INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA
ACT, 2000 (ACT NO. 13 OF 2000)

ACT

To provide for the establishment of the Independent Communications Authority of South Africa; to provide for the dissolution of the Independent Broadcasting Authority and the South African Telecommunications Regulatory Authority; to transfer the functions of the latter authorities to the Independent Communications Authority of South Africa; to amend the Independent Broadcasting Authority Act, 1993, the Telecommunications Act, 1996, and the Broadcasting Act, 1999; and to provide for matters connected therewith.

PREAMBLE

Recognising that technological and other developments in the fields of broadcasting and telecommunications are causing a rapid convergence of these fields;

Acknowledging that the establishment of an independent body to regulate broadcasting and telecommunications is required.

BE IT THEREFORE ENACTED by the Parliament of the Republic of South Africa, as follows.-

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Chapter 1

Introductory Provisions

Definitions

1. In this Act, unless the context indicates otherwise, any word or expression defined in the Broadcasting Act, the IBA Act or the Telecommunications Act has the meaning assigned to it in the Act in question and—

(i) "Authority" means the Independent Communications Authority of South Africa established by section 3; (ix)

(ii) "Broadcasting Act" means the Broadcasting Act, 1999 (Act No. 4 of 1999); (iv)

(iii) "Council" means the Council referred to in section 5; (xi)

(iv) "establishment date" means the date determined as such by the Minister by notice in the Gazette; (iii)

(v) "family member", in relation to any person, means his or her parent, child or spouse, and includes a person living with that person as if they were married to each other; (i)

(vi) "former authorities" means the IBA, SATRA or both, as the case may be; (xv)

(vii) "IBA" means the Independent Broadcasting Authority established by section 3 of the IBA Act; (vii)
Object of Act

2. The object of this Act is to establish an independent authority which is to-

(a) regulate broadcasting in the public interest and to ensure fairness and a diversity of views broadly representing South African society, as required by section 192 of the Constitution;

(b) regulate telecommunications in the public interest; and

(c) achieve the objects contemplated in the underlying statutes.
CHAPTER II

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

Establishment of Independent Communications Authority of South Africa

3. (1) There is hereby established a juristic person to be known as the Independent Communications Authority of South Africa.

(2) The Authority acts through the Council contemplated in section 5.

(3) The Authority is independent, and subject only to the Constitution and the law, and must be impartial and must perform its functions without fear, favour or prejudice.

(4) The Authority must function without any political or commercial interference.

Functions of Authority

4. (1) The Authority-

   fa) must perform the duties imposed upon the former authorities by or under the underlying statutes;

   (b) may exercise the powers conferred upon the former authorities by or under the underlying statutes;

   (c) subject to section 231 of the Constitution, must act in a manner that is consistent with the obligations of the Republic under any applicable international agreement.

(2) The Authority is subject to the Public Finance Management Act, 1999 (Act No. 1 of 1999).

Constitution of and appointment of councillors to Council

5. (1) The Council consists of seven councillors appointed by the President on the recommendation of the National Assembly according to the following principles, namely-
(a) participation by the public in the nomination process;

(b) transparency and openness; and

(c) the publication of a shortlist of candidates for appointment, with due regard to subsection (3) and section 6.

(2) (a) The President must appoint one of the councillors as chairperson of the Council.

(b) In the absence of the chairperson, the remaining councillors must from their number elect an acting chairperson, who, while he or she so acts, may perform all the functions of the chairperson.

(3) Persons appointed to the Council must be persons who-

(a) are committed to fairness, freedom of expression, openness and accountability on the part of those entrusted with the governance of a public service; and

(b) when viewed collectively-

(i) are representative of a broad cross section of the population of the Republic; and

(ii) possess suitable qualifications, expertise and experience in the fields of, amongst others, broadcasting and telecommunications policy, engineering, technology, frequency band planning, law, marketing, journalism, entertainment, education, economics, business practice and finance or any other related expertise or qualifications.

(4) A councillor appointed under this section must, before he or she begins to perform his or her functions, take an oath or affirm that he or she-

(a) is committed to fairness, freedom of expression, openness and accountability; and

(b) will uphold and protect the Constitution and the laws of the Republic, including this Act and the underlying statutes.
Disqualification

G. (1) A person may not be appointed as a councillor if he or she:

(a) is not a citizen of the Republic;

(b) is not permanently resident in the Republic;

(c) is a public servant or the holder of any other remunerated position under the State;

(d) is a member of Parliament, any provincial legislature or any municipal council;

(e) is an office-bearer or employee of any party, movement or organisation of a party-political nature;

(f) or his or her family member has a direct or indirect financial interest in the telecommunications or broadcasting industry;

(g) or his or her business partner or associate holds an office in or with, or is employed by, any person or body, whether corporate or unincorporated, which has an interest contemplated in paragraph ff);

(h) is an unrehabilitated insolvent;

(i) has been declared by a court to be mentally ill or disordered;

(j) has at any time been convicted, whether in the Republic of elsewhere, of-

(i) theft, fraud, forgery or uttering a forged document, perjury, an offence in terms of the Corruption Act, 1992 (Act No. 94 of 1992), or any other offence involving dishonesty; or

(ii) an offence under this Act or the underlying statutes;

(k) has been sentenced, after the commencement of the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993), to a period of imprisonment of not less than one year without the option of a fine; or

(i) has at any time been removed from an office of trust on account of misconduct.
(2) A person who is subject to a disqualification contemplated in subsection (1) (b) to (i) may be nominated for appointment as a councillor, but may only be appointed if at the time of such appointment he or she is no longer subject to that disqualification.

Terms of office

7. (1) The chairperson holds office for a period of five years as from the date of his or her appointment.

(2) (a) Subject to paragraph (b), the other councillors hold office for a period of four years as from the date of their appointment.

(b) Such three of the other councillors appointed to the first Council constituted after this Act takes effect as are determined by lot in accordance with Schedule 2, must vacate their offices upon expiration of a period of two years as from the date of their appointment.

(3) A councillor may at any time, upon at least three months' written notice tendered to the President, resign from office.

(4) Despite subsections (1) and (2), the councillors remain in office after expiry of their term of office until the commencement of the term of office of their successors, but the extended term of office may not exceed 45 days.

(5) A councillor may at the end of his or her term of office be reappointed in terms of section 5 for one additional term.

(6) Every councillor serves in a full-time capacity to the exclusion of any other remunerative employment, occupation or office which is likely to-

(a) interfere with the exercise by any such councillor of his or her functions in terms of this Act or the underlying statutes; or

(b) create a conflict of interests between such employment, occupation or office and his or her office as councillor.

Removal from office

8. (1) Subject to subsection (2), a councillor may be removed from office on account of-
(d) misconduct,

(b) inability to perform the duties of his or her office efficiently;

(c) absence from three consecutive meetings of the Council without the permission of the Council, except on good cause shown;

(d) a contravention of section 7 (6);

(e) failure to disclose an interest in terms of section 12 (2) (a) or voting or attendance at, or participation in, proceedings of the Council while having an interest contemplated in section 12 (1); or

(f) his or her becoming disqualified as contemplated in section 6 (1).

(2) A councillor may be removed from office only on-

(a) a finding to that effect by the National Assembly; and

(b) the adoption by the National Assembly of a resolution calling for that councillor's removal from office.

(3) The President-

(a) may suspend a councillor from office at any time after the start of the proceedings of the National Assembly for the removal of that councillor;

(b) must remove a councillor from office upon adoption by the National Assembly of the resolution calling, for that councillor's removal.

Vacancies

9. (1) A vacancy in the Council occurs if a councillor-

(a) becomes subject to a disqualification referred to in section 6;

(b) tenders his or her resignation as contemplated in section 7 (3) and the resignation takes effect;

(c) is removed from office in terms of section 8;

(d) dies; or
(e) becomes permanently incapable of doing his or her work.

(2) (a) Where a vacancy has arisen as contemplated in subsection (1), the procedure contemplated in section 5 applies.

(b) Any councillor appointed under this subsection holds office for the rest of the period of the predecessor's term of office, unless the National Assembly directs that such councillor holds office for a longer period which may not exceed four years.

Remuneration

10. The chairperson and other councillors must be paid such remuneration and allowances and be entitled to such benefits as the Minister may determine with the concurrence of the Minister of Finance, subject to any applicable national legislation envisaged by section 219 (5) of the Constitution.

Meetings of Council

11. (1) (a) Meetings of the Council must be held at such times and places as the Council may determine.

(b) However, the first meeting must be held at such time and place as the chairperson determines.

(2i (a) The chairperson may at any time convene a special meeting of the Council, which must be held at such time and place as the chairperson determines.

(b) If at least two councillors request a special meeting in writing, the chairperson must convene such a meeting within seven days after receiving the request.

(c) If the chairperson fails to convene a special meeting within seven days after receiving the request, the councillors concerned may convene a special meeting.

(3) The quorum for any meeting of the Council is a majority of the councillors in office at the time.

(4) (a) Subject to subsection (3), a decision of the Council is taken by resolution agreed to by the majority of councillors at any meeting of the Council.

(b) In the event of an equality of votes regarding any matter the chairperson has a casting vote in addition to his or her deliberative vote

Issue No. 12(2002)
Conflicting interests

12. (1) A councillor may not vote at, attend or in any other manner participate in, any meeting or hearing of the Council, nor be present at the place where the meeting is held, if-

(a) in relation to an application relating to a licence, he or she or his or her family member is a director, member or business partner or associate of or has an interest in the business of the applicant or of any person who made representations in relation to the application; or

(b) in relation to any matter before the Council, he or she has any interest which may preclude him or her from performing his or her functions as a councillor in a fair, unbiased and proper manner.

(2) (a) If, during the course of any proceedings before the Council, there is reason to believe that a councillor has any interest contemplated in subsection (1), that councillor must immediately fully disclose the nature of his or her interest and leave the meeting or hearing in question so as to enable the remaining councillors to discuss the matter and determine whether or not that councillor should be allowed to participate in the proceedings.

(b) The disclosure, and the decision taken by the remaining councillors, must be recorded in the minutes of the proceedings in question.

(3) If any councillor fails to disclose any interest as required by subsection (2) or, subject to that subsection, if he or she is present at the place where a meeting of the Council is held or in any manner participates in the proceedings of the Council, the relevant proceedings of the Council shall be null and void.

(4) A councillor is guilty of an olyence and liable on conviction to a fine not exceeding R250 000 or to imprisonment for a period not exceeding five years, or to both such fine and imprisonment, if he or she.

(a) contravene subsection (1); or

(b) fails to disclose any interest or fails to leave the meeting or hearing as required by subsection (2).
Validity of proceedings

13. Subject to section 12, a decision taken by the Council or an act performed under that decision is not invalid merely by reason of:

   (a) any irregularity in the appointment of a councillor;
   
   (b) a vacancy in the Council; or
   
   (c) the fact that any person not entitled to sit as a councillor sat as such at the time when the decision was taken.

provided such decision was taken by a majority of the councillors present at the time and entitled so to sit, and those councillors at the time constituted a quorum.

Staff

14. (1) The Council must establish its own administration to assist the Authority in the performance of its functions and to this end the Council must appoint:

   (a) a suitably qualified and experienced person as chief executive officer of the Council for the purpose of assisting the Authority, subject to the Council's direction and control, in the performance of all financial, administrative and clerical functions and work arising from the administration of this Act; and

   (b) such other staff as the Council may deem necessary to assist the Authority with all such work as may arise through the performance of its functions.

(2) The Council must, in the appointment of it? staff-

   (a) provide for the advancement of persons disadvantaged by unfair discrimination, with the aim that its staff, when viewed collectively represents a broad cross-section of the population of the Republic;

   (b) subject to paragraph (a), apply equal opportunity employment practices.

(3) The Authority may pay to the persons in its employ such remuneration and allowances and provide them with such pension and other employment benefits as are consistent with that paid in the public sector.
Financing of and accounting by Authority

15. (1) The Authority is financed from money appropriated by Parliament.

(2) The chief executive officer contemplated in section 14(1) (a) is, in accordance with section 36 of the Public Finance Management Act, 1999 (Act No. 1 of 1999), the accounting officer of the Authority and charged with the responsibilities referred to in that Act which include, amongst others, responsibilities regarding auditing, financial control, budgetary control and reporting.

(3) All revenue received by the Authority in a manner other than in accordance with subsection (1) must be paid into the National Revenue Fund within 30 days after receipt of such revenue.

(4) Cheques drawn by the Authority must be regarded to have been duly issued and signed on its behalf if issued under the joint signatures of the accounting officer and another member of the staff of the Authority designated by the Council.

Annual report

16. (1) The Council must-

(a) supply the Minister with such information and particulars as he or she may in writing require in connection with the activities of the Authority; and

(b) as soon as may be reasonably practicable after the end of each financial year but in any event within three months of the end of the financial year, supply the Minister with a copy of-

(i) the annual report of the Authority;

(ii) the financial statements of the Authority referred to in section 40 (1) (e) of the Public Finance Management Act, 1999 (Act No. 1 of 1999); and

(iii) the Auditor-General's report on those statements.

(2) For purposes of this section, the annual report referred to in subsection (1) (b) ii) must include, amongst others-
(a) information regarding licences granted, renewed, amended, transferred, suspended or revoked; and

(b) such other information as the Minister may in writing require.

(3) The Minister must table a copy of the annual report in Parliament within 30 days after it has been received by him or her if Parliament is then sitting and, if Parliament is not in sitting, within 14 days after the next ensuing sitting of Parliament.

CHAPTER iii

COMMITTEES

Standing and special committees

17. (1) The Council may establish standing committees or special committees for such purposes as the Council may deem necessary with a view to assisting it in the effective exercise and performance of its powers and duties.

(2) Each committee established in terms of this section must consist of-

(a) one or more councillors designated by the Council; and

(b) such additional members as the Council may determine.

(3) The additional members referred to in subsection (2) (b) must be persons who-

(a) are not subject to any disqualification contemplated in section 6 (1) (d) to (1); and

(b) on account of their expertise, qualifications and experience are suited to serve on the relevant committee.

(4) The Council must appoint the chairperson of each committee from the councillors designated in terms of subsection (2) (a).

(5) A committee must perform such functions as may be delegated or assigned to it.

(6) The meetings of a committee (including any special meetings) must be convened by the chairperson, who determines the procedure at the meeting.
(7) Section 11 is applicable, with the necessary changes, as regards the meetings of any committee.

(8) The members of any committee, including the Broadcasting Technical Committee and Broadcasting Monitoring and Complaints Committee referred to in section 21 of the IBA Act, who are not councillors or members of the staff of the Authority must be paid such remuneration and allowances as the Council determines.

(9) For purposes of subsection (8), the Council may differentiate between different committees and different members thereof.

CHAPTER IV

TRANSITIONAL PROVISIONS

Dissolution of IBA and SATRA, and first meeting of Council

18. (1) The IBA and SATRA are hereby dissolved with effect from the establishment date.

(2) (a) The councillors of the Council referred to in section 3 (2) of the IBA Act and the councillors of the Council referred to in section 6 of the Telecommunications Act remain in office until immediately before the commencement of the first meeting of the Council.

(b) if any councillor contemplated in paragraph (a) is not appointed in terms of section 5, the termination of that person’s tenure of office must be dealt with in accordance with any terms and conditions relating to such termination in the agreement governing his or her appointment as councillor.

(c) If the agreement does not contain any such terms and conditions, that person’s position must be considered by the Minister in concurrence with the Minister of Finance in the light of all relevant circumstances, including—

(i) the legitimate expectations of the councillor;

(ii) any financial constraints on expenditure by the Authority;

(iii) the prospect of further employment of that person.
(d) If the councillor is not satisfied with any order made by the Minister, the matter must be referred to arbitration in terms of the Arbitration Act, 1965 (Act No. 42 of 1965).

(3) The first meeting of the first Council constituted in terms of section 5 must be held within three months of the establishment date.

Transfer of staff

19. (1) (a) Every person appointed under section 14 of the ISA Act, and every person appointed under or transferred in terms of section 17 of the Telecommunications Act, who is in the service of the IBA and SATRA immediately before the establishment date, is, as from that date, hereby transferred to the service of the Authority.

(b) Every person so transferred must be regarded as having been appointed in terms of section 14

(2) The remuneration and other terms and conditions of service of any person transferred as contemplated in subsection (1) may not be less favourable than the remuneration, terms and conditions applicable to that person immediately before the establishment date and he or she remains entitled to all rights, benefits and privileges to which he or she was entitled immediately before that date, including, where applicable-

(a) membership of a pension fund;

(b) membership of a medical aid scheme;

(c) employer contributions in connection with the memberships contemplated in paragraphs (a) and (b);

(d) accrued pensionable service;

(e) accrued leave benefits; and

(1) retirement at a specific age.

(3) Any person transferred to the service of the Authority as contemplated in subsection (1), who immediately before such transfer was a member of a pension fund of any former authority, remains a member of that pension fund upon such transfer despite any provision to the contrary in any law or in the rules of that pension fund and the Authority must contribute to the pension fund in respect of that person to the same extent as an employer is required in terms of the laws and rules regulating that pension fund to contribute in respect of an employee who is a member of that fund.
(4) For purposes of the Income Tax Act, 1962 (Act No. 58 of 1962), no change of employer must be regarded as having taken place when a person is transferred to the service of the Authority as contemplated in subsection (1) and the position of those persons in respect of the phasing-in of tax levied on benefits or advantages derived by reason of employment or the holding of any office as contemplated in Schedule 7 to the Income Tax Act, 1962, must be regarded as remaining unchanged.

**Passing of assets and liabilities to Authority**

20. (1) All assets, rights, liabilities and obligations which, immediately before the establishment date, vest in the former authorities pass to the Authority on that date.

(2) The registrar of deeds must make the necessary entries or endorsements for the transfer of any property in terms of subsection (1), and no transfer fee, office fee or other charge is payable in respect of that entry or endorsement.

(3) All licences issued, rights granted and undertakings given by the former authorities by or under the underlying statutes must be regarded to have been issued, granted or given by the Authority.

**Pending matters**

21. (1) Any application, proceedings or similar matter pending before the former authorities at the establishment date must be dealt with by the Authority under the relevant underlying statute.

(2) Any order, ruling or direction made or given by the former authorities immediately before the establishment date must be regarded as having been made or given by the Authority.

**Savings**

22. (1) Anything done before the commencement of this Act under or in terms of a provision repealed or amended by this Act must be regarded, unless clearly inappropriate, to have been done under or in terms of the corresponding provision of this Act.

(2) Any reference to any of the former authorities in any law must be regarded, unless clearly inappropriate, to be a reference to the Authority.

(3) The Authority is the legal successor of the former authorities.
CHAPTER V

GENERAL

Repeal and amendment of laws

23. The laws specified in the second column of Schedule I are hereby repealed or amended to the extent indicated in the third column thereof.

Application of Act

24. In the event of any conflict between the provisions of this Act and any other prior law relating to the regulation of broadcasting and telecommunications, the provisions of this Act prevail.

Short title and commencement

25. This Act is called the Independent Communications Authority of South Africa Act, 2000, and comes into operation on a date fixed by the President by proclamation in the Gazette, except section 18 (2) which must be regarded as having come into operation on 30 March 2000.
Schedule 1

LAWS AMENDED OR REPEALED

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<td>2. Amends section 2.</td>
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<td>17. <strong>Repeals</strong> section 17(2).</td>
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<td>18. Repeals section 18.</td>
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<td>21. <strong>Amends</strong> section 21(2).</td>
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<td>23. Repeals section 23.</td>
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<td>27. <strong>Amends</strong> section 29.</td>
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|                    |                                | 2. Amends section 5.     |
|                    |                                | 4. Repeals section 7.    |
|                    |                                | 5. Repeals section 8.    |
|                    |                                | 7. **Repeals** section 10.|
|                    |                                | 8. Repeals section 11.   |
## 1.108
**TELECOMMUNICATIONS ACT**

*Part 1: Independent Communications Authority of South Africa Act No. 13 of 2000*

**Schedule 1**

**LAWS AMENDED OR REPEALED (Continue)**

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<td>9.</td>
<td>Repeals section 12.</td>
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Act No. 4 of 1999  
Broadcasting Act, 1999  
1. Amends section 1.
1. Upon having appointed the six other councillors in terms of section 5 of this Act, the National Assembly must forthwith proceed, in an open and transparent manner, to determine by lot, as required by section 7 (2) (b) of this Act, which three of such six other councillors must vacate their offices upon the expiration of two years after their appointment, for which purpose the National Assembly must designate from its own number the person who must conduct the lot (hereinafter referred to as the designated person).

2. The designated person must thereupon ensure that the name of each one of the six other councillors is written on a separate piece of paper of equal size and identical shape and colour.

3. The designated person must thereafter display the six pieces of paper contemplated in item 2 to every person who is present at the place where the lot is being conducted and who is desirous of inspecting any such piece of paper.

4. The designated person must thereafter fold every such piece of paper in such a manner that the name thereon is not visible, and place all such pieces of paper in an empty container.

5. The designated person must thereupon appoint an impartial person (hereinafter referred to as the drawer) to draw three pieces of paper from the said container.

6. The designated person must thereafter shake the container in such a manner as to thoroughly mix the pieces of paper therein, and must hold such container in such a position that the drawer is unable to see the pieces of paper inside.

7. The drawer must thereafter draw three pieces of paper from such container and hand them to the designated person without unfolding any of them.

8. The designated person must then unfold each of the three pieces of paper handed to him or her as contemplated in item 7, read out the names written thereon and display every such piece of paper to every person who is present at the place where the lot is being conducted and who is desirous of inspecting the same.

9. The three persons whose names have been so drawn, must vacate their offices as councillors two years after the date of their appointment as such.
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#### Regulations (Chronological)

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<td>3.</td>
<td>Declaration of certain apparatus to be not radio apparatus for purposes of Act No. 3 of 1952 (G.N. 1790 of 1995)</td>
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<td>5.</td>
<td>Regulations in terms of section 34 read with sections 96 (1) and 96 (5) (b) of the Telecommunications Act, 1996 (Act No. 103 of 1996) regarding certain matters in the licensing process in respect of one mobile cellular telecommunication service licence for which applications have been invited in terms of section 34 (2) (a) (ii) of the Act, published in Notice 314 in Government Gazette 19806 dated 26 February 1999 (G.N. R.676 of 24 May 1999)</td>
<td>2.114</td>
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DEPARTMENT OF POSTS AND TELECOMMUNICATIONS

No. R. 2862 28 December 1979

RADIO REGULATIONS


Under the powers vested in me by section 18 of the Radio Act, 1952 (Act 3 of 1952), I, Hendrik Hanekom Smit, Minister of Posts and Telecommunications, hereby make the Regulations as contained in the undermentioned Schedule. The Regulations are made with the consent of the Administrator General of the Territory of South West Africa and shall also apply in that Territory.

H. H. SMIT, Minister of Posts and Telecommunications.

[Editor's note: Section 95 (4) of the Telecommunications Act, 1996 (Act No. 103 of 1996), provides that these regulations which were made under section 18 of the Radio Act, 1952, which Act was repealed by the 1996 Act, and which was in force immediately prior to the commencement of the 1996 Act, shall remain in force until amended or repealed under section 95 of the 1996 Act. When the new regulations are promulgated, the said new regulations will replace these Regulations by means of an update service.

Section 118 of the Telecommunications Act, 1996 further provides that the expression "Postmaster-General", wherever it occurs should be substituted by the expression "Director-General" (of the Department Communications).]
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CHAPTER 1

DEFINITIONS

Any expression to which a meaning is assigned in the Radio Act, 1952 (Act 3 of 1952), or in the Broadcasting Act, 1976 (Act 73 of 1976), has the same meaning in these regulations and, unless the context otherwise indicates:

(i) **aeronautical station** means a land station in the aeronautical mobile service which may be on board a ship or vehicle in exceptional cases;

(ii) **aircraft station** means a mobile station in the aeronautical mobile service on board an aircraft or a spacecraft;

(iii) **alarm station** means a transmitting station in the land mobile service that is intended to transmit automatic alarm signals to a central position;

(iv) **amateur** means someone who is interested in the radio technique solely for a private reason and not for financial gain and to whom the Director-General has granted an amateur radio station licence;

(v) **amateur radio station** means a station for a service of self-tuition, intercommunication and technical investigation that is operated by an amateur;

(vi) **base station** means a land station in the land mobile service for a service with land mobile stations;

(vii) **carrier wave power** means the average power that is supplied by the transmitter to the antenna transmission line and is measured during one radio-frequency cycle in conditions of no modulation;

(viiA) **cellular radio communication service** means a two-way C450 or GSM cellular radio communication service provided by means of radio between cellular stations and/or radio apparatus where the interconnection of stations, where applicable, are affected by means of telecommunication lines as defined in the Post Office Act, No. 44 of 1958, and where a limited number of frequencies is used within each of a number of cells allowing the re-use of the same frequencies in different non-adjacent cells and enabling users to maintain connections by the use of call handover whilst moving between adjacent cells;
(viii) *citizen-band radio service* means a private, two-way, short-distance speech communication service in the land mobile service for personal and business operations, which may also be used as a paging system;

(ix) *coast station* means a land station in the sea mobile service;

(ixA) *decoder*;

(ixAA) *encoded form*;

(x) *experimental station* means a station that uses radio waves in experiments for the purpose of developing the science or technique but that is not an amateur radio station;

(xi) *ignition system* means apparatus that has been assembled in order to supply and conduct electric energy for the ignition of gas or vapour in an internal-combustion engine;

(xii) *input* means the direct current input (dc input) to the anode of the radio-frequency stage that immediately precedes the antenna;

(xiii) *inspecting officer* means someone who has been appointed under regulation F8;

(xiv) *land mobile service* means a mobile radio-communication service between fixed stations and mobile land stations, or between land mobile stations;

(xv) *licensee* means someone to whom a licence has been issued in terms of section 7 of the Act;

(xvA) *licence year* in relation to a licence or a certificate, means the period of 12 months of each year from 1 January to 31 December, both dates inclusive;

(xvi) *mobile station* means a station that is intended to be operated while it is in motion or while it is stationary at an unspecified place;

(xvii) *paging station* means a receiving station in the land mobile service that is intended to receive selective signals from a central position;

(xviiA) *paid television broadcasting service* a telecommunication service which transmits television programmes in encoded form for reception by users of television sets in possession of decoders which can be activated or deactivated by that telecommunication service by means of telecommunications;
(xviii) peak envelope power means the average power supplied to the antenna transmission line by a transmitter during one radio-frequency cycle at the highest crest of the modulation envelope, taken under conditions of normal operation;  

(xviiiA) pirate decoder;  

(xix) plain language means words and expressions that make out an intelligible communication whereby all words and expressions have the meaning usually attached to them in the language to which they belong;  

(xixA) private communal radio repeater station service means a land mobile radio-communication service installed, maintained and operated by a private person over repeater stations that are available for communal use;  

(xx) radio-beacon station means a station the radiation of which is intended to enable a mobile station to fix its position or obtain its bearing with regard to the radio beacon;  

(xxii) radio-communication means all telecommunication by means of radiowaves;  

(xxiv) special radio service means a radio-communication service that is not otherwise defined in these regulations and is operated solely for specified purposes of general benefit but not for public correspondence;  

(xxv) suppressor means an object that is designed to reduce the radiation of electromagnetic energy by the apparatus to which it is fitted;
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2.9

telecommunication means every transmission, emission or reception of
signs, signals, writing, images and sounds or intelligence of any nature by
wire, radio, optical or other electromagnetic systems;


CHAPTER 2

RADIO DEALERS

A1 Manner of completion and period of retention of registers and records that must be kept in terms of section 12 (2) of the Act

(D A radio dealer shall, in respect of all types of radio apparatus that he has sold, hired out, given or supplied in any other manner or has repaired for someone, keep a register in which the following shall be recorded:

(i) The name and address of the person to whom such radio apparatus was sold, hired out, given or supplied or for whom the repairs were done.

(ii) The date of the transaction by virtue of which such apparatus was sold, hired out, given or supplied or the date on which the repairs were carried out and the nature of such repairs.

(iii) A complete description of the type and nature of the radio apparatus involved and, in the case of two-way apparatus, the serial number as well as the frequency on which it operates, for example XYZ two-way radio 1358706 on the frequency 83,500 MHz.

(iv) The number or, where applicable, the call sign and the expiry date of the licence issued to the person to whom such radio apparatus was sold, hired out, given or supplied or for whom the repairs were carried out or the call sign or number and expiry date of the licence, radio dealer's registration certificate or particulars of the permit by virtue of which the person to whom the radio apparatus was supplied or for whom the repairs were carried out was exempted from an obligation to be the holder of an appropriate licence for the possession of such apparatus.
(2) The register referred to in subregulation (1) shall be retained by the radio dealer for a period of at least 12 months after the date of the transaction by virtue of which the required records were made.

(3) Extracts from or copies of the register and records therein referred to in subregulation (1) and relating to the sale or hiring-out of sound radio sets and television sets shall be sent to the South African Broadcasting Corporation by the dealer not later than the last day of the month immediately following the month in which this transaction was recorded by virtue of this regulation.

(4) Radio apparatus other than a sound radio set or television set shall not be handed over or returned by the radio dealer to a person or any other radio dealer unless the radio dealer is satisfied that such apparatus is tuned to only that frequency or those frequencies that the licensee may use in terms of the conditions of his licence or that the Director-General has otherwise prescribed.

(5) Someone who does business by travelling or going about as representative, agent or employee of someone else or who, as employee of such representative, agent or employee of someone else, sells, hires out, gives or supplies radio apparatus in any other way or who requests, solicits or accepts orders for the sale, hiring-out or supply of radio apparatus shall in his own capacity also be in possession of a radio dealer’s registration certificate.


A2 Prohibition on certain types of radio apparatus:

(1) All cordless telephones except those which a radio dealer has been licensed to distribute in terms of the Post Office Act, 1958 (Act No. 44 of 1958), shall belong to a category of radio apparatus contemplated by section 12 of the Radio Act, 1952 (Act No. 3 of 1952).


CHAPTER 3

AMATEUR RADIO STATIONS

B1 Conditions for the issuing of amateur radio station licences

(1) The Director-General may, subject to the provisions of section 7 of the Act and these Regulations and on the conditions that are set out in this Chapter, issue a class-A or class-B licence for the use of an amateur radio station.
(2) A class-A licence may be issued to a person who-

(i) is 12 years or older;

(ii) can speak Afrikaans or English fluently;

(iii) has furnished proof acceptable to the Director-General that he can transmit and receive morse code at at least 12 words per minute calculated at five characters per word unless he wishes to use only frequencies of 30 MHz and higher; and

(iv) is in possession of a certificate of proficiency (amateur radio operator's certificate) issued in terms of section 7 (1) (c) of the Act.

(3) A class-B licence may be issued to a person who-

(i) is 10 years or older;

(ii) can speak Afrikaans or English fluently;

(iii) can furnish proof acceptable to the Director-General that he can transmit and receive morse code at at least five words per minute calculated at five characters per word; and

(iv) is in possession of a certificate of proficiency (amateur radio operator's certificate) issued in terms of section 7 (1) (c) of the Act.

(4) For the purposes of subregulations (2) and (3) "a person" shall mean "a natural person" and shall not include associations, companies or other legal persons: Provided that an amateur radio station licence may be issued to a licensed amateur on behalf of a bona fide amateur radio association.


B2 Use of amateur radio stations

(1) An amateur radio station shall only be used by the holder of the amateur radio station licence issued by the Director-General, provided that someone who holds an amateur radio operator certificate issued in terms of section 7 (2) (c) of the Act may be permitted by the holder of an amateur radio station licence to make transmissions over the amateur radio station under the supervision of the licensee on condition that such transmissions shall be in morse code and take place only for short periods for the sole purpose of training.
(2) The holder of an amateur radio station licence may use an amateur radio station other than his own with the permission of the licensee concerned.

(3) An amateur radio listener's licence authorizes the holder thereof to acquire and be in possession of radio apparatus for the reception only of amateur radio signals.

B3 Communication between amateur radio stations

(1) (a) Except as indicated in subregulation (b), an amateur radio station shall not be used to communicate with any station other than an amateur radio station: Provided that communication may be made with an amateur radio station outside the boundaries of the Republic only if such communication is not prohibited in the country where the station is situated; any such communication shall be restricted to reports on radio experiments and remarks of a personal nature which shall not include messages of business import for which the public telecommunication service would have been used had the amateur radio communications not been available.

(b) Emergency communication between amateur radio stations and with any other station is permissible to prevent loss of life and to render assistance or call for assistance in emergency situations.

(2) Communication by means of an amateur radio station shall be carried on in plain language or in the Q code.

(3) No person shall advertise any goods or services or anything else, or transmit any news or messages on behalf of a third person on an amateur radio station: Provided that the Postmaster General may authorise a licensee to transmit-

    (i) reports on behalf of or by a third person during events that are in the judgement of the Postmaster General of public interest;

    (ii) information bulletins that are of direct interest to amateurs; and

    (iii) morse code for reception by persons learning morse code operation or for improving their competence in morse.

(4) An amateur radio station shall not be used to transmit or to receive messages for reward nor for communication for monetary consideration.
Radio station or Radio stations and radio frequency or group of radio frequencies shall only be used in the manner set out hereunder

(1) AMATEUR RADIO STATION
   (a) Communication between amateur radio stations
   (b) Transmission and receiving of Morse code
   (c) Reports on radio experiments within and outside the boundaries of the Republic of South Africa
   (d) Weather Satellite reception and retransmission
   (e) Emergency communication in the event of emergency or disaster

(2) AERONAUTICAL RADIO STATION
   (a) Safety purposes
   (b) Ground-to-Air communication or vice versa

(3) MARITIME RADIO STATION
   (a) Safety purposes
   (b) Sea-to-Shore communication or vice versa

(4) MOBILE AND FIXED SERVICES
   (a) Private short distance voice communication and voice paging
   (b) Safety at sea and inland waters
   (c) Control of personnel
   (d) Security and alarm monitoring
   (e) Experimental purposes
   (f) Electricity control and load management
   (g) Voice, data, audio and video communication and transfer
   (h) Water and electricity management and control
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(i) Demonstration purposes

(j) Message handling services

(k) Mobile News gathering

(l) Vehicle tracking purposes

(m) Direct to home (DTH) broadcasting

(n) Repair, Install, Supply of equipment


B4 Log book with regard to amateur radio station activities

Except when operating a station in the VHF and UHF bands, the licensee shall, regarding the activities of the amateur radio station used by him, keep a log book in which shall be accurately recorded-

(i) the date, time and nature of each transmission. (The date with regard to each individual day's operations need be recorded only once and for the purposes of this paragraph "time of each transmission" shall mean the time that a specific station is called and the time at which the communication with such station is terminated);

(ii) the full name and address of the person making the transmission, provided that the name of the licensee who regularly uses the amateur radio station need be recorded only once in the log book together with an explicit statement that all transmissions are made by him except where stated otherwise;

(iii) the call sign of every station, provided that it need not be recorded repeatedly for calls made to the same station during the course of the communication;

(iv) the power that is used;

(v) the frequency band that is used, provided that it need be recorded in the log book only once until a change of frequency to another authorised band takes place; and

(vi) the address from where the transmission takes place, provided that such address need be recorded only once should the place of transmission not
B5A  Frequencies for transmissions over amateur radio stations by holders of class-A licences
[Heading substituted by G.N.R. 1356 of 22 June 1990.]

(1) Subject to the provisions included in "Remarks" no person shall transmit over amateur radio stations at frequencies other than those given below, and furthermore the modes explained in subregulation (2) shall be restricted to the various frequency bands as indicated below:

<table>
<thead>
<tr>
<th>Frequency list</th>
<th>Mode</th>
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<tr>
<td>(a) 1 810-1 850 kHz</td>
<td>A3E; R3E; J3E; F3E; G3E; A1A; F1A; F1B</td>
</tr>
<tr>
<td>(b) 3 500-3 800 kHz</td>
<td>A3E; R3E; J3E; F3E; G3E; A1A; F1A; F1B</td>
</tr>
<tr>
<td>(c) 7 000-7 100 kHz</td>
<td>A3E; R3E; J3E; F3E; G3E; A1A; F1A; F1B</td>
</tr>
<tr>
<td>(d) 10 100-10 150 kHz</td>
<td>A3E; R3E; J3E; F3E; G3E; A1A; F1A; F1B</td>
</tr>
<tr>
<td>(e) 14 000-14 350 kHz</td>
<td>A1A; F1A; F1B</td>
</tr>
<tr>
<td>(f) 18 068-18 168 kHz</td>
<td>A3E; R3E; J3E; J3F; F3E; G3E; A1A; F1A; F1B</td>
</tr>
<tr>
<td>(g) 21 000-21 450 kHz</td>
<td>A1A; F1A; F1B</td>
</tr>
<tr>
<td>(h) 24 890-24 990 kHz</td>
<td>A3E; R3E; J3E; J3F; F3E; G3E; A1A; F1A; F1B</td>
</tr>
<tr>
<td>(i) 28 000-29 700 kHz</td>
<td>NON; A1A; F1A; F1B</td>
</tr>
<tr>
<td>(j) 50-54 MHz</td>
<td>A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F2A; F2B; A3C; F3C</td>
</tr>
<tr>
<td>(k) 144-146 MHz</td>
<td>A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; W9E</td>
</tr>
<tr>
<td>(l) 430-440 MHz</td>
<td>A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; W9E</td>
</tr>
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- **(m) 1 240-1 300 MHz**
  - A3E; R3E; J3F; F3E; G3E; **NON**; A1A; F1A; F1B; F2A; F1D; F2B; A3C; F3C; C3F; W9E

- **(n) 2 300-2 450 MHz**
  - A3E; R3E; J3E; J3F; F3E; **G3E**; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(o) 5 650-5 850 MHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(p) 10-10.5 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(q) 24-24.5 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F2A; F2B; A3C; F3C; C3F; W9E

- **(r) 24.05-24.25 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(s) 47-47.2 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(t) 75.5-76 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(u) 76-81 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(v) 142-144 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F2A; F2B; A3C; F3C; C3F; W9E

- **(w) 144-149 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(x) 241-248 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

- **(y) 248-250 GHz**
  - A3E; R3E; J3E; J3F; F3E; G3E; NON; A1A; F1A; F1B; F1D; F2A; F2B; A3C; F3C; C3F; W9E

### Remarks:

(i) The **bandwidth** of F3E and G3E, emission shall be restricted to **10 kHz** in bands under **50 MHz**.
(ii) The bandwidth for 625-line television transmissions (C3F) shall not exceed 6 MHz at frequencies above 1 GHz.

(iii) Bands (b), (d), (l), (m), (n), (o), (p), (r), (u) and (w): These bands are shared with other services and amateur radio stations shall avoid interference to these services.

(iv) Bands (a) to (j): In these bands the transmitter shall have crystal control or a stability similar to that of crystal control.

M Band (n): The band 2 400-2 500 is allocated for industrial, scientific and medical purposes. Radio-communication services within these limits shall unconditionally accept interference as a result of the operation of industrial, scientific and medical equipment.

(vi) Band (o): The band 5 725-5875 is allocated for industrial, scientific and medical purposes. Radio-communication services within these limits shall unconditionally accept interference as a result of the operation of industrial, scientific and medical equipment.

(vii) The bandwidth shall be restricted to a maximum of 25 kHz in the bands 50-430 MHz.

(viii) A maximum of 12 channels may be multiplexed and the bandwidth shall not exceed 25 kHz per channel in the bands 430-440 MHz.

(ix) The bandwidth shall not exceed 10% of the band concerned when operating above 1 GHz.

(x) Band (1): For digital-repeater interlinking at 9 600 baud the frequencies of 438.650-439.100 MHz may be used.

(2) Explanation of modes indicated in subregulation (1):

<table>
<thead>
<tr>
<th>Mode</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1A</td>
<td>Telegraphy without the use of a modulating audio frequency (by on/off keying) for aural reception.</td>
</tr>
<tr>
<td>A3C</td>
<td>Facsimile (with modulation of the main carrier either directly or by a frequency-modulated subcarrier).</td>
</tr>
<tr>
<td>A3E</td>
<td>Double sideband, telephony.</td>
</tr>
<tr>
<td>C3F</td>
<td>Television by analogue modulation and vestigial-sideband operation.</td>
</tr>
</tbody>
</table>
2.18
TELECOMMUNICATIONS ACT
Part 2: Government Notices Act No. 103 of 1996

F1A  Telegraphy for aural reception including RTTY and DATA by means of frequency-shift keying without the use of a modulating audio frequency, one of two frequencies being emitted at any instant.

F1B  Telegraphy including RTTY and DATA by means of frequency-shift keying without the use of a modulating audio frequency, one of two frequencies being emitted at any instant.

F1D  Data transmissions by means of frequency-shift keying without the use of a modulating audio frequency, one of two frequencies being emitted at any instant.

F2A  Telegraphy for aural reception including RTTY and DATA by the on/off keying of a frequency-modulated emission.

F2B  Telegraphy including RTTY and DATA by the on/off keying of a frequency-modulating audio frequency or by means of the on/off keying of a frequency-modulated emission.

F3C  Facsimile by direct frequency modulation of the carrier.

F3E  Frequency-modulated telephony.

G3E  Phase-modulated telephony.

J3E  Single sideband, suppressed carrier, telephony.

J3F  Single sideband, suppressed carrier, modulated by slow scan television audio frequencies.

N0N  Emission of an unmodulated carrier.

R3E  Single sideband, reduced or variable-level carrier, telephony.

W9E  Digital speech multiplexed up to 12 channels.

(3) The transmit apparatus used at an amateur radio station shall under no circumstances or at any time be tuned to a frequency other than that referred to in subregulation (1). The required frequencies shall be selected and maintained such that no appreciable energy shall be radiated at frequencies other than those referred to in subregulation (1), provided that the bandwidth of emissions on bands that have been allocated to amateur radio stations in terms of these regulations shall be restricted to the minimum.
B5B Frequencies and conditions for transmissions over amateur radio stations by holders of class-B licences

(1) Subject to the provisions of subregulations B2, B3 and B4, the following regulations shall apply to all holders of class-B licences as well as the amateur radio stations used by such licensees.

(2) The holder of a class-B licence may, subject to the provisions under "Remarks" below, not transmit at frequencies and modes other than those mentioned below over amateur radio stations; the modes, set out in subregulation B5A (2), are furthermore restricted to the various frequency bands indicated below:

<table>
<thead>
<tr>
<th>Frequency band</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 1 810-1850 kHz</td>
<td>A3E; F3E; G3E; J3E; R3E; A1A; F1A; F1B; F1D; F2A; F2B</td>
</tr>
<tr>
<td>(b) 3 500-3 800 kHz</td>
<td>A1A; F1A; F1B; F2A; F2B; J3E</td>
</tr>
<tr>
<td>(b)(A) 7 000-7 030 kHz</td>
<td>A1A</td>
</tr>
<tr>
<td>(c) 10130-10 140 kHz</td>
<td>A1A; F1A; F1B; F2A; F2B</td>
</tr>
<tr>
<td>(d) 21 100-21 149 kHz</td>
<td>A1A; F1A; F1B; F2A; F2B</td>
</tr>
<tr>
<td>(e) 28 100-28 190 kHz</td>
<td>A1A; F1A; F1B; F1D; F2A; F2B</td>
</tr>
<tr>
<td>(f) 28 225-28 300 kHz</td>
<td>A1A; F1A; F1B; F1D; F2A; F2B</td>
</tr>
<tr>
<td>&lt;g&gt; 28 300-28 500 kHz</td>
<td>A3E; F3E; G3E; J3E; R3E; A1A; F1A; F1B; F1D; F2A; F2B</td>
</tr>
<tr>
<td>(g)(A) 144-146 MHz</td>
<td>A1A; A3E; F1A; F1B; F1D; F2A; F2B; F3E; G3E; J3E; R3E</td>
</tr>
<tr>
<td>(g)(B) 430-440 MHz</td>
<td>A1A; A3E; F1A; F1D; F2A; F2B; F3E; G3E; J3E; R3E</td>
</tr>
<tr>
<td>(h) 433-435 MHz</td>
<td>A3E; F3E; G3E; J3E; R3E; A1A; F1A; F1B; F1D; F2A; F2B</td>
</tr>
</tbody>
</table>
Remarks:

(i) The bandwidth of F3E and G3E emissions shall be restricted to 10 kHz in bands under 50 MHz.

(ii) Bands (b), (c) and (h) are shared with other services and amateur radio stations shall avoid interference with these services.

(3) Limitations in respect of transmissions by an amateur radio station

(a) The transmit apparatus used at an amateur radio station shall under no circumstance, or at any time be tuned to a frequency other than those referred to in subregulation (2). The required frequencies shall be selected and maintained in such a way that no appreciable energy shall be radiated at frequencies other than those mentioned in subregulation (2): Provided that the bandwidth of emissions on bands allocated to amateur radio stations in terms of these regulations shall be restricted to the minimum.

(b) No person may use an amateur radio station for any form of entertainment, including music transmissions, television broadcasts and spread spectrum communication; no person may use a mobile amateur radio station for any purpose.

(c) Class-B emission (damped waves) by an amateur radio station is not permissible.

(d) An amateur or experimental radio station shall not be used for the simultaneous retransmission, by automatic or other means, of programmes or signals originating from another radio station: Provided that the holder of an amateur radio station licence or experimental station licence may relay lawful signals by automatic or other means that originate from a licensed amateur or experimental radio station.

(4) Power of amateur radio stations

No person may operate an amateur radio station if-

(a) the dc input at the input of the final stage immediately preceding the antenna, as measured by means of suitable dc metres in condition of r modulation, exceeds 5 W;

(b) in the case of single-sideband transmitters, the output radio-frequency peak envelope power exceeds 20 W and linearity is not maintained;

(c) an adequately filtered direct-current power supply is not used for the transmitting equipment; and

(d) the coupling between the antenna and the transmitter is such that direct potential at a power-supply frequency dangerous to life exists on the
(5) **Teleprinter operation**

No person shall undertake teleprinter operation in contravention of regulations B7 (2) and B8 (1).

(6) **Measuring equipment**

No person shall operate an amateur or experimental radio station which is not equipped with frequency-measuring equipment with an accuracy of at least 0.1 per cent.

[Regulation B5B inserted by G.N.R. 1358 of 22 June 1990 and amended by G.N.R. 833 of 14 May 1993]

**B6 Music transmissions**

No form of entertainment shall be transmitted from an amateur radio station, provided that music transmissions for experimental purposes shall be permissable on condition that—

(i) such transmissions shall last no longer than three minutes;

(ii) at least five minutes shall elapse before any further music is transmitted from the same station;

(iii) when gramophone records or other commercial recordings are used the make, name or title of such recordings shall not be mentioned; and

(iv) such transmissions shall not take place in bands other than the following:

- 3 500-3 800 kHz
- 50-54 MHz
- 144-146 MHz
- 430-440 MHz
- 1 240-1 300 MHz


**B7 Television transmissions**

(1) The Director-General may, subject to such conditions as he may in each case lay down, authorise the holder of an amateur radio station licence to transmit television, provided that such approval shall only be granted to the licensee after at least 12 months have elapsed since the date of issue of such licence.
(2) in the case of television transmissions the station call sign shall also be given in hand-speed morse code or radiotelephony at the beginning and end of each transmission and at least once every 15 minutes in the stipulated manner in the case of long transmissions.

**B7A Spread-spectrum communications**

(1) The Director-General may, subject to the condition that interference is not caused to other users of the same frequency band and such other conditions as he may deem necessary, on application, authorize the holder of an amateur radio station licence to employ spread-spectrum communications.

(2) In an application referred to in paragraph (1) the frequencies and the mode to be used shall be furnished.

[Regulation B7A inserted by G.N.R.1349 of 30 June 1989.]

**B8 Teleprinter working**

(1) Teleprinter operation with call-sign identification in teleprinter code between amateur radio stations is permissible without prior approval of the Director-General, provided that the maximum operating speed shall be restricted to 300 baud in the HF bands and to 1200 baud in the VHF and UHF bands.

(2) In the case of any such transmission the call sign identification shall be given in teleprinter code at the beginning and end of each transmission and at least once every 15 minutes in the case of long transmissions.


**B9 Restrictions with regard to transmissions by an amateur radio station**

(1) Subject to the provisions in subregulations (2), (3) and (4) and any other condition of these regulations, the holder of an amateur radio station licence may use any of the modes referred to in regulation B5 (1).

(2) Class B emission (damped waves) by an amateur radio station is not permissible.

(3) ........

(4) The holder of a restricted amateur radio station licence shall use his station only at frequencies of 50 MHz or higher and shall not communicate with other amateur radio stations operating at frequencies below 50 MHz.

(5) An amateur or experimental radio station shall not be used for the simultaneous retransmission by automatic or other means of programs or signals originating from another
radio station, provided that the holder of an amateur radio station licence or experimental station licence may relay legal signals by automatic or other means that originate from a licensed amateur or experimental radio station.

(6) An amateur radio station shall not be erected for use from a public vehicle.


B10 Power of amateur radio stations

(1) The dc output of amateur radio stations at the input of the final stage immediately preceding the antenna, as measured by means of suitable dc meters in a condition of no modulation, shall not exceed 150 W.

(2) In the case of single-sideband transmitters the output radio-frequency peak envelope power shall be not more than 400 W and linearity shall be maintained.

(3) The holder of an amateur radio station licence shall not use or own equipment that may exceed the restrictions imposed by subregulations (1) and (2) above.

(4) An adequately filtered direct-current power supply shall be used for the transmitting equipment.

(5) The coupling between the antenna and the transmitter shall be such that no direct potential at a power-supply frequency dangerous to life exists on the antenna. The antenna system shall furthermore comply with the requirements of the relative local authority.


B11 Frequency-measuring equipment

Every amateur or experimental radio station shall have frequency-measuring equipment with an accuracy of at least 0.1 per cent.

B12 Mobile amateur radio station

(1) An amateur may use a mobile amateur radio station within the boundaries of the Republic. When such a station is used in an amateur radio zone other than that in which the amateur resides the call sign allotted to the main station shall-

(i) in the case of continuous-wave radiotelegraphy be followed by the group -.-., the letter M and the number of the zone from where the station is operated; and
(ii) in the case of radiotelephony be followed by the word "mobile", followed by the number of the zone from where the station is operated.

(2) For the application of the provisions of subregulation (1) in respect of zones the different zones of the Republic are indicated in Annexure F to these regulations.

\section*{B1.3 Amateur radio operator certificate}

(1) No person shall obtain an amateur radio operator's certificate unless he has passed an examination set by the Director-General, on the syllabuses approved by him for class-A and class-B licences.

(2) Any person permitted by the Director-General and who is not prohibited by the provisions in paragraphs (i) to (iii) of regulations B1 (2) and B1 (3) from qualifying may sit for the examination on payment of the applicable amount in respect of the certificate referred to in regulation E2 (i).

(3) The examination shall be conducted at least once a year at centres indicated by the Director-General.

(4) Amateur radio operator certificates shall be issued to candidates who pass the examination and such certificates are not recognised for any purpose other than the issuing of an amateur radio station licence. Subject to the provisions of the Act and these regulations, the possession of such certificate shall not endow the holder with any right or claim to an amateur radio station licence.

(5) The holder of an amateur radio operator certificate whose licence has expired for any reason whatsoever shall comply with the provisions of regulations B1 (2) (iii) and B1 (3) (iii) before an application from him for a new licence will be considered.

(6) (a) The syllabuses for the examination referred to in subregulation (1) are obtainable from the Director-General. Three hours shall be allowed for the examination paper consisting of various parts. To pass the examination, a candidate must obtain at least 40 per cent in each of the relevant parts with a total average of 50 per cent.

(b) A candidate who passes either of the parts referred to above and passes the remaining part within three successive attempts, which must commence with the examination immediately after the one in which a candidate was unsuccessful, with a percentage which gives him an average of at least 50 per cent, shall be exempted from writing the whole examination again.
CHAPTER 4

ULTRA HIGH FREQUENCY (UHF), VERY HIGH FREQUENCY (VHF), HIGH FREQUENCY (HF), and very short range band (VSRB) STATIONS IN THE LAND AND MARITIME MOBILE SERVICES

[Heading substituted by G.N.R. 2633 of 12 December 1986.]

C1 UHF, VHF and HF stations

The licensee is obliged to ensure that parasitic emissions, including harmonic radiations and intermodulation products, do not exceed the following limits at any point in the entire frequency range of 100 kHz to 1 000 MHz:

1. Below 30 MHz:
   (a) The mean power output of fixed installations may not exceed 50 mW or 17 dB (mW).
   (b) The mean power output for hand-held portable units of less than 5 W may not exceed 5 mW or 7 dB (mW).
   (c) Mobile transmitters may not exceed 200 mW or 23 dB (mW).

2. 30-235 MHz:
   (a) Transmitters with a mean power output exceeding 25 W may not exceed 1 mW or 0 dB (mW).
   (b) Transmitters with a mean power output of not exceeding 25 W may not exceed μ25 W or -16 dB (mW).
(3) 235-470 MHz:
Transmitters with a mean power output of not exceeding 25 W may not exceed 25\(\mu\)W or -16 dB (mW).

(4) 30-470 MHz:
Hand-held portable equipment with a mean power output of not exceeding 5 W may not exceed 100\(\mu\)W or -10 dB (mW).
[Regulation C1 substituted by G.N R.1349 of 30 June 1989.]

C1A Frequency-modulated maritime mobile radio-telephone apparatus

The mean power of any spurious emission falling in any other international maritime mobile channel owing to products of modulation shall not exceed 10\(\mu\)W and the mean power of any other spurious emission on any discrete frequency within the international maritime mobile band shall not exceed 2,5\(\mu\)W, but if transmitters with a mean power exceeding 20 W are used, these limits may be increased in proportion to the mean power of the transmitter.
[Regulation C1A inserted by G.N.R.1349 of 30 June 1989.]

C2 VSRB stations

Licensees who operate stations on the very short range band (26,965 MHz - 27,175 MHz) must ensure that they comply with the following requirements:

(i) Frequency tolerance: 200 parts in 10^6.

(ii) Bandwidth: 6 kHz.

(iii) Final stage dc input: 100 mW.

(iv) Maximum length of antenna of transmitter: 1.5 m.

(v) Spurious emissions, including harmonic radiations and intermodulation products: 50 \(\mu\)W or -13 dB (mW) maximum.

Frequencies in the frequency band 26.96 to 27.28 MHz are intended mainly for industrial, scientific and medical purposes. Users of radio-communication services who operate within the limits of these frequencies shall unconditionally accept harmful interferences and the Director-General will not investigate such interferences.

Issue No. 12 (2002)
C3 Private communal radio repeater station service

(1) The Director-General may, subject to the provisions of section 7 of the Act, and of these regulations and on the conditions set out in this Chapter, on payment of the prescribed amount issue a licence to a person to operate a private communal radio repeater station service.

(2) Any person who intends to apply to the Director-General for the issuing of a licence to operate a private communal radio repeater station service shall:

(a) himself approach existing licensees in the area of operation referred to in paragraph (b) (i) to obtain suitable frequencies for the purpose of the operation of the private communal radio repeater station service, and the Director-General shall consider the assignment of such frequencies or other frequencies in areas where they are readily available;

(b) furnish the Director-General with:

(i) a map of the environment indicating the area of operation of the communal radio repeater station service;

(ii) particulars of repeater station frequencies allocated to him within the mentioned area of operation as well as to prospective users of the private communal radio repeater service who already hold repeater-station licences, in order to enable the Postmaster General to consider the re-allocation or withdrawal thereof;

(iii) a copy of such licence and the written approval of the licensee concerned for the re-allocation or withdrawal thereof.

(3) No person shall use a trunking system without the approval of the Director-General: Provided that such approval will only be considered in cases where multichannel allocations are already in use on the private communal radio repeater station service.

(4) (a) A licence for an additional private communal radio repeater service in a specific area may be issued by the Director-General if each of the licensee's existing private communal radio repeater services in the same area (urban and rural) services a minimum of 10 clients and 100 two-way radio stations.

(b) If the licensee's existing private communal radio repeater service(s) does or do not comply with the requirements specified in subregulation (4) (a), a licence may be issued by the Director-General if proof of channel occupation to justify the application, is furnished.
C4 Technical requirements for the operation of a private communal radio repeater station service

(1) Subject to the provisions of the Act and of these Regulations no person shall operate or use a private communal radio repeater station service unless-

(a) tone signalling is built into all stations in the system: Provided that if the CTCSS signalling method (continuous-tone coded squelch system) is not used, some other method of automatic tone control shall be used to ensure that contact with the repeater station is maintained at the end of each message in order to enable the recipient of the message to reply;

(b) each station is equipped with a 2-minute forced repeater-release facility: Provided that the forced release shall not be exclusively dependent on the discontinuance of the carrier;

(c) the private communal radio repeater has a facility to prevent any user group from re-engaging it within 1 minute of completing a call;

(d) all transceivers have a built-in facility to prevent the transmission of a carrier while the private communal radio repeater is being used by other clients and by means of which it can be ascertained whether the system is engaged; and

(e) the transmitter power is as follows:

(i) VHF midband-base/mobile 30 watt RF/30 watt ERP
VHF midband-repeater 50 watt RF/100 watt ERP

(ii) VHF high band-base/mobile 30 watt RF/30 watt ERP
VHF high band-repeater 30 watt RF/100 watt ERP

(iii) UHF band-base/mobile 5 watt RF/20 watt ERP
UHF band-repeater 15 watt RF/60 watt ERP

C5 Licensee's responsibility to keep a register of users communal radio repeater station service

(1) (a) The licensee of a private communal radio repeater station service shall keep a register of each user connected by the service, reflecting the user's name as well as the address of the base station: Provided that the name and address of the user himself is
required in cases where a base station is not used.

(b) A copy of the register referred to in subregulation (a) shall be made available to the Director-General on his request and shall, if an application is made for a licence for an additional private communal radio repeater station in a specific area, accompany such application in confirmation, as prescribed in regulation C3 (4) (a), of the clients and stations served by an existing system in that area.

(2) (a) At the end of each month the licensee shall send a copy of the register referred to in subregulation (1) by certified post to the Director-General (3C16), Private Bag X74, Pretoria, 0001, to reach him not later than the 14th day of the next month.

(b) On the copy referred to in paragraph (a) the additional users connected to the system during the previous month must be clearly identified.

(c) Particulars must be provided separately in respect of those persons who cancelled the use of the service during the course of the month to which the copy relates.

CHAPTER 4A

RADIO TRUNKING SERVICE

Definitions

1. In this chapter, unless the context otherwise indicates-

"fixed dispatch station" means a station of a user of a radio trunking system which is situated at a fixed address and which is not designed or adapted for use while in movement;

"local radio trunking service" means a radio trunking service provided by means of a local radio trunking system;

"local radio trunking system" means a radio trunking system consisting of a single base station and which provides communication within a limited area in non-urban areas and, under particular circumstances as prescribed by the Director-General, in urban areas;

"national radio trunking service" means a radio trunking service provided by means of a national radio trunking system;
"national radio trunking system" means a radio trunking system consisting of various connected regional radio trunking systems expanded along national main road routes and in which could be included local radio trunking systems, in such a manner that communication can take place between the stations of a user over the total national coverage area of the national radio trunking system;

"network operator" means a person authorized to construct, operate and maintain a national radio trunking system or a regional radio trunking system;

"radio trunking" means a technique by means of which free channels out of a group of radio frequency channels allocated to a base station are automatically made available for the establishment of a connection between the stations of a user;

"radio trunking service" means a radio communication service provided by means of a radio communication system;

"radio trunking system" means a radio communication system,

(i) which utilises radio trunking,

(ii) which does not hand over calls between cells, and

(iii) of which the primary purpose is not coupling with the public switched telephone network;

"regional radio trunking system" means a radio trunking system consisting of various base stations at multiple sites, which base stations are connected by means of a nodal switch in such a manner that it functions as an integrated system to provide service over the total relevant geographical area inside an urban complex, as determined by the Director-General;

"regional radio trunking service" means a radio trunking service provided by means of a regional radio trunking system;

"service provider" means a person who, in agreement with the licensee of a national radio trunking system or a regional radio trunking system, provides airtime or airtime together with radio apparatus to the users of such a system.

Conditions applicable to applications for licences and the construction of radio trunking systems

2. (1) The Director-General may-
(a) on application and against the provision of a performance bond to him, authorise a person to construct a national radio trunking system, a regional radio trunking system or a local radio trunking system; and

(b) subject to the conditions of regulation 3 (1), issue to such a person a licence to operate and maintain such a system.

(2) The total amount of the performance bond referred to in subregulation (1) shall, in respect of a particular authority, be the amount of R2 000 multiplied by the number of radio frequency channels which is indicated in the relevant authority.

(3) An application for an authorisation shall be accompanied by a Schedule of Construction which, apart from any additional particulars which may be required by the Director-General, shall indicate the particulars in respect of-

(a) the geographical area, or areas, which will be served; and

(b) the addresses, geographical co-ordinates and number of channels required in respect of each base station which the applicant proposes to erect initially and in the future and the proposed month and date of commissioning, in respect of the proposed radio trunking system.

(4) Any departure from the particulars contained in the Schedule of Construction shall be fully motivated and shall be subject to prior written approval by the Director-General.

(5) An applicant shall provide the performance bond referred to in subregulation (2) within fourteen days after his application has been approved, after which the relevant authority may be issued to him.

(6) The initial construction periods within which radio trunking systems shall be constructed and, subject to regulation 3 (1), put into operation, are-

(a) twenty-four months in the case of a national radio trunking system or a regional radio trunking system; and

(b) eighteen months in the case of a local radio trunking system.

(7) The periods referred to in subregulation (6) shall commence on the date mentioned in the authority.

(8) If a radio trunking system is fully commissioned within the initial construction period with the number of assigned channels and in accordance with the Schedule of Construction, the performance bond provided in favour of the Director-General shall be cancelled.

Issue No. 12 (2002)
(9) The following extended construction periods may be granted, subject to the provisions of subregulation (10), if a radio trunking system is not completed within the initial construction period:

(a) twelve months for a national radio trunking system or a regional radio trunking system; and

(b) six months for a local radio trunking system.

(10) A portion of the performance bond is immediately payable as follows to the Director-General for each period of a month, or a portion thereof, with which the initial construction period is exceeded until, subject to subregulation (14), a radio trunking system is completed:

(a) one twelfth of the amount calculated in terms of subregulation (2) in the case of a national radio trunking system or a regional trunking system; and

(b) one sixth of the amount calculated in terms of subregulation (2) in the case of a local radio trunking system.

(11) The balance of the performance bond not paid to the Director-General in terms of subregulation (10) shall be cancelled if a radio trunking system is fully commissioned within the extended construction period with the number of assigned channels and in accordance with the Schedule of Construction.

(12) The total performance bond or the balance thereof, as the case may be, shall be payable to the Director-General immediately during the initial and the extended construction periods:

(a) if an authority or licence is cancelled on the request of an authorised person or a licensee or as a result of any action by him; or

(b) if the Director-General is requested to transfer an authority or a licence to another person; or

(c) as a result of a transgression of the Act or the violation of any special condition of an authority or a licence; or

(d) in the event of the liquidation or the dissolution of an authorised person or a licensee.

(13) If the initial construction period expires without the commissioning of a complete radio trunking system the Director-General may issue to another person, who shall have no connection with the unsuccessful person, an authority for the construction and a licence for the commissioning of a radio trunking system in the same area.
(14) If the extended construction period expires without a radio trunking system having been fully commissioned, any authority or licence issued to the unsuccessful person shall be cancelled.

Inspection of radio trunking system, licence fees and periods of validity of licences

3. (1) A radio trunking system or portion thereof shall not provide communication service to any person unless such a system or portion thereof has been inspected by the Director-General, approved by him and a licence for the operation of such a system has been issued.

(2) The licence fee for a radio trunking system is payable as from the date on which the system or any portion thereof is commissioned, or as from the date on which the initial construction period, as determined in regulation 2 (6), expires, whichever date occurs first.

(3) The licence fee for radio trunking services are prescribed by item 5.5 of Chapter 6.

(4) Licence fees are payable annually in advance on the date which is determined by the Director-General and no portion thereof is refundable for whatever reason.

(5) Written notification of at least 30 (thirty) days shall be given by the Director-General to a licensee of the licence fee payable on each anniversary of a licence and payment must be made within 30 days from the date of the notification.

(6) Provided the licence fee has been paid and unless a licence is cancelled earlier, it shall remain valid-

   (i) for fifteen years for a national radio trunking system;

   (ii) ten years for a regional radio trunking system; and

   (iii) five years for a local radio trunking system,

(7) When a validity period referred to in subregulation (8) has expired, application can be made for the renewal of the licence mentioned therein.

[Regulation 3 amended by G.N.R.1676 of 18 October 1996.]

General conditions for the operation of a radio trunking system

4. (1) No one shall, with regard to the operation of a radio trunking system or the provision of such service do anything which is contrary to the provisions of the Post Office Act, 1958 (Act No. 44 of 1958).
(2) Except as determined by subregulation (5) a licensee shall, with regard to any client, employ a radio trunking system only to convey messages between the stations of such client.

(3) Messages implied by subregulation (2) shall be conveyed between different radio trunking systems of the licensee only by means of telecommunications lines of the telecommunications company defined in the Post Office Act, 1958.

(4) The interconnection of radio trunking systems of different licensees is not permitted.

(5) The Director-General may, on the undermentioned conditions and such other conditions as he may deem necessary, grant approval for the interconnection of the licensee's radio trunking system with the public switched telephone network in order to permit limited communication for essential purposes between users of the licensee's system and users of the public switched telephone network:

(a) In the case of a regional system the interconnection shall be made at the nodal switching unit in that region.

(b) In the case of a national system the interconnection shall be made at the nodal switching unit in each regional component of the national system.

(c) Any communication between a mobile station served by the licensee's system and a destination on the public switched telephone network shall only take place over the interconnection serving the area in which the mobile station is situated.

(d) The apparatus intended for such interconnection shall be licensed in terms of section 78 of the Post Office Act, 1958, and proof thereof shall be furnished to the Director-General.

(e) The licensee shall regularly monitor the performance of the radio trunking system and ensure that-

(i) the interconnection of his system with the public switched telephone network is at most an ancillary feature of the service provided by the licensee;

(ii) a communication originated in the public switched telephone network and then carried by the licensee's system, is not again rerouted to the public switched telephone network; and

(iii) information, as may be required, is provided to the Director-General about-
(a) the total traffic,
(b) the traffic in respect of different clients, and
(c) the traffic over the interconnection with the public switched telephone network.

(6) A person authorised to construct a radio trunking system or a licensee-

(a) shall not verbally or otherwise convey to any person that the Director-General recommends the use of his radio trunking system above that of another radio trunking system, but may disclose that he has been authorised by the Director-General to construct a radio trunking system or is licensed to operate and maintain such a system, as the case may be, and may advertise such service;

(b) shall not provide radio communication service to a client or allow access from another radio trunking system if such service or such access is or would be in contravention of the provisions of section 78 of the Post Office Act, 1958, the Regulations or the conditions of a licence;

(c) shall not, in his capacity as a network operator, provide airtime or radio apparatus directly to the users of his own radio trunking system, but shall utilise for this purpose service providers, who shall not be the same legal person as the licensee and who are in his opinion sufficiently qualified to provide only airtime on the relevant radio trunking system or airtime and radio apparatus to the users thereof. A network operator shall-

(i) conclude a written service contract with a service provider; and
(ii) lodge a copy of such a service contract with the Director-General;

(d) shall inform the Director-General and provide him with particulars about-

(i) any proposals for changes to a radio trunking system or to any apparatus comprised therein; and
(ii) any new service or facilities being contemplated for incorporation in a radio trunking system;

(e) shall keep complete records of-

(i) service providers, where applicable;
(ii) the type and number of stations which make use of the radio trunking system; and

(iii) the grade of service on the installed radio frequency channels;

and shall assist the Director-General to obtain information about the names and addresses of users of a radio trunking system;

(f) shall be responsible for complying with any property right requirements that may be applicable to any apparatus, signalling protocols, facilities or service comprised in a radio trunking system;

(g) or any member of his group shall not, in respect of the provision of any aspect of the radio trunking service, show any undue preference for or exercise any discrimination against any service provider or client by subsidising the following:

(i) The manufacturing of radio communication apparatus for connection to a radio trunking system;

(ii) the provision of radio communication apparatus on a radio trunking system consisting of the installation, maintenance, adjustment, repair, alteration, moving, removal or replacement of such apparatus which is or will be comprised in any radio communication system which is or will be authorised to use a radio trunking system;

(iii) the provision of any service which is provided in whole or in part by means of a radio trunking system; and

(iv) the conveyance of messages by means of a radio trunking system;

and shall, where such practices take place, take such steps as the Director-General may direct to rectify the situation;

(h) shall record, and declare upon request to the Director-General, any transfer of apparatus, material or goods between him and service providers, or between him and radio dealers at full cost in his accounting records.

(7) Service providers are, in terms of the service contract implied by regulation 4 (6) (c), responsible to network operators for the proper conduct of business in connection with the provision of radio trunking service to users.

(8) Anyone who provides radio apparatus in connection with a radio trunking system shall be in possession of a valid radio dealers' registration certificate and shall, if he is not a service provider, provide radio apparatus to users of a radio trunking system only through
Conditions for the establishment and operation of base stations

5. (1) Base stations of a radio trunking system shall, in order to transmit and receive messages between mobile and fixed dispatch stations, be constructed strictly in accordance with the following characteristics as contained in the columns in the Schedule of Operation of, as the case may be, the relevant authority or licence-

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Base station sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 2</td>
<td>Type of apparatus</td>
</tr>
<tr>
<td>Column 3</td>
<td>Assigned radio frequency channels</td>
</tr>
<tr>
<td>Column 4</td>
<td>Transmit and receive modes</td>
</tr>
<tr>
<td>Column 5</td>
<td>Maximum power which shall not be exceeded by the effective radiated power</td>
</tr>
<tr>
<td>Column 6</td>
<td>Type of antenna</td>
</tr>
<tr>
<td>Column 7</td>
<td>Maximum antenna height</td>
</tr>
<tr>
<td>Column 8</td>
<td>Antenna pattern</td>
</tr>
</tbody>
</table>

(2) A base station shall only be used to convey messages by means of-

(a) radio between mobile stations and between such stations and fixed dispatch stations within the coverage area of that base station; and

(b) subject to regulation G11, a telecommunications line of the telecommunications company, as defined in the Post Office Act, 1958, to any other base station or the nodal switching unit of the licensee's system.

(3) All radio apparatus, including the mobile and fixed dispatch stations, shall comply with the British MPT 1327 and MPT 1343 and associated specifications as adapted by the South African Bureau of Standards for the frequency bands 254.0-259.4 megahertz and 262.0-267.4 megahertz. Acceptable proof of such compliance must be provided to the Director-General before a radio trunking system is taken into service.

(4) The facility of system roaming shall be provided in order to enable any person authorised to use a specific radio trunking system to transmit, subject to subregulation (2), messages upon demand via another radio trunking system.
Non-compliance with licence conditions

6. (1) If a transgression of the provisions of the Act, the Regulations or any special conditions under which an authority or a licence has been issued, is committed, the Director-General shall give written notice of such transgression to the authorised person or the licensee, as the case may be, who shall comply with the request contained in the notification within a period of 60 days, or such other period as the Director-General may determine.

(2) Written confirmation of compliance with the notification shall be supplied to the Director-General within the period determined.

(3) Subject to the provisions of section 14 of the Act an authority or a licence shall be suspended or cancelled if an authorised person or a licensee-

(a) requests in writing that an authority or a licence be suspended or cancelled; or

(b) cannot pay the licence fee which is due within the periods allowed; or

(c) applies for voluntary liquidation or dissolution; or

(d) is placed under provisional or final liquidation.

(4) The Director General may, if a transgression of the provisions of the Act, the Regulations or any special condition of an authority or a licence persists, make such arrangements as he may deem necessary to ensure that a radio trunking system is operated in accordance with the provisions of the Act, the Regulations, or such special conditions and in the interests of the users of a system.

(5) If, in the opinion of the Director-General, an acceptable grade of service, with reference to specification MPT 1318, is not rendered by a radio trunking system, the Director-General may, at his discretion-

(i) reduce the channels assigned to a licensee; or

(ii) require that the number of channels be increased if free channels are available for assignment; or
(iii) order that connection with the public switched telephone network be decreased or ceased.

[Chapter 4A inserted by G.N.R.2412 of 17 December 1993.]

CHAPTER 5

CITIZEN-BAND RADIO SERVICE

D1 Licences for the operation of a citizen-band radio station

(1) On payment of the prescribed amount the Director-General may issue a licence for the operation of a citizen-band radio station to any person provided that in the case of a natural person a licence is not issued, unless such person is at least 18 years of age.

(2) A licence issued in terms of subregulation (1) confers on the licensee the right to use a citizen-band radio station from his car or other vehicle or vessel or home or from any fixed point.

(3) The following persons may also be permitted by the licensee to use his citizen-band radio station on the authority of the licence issued to him:

(i) A member of the licensee's household who resides with him.

(ii) Any of the licensee's employees, provided the communications concern the business of the licensee only.

(iii) Every partner or employee of a partnership that is a licensee; provided the communications concern the business of the partnership only.

(iv) Every member of an association and employee of an association that is a licensee; provided the communications concern the business of the association only.

(v) Every official, director or employee of a company that is a licensee provided the communications concern the business of the company only.

(vi) Anybody else, provided the specific permission of the Director-General has been obtained.

N.B. In cases (ii) to (v) communication between fixed points for business purposes is prohibited.
D2 Frequencies for transmitting over the citizen-band radio-service

(1) No person may transmit in the citizen-band on any frequency other than the following:

<table>
<thead>
<tr>
<th>Channel</th>
<th>Frequency (MHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>27,185</td>
</tr>
<tr>
<td>20</td>
<td>27,205</td>
</tr>
<tr>
<td>21</td>
<td>27,215 Emergency channel [see subregulation (2)]</td>
</tr>
<tr>
<td>22</td>
<td>27,225</td>
</tr>
<tr>
<td>23</td>
<td>27,255</td>
</tr>
<tr>
<td>24</td>
<td>27,235</td>
</tr>
<tr>
<td>25</td>
<td>27,245</td>
</tr>
<tr>
<td>26</td>
<td>27,265</td>
</tr>
<tr>
<td>27</td>
<td>27,275</td>
</tr>
</tbody>
</table>

(2) Although any channel may be used for emergency communications or for assistance to travellers, channel 21 may not be used for purposes other than emergency communications or travellers’ assistance.

(3) All channels are for the common use of all licensees and no channel will be reserved for the private or exclusive use of any particular station or group of stations, nor for single sideband or AM reception or transmission.

(4) Frequencies in the frequency band 26,96 to 27,28 MHz are intended primarily for industrial, scientific and medical purposes. Users of the citizen-band radio service who work within the limits of this frequency band shall unconditionally accept harmful interference from these sources and the Director-General will not investigate complaints about such interference.

D3 Communication between citizen-band radio stations

(1) Citizen-band radio stations may only be used to communicate with other license citizen-band radio stations. Reception of as well as transmission to foreign radio stations and radio stations not licensed in the citizen-band radio service is prohibited.

(2) Except in the case of paging when one-way communication is permissible, communication in the citizen-band radio service must be by means of two-way conversations in plain language or in the 10 code.

(3) No person shall use the citizen-band radio service to-
2.41

TELECOMMUNICATIONS ACT

Part 2: Government Notices

(i) transmit material intended for direct or indirect transmission over a broadcasting station;

(ii) advertise any goods, services or public campaign or canvass votes for a political candidate;

(iii) communicate for business purposes between fixed points; or

(iv) operate the system in such a way as to cause interference to any other radio station.

(4) No licensee or any other person may accept remuneration for the transmission or reception of messages over the citizen-band radio service.

(5) Users of the citizen-band radio service shall be obliged to give priority to emergency communications at all times.

(6) Communication between citizen-band stations must be as brief as practicable and must not exceed five continuous minutes except in the case of an emergency. All stations that participated in such communication shall not transmit again for at least one minute.

D4  Use of a handle, station indicator or other special identification

A handle, station indicator or other special identification may be used in addition to, but not instead of the call sign allocated to the station by the Director-General. Similarly, the phonetic alphabet may be used as an aid to identification.

DS  Modification/adjustment of citizen-band radio apparatus

No person shall effect any modification or adjustment to an approved citizen-band radio apparatus without the express approval of the Director-General. All repairs or approved adjustments shall be made by or under the direct supervision of a registered radio dealer.

D6  Technical requirements that citizen-band radio apparatus must satisfy

(1) Citizen-band radio apparatus shall satisfy the following technical requirements:

- **Power**: 4W (carrier wave power) AM.
- 1 2W (peak envelope power) SSB.
- **Emission**: A3 or A3J.
- **Bandwidth**: 6 kHz.
- **Channel spacing**: 10 kHz.
Frequency tolerance: ±1.5 kHz.
Antenna: Unity gain (with reference to a quarter-wave ground-plane antenna).

Spurious radiation, including harmonic emissions and intermodulation products:

(i) For fixed and mobile transmitters with an output of 4 W-attenuation at least 30 dB below the mean power of the fundamental frequency.

(ii) For portable radio transmitters of 4 W-attenuation at least 30 dB.

(2) No person shall connect or use a linear or additional radio-frequency amplifier to a citizen-band radio station. For the purposes of this regulation, it will be assumed that a linear or additional amplifier has been used if-

it is in the possession or on the premises of the user; and for

there is proof that the citizen-band radio station has been operated with more than the permissible power.

(Chapter 5 amended by G.N.R. 148 of 25 January 1980.)
CHAPTER 5A

EARTH STATION FOR PRIVATE SATELLITE RECEPTION


CHAPTER 6

LICENCE AND EXAMINATION FEES

Subject to the provisions of the Act and of these regulations, the Director-General may issue, against the payment of fees as indicated hereunder, licences and certificates for the use of radio-communication and for conducting examinations.
### E1 Licence fees

<table>
<thead>
<tr>
<th>Type of radio-communication service</th>
<th>Prescribed fees per year but subject to regulation E1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AMATEUR RADIO</td>
<td></td>
</tr>
<tr>
<td>(i) All classes of licences</td>
<td>27.00</td>
</tr>
<tr>
<td>(ii) Beacon</td>
<td>48.00</td>
</tr>
<tr>
<td>(iii) Change of call sign on request</td>
<td>27.00</td>
</tr>
<tr>
<td>(iv) Guest or special event licence</td>
<td>27.00</td>
</tr>
<tr>
<td>(v) Listener</td>
<td>48.00</td>
</tr>
<tr>
<td>(vi) Repeater station including radio link</td>
<td>48.00</td>
</tr>
<tr>
<td>(vii) Digipeater/Bulletin Board</td>
<td>27.00</td>
</tr>
<tr>
<td>(viii) Experimental station for weather satellite reception and retransmission</td>
<td></td>
</tr>
<tr>
<td>2. AERONAUTICAL</td>
<td></td>
</tr>
<tr>
<td>(i) Aircraft station</td>
<td>48.00</td>
</tr>
<tr>
<td>(ii) Beacon</td>
<td>48.00</td>
</tr>
<tr>
<td>(iii) Ground Station</td>
<td>48.00</td>
</tr>
<tr>
<td>(iv) Relay Station</td>
<td>48.00</td>
</tr>
<tr>
<td>(v) Radio Link</td>
<td></td>
</tr>
<tr>
<td>3. LAND MOBILE SERVICE</td>
<td></td>
</tr>
<tr>
<td>3.1 Alarm station (see also item 5.1 for alarm systems)</td>
<td>18.00</td>
</tr>
<tr>
<td>3.2 Base station</td>
<td></td>
</tr>
<tr>
<td>(i) Citizen band</td>
<td>33.00</td>
</tr>
<tr>
<td>(II) Civil Defence/Privetnet</td>
<td></td>
</tr>
<tr>
<td>(a) Station without private frequency</td>
<td>33.00</td>
</tr>
<tr>
<td>(b) Station with private frequency(cies)</td>
<td>42.00</td>
</tr>
<tr>
<td>(iii) 27/29 MHz frequency band</td>
<td></td>
</tr>
<tr>
<td>(a) Station with one frequency channel</td>
<td>33.00</td>
</tr>
<tr>
<td>(b) Station with more than one frequency channel (including station for use at sea and inland waters)</td>
<td>42.00</td>
</tr>
<tr>
<td>(iv) Other</td>
<td></td>
</tr>
<tr>
<td>(a) Station with one single frequency channel</td>
<td>42.00</td>
</tr>
<tr>
<td>(b) Station with more than one single frequency channel</td>
<td>48.00</td>
</tr>
<tr>
<td>(c) Station with one or more double frequency channels</td>
<td>48.00</td>
</tr>
<tr>
<td>(d) High frequency band:</td>
<td></td>
</tr>
<tr>
<td>(i) First base station</td>
<td>48.00</td>
</tr>
<tr>
<td>(ii) Each additional base station</td>
<td>90.00</td>
</tr>
<tr>
<td>(iii) Civil Defence station</td>
<td>48.00</td>
</tr>
<tr>
<td>3.3 Experimental station</td>
<td>27.00</td>
</tr>
</tbody>
</table>
### 2.45
#### TELECOMMUNICATIONS ACT

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<table>
<thead>
<tr>
<th>Type of radio-communication service</th>
<th>Prescribed fees per year subject to regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4 Load management <strong>station</strong> <em>(see also item 5.2)</em></td>
<td>1.20</td>
</tr>
</tbody>
</table>

#### 3.5 Mobile two-way stations

- (i) Citizen band
- (ii) Civil Defence/Metnet:
  - (a) **Station** without private frequency
  - (b) **Station** with private **frequency**
- (iii) *(26/27 MHz frequency band with apparatus not exceeding 100 mW)*
  - (a) **Station** in the **ultra high frequency** band for on-site communication and apparatus that does not exceed 2 watts
- (iv) *(27/29 MHz)*
  - (a) **Station** with one frequency channel
  - (b) **Station** with more than one frequency channel *(including station for use at sea and inland waters)*

#### 3.6 Paging station which is used in a system other than that indicated under Hem 5.4:

- (i) One-way
- (ii) Two-way

#### 3.7 Relay station:

- (i) **Station** with one **single frequency** channel
- (ii) **Station** with more than one single frequency channel
- (iii) **Station** with double **frequency** channel

#### 3.8 Repeater station *(see item 5.6)*

#### 3.9 Special radio service: P**ref** licence

#### 3.10 Telemetry station

---

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<table>
<thead>
<tr>
<th>Type of radio-communication service</th>
<th>Prescribed fees per year but subject to regulation E1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.11 Licence fees payable by the South African National Defence Force, South African Police Services, Telkom SA Ltd and Trananet Ltd: Per MHz frequency spectrum</td>
<td>1 540.00</td>
</tr>
<tr>
<td>3.12 Radio link station:</td>
<td></td>
</tr>
<tr>
<td>(i) Single frequency link below 1 000MHz (per control and/or interconnect point)</td>
<td>42.00</td>
</tr>
<tr>
<td>(ii) Double frequency link below 1 000MHz (per control and/or interconnect point)</td>
<td>48.00</td>
</tr>
<tr>
<td>(iii) Radio link above 1 000MHz: per MHz calculated on the assigned bandwidth per frequency (per control and/or interconnect point)</td>
<td>770.00</td>
</tr>
</tbody>
</table>

4. MARITIME

4.1 Beacon | 48.00 |

4.2 Coast station:

0) Non-commercial

(a) Commercial:

   (a) In the medium and high frequency bands: per base station with-

   1 to 5 mobile stations | 2 028.00 |
   6 to 10 mobile stations | 4 008.00 |
   11 to 15 mobile stations | 5 988.00 |
   16 to 20 mobile stations | 7 968.00 |
   21 and more mobile stations | 9 948.00 |

   (b) In the very high frequency band: per base station with-

   1 to 5 mobile stations | 1 238.00 |
   6 to 10 mobile stations | 2 424.00 |
   11 to 15 mobile stations | 3 612.00 |
   16 to 20 mobile stations | 4 800.00 |
   21 and more mobile stations | 5 988.00 |

4.3 Ship station: Maritime frequency band | 48.00 |

4.4 Ships operating on land mobile frequencies [See items 3.2(ii)(b) and 3.5(iv)(b)] |

5. RADIO-COMMUNICATION SYSTEMS

5.1 Alarm:

(i) Urban complexes (Durban and Pietermaritzburg, Cape Peninsula and surroundings, the greater Johannesburg, Pretoria and Vereeniging areas):

   Per control room and per frequency channel: Minimum licence fee as for 240 alarm stations | 4 320.00 |
### TELECOMMUNICATIONS ACT

Part 2: Government Notices

<table>
<thead>
<tr>
<th>Type of radio-communication service</th>
<th>Prescribed fees per year but subject to regulation E1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ii) AH other areas:</td>
<td></td>
</tr>
<tr>
<td>Per control room and per frequency channel: Minimum licence fee as for 100 alarm stations</td>
<td></td>
</tr>
<tr>
<td>(iii) Extensions: Minimum licence fee as for 20 alarm stations</td>
<td></td>
</tr>
<tr>
<td>1 800.00</td>
<td></td>
</tr>
<tr>
<td>5.2 Load management: minimum licence fee as for 200 load management stations</td>
<td></td>
</tr>
<tr>
<td>240.00</td>
<td></td>
</tr>
<tr>
<td>5.3 Message handling (two-way)</td>
<td></td>
</tr>
<tr>
<td>(i) Urban complexes (Durban and Pietermaritzburg, Cape Peninsula and surroundings, the greater Johannesburg, Pretoria and Vereeniging areas):</td>
<td></td>
</tr>
<tr>
<td>(a) Per single frequency channel: Minimum licence fee as for 80 two-way mobile stations</td>
<td></td>
</tr>
<tr>
<td>(b) Per double frequency channel: Minimum licence fee as for 80 two-way mobile stations</td>
<td></td>
</tr>
<tr>
<td>(ii) All other areas:</td>
<td></td>
</tr>
<tr>
<td>(a) Per single frequency channel: Minimum licence fee as for 40 two-way mobile stations</td>
<td></td>
</tr>
<tr>
<td>(b) Per double frequency channel: Minimum licence fee as for 40 two-way mobile stations</td>
<td></td>
</tr>
<tr>
<td>(iii) Extensions: Minimum licence fee as for 10 two-way mobile stations, single or double frequency, whichever licence fee is applicable.</td>
<td></td>
</tr>
<tr>
<td>3 360.00</td>
<td></td>
</tr>
<tr>
<td>3 840.00</td>
<td></td>
</tr>
<tr>
<td>1 680.00</td>
<td></td>
</tr>
<tr>
<td>1 920.00</td>
<td></td>
</tr>
<tr>
<td>5.4 Paging (one-way):</td>
<td></td>
</tr>
<tr>
<td>(i) Urban complexes (Durban and Pietermaritzburg, Cape Peninsula and surroundings, the greater Johannesburg, Pretoria and Vereeniging areas):</td>
<td></td>
</tr>
<tr>
<td>Per control room and per frequency channel: Minimum licence fee as for 240 one-way paging stations</td>
<td></td>
</tr>
<tr>
<td>(ii) All other areas:</td>
<td></td>
</tr>
<tr>
<td>Per control room and per frequency channel: Minimum licence fee as for 100 one-way paging stations</td>
<td></td>
</tr>
<tr>
<td>(iii) Extensions: Minimum licence fee as for 20 one-way paging stations.</td>
<td></td>
</tr>
<tr>
<td>4 320.00</td>
<td></td>
</tr>
<tr>
<td>1 800.00</td>
<td></td>
</tr>
<tr>
<td>5.5 Radio trunk!ng:</td>
<td></td>
</tr>
<tr>
<td>All areas:</td>
<td></td>
</tr>
<tr>
<td>(a) For a maximum of one control channel per base station</td>
<td></td>
</tr>
<tr>
<td>(b) For each additional double frequency channel or if only one channel is used at a base station</td>
<td></td>
</tr>
<tr>
<td>48.00</td>
<td></td>
</tr>
<tr>
<td>3 840.00</td>
<td></td>
</tr>
</tbody>
</table>
### 5.6 Repeater (communal and private):

- (i) Urban complexes (Durban and Pietermaritzburg, cape Peninsula and surroundings, the greater Johannesburg, Pretoria and Vereeniging areas):
  - Minimum licence fee as for 80 two-way stations
- (ii) Other areas: Minimum licence fee as for 40 two-way stations
- (iii) Extensions: Minimum licence fee as for 10 two-way stations

#### Prescribed fees per year but subject to regulation E1.1

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeater</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 810.00</td>
</tr>
<tr>
<td></td>
<td>1 920.00</td>
</tr>
</tbody>
</table>

5.7 For any stations used in the radio-communications system stated under item 5 and which differ from those on which the minimum licence fee is based, the applicable prescribed licence fee is payable in addition to the minimum licence fee for the relevant system.

### 5.8 Cellular radio-communication service

- (i) C45O
  - Annual all inclusive licence fee payable annually in advance on 1 June:

<table>
<thead>
<tr>
<th>Year</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>1 300 000.00</td>
</tr>
</tbody>
</table>

- (ii) GSM
  - (a) Basic fee
  - (b) Additional fee per 200 kHz frequency pair
  - (c) A further annual licence fee of 5% of the nett operational income of the licensee
  - (d) Plus additional fees payable as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>10 000 000.00</td>
</tr>
<tr>
<td>1995</td>
<td>10 000 000.00</td>
</tr>
<tr>
<td>1996</td>
<td>22 310 000.00</td>
</tr>
<tr>
<td>1997</td>
<td>24 900 000.00</td>
</tr>
<tr>
<td>1998</td>
<td>27 780 000.00</td>
</tr>
<tr>
<td>1999</td>
<td>30 990 000.00</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

5.9 The Postmaster General may subject to an appropriation made by a Post Office Appropriation Act in respect of a specific financial year and to the extent provided for in the Post Office Appropriation Act, in respect of all moneys or any part thereof collected in terms of regulation 5.3(c) and paid into the Post Office Fund transfer such moneys to the State Revenue fund.
## Type of radio-communication services

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Prescribed fees per year but subject to regulation E1-1 R</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5.10 Wireless data telecommunication services:</strong></td>
<td></td>
</tr>
<tr>
<td>Wireless data extensions to the Public Switched Data Network (PSDN):</td>
<td></td>
</tr>
<tr>
<td>(a) Telecommunication fee payable on date of issue of the telecommunications licence</td>
<td>500 000.00</td>
</tr>
<tr>
<td>(b) Annual licence fee of 1% of the net operational income of the licence</td>
<td>25 000.00</td>
</tr>
<tr>
<td>(c) Per assigned national 12.5 kHz frequency pair</td>
<td></td>
</tr>
<tr>
<td><strong>5.11 &quot;Pub games&quot; radio systems:</strong> Per licence irrespective of the number of the systems in operation</td>
<td>5 000.00</td>
</tr>
<tr>
<td><strong>5.12 Broadcasting band subcarrier system:</strong> Per frequency of subcarrier used</td>
<td>8 000.00</td>
</tr>
<tr>
<td><strong>5.13 Video conference system</strong></td>
<td>50 000.00</td>
</tr>
<tr>
<td><strong>5.14 Microwave Multipoint Distribution Systems (MMDS)</strong></td>
<td>50 000.00</td>
</tr>
<tr>
<td><strong>5.15 Wide Area Network (entire system)</strong></td>
<td>5 000.00</td>
</tr>
<tr>
<td><strong>5.16 Oghal European Cordless Telecommunication (DECT) Cordless telephone system:</strong> Per megahertz frequency system.</td>
<td>1 540.00</td>
</tr>
<tr>
<td><strong>5.17 Wireless Local Loop (WLL) (entire system)</strong></td>
<td>10 000.00</td>
</tr>
<tr>
<td><strong>5.18 Mobile data telecommunication services</strong></td>
<td></td>
</tr>
<tr>
<td>(i) National mobile data telecommunications network</td>
<td></td>
</tr>
<tr>
<td>(a) Telecommunications fee payable</td>
<td></td>
</tr>
<tr>
<td>(i) on date of issue of the telecommunications licence; or</td>
<td></td>
</tr>
<tr>
<td>(ii) on date of issue of the telecommunications licence, plus</td>
<td></td>
</tr>
<tr>
<td>(iii) on the first anniversary of the Commercial Date</td>
<td>1 500 000.00</td>
</tr>
<tr>
<td>(iv) on the second anniversary of the Commercial Date</td>
<td>500 000.00</td>
</tr>
<tr>
<td>(b) Annual income related licence fee of:</td>
<td></td>
</tr>
<tr>
<td>(i) 0.2% of Turnover i.e. the first two financial years</td>
<td>632 500.00</td>
</tr>
<tr>
<td>(ii) 2% of Turnover for the remainder of the licence period</td>
<td>739 500.00</td>
</tr>
<tr>
<td>(c) Annually per first assignment of a specific 12.5 kHz frequency pair within the RSA</td>
<td>25 000.00</td>
</tr>
</tbody>
</table>

*Item 5.18 added by G.N. 880 of 27 June 1997*
## Type of radio-communication service

<table>
<thead>
<tr>
<th>Type of service</th>
<th>Prescribed fees per year but subject to regulation E1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6. SATELLITE</strong></td>
<td></td>
</tr>
<tr>
<td>6.1 Inmarsat</td>
<td></td>
</tr>
<tr>
<td>(i) Land mobile service:</td>
<td></td>
</tr>
<tr>
<td>(a) A terminal</td>
<td>396.00</td>
</tr>
<tr>
<td>(b) B terminal</td>
<td>396.00</td>
</tr>
<tr>
<td>(c) C terminal</td>
<td>168.00</td>
</tr>
<tr>
<td>(d) M terminal</td>
<td>396.00</td>
</tr>
<tr>
<td>(ii) Maritime:</td>
<td></td>
</tr>
<tr>
<td>(a) A terminal</td>
<td>396.00</td>
</tr>
<tr>
<td>(b) B terminal</td>
<td>396.00</td>
</tr>
<tr>
<td>(c) C terminal</td>
<td>168.00</td>
</tr>
<tr>
<td>(d) M terminal</td>
<td>396.00</td>
</tr>
<tr>
<td>6.2 Up link broadcasting signal distribution fixed satellite earth station</td>
<td>50 000.00</td>
</tr>
<tr>
<td>6.3 Mobile of fixed satellite news gathering station</td>
<td>50 000.00</td>
</tr>
</tbody>
</table>

## MISCELLANEOUS

- (i) Computer print-out per licence/certificate: 18.00
- (ii) Duplicate per licence/certificate: 18.00
- (iii) New licence where the name and/or title of the licence change: 24.00
- (iv) Radio dealer's registration certificate: 33.00
- (v) Take over of a radio-communication system: Applicable prescribed licence fee for the relevant radio-communication service
- (vi) Temporary licence: Applicable prescribed licence fee as for a minimum period of one year

Issue No. 12 (2002)
The licence fees shown against item 1 (iii) and 1 (iv) and item 7 [except 7 (iv) and (v)] are payable per occasion. Fees payable in respect of licences and certificates issued during the licence year shall be calculated as follows:

(1) If a licence or certificate referred to in regulation E1 is issued during the licence year the fees payable shall, subject to subregulation (2) be-

(a) in respect of a licence or certificate issued in the first month of a licence year- the full prescribed fee;

(b) in respect of a licence or certificate issued in the second month of a licence year- eleven twelfths of the prescribed fee;

(c) in respect of a licence or certificate issued in the third month of a licence year- ten twelfths of the prescribed fee;

(d) in respect of a licence or certificate issued in the fourth month of a licence year- nine twelfths of the prescribed fee;

(e) in respect of a licence or certificate issued in the fifth month of a licence year- eight twelfths of the prescribed fee;

(f) in respect of a licence or certificate issued in the sixth month of a licence year- seven twelfths of the prescribed fee;

(g) in respect of a licence or certificate issued in the seventh month of a licence year- six twelfths of the prescribed fee;

(h) in respect of a licence or certificate issued in the eighth month of a licence year- five twelfths of the prescribed fee;

(i) in respect of a licence or certificate issued in the ninth month of a licence year- four twelfths of the prescribed fee;

(j) in respect of a licence or certificate issued in the tenth, eleventh or twelfth month of a licence year- three twelfths of the prescribed fees plus the prescribed fee for the ensuing year.

(2) If the amount of a fee calculated in accordance with subregulation (1) amounts to a fraction of a cent, that fraction shall be rounded off to a full cent.
E2 Examination and certificate fees

The fees below are payable with a view to sitting for the examination indicated or to acquire the certificate shown.

Certificate, purpose for which it is required and examination fee unless otherwise stated:

(i) Issue of Amateur Radio Operator’s Certificate; prerequisite for Amateur Radio Station Licence 30,00

(ii) General Operator’s Certificate (Maritime): Performing duties on a ship subject to the requirements of the Global Maritime Distress and Safety System: Issue of certificate 30,00

(iii) Restricted Radiotelephone Operator’s Certificate (Maritime): Operation of a radiotelephone installation on a ship, provided that-

(a) the carrier-wave power of the transmitter does not exceed 50W; or
(b) the operation of the transmitter requires only the use of simple external switching devices, any manual tuning of the elements determining the frequency is excluded, and the stability of the frequencies is maintained within the prescribed tolerance limits by the transmitter itself, the peak envelope power of which does not exceed 1,5kW

Issue of certificate 30,00

Per repeated subject 18,00

(iv) Restricted Operator’s Certificate (Maritime): Performing duties on a ship subject to the requirements of the Global Maritime Distress and Safety System: Issue of certificate 30,00

(v) General Certificate of Competency in Radio-telephony (Aeronautical): Operation of a radiotelephone installation on board any aircraft: Issue of certificate 30,00

(vi) Restricted Radiotelephone Operator’s Certificate (Aeronautical): Operation of a radiotelephone installation on board an aircraft by the holder of at least a private pilot licence: Issue of certificate 30,00

(vii) Authority to operate Radio Apparatus; authorizing the holder of any certificate of competence to operate radio apparatus in accordance
with the provisions of such certificate: Issue of certificate 30,00
(viii) Duplicate: Replacement of any of the above-mentioned documents 30,00

**E3 Application Fees**

<table>
<thead>
<tr>
<th>Type of Radio-Communications Services</th>
<th>FEES (Rand)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1. Amateur Radio</strong></td>
<td></td>
</tr>
<tr>
<td>(i) All classes of licenses (including CEPT Format)</td>
<td>140</td>
</tr>
<tr>
<td>(ii) Beacon</td>
<td>100</td>
</tr>
<tr>
<td>(iii) Change of call sign on request</td>
<td>100</td>
</tr>
<tr>
<td>(iv) Guest or special event license</td>
<td>100</td>
</tr>
<tr>
<td>(v) Listener</td>
<td>100</td>
</tr>
<tr>
<td>(vi) Repeater station including radio link</td>
<td>100</td>
</tr>
<tr>
<td>(vii) Digipeater/Bulleting Board</td>
<td>100</td>
</tr>
<tr>
<td>(viii) Experimental station for weather satellite reception and retransmission</td>
<td>210</td>
</tr>
<tr>
<td><strong>2. Aeronautical</strong></td>
<td></td>
</tr>
<tr>
<td>(i) Aircraft station</td>
<td>380</td>
</tr>
<tr>
<td>(ii) Beacon</td>
<td>380</td>
</tr>
<tr>
<td>(iii) Ground station</td>
<td>410</td>
</tr>
<tr>
<td>(iv) Relay station</td>
<td>170</td>
</tr>
<tr>
<td><strong>3. Land Mobile Service</strong></td>
<td></td>
</tr>
<tr>
<td>3.1 Alarm station (see also item 5.1 for alarm systems)</td>
<td>210</td>
</tr>
</tbody>
</table>
3.2 General Base/Mobile

(i) Citizen band 210

(ii) Civil Defence/Marnet

(a) Station without private frequency 210
(b) Station with private frequency 620

(iii) 27/29 MHz frequency band

(a) Station with one frequency channel 210
(b) Station with more than one frequency channel 210 (including station for use at sea and inland waters)

(iv) Other

(a) Station with one single frequency channel 620
(b) Station with more than one frequency channel 620
(c) High frequency band:

(i) Cross Border 830
(ii) Cross Border - SADC 1 040
(iii) Local HF 620

3.3 Experimental or test station 830

3.4 Load Management station (see also item 5.2) 830

3.5 Special radio service: Per licence 73u

3.6 Telemetry Station 730

3.7 Payable by the South African National Defence Force, South African Police Services, Telkom SA Ltd, Eskom, and Transnet Ltd: 830

3.8 Radio link station 730

3.9 Radio link 730
2.55

TELECOMMUNICATIONS ACT
Part 2: Government Notices Act No. 103 of 1996

4. Maritime

4.1 Beacon 180

4.2 Coast station:
   (i) Non-commercial 480
   (ii) Commercial 600

4.3 Ship station: Maritime frequency band 480

4.4 Ships operating on land mobile frequencies (See item 3.2 (iii) (b)) 580

5. Radio-Communications Systems

5.1 Alarm systems 980

5.2 Load management system 1 000

5.3 Message handling system 1 230

5.4 Paging system 1 430

5.5 Radio trunking:
   Per frequency channel 275

5.6 Repeater system (communal and private): 1 100

5.7 "Pub games" radio systems: 380

5.8 Broadcasting band subcarrier system: 380

5.9 Video conference system 380

5.10 Microwave Multipoint Distribution Systems (MMDS) 400

5.11 Wide Area Network 1 660

5.12 Value-Added Network Services (VANs) 1 500

5.13 Private Telecommunications Network (PTN) 1 000

5.14 Digital Enhanced Cordless Telecommunication system (DECT) 420
## 5.15 Wireless Local Loop (WLL)

### 6. Satellite

- **6.1 Fixed satellite earth station (Uplink)**
  - 1 600

- **6.2 Transportable satellite news gathering station**
  - 1 460

- **6.3 Global Mobile Personal Communications by Satellite Earth Gateway Station**
  - 1 600

### 7. Miscellaneous

- **(i) Computer print-out per licence/certificate**
  - 100

- **(ii) Duplicated per licence/certificate**
  - 50

- **(iii) New licence where the name and/or title of the licence change**
  - 50

- **(iv) Take over the radio-communication system: Applicable prescribed licence fee for the relevant radio-communication service**
  - 50

- **(v) Modifications to licence - Administrative (excluding address changes)**
  - 100

- **(vi) Modifications to licence - Technical**
  - 210

- **(vii) Temporary licence: Applicable prescribed fee as for a minimum period of one year**
  - 380

### 8. Certificate Application

- **(i) Amateur**
  - 10

- **(ii) Maritime**
  - 100

- **(iii) Aeronautical**
  - 100

- **(iv) Validations**
  - 70

- **(v) Duplicate Certificates**
  - 100

- **(vi) Radio Dealer Registration Certificate**
  - 50
9. **Equipment Type Approvals**

(i) Telecommunications Line Terminal Equipment (TLTE) 1 230

(ii) Switches 1 845

(iii) Line Maintenance Organisations (LMOs) 1 845

(iv) Certifications 410

(v) Labels 0.50

(vi) Radio Equipment:

(a) New Application 4 000

(b) Untested variant 2 000

(c) **Tested** variant 2 000

(d) Badge Engineering 4 000

CHAPTER 7

INTERFERENCE

F1  Prohibition against manufacture, import, sale, hiring out, installation or use of certain apparatus

No person shall manufacture, import, sell, hire out, install or use an apparatus that generates and radiates electromagnetic energy that exceeds the limits prescribed in respect of the said apparatus in Annexure A to these regulations.

F2  Prohibition against import for sale or manufacture for sale of certain apparatus

No person shall import for sale or manufacture for sale apparatus other than the apparatus described in paragraphs 3 (a) (v) and (c) of Annexure A to these regulations unless such apparatus corresponds, with regard to electromagnetic-radiation properties, with a model of such apparatus in respect of which a certificate was issued by the Director-General in the form set out in Annexure B to these regulations.

F3  Application for certificate

(1) A person who wishes to apply for a certificate referred to in regulation F2 shall submit an application to the Director-General in the form referred to in Annexure C to these regulations.

(2) A model of the apparatus that is the subject of an application referred to in subregulation (1) shall be furnished to the Director-General together with the said application or, if it is not practicable thus to furnish the said apparatus, the application shall state the place where the said model may be examined.


F4  Prohibition against import, sale or hiring out of certain internal-combustion engines

No person shall sell or hire out or import for, sale or manufacture for sale an internal-combustion engine with an ignition system (regardless of whether such internal-combustion engine forms part of a vehicle, vessel or any device) unless such ignition system is fitted with the suppressors referred to in Annexure D to these regulations.
F5  Prohibition against use of certain ignition systems

(1) No person shall use an ignition system that forms part of an internal-combustion engine unless such ignition system is fitted with the suppressors referred to in Annexure D to these regulations.

(2) In the implementation of a provision of an ordinance of a province regarding the roadworthiness of vehicles or a provision of any regulation promulgated in terms of such ordinance, a motor vehicle shall be regarded as unroadworthy if an apparatus not complying with the requirements of these regulations is installed, mounted or connected in, on or to it.

F6  Prohibition against import, manufacture, sale, hiring out and installation of certain receivers

[Regulation F6 deleted by G.N.R.587 of 17 March 1986.]

F7  Prohibition against the modification of certain apparatus

No person shall modify an apparatus complying with the provisions of these regulations in such a way that the said apparatus no longer complies with such provisions.

F8  Appointment of investigating officers

(1) The Director-General may appoint a person who in his opinion possesses the necessary knowledge and competence to examine apparatus or models thereof and to determine whether such apparatus or models thereof comply with the provisions of these regulations.

(2) The Director-General shall issue to a person appointed in terms of subregulation (1) an authority stating the fact that such person was thus appointed.

[Regulation F8 amended by G.N.R.855 of 30 April 1982.]

F9  Fees payable for examination of model of apparatus

(1) For the examination of a model of apparatus with a view to issuing the certificate referred to in regulation F2 the examination fees prescribed in subregulation (2) shall be paid to the investigating officer appointed for that purpose in terms of regulation F8.
(2) The sum of the examination fees that are payable in terms of subregulation (1) shall be an amount equal to the amount representing the actual expenditure in respect of material, labour, transport and other costs incurred in connection with the examination plus a surcharge of 33\% per cent calculated on the total of that expenditure.

[Regulation F9 replaced by G.N.R.855 of 30 April 1982.1]

F10 Investigating officers may enter certain premises and examine and remove certain apparatus

(1) An investigating officer may-

(i) at any reasonable time enter premises in or on which an apparatus not complying with the provisions of these regulations is on reasonable grounds suspected to be; and

(ii) examine an apparatus that on reasonable grounds is suspected to be an apparatus referred to in paragraph (i).

(2) The person in charge of premises or apparatus referred to in subregulation (1) shall, at the request of an investigating officer, allow such investigating officer access to such premises or apparatus.

(3) An investigating officer wishing to enter premises referred to in subregulation (1) or to examine an apparatus referred to in that subregulation shall, if requested to do so by the person in charge of such premises or apparatus (as the case may be), produce the authority issued to him in terms of regulation F8.

(4) If an investigating officer has reasonable grounds to suspect that an apparatus does not comply with the provisions of these regulations and if, in the opinion of such investigating officer, it is not feasible to examine such apparatus in or on the premises where he found it, he may remove the said apparatus to a place equipped with the facilities required for the examination of such apparatus.

(5) An apparatus removed in terms of subregulation (4) shall, on completion of the examination be returned to the person in whose charge the apparatus was at the time of its removal.
CHAPTER 7A

PIKATE VIEWING


CHAPTER 7B

SOUND BROADCASTING SERVICES

F1B Technical conditions

(1) The Director-General determines the frequency for a sound broadcasting service and the use of such a frequency shall be for the duration of the sound broadcasting licence only. The Director-General may change the frequency at any time if for technical reasons or the prevention of interference it is necessary. Such a frequency change will be for the account of the licensee. The licensee will at all times fully co-operate with the Director-General in this regard.

(2) The licensee shall comply with the prescribed power outset, antenna height and antenna polarisation, horizontal beam, frequency stability and other technical requirements.

(3) The operation of the station for a sound broadcasting service shall not cause interference to any other radio stations or telecommunication lines.

F2B Duration of licence for a sound broadcasting service and broadcasting time

(1) The licence for a sound broadcasting service will be of a temporary nature and will expire two days prior to the Independent Broadcasting Authority Act, 1993, coming fully into operation, or two days prior to the Authority declaring itself in a position to issue broadcasting licences, whichever event occurs first. Furthermore, as a condition of the licence, in the national interest and in particular to maintain the authority of the Independent Broadcasting Authority, the Director-General shall have the right to suspend or withdraw the temporary sound broadcasting licence at any time in terms of section 14 of the Radio Act, 1952.

(2) The licensee acquires no established right for the issuing of a broadcasting licence as a matter of course as provided for in section 46 (2) of the Independent Broadcasting
Authority Act, 1993. The licensee will therefore have to submit a new application timeously for consideration by the Authority.

(3) A maximum broadcasting time of 14 hours per day calculated as an average over a week of seven days is applicable.

F3B Licence fee

(1) A single amount of R1 000.00 is payable per licence for a sound broadcasting service provided that in the case of a licence for a sound broadcasting service for a specific event of less than 14 days a single amount of R250.00 is payable.

F4B General

(1) The licensee shall appoint a responsible person/persons to act as authorised representative(s) on his behalf. Particulars of such nomination shall be provided in writing to the Director-General.

(2) A broadcasting station shall switch on for public transmissions not later than six weeks after the issuing of the licence.

(3) A transgression of any of the prescribed conditions, can besides any other sanctions in terms of the provisions of the Radio Act, 1952, result in the suspension or withdrawal of the temporary broadcasting licence in terms of section 14 of the said Act and the assignment of the frequency to the next applicant.

[Chapter 7B inserted by G.N.R. 334 of 18 February 1994.]
CHAPTER 8

MISCELLANEOUS PROVISIONS

G1  Allocation and display of call sign

The Director-General allocates a call sign to a radio station. Such call sign shall be conspicuously displayed on the relative radio set by the licensee and the call sign must be transmitted at least once during each separate transmission.

G2  Radio apparatus must satisfy the Director-General’s requirements

Radio apparatus shall satisfy the Director-General’s requirements at all times and may not be capable of being tuned to frequencies other than those laid down for use by licensees by the Director-General in these regulations or separately. The Director-General may allocate frequencies on a shared basis and co-users of them must make mutual arrangements for the satisfactory utilisation of the facility.

G3  Director-General may require certain modifications to a station

A licensee shall be obliged to effect at his own cost any modification to his radio-communication system that the Director-General has indicated and the Director-General shall by no means be liable to the licensee or any other person for any damage or loss arising from such modifications.

G4  Interference, condition of station and compliance with requirements of Director-General and local authority

(1) The licensee shall be obliged to maintain all radio apparatus at a station technically in a good condition and to ensure at all times that it satisfies the requirements of the Director-General and does not cause interference with the reception and transmissions of other radio users or telecommunication lines.

(2) The antenna system shall comply with the requirements of the relevant local authority.

[Regulation G4 substituted by G.N.R.1349 of 30 June 1989.]
G5  **Indecent language and fraudulent transmissions over stations prohibited**

No person shall transmit insulting, improper, obscene, blasphemous or threatening language over the radio apparatus. Communications shall be concise and limited to essentials and no music or entertainment of any nature shall be transmitted. Similarly no sounds or effects for entertainment or for the purpose of drawing attention shall be transmitted.

G6  .........


G7  **Use of station restricted to licensee or someone in his employ or under his control**

Except where provided to the contrary in these regulations only the licensee or someone in his employ or under his control, may operate the station in respect of which the relative licence was issued.

G8  **Distress signal**

No person shall transmit without sound reason the distress signal (i.e. "......" in radio telegraphy and the word "MAYDAY" in radio telephony).

G9  **Licence not transferable and must be returned on expiry/suspension**

(1) Except with the approval of the Director-General no person to whom a licence was issued in terms of the Act or these regulations shall transfer such licence, powers or authority granted to him to any other person or surrender it in any other way in favour of someone else.

(2) A licence issued in terms of the Act and these regulations shall, on expiry or suspension, be returned to the Director-General within 14 days of such expiry date or date of suspension.
G9A  Procedure for the transfer of a radio frequency spectrum licence or certificate or authority

Definitions

2. In this schedule any expression shall have the same meaning ascribed to it in the Telecommunications Act, 1996, (Act 103 of 1996), unless the context indicates otherwise.

Procedure

3. A person who wishes to have a radio frequency spectrum licence or certificate or authority transferred to him/her/it shall apply in writing to the Authority in the manner set out hereunder:

(1) A written consent from the holder of the radio frequency spectrum licence or certificate or authority must accompany the application.

(2) A duly completed application form accompanied by the original licence or radio station licences or authority, must be submitted by the transferee together with the prescribed application fee at any office of the Authority.

(3) Where the transferee is a juristic person or an association, a certified copy of the registration certificate or constitution of the association must also be submitted with the application form.

(4) In cases where the frequency(ies) on the existing licence is an exclusive frequency(ies) and not a shared frequency(ies), a business plan along the lines shown in Appendix A must be submitted by the transferee.


(6) An application for a transfer shall only be considered if all the outstanding fees with respect to the relevant radio frequency spectrum licence or certificate or authority have been paid.

(7) In the case of liquidation or insolvency of the transferor, the liquidator/curator must give written consent to the transfer.
(8) In the case of a deceased estate, the executor of the deceased estate must give written consent to the transfer.

(9) A licence for an exclusive frequency shall only be transferable after twelve months from the date of issue.

(10) For licences where a service is rendered to the public, the system must be operational for at least twelve months before an application for a transfer shall be entertained.
Appendix A

Appendix to Frequency Assignment/Radio Licensing Guideline

Information Required for the Evaluation of Licence Applications

Introduction Applicants must provide sufficient detail in the business plan to enable SATRA to analyse and determine from the plan alone, the extent to which the plan would lead to a sustainable business.

Information Please provide the following information in respect of:

1. Applicant
2. Description of service
3. Market analysis
4. Construction of the network
5. Technical information on system design
6. Business planning
7. Tariffs and fees.

Note: See below for detail on each of these points.

Very Important Note that SATRA may incorporate the information given in this business plan as conditions in the licence. See point 8.

1. Applicant Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Name, address and registration number of Applicant</td>
</tr>
<tr>
<td></td>
<td>* Company's registration certificate</td>
</tr>
<tr>
<td></td>
<td>* Names &amp; addresses of directors &amp; principal executives</td>
</tr>
<tr>
<td></td>
<td>* Company/associations's main objective &amp; constitution</td>
</tr>
<tr>
<td>b</td>
<td>Annual Reports of the applicant and its main shareholders for the previous three years, when available</td>
</tr>
<tr>
<td>c</td>
<td>Full particulars of the experience and expertise of the Applicant, its shareholders, partners, suppliers and contractors in the business contemplated</td>
</tr>
<tr>
<td>d</td>
<td>* Extent of beneficial ownership of the applicant by the historically disadvantaged</td>
</tr>
<tr>
<td></td>
<td>* Extent of beneficial ownership by women.</td>
</tr>
</tbody>
</table>
2. **Description** of service  
Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>A full description of the services to be provided</td>
</tr>
<tr>
<td>b</td>
<td>Proposed annual coverage, rollout indicating the exact</td>
</tr>
<tr>
<td></td>
<td>areas and location concerned</td>
</tr>
<tr>
<td>c</td>
<td>Guarantees that the proposed coverage will be met</td>
</tr>
<tr>
<td>d</td>
<td>Guarantees as required by the Frequency Assignment/</td>
</tr>
<tr>
<td></td>
<td>Licensing Guidelines.</td>
</tr>
</tbody>
</table>

**Market analysis**

Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Projection of the market size and the different target</td>
</tr>
<tr>
<td></td>
<td>markets</td>
</tr>
<tr>
<td>b</td>
<td>Marketing strategy for the first five years of service</td>
</tr>
<tr>
<td>c</td>
<td>Types of services to be provided to different target</td>
</tr>
<tr>
<td></td>
<td>markets</td>
</tr>
<tr>
<td>d</td>
<td>Marketing strategy</td>
</tr>
<tr>
<td>e</td>
<td>Distribution strategy for customer equipment.</td>
</tr>
</tbody>
</table>

4. **Construction of the network** Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Availability and experience of planning and project</td>
</tr>
<tr>
<td></td>
<td>management capabilities required for construction of the</td>
</tr>
<tr>
<td></td>
<td>network</td>
</tr>
<tr>
<td>b</td>
<td>Mechanisms used for the planning of any radio portion of</td>
</tr>
<tr>
<td></td>
<td>the network</td>
</tr>
<tr>
<td>c</td>
<td>Plans to acquire resources such as access to sites, other</td>
</tr>
<tr>
<td></td>
<td>property, technology, personnel and capital.</td>
</tr>
</tbody>
</table>

**Technical information**

Indicate the technical, operational and maintenance aspects of the proposed telecommunications system. Some of these aspects could be as follows:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>A full description of the technology to be implemented</td>
</tr>
<tr>
<td>b</td>
<td>The Applicant's approach to network development and</td>
</tr>
<tr>
<td></td>
<td>expansion</td>
</tr>
<tr>
<td>c</td>
<td>Description of all interfaces in the network</td>
</tr>
<tr>
<td>d</td>
<td>Requirements for interconnection to other telecommunications networks or services and the</td>
</tr>
<tr>
<td></td>
<td>transmission medium and links required</td>
</tr>
</tbody>
</table>

Issue No. 12 (2002)
### 6. Technical Information (system design) (continued)

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Details of radio network planning including methods to reserve frequency:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site-Name/s</td>
<td>Name of the place where equipment is located</td>
</tr>
<tr>
<td></td>
<td>Site Code</td>
<td>Code assigned to place</td>
</tr>
<tr>
<td></td>
<td>Site/s Co-ordinates (ddmmss)</td>
<td>Geographical co-ordinates used to locate a place on a map:</td>
</tr>
<tr>
<td></td>
<td>Frequency/ frequencies</td>
<td>Air waves through which radio waves are transmitted</td>
</tr>
<tr>
<td></td>
<td>Bandwidth of Transmitted Signal (MHz)</td>
<td>Amount of frequency occupied by the transmitted signal</td>
</tr>
<tr>
<td></td>
<td>Modulation Scheme and Bit-Rate</td>
<td>Method and speed of transmitting radio signal</td>
</tr>
<tr>
<td></td>
<td>Antenna Site</td>
<td>Where antenna is situated</td>
</tr>
<tr>
<td></td>
<td>Antenna Type</td>
<td>Type of antenna</td>
</tr>
<tr>
<td></td>
<td>Antenna Diameter (meter)</td>
<td>Diameter of antenna</td>
</tr>
<tr>
<td></td>
<td>Antenna Gain (dB)</td>
<td>• Given in specifications for antenna</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• dB* decibel</td>
</tr>
<tr>
<td></td>
<td>Antenna Polarisation (H/V)</td>
<td>• Polarisation - horizontally or vertically polarised transmission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H/V = horizontal/vertical</td>
</tr>
<tr>
<td></td>
<td>Transmit Power (dBm/Watt)/ Receiver Sensitivity Threshold (dBm)</td>
<td>• Wattage (Watt = measurement of power)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Receiver sensitivity threshold = the lowest value that can be detected by a receiver</td>
</tr>
<tr>
<td></td>
<td>Fixed Loss (dB): Transmit and receive</td>
<td>Percentage of lost power</td>
</tr>
<tr>
<td></td>
<td>Type of Service</td>
<td>Whether it is data service, voice, paging, telemetry etc</td>
</tr>
<tr>
<td></td>
<td>Area and Direction of Operation</td>
<td>Geographical area of service</td>
</tr>
</tbody>
</table>

*Issue No. 12 (2002)*
Notes on

Please note the following further explanations in respect of point (5g) in the table on the previous page:

<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>Refers to the actual Bandwidth of the Signal Transmitted and not to the Baseband value, for example</td>
</tr>
<tr>
<td>Baseband value</td>
<td>This is the frequency during the signal processing stage</td>
</tr>
</tbody>
</table>
| Reflectors     | In the case where a Reflector is used as part of a Radio link, the Link will be treated as consisting of two parts, i.e., two separate links. The applicant must calculate hypothetical values for:  
• antenna parameters  
• transmit power etc.  
 in order to supply the information required for the Site containing the Reflector. |

Diagrams or sketches

Applicants must supply diagrams or sketches of proposed operations, systems or Radio Links for explanatory purposes. Insufficient or incorrect information will result in an unsuccessful application.

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>h</td>
<td>Adherence to EMC specifications</td>
</tr>
<tr>
<td>i</td>
<td>Theoretical traffic volume forecasts and alternate routing and redundancy requirements</td>
</tr>
<tr>
<td>j</td>
<td>Numbering plan for the service</td>
</tr>
<tr>
<td>k</td>
<td>Quality systems employed and the quality targets used</td>
</tr>
<tr>
<td>l</td>
<td>Details of fixed network planning</td>
</tr>
<tr>
<td>m</td>
<td>Presentation of network planning data in the form of schedules, tables, diagrams and maps for the initial phase and two subsequent phases</td>
</tr>
<tr>
<td>n</td>
<td>Network management, fault detection, service and maintenance mechanisms</td>
</tr>
<tr>
<td>o</td>
<td>Equipment specifications/type approval certificates</td>
</tr>
<tr>
<td>p</td>
<td>Regulatory requirements (ITU &amp; Radio Act)</td>
</tr>
<tr>
<td>q</td>
<td>Technical expertise</td>
</tr>
<tr>
<td>r</td>
<td>Service monitoring capabilities.</td>
</tr>
</tbody>
</table>
6. **Business planning**  Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>The fundamental assumptions for the <em>business</em> plan</td>
</tr>
<tr>
<td>b</td>
<td>Indication of all factors over which the Applicant has no control</td>
</tr>
<tr>
<td>c</td>
<td>Balance sheet, profit and loss accounts, cash flow statement, discounted cash flow statement for the first five years</td>
</tr>
<tr>
<td>d</td>
<td>A sensitivity analysis showing how costs to the subscriber changes with a 10% variation in the factors indicated in (b)</td>
</tr>
<tr>
<td>e</td>
<td>Key financial policies such as dividend rate, debt to equity ratio, etc</td>
</tr>
<tr>
<td>f</td>
<td>Full particulars of financing requirements and how the operation will be financed throughout the licence period</td>
</tr>
<tr>
<td>g</td>
<td>The amount of external capital used must be clearly indicated (both loans and equity).</td>
</tr>
</tbody>
</table>

7. **Tariffs and fees**  Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>A full tariff plan indicating all tariffs and fees to be charged at the wholesale level and the subscriber level when the service is launched</td>
</tr>
<tr>
<td>b</td>
<td>Projection of the tariffs and fees up to the fifth year</td>
</tr>
<tr>
<td>c</td>
<td>Substantiated costs for the customer equipment and an estimate of charges in unit costs</td>
</tr>
<tr>
<td>d</td>
<td>Data management and billing systems.</td>
</tr>
</tbody>
</table>

8. **Important general notes**  Please take careful note of the following important points:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Should a licence be issued, the information contained in the business plan may be incorporated by SATRA as conditions in the licence</td>
</tr>
<tr>
<td>b</td>
<td>Licensees will be required to supply certain data on an annual basis on issues such as empowerment, employment and training of the historically disadvantaged, women and the disabled.</td>
</tr>
</tbody>
</table>

[Regulation G9A inserted by G.N. R. 292 of 8 March 2002.]
G10  Period of validity of licence

(1) Unless a licence issued in terms of the Act and these regulations was previously
suspended by the Director-General in terms of section 14 of the Act, or unless the
provisions of the licence provides otherwise, it shall remain valid until 31 December of the
year in which it was issued, and thereafter on payment of the prescribed annual licence fee
until 31 December of each succeeding year: Provided that a broadcasting licence issued
in terms of the saving clause of section 7 (1) of the Radio Act, 1952, to a person other
than the South African Broadcasting Corporation shall be valid for 20 years.

(2) Fees in respect of existing licences shall be paid before or on 31 January.


G10A  Procedure for the amendment of radio frequenciespectrum licences, certificates or
authorities

Subject to regulation 3 (12), the procedure for the amendment of any radio frequency
spectrum licence, certificate or authority shall be as follows:

(1) All applications for the amendment of any radio frequency spectrum licence,
certificate, or authority shall be in writing and shall contain:

(a) the name and address of the applicant, and

(b) the reason for the amendment of the radio frequency spectrum
licence, certificate or authority.

(2) The Authority shall give notice of the application by publication in the
Government Gazette, inviting interested persons to submit written
representations with regard thereto within a specified period or such other
extended period as the Authority may specify by notice in the gazette.
Representations received after the closing date shall not be considered by
the Authority.

(3) All applications, representations and other documents relating to the
application shall, subject to regulation (4), be open to public inspection
during the normal office hours of the Authority, and the Authority shall at
the request of any person and on payment of a fee of 50c (fifty cents) per
page, furnish him or her with a copy thereof.

(4) The Authority may, at the request of the applicant or person who lodged
representations, determine that any document or information that is
commercially sensitive or any matter reasonably justifying confidentiality,
shall not be open to public inspection, if such a document can be separated from the application, representations or other document in question.

(5) If the Authority refuses a request contemplated in regulation (4), the applicant or the person concerned shall be allowed to withdraw the document or information in question, in which event, the Authority shall not consider the document or information so withdrawn.

(6) The applicant may, not later than 21 days after the period for lodging representations in terms of regulation (2) has passed, submit its written comments to any of the representations made.

(7) The Authority may, after the period for lodging comments by applicants in terms of regulation (6) has passed, hold a public hearing in respect of the application, the representations and any other relevant information.

(8) A hearing contemplated in regulation (7) shall, subject to regulation (9), be open to the public.

(9) Before considering any document or information which the Authority has determined shall not be open for public inspection, the Authority may direct that the public, or any section or member thereof shall not be present at the hearing.

(10) In processing the application the Authority may conduct an on-site investigation.

(11) After due consideration of the application, the representations and any relevant information, the Authority shall make a decision and communicate same to interested parties.

(12) The provisions of regulation (2) to (9) shall not apply to:

(a) applications made by the South African National Defence Force, South African Police Services, National Intelligence Agency, and the following holders of licences and certificates:

(i) Maritime,

(ii) Aeronautical,

(iii) Citizen Band,

(iv) Civil Defence/Marnet.
2.74

TELECOMMUNICATIONS ACT

Part 2: Government Notices

Act No. 103 of 1996

(v) Amateur Radio,
(vi) 27 MHz and 29 MHz band two-way Radio,
(vii) Shared Simplex HF, VHF and UHF,
(viii) Very Short Range Band, and
(ix) Low Power Devices.

(b) amendments of the frequency spectrum licences, certificates of authorities arising out of migration caused by a frequency band plan contemplated in section 29 of the Act.

4. The Authority shall not entertain any application for the amendment of a radio frequency spectrum licence wherein the additional frequency(ies) applied for fall outside the frequency band or bands assigned in terms of the original licence.


G11 Radio-communication between two or more fixed points and connection with public telephone system prohibited

Except with the approval of the Director-General and subject to these regulations, no person shall-

(i) Operate radio-communication between two or more fixed points;

(ii) connect radio apparatus in any way whatsoever to the public telephone system; and

(iii) transfer to another place radio apparatus in respect of which authority was granted for installation at a particular place.

G12 Tests

The licensee of a station may carry out the routine tests that are necessary for the proper maintenance of his station.
G13  Change of address

Every licensee who changes his address shall advise the Director-General of the new address of his station within 14 days of the change.

G14  Radio receiving apparatus with continuous tuning

No person shall use or have in his possession any radio receiving apparatus with continuous tuning that can be tuned to bands above 30 MHz other than the international broadcasting and amateur bands except where the Director-General's prior approval was obtained.

[Regulation G14 replaced by G.N.R. 1945 of 10 September 1982.]

G15  Control over maintenance of radio apparatus

..............

[Regulation G15 deleted by G.N.R. 2133 of 31 July 1992.]

G16  Operation of station on board ship while it is in harbour

(1) The master of a ship shall ensure that the radio installation on board is not used for radio-communication while the ship is berthed or anchored in a harbour in the Republic, except for the purposes of type F3 transmissions in the VHF maritime mobile band to communicate with-

(i) the nearest coast station in the Republic that is open for public correspondence;

(ii) the port operations service; and

(iii) a vessel on its way to the harbour or berth provided the communication is limited to navigational safety.

(2) The restriction contained in subregulation (1) shall not apply to the apparatus used on board ships for establishing communication via any satellite of the INMARSAT organization.

[Regulation G16 substituted by G.N.R. 1349 of 30 June 1989.]

G16A Issue of a broadcasting licence in relation to paid television broadcasting service

The Director-General may issue a broadcasting licence to any person to establish, maintain and operate a television service for the purpose of providing, for reception by the general public, a paid television broadcasting service, and an additional restricted television service.
resolutions of ITU World Radio Conferences which form part of the ITU radio regulations, to ensure controlled, ordered and efficient use of the radio spectrum;

(b) the revised South African Frequency Allocation Plan (hereinafter referred to as the "Band Plan"), concerning electromagnetic waves of certain frequencies below 3 000 GHz, and the revised band planning for the frequency spectrum from 3.4 GHz to 3.6 GHz, both published in Government Gazette No. 17983, Notice 759 of 1997, dated 6 May 1997, and used for national management of the radio spectrum;

(c) the revised Migration Strategy to Implement the Band Plan (hereinafter referred to as the "Migration Strategy") concerning electromagnetic waves of certain frequencies below 3 000 GHz, and a new migration strategy for the frequency spectrum from 3.4 GHz to 3.6 GHz, both published in Government Gazette No. 17983, Notice 759 of 1997, dated 6 May 1997, and used for national management of the radio spectrum;

(d) the management of frequencies for the form of telecommunications channels using electromagnetic waves of frequencies below 3 000 GHz, including, but not limited to, such telecommunications channels as those being implemented between a local exchange in the Public Switched Telephone Network (hereinafter referred to as the "PSTN") and an item of customer premises equipment (hereinafter referred to as "Wireless Local Loop"), which provides interconnectivity for purposes of basic telecommunications services;

(e) the management of frequencies for fixed services that pertain to the provision of backbone for the delivery of Wireless Local Loop.

"Effective Date" means the date on which the licence issued to Telkom S.A. Limited (hereinafter referred to as "Telkom") in terms of section 36 of the Telecommunications Act, 1996 (Act No. 103 of 1996) was issued by the Minister.

Start date of migration

2. (1) Where the Migration Strategy indicates the start date of migration of 1 January 1997, this regulation will apply only from the date of publication of this Chapter and this date will be regarded as the start of migration (hereinafter referred to as the "Migration Start Date").
(2) In all other cases where the Migration Strategy indicates a start date of migration beyond the date of publication of this Chapter, the Migration Start Date shall be defined as the start date of migration as indicated in the Migration Strategy.

**Facilitation of migration earlier than the time-scales indicated in the Migration Strategy by the Director-General**

3. (1) If during the Exclusivity Period (as defined in the licence issued to Telkom in terms of section 36 of the Telecommunications Act, 1996), Telkom requires frequencies prior to the end of the period specified in the Migration Strategy for migration to occur (hereinafter referred to as the "Migration Strategy End Date"), Telkom may request the licensee using any such frequencies to accelerate migration in accordance with the principles and procedures set out in this regulation.

(2) The following principles shall apply to migration occurring as contemplated in subregulation (1):

(a) Subject to regulation 2 with regard to Migration Start Date, the time-scales stipulated by Telkom and the Migration Strategy will form the basis of the procedures set out in this regulation.

(b) The maximum amount for which Telkom as the incoming licensee shall be liable, in connection with spectrum pertaining specifically to Wireless Local Loop and fixed services that pertain to the provision of backbone for the delivery of Wireless Local Loop, is a value calculated in Rands equal to US $25 million at the prevailing rate of exchange at the time of payment, in the aggregate for all such spectrum, in accordance with the procedures set out in subregulation (3) for accelerated migration.

(c) In connection with spectrum not specifically pertaining to Wireless Local Loop or fixed services that pertain to the provision of backbone for the delivery of Wireless Local Loop, Telkom shall provide the outgoing licensee with an indemnity, to be negotiated in good faith between Telkom and the outgoing licensee, for such outgoing licensee’s costs of migration. Such indemnity shall be limited to costs necessarily and directly incurred by such outgoing licensee in order to effect migration by the time or times agreed with Telkom and, for the avoidance of doubt, shall not include additional expenses incurred as a result of such outgoing licensee upgrading or otherwise modifying its equipment.

(3) The following procedures shall be utilized in order to facilitate the accelerated time-scales in such cases required by the Director-General following a request by Telkom as contemplated in subregulation (1);
Outgoing licensees adhering to the shortened time-scales as agreed with Telkom shall be charged license fees determined from time to time by the Minister in terms of the Act at preferential rates in the spectrum to which they migrate for a period equal to the period from the date of accelerated migration up to the Migration Strategy End Date.

If migration is not completed by the date agreed with Telkom, but is nonetheless completed before the Migration Strategy End Date, preferential rates shall be determined from time to time by the Minister in terms of the Act.

At all times the Director-General shall facilitate good faith negotiations with the aim of completing migration-

(i) in Wireless Local Loop bands and fixed services bands pertaining to the provision of backbone for the delivery of Wireless Local Loop, as soon as may be practicable but in any event within a period of six months of the Effective Date or such later date as Telkom may request; and

(ii) in all other bands, as soon as may be practicable but in any event no later than such date as Telkom may reasonable request.

If the outgoing licensee migrates on or before the date agreed with Telkom, Telkom shall compensate the outgoing licensee for fifty per cent of the costs necessarily and directly incurred by an outgoing licensee in order to effect migration;

If the outgoing licensee migrates after the date agreed with Telkom, but on or before the Migration Strategy End Date, the contribution to be paid by Telkom shall be reduced pro rata from twenty five per cent to zero from the date agreed with Telkom to the Migration Strategy End Date;

If migration is not completed within the period agreed with Telkom, the Director-General shall increase the spectrum fee charged per annum to the outgoing licensee and at the same time give written notice to the outgoing licensee of his or her intention to enforce completion of migration from the date specified pursuant to paragraph (c).

Such increased fees shall be determined from time to time by the Minister in terms of the Act.

If, six months after the date specified in terms of paragraph (c), the outgoing licensee has not yet migrated, the Director-General shall promptly enforce completion of migration to the maximum extent permitted under applicable
law.

(1) Notwithstanding the foregoing, if Telkom is required to compensate an outgoing licensee in accordance with this subregulation and, in bearing such costs, Telkom becomes liable for payment in excess of the maximum amount indicated in subregulation (2) (b), the outgoing licensee shall be fully liable for the remainder of its own migration cost.

[Chapter 9 inserted by G.N. R.328 of 21 February 1997 and substituted by G.N. R.676 of 6 May 1997.]
ANNEXURE A

LIMITS OF INTERFERENCE

A1. For the purpose of these limits-

(a) "power-distributed system" shall mean any system for conveying electrical energy from one place to another;

(b) "interference voltage at the terminals" shall mean the interference voltage measured at the point where the apparatus is connected to the power-distribution system. Limits for the interference voltage at the terminals only apply where the declared mains voltage is not higher than 750V between conductors or not higher than 375V between one conductor and earth.

A2. Limits of interference:

Table 1 shows the limits of interference that shall not be exceeded for the classes of apparatus and systems listed in paragraph A3.

A3. Classification of equipment:

(a) (i) Equipment not covered by classes below;

(ii) portable tools incorporating electric motors;

(1) rated mains power up to and including 700W;

(2) rated mains power above 700W up to and including 1,000W;

(3) rated mains power above 1,000W up to and including 2,000W;

(iii) household and similar appliances;

(iv) regulating controls incorporating semiconductor devices;

(v) electrical traction systems;

(1) trolley buses, tramways;
(2) other traction systems;

(vi) equipment not connected to a power-distribution system (e.g. battery-operated equipment);

(b) gas-discharged lamps, neon signs and filament lamps;

(c) power-distribution systems having a declared voltage between conductors not higher than 750V or a declared voltage between any one conductor and earth not higher than 375V;

(ii) power-distribution systems having a declared voltage between conductors higher than 750V but not exceeding 15 000V or a declared voltage between any one conductor and earth higher than 375V but not exceeding 15 000V;

(iii) power-distribution systems having a declared voltage between conductors or between any one conductor and earth exceeding 15 000V;

(d) ignition systems;

(e) industrial, scientific and medical apparatus:

(i) Frequency bands that are not subject to control;

(ii) measured on a test site;

(iii) not measured on a test site;

(iv) radio-frequency glueing and heating equipment;

(f) television and radio receivers:

(ii) local-oscillator radiation from very high frequency (VHF) frequency modulation receivers for broadcast reception in the band 87.5 to 108 MHz;

(ii) local-oscillator radiation and voltage on antenna terminals of receivers for television reception in the band 174 to 1 000 MHz;

(iii) time-base voltage on mains terminals of receivers for television reception in the band 174 to 1 000 MHz;
<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Power (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>150-350 kHz</td>
<td>15</td>
</tr>
<tr>
<td>350-500 kHz</td>
<td>15</td>
</tr>
<tr>
<td>5-30 MHz</td>
<td>15</td>
</tr>
<tr>
<td>30-300 MHz</td>
<td>15</td>
</tr>
<tr>
<td>150-350 kHz</td>
<td>15</td>
</tr>
<tr>
<td>350-500 kHz</td>
<td>15</td>
</tr>
<tr>
<td>5-30 MHz</td>
<td>15</td>
</tr>
<tr>
<td>30-300 MHz</td>
<td>15</td>
</tr>
<tr>
<td>ISO-1605 kHz</td>
<td>15</td>
</tr>
<tr>
<td>500-5000 kHz</td>
<td>15</td>
</tr>
<tr>
<td>5-30 MHz</td>
<td>15</td>
</tr>
<tr>
<td>30-300 MHz</td>
<td>15</td>
</tr>
<tr>
<td>300-1000 MHz</td>
<td>15</td>
</tr>
<tr>
<td>Najpeli Ltd.</td>
<td>15</td>
</tr>
<tr>
<td>150-30000 kHz</td>
<td>15</td>
</tr>
<tr>
<td>30-300 MHz</td>
<td>15</td>
</tr>
<tr>
<td>300-1000 MHz</td>
<td>15</td>
</tr>
<tr>
<td>Noutwal Ltd.</td>
<td>15</td>
</tr>
<tr>
<td>150-30000 kHz</td>
<td>15</td>
</tr>
<tr>
<td>30-300 MHz</td>
<td>15</td>
</tr>
<tr>
<td>300-1000 MHz</td>
<td>15</td>
</tr>
</tbody>
</table>
(iv) local-oscillator radiation from all receivers not covered by (f) (i) or (f) (ii);

(g) information technology equipment (ITE):

(i) Class A equipment:

Class A equipment is information technology equipment which satisfies the class A interference limits but not the class B limits. It is the supplier's responsibility to ensure that prior to sale the customer is aware that such equipment is not suitable for use in residential or domestic environments. Such information shall be clearly displayed on either the article or its container.

(ii) Class B equipment:

Class B equipment is ITE which satisfies the class B interference limits and as such is certified for use in all normal environments.

**A4.** Classes (a), (b), (c), (e) and (f) referred to in A3, with the exception of (a) (v) and (a) (vi), apply to equipment designed for connection at its terminals to a distribution system having a declared voltage between conductors not higher than 750V or a declared voltage between any one conductor and earth not higher than 375V.
### TABLE 1 (continue)

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Class of exposure</th>
<th><strong>A</strong></th>
<th><strong>B</strong></th>
<th><strong>C</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - 500</td>
<td>50 - 200 Hz</td>
<td>30</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>500 - 1000</td>
<td>200 - 400 Hz</td>
<td>40</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>1000 - 3000</td>
<td>400 - 800 Hz</td>
<td>50</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>3000 - 6000</td>
<td>800 - 1600 Hz</td>
<td>60</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>6000 - 10000</td>
<td>1600 - 3200 Hz</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>10000 - 20000</td>
<td>3200 - 6400 Hz</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

**Notes:**

- **A**, **B**, and **C** represent different levels of exposure.
- The table is based on the Telecommunications Act of 1996.

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**Issue No. 12 (2002)**
### Table 1 (continues)

<table>
<thead>
<tr>
<th>Class of Approvals</th>
<th>Frequency Range</th>
<th>Interference Voltage at End Equipment 10μA</th>
<th>Conductive Voltage at End Equipment 10μA</th>
<th>Radiated Interference Voltage at End Equipment 10μA</th>
<th>Radiated Power 10μA</th>
<th>Radiated Interference Fields and Ongoing Charges (μA)</th>
<th>Measuring Distance (m)</th>
<th>Measuring Distance of End Equipment (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>150 - 200</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
</tr>
<tr>
<td>(b)</td>
<td>200 - 300</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
</tr>
<tr>
<td>(c)</td>
<td>300 - 400</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
</tr>
<tr>
<td>(d)</td>
<td>400 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
</tr>
<tr>
<td>(e)</td>
<td>500 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
<td>33 - 500</td>
</tr>
</tbody>
</table>

**Key to abbreviations:**

- The italicized text indicates that the interference voltage at the lower specified value is the lower frequency in the upper specified value at the upper frequency.
- c = \( N \) for equipment with measuring channels not more than 10 kHz.
- e = \( N \) for equipment with measuring channels not more than 10 MHz.
- f = \( N \) for equipment with measuring channels not more than 100 MHz.
- g = \( N \) for equipment with measuring channels not more than 1 GHz.
- h = \( N \) for equipment with measuring channels not more than 10 GHz.
- i = \( N \) for equipment with measuring channels not more than 100 GHz.
- j = \( N \) for equipment with measuring channels not more than 1 THz.
- k = \( N \) for equipment with measuring channels not more than 10 THz.
- l = \( N \) for equipment with measuring channels not more than 100 THz.
- m = \( N \) for equipment with measuring channels not more than 1 GHz.
- n = \( N \) for equipment with measuring channels not more than 10 GHz.
- o = \( N \) for equipment with measuring channels not more than 100 GHz.
- p = \( N \) for equipment with measuring channels not more than 1 THz.
- q = \( N \) for equipment with measuring channels not more than 10 THz.
- r = \( N \) for equipment with measuring channels not more than 100 THz.
- s = \( N \) for equipment with measuring channels not more than 1 GMHz.
- t = \( N \) for equipment with measuring channels not more than 10 GMHz.
- u = \( N \) for equipment with measuring channels not more than 100 GMHz.
- v = \( N \) for equipment with measuring channels not more than 1 THz.
- w = \( N \) for equipment with measuring channels not more than 10 THz.
- x = \( N \) for equipment with measuring channels not more than 100 THz.
- y = \( N \) for equipment with measuring channels not more than 1 GMHz.
- z = \( N \) for equipment with measuring channels not more than 10 GMHz.
- A = \( N \) for equipment with measuring channels not more than 100 GMHz.
- B = \( N \) for equipment with measuring channels not more than 1 THz.
- C = \( N \) for equipment with measuring channels not more than 10 THz.
- D = \( N \) for equipment with measuring channels not more than 100 THz.
- E = \( N \) for equipment with measuring channels not more than 1 GMHz.
- F = \( N \) for equipment with measuring channels not more than 10 GMHz.
- G = \( N \) for equipment with measuring channels not more than 100 GMHz.
- H = \( N \) for equipment with measuring channels not more than 1 THz.
- I = \( N \) for equipment with measuring channels not more than 10 THz.
- J = \( N \) for equipment with measuring channels not more than 100 THz.
- K = \( N \) for equipment with measuring channels not more than 1 GMHz.
- L = \( N \) for equipment with measuring channels not more than 10 GMHz.
- M = \( N \) for equipment with measuring channels not more than 100 GMHz.
- N = \( N \) for equipment with measuring channels not more than 1 THz.
- O = \( N \) for equipment with measuring channels not more than 10 THz.
- P = \( N \) for equipment with measuring channels not more than 100 THz.
- Q = \( N \) for equipment with measuring channels not more than 1 GMHz.
- R = \( N \) for equipment with measuring channels not more than 10 GMHz.
- S = \( N \) for equipment with measuring channels not more than 100 GMHz.
- T = \( N \) for equipment with measuring channels not more than 1 THz.
- U = \( N \) for equipment with measuring channels not more than 10 THz.
- V = \( N \) for equipment with measuring channels not more than 100 THz.
- W = \( N \) for equipment with measuring channels not more than 1 GMHz.
- X = \( N \) for equipment with measuring channels not more than 10 GMHz.
- Y = \( N \) for equipment with measuring channels not more than 100 GMHz.
- Z = \( N \) for equipment with measuring channels not more than 1 THz.
TABLE 2

LIMITS OF NOISE VOLTAGE AT MAINS TERMINALS IN THE RANGE 150 TO 200 kHz FOR DOMESTIC APPLIANCES

<table>
<thead>
<tr>
<th>Type of appliance</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>All appliances not listed below</td>
<td>$2 \times 10^3 \mu$V</td>
</tr>
<tr>
<td>Warming plates, cooking ovens, deep-fat fryers, space heaters, forced air heaters, convector, refrigerators, immersion heaters, boilers, instantaneous water heaters, waffle irons, kettles, coffee percolators, milk boilers, sterilizers, warming pads, blankets, bed warmers, separate thermostats for control of room temperatures (such as water heaters and oil burners), irons, frying pans, stewing pans, automatic toasters, cooking ranges with automatic plates</td>
<td>$3 \times 10^3 \mu$V</td>
</tr>
</tbody>
</table>

TABLE 3

Factor $f$ values for various appliances

<table>
<thead>
<tr>
<th>Type of appliance</th>
<th>Factor $f$</th>
</tr>
</thead>
<tbody>
<tr>
<td>All appliances not listed below</td>
<td>1</td>
</tr>
<tr>
<td>Stoves</td>
<td>0.5</td>
</tr>
<tr>
<td>Appliances with more than one cooking plate controlled by thermostats or energy regulators</td>
<td>0.5</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>0.5</td>
</tr>
<tr>
<td>Irons</td>
<td>0.66</td>
</tr>
</tbody>
</table>

[Table 3 amended by G.N.R.148 of 26 January 1980.]
ANNEXURE B

REPUBLIC OF SOUTH AFRICA
THE SOUTH AFRICAN POST OFFICE
CERTIFICATE OF COMPLIANCE WITH THE RADIO REGULATIONS
(Regulation F2)

This is to certify that the apparatus described below has, in terms of regulation F3 of the Radio Regulations that were promulgated under section 18(10)(e) of the Radio Act, 1952 (Act 3 of 1952), been produced for examination and that, after examination, the apparatus was found to meet the applicable provisions of the said regulations.

Certificate number

Date of issue

Description of apparatus

Issued to

Address

Country of manufacture or assembly

Manufacturer’s name

Trade name of apparatus

Model identification of apparatus

Director-General
APPLICATION FOR CERTIFICATE
(Regulation F3)

I, (a) 

(b) 

a company registered under the Companies Act, 1973 (Act 61 of 1973), intend to manufacture for sale/import for sale the apparatus described below. I hereby apply in terms of regulation F3 of the regulations promulgated under the Radio Act, 1952 (Act 3 of 1952) for the issue to me/the above-mentioned company of a certificate as mentioned in regulation F2 of the said regulations.

Description of apparatus

*A sample of the above-mentioned apparatus is offered for examination with this application./A sample of the above-mentioned apparatus is not offered with this application but may be examined at

Signature of applicant/

person authorised by company

Date

(a) Insert the full names of natural person if application is made by natural person.

(b) Insert the name of the company if the application is made on behalf of a company.
ANNEXURE D

For the purposes of the Annexure the letters and figures in the left-hand column represent the class of suppressor mentioned in the column on the right against the relative or figure.

<table>
<thead>
<tr>
<th>Letter or figure</th>
<th>Class of suppressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spark-plug suppressor.</td>
</tr>
<tr>
<td>2</td>
<td>Shielded spark-plug suppressor.</td>
</tr>
<tr>
<td>3</td>
<td>Suppressed spark-plug or resistor spark-plug.</td>
</tr>
<tr>
<td>4</td>
<td>Resistive cable.</td>
</tr>
<tr>
<td>5</td>
<td>Reactive cable.</td>
</tr>
</tbody>
</table>

A Distributor cap with built-in centre resistor (resistor brush) or with plug-in resistor.
B Rotor with resistor.
C Distributor cap with built-in centre resistor (resistor brush) or with plug-in resistor and resistors in the distribution outlets or in the cables near the distribution cap.
D Distributor cap with a resistor in the rotor and resistors in all the spark-plug outlets or spark-plug leads.

(i) Internal-combustion engines with metal engine enclosures or special metal ignition-system enclosures-

(a) with distributors shall be equipped with the following classes of suppressors:

Class 1 together with class B or C or D.
Class 2 together with class A or B or C or D.
Class 3 together with class A or B or C or D.
Class 4 (all spark-plug leads) together with class A or B.
Class 4 (all leads).
Class 5 (all spark-plug leads) together with class A or B.

(b) without distributors shall be equipped with the following class of suppressors:

Class 1 or 2 or 3 or 4 or 5.
(ii) Internal-combustion engines without metal engine enclosures or special metal ignition-system enclosures-

(aa) with distributors shall be equipped with the following classes of suppressors:

- Class 2 together with class C or D.
- Class 3 together with class C or D.
- Class 2 together with 4 or 5 (all leads).
- Class 3 together with 4 or 5 (all leads).

(bb) without distributors shall be equipped with the following class of suppressor:

- Class 2 or 3.

ANNEXURE E

[Annexure E deleted by G.N.R.855 of 30 April 1982.]

ANNEXURE F

ENACTMENT OF TELECOMMUNICATION REGULATIONS

The Minister of Posts, Telecommunications and Broadcasting has, under section 119A of the Post Office Act, 1958 (Act No. 44 of 1958), made the regulations in the Schedule.

(Editor's note: Section 96 (7) of the Telecommunications Act, 1996 (Act No. 103 of 1996), provides that these regulations which were made under section 119A of the Post Office Act, 1958, which Act was repealed by the 1996 Act, and which were in force immediately prior to the commencement of the 1996 Act, shall remain in force until amended or repealed under section 96 of the 1996 Act. When the new regulations are promulgated, the said new regulations will replace these Regulations by means of an update service.

Section 118 of the Telecommunications Act, 1996 further provides that the expression "Postmaster-General", wherever it occurs should be substituted by the expression "Director-General" [of the Department Communications].)

SCHEDULE

CHAPTER 1

DEFINITIONS

1. In these regulations any expression shall have the meaning ascribed to it in the Post Office Act (Act No. 44 of 1958), and unless the context otherwise indicates-

"accredited test laboratory" means a test laboratory approved by the South African Bureau of Standards, in terms of Specification SABS 0259, as competent to perform type approval testing in accordance with any specification prescribed by the Director-General;

"client" means the registered subscriber of a telecommunications line provided by Telkom SA Ltd or any person using such a telecommunications line in a manner that in the opinion of the Director-General renders such a person as a registered subscriber or causes him to be regarded as such a subscriber;
"common interest group" means a group of companies that need not be legally associated or affiliated but which, by virtue of common business interests, desires access to the same computer(s) for data processing;

"data modem" means a device that enables the interconnection of data equipment to a telecommunications line;

"data processing" means application processing, excluding an application dedicated to text switching and routing;

"data transmission" means transmission of binary digital information including both data and text, between data terminal equipment;

"electronic PABX" means PABX switching unit of which the switching matrix and the control circuitry are mainly constructed of non-mechanical components;

"exchange line" means the voice channel (physical or otherwise) that connects the PABX switching unit with the PSTN;

"extension line" means the voice channel (physical or otherwise) that connects the PABX switching unit with an extension terminal on premises under the PABX user's control;

"extension reticulation" means the network cabling connecting the PABX switching unit and extension terminals;

"extension terminal" means any TLTE connected to an extension line;

"ICASA logo" means the logo of the Independent Communications Authority of South Africa obtainable at any office of the Authority;

[Definition of "ICASA logo" inserted by r. 2 of G.N. R. 289 of 6 March 2002]

"LMO" means licensed maintenance organisation and is an organisation, not affiliated to a PABX supplier, that is licensed by the Director-General to install, alter and maintain licensed PABX switching unit types and/or the associated extension reticulation and extension terminals;

"PABX" means a private automatic branch exchange;

"PABX owner" means the person who is the legal owner of the PABX system;

"PABX supplier" means the person to whom a licence is issued by the Director-General, allowing him to supply, install and maintain a PABX system in accordance with the Director-General's requirements;
"**PABX switching unit**" means a switching unit installed on the premises occupied by the PABX user or intended to be so installed, and connected to the PSTN by means of exchange lines and which functions as an intermediary to enable telephone calls to be established between extensions, or between extensions and exchange lines or between extensions and tie lines, connected to the PABX switching unit;

"**PABX switching unit type**" means a specific model and version of a specific make of PABX switching unit;

"**PABX system**" means the PABX switching unit and its associated exchange line terminations, extension reticulation and extension terminals;

"**PABX user**" means the person for whom and at whose request a PABX system has been installed and connected to the PSTN (a PABX user may own or rent a PABX system);

"**PBX**" means a private branch exchange, whether automatic or manual;

"**PSTN**" means the public switched telephone network consisting of the exchanges, interexchange connections (cable, *microwave*, *optic fibre*, etc.), exchange lines and TLTE owned and operated by Telkom SA Ltd, for the provision of telephone service to the general public;

"**tie line**" means a voice channel (physical or otherwise) provided by Telkom SA Ltd for the direct interconnection of two PBXS used by the same person or legal entity; and

"**TLTE**" means telecommunication line terminal equipment which is connected to an exchange line or an extension line to transmit, receive and manipulate voice, data and video signals.
CHAPTER 2

PRIVATE AUTOMATIC BRANCH EXCHANGES (PABXS)

Licensing of PABX switching units and suppliers

2. (1) PABXS connected to the PSTN shall satisfy the Director-General’s requirements as prescribed in the latest issue of the PABX specification compiled by and obtainable from the Director-General.

(2) All PABX switching unit types shall be evaluated and tested by an accredited test laboratory for compliance with the requirements referred to in subregulation (1) and to ensure that they will interwork satisfactorily with the PSTN.

(3) Application for the licensing of a PABX switching unit type shall be made to the Director-General in accordance with the application procedure prescribed in the “Suppliers guide to the approval of PABX equipment intended for connection to the PSTN”, compiled by and obtainable from the Director-General.

(4) Licences shall only be issued to South African citizens or South African registered companies.

(5) When a particular PABX switching unit type complies with the Director-General’s requirements, the supplier will receive a licence entitling him to supply and install PABX switching units of such type for connection to the PSTN and to maintain such PABX switching units, extension reticulation and extension terminals, provided that-

(a) the evaluation and licence fees prescribed in the relevant tariff list have been paid by the PABX supplier; and

(b) the Director-General is satisfied that the PABX supplier-

(i) is capable in all respects to install and maintain the PABX switching unit type, extension line reticulation and extension terminals, in accordance with the required standards;

(ii) is qualified to provide prospective PABX users with adequate technical information and advice; and

(iii) will maintain an adequate stock of spare parts for systems supplied by him.
Licensing of maintenance organisations

3. (1) The Director-General may license an organisation which is not affiliated to a PABX supplier as a type 1 LMO in respect of a PABX system using a particular PABX switching unit type, provided that-

(a) the prescribed licence fee has been paid; and

(b) he is satisfied that the applicant-

(i) has a sufficient number of qualified telecommunication technicians or electricians in his employ who have been suitably trained on the particular PABX switching unit type;

(ii) has access to the necessary technical information and spares;

(iii) is capable in all respects to install, alter and maintain the PABX switching unit type, extension reticulation and extension terminals in accordance with the required standards; and

(iv) has, in the case of an electronic PABX switching unit type, made suitable arrangements for the repair of printed circuit boards, for access to spares and software support, and for obtaining specialised training on the maintenance of such a switching unit type.

(2) The Director-General may license an organisation which is not affiliated to a PABX supplier as a type 2 LMO for the maintenance of extension reticulation and extension terminals, provided that-

(a) the prescribed licence fee has been paid; and

(b) he is satisfied that the applicant-

(i) has a sufficient number of qualified telecommunication technicians or electricians in his employ; and

(ii) is capable in all respects to install and maintain extension reticulation and extension terminals in accordance with the required standards.

Validity of licence

4. A licence referred to in regulations 2 and 3 shall be valid until 31 March subsequent to the date of issue and shall be renewed yearly by payment of the prescribed licence fee before or on 30 April.
Licence not transferable and may be revoked

5. (1) Except with the written approval of the Director-General, no person or legal entity to whom a licence has been issued under regulation 2 or 3 may transfer such licence, or the powers or authority granted to him by such licence, to any other person or legal entity, or surrender it in any way in favour of another person or legal entity.

(2) The Director-General may, with due warning, revoke a licence issued under regulations 2 or 3, of the licensee-

(a) supplies PABX switching units that are not licensed or which in any way differ from those which were licensed;

(b) contravenes or fails to comply with any of the conditions of the licence; and

(c) requests the Director-General in writing to this effect.

(3) When a licence is revoked for any reason the licensee must return it to the Director-General within 14 days after receiving notice of the revocation.

Licence does not grant exclusive rights

6. A licence does not grant exclusive rights to the licensee and the Director-General reserves the right to issue a licence to any other person to supply PABX systems for connection to the PSTN and to maintain such PABX systems.

Procurement and commissioning

7. (1) A prospective PABX user shall apply to Telkom SA Ltd on the prescribed application form for the connection of his PABX system to the PSTN. (Such application may be made directly to Telkom SA Ltd or with the assistance of a PABX supplier or LMO.)

(2) (a) The configuration of the PABX system shall be in accordance with the requirements of the PABX user. Where applicable, the configuration requirements shall also comply with the requirements of Telkom SA Ltd who will issue a schedule of requirements upon payment of the prescribed fee.

(b) The schedule of requirements referred to in paragraph (a) above is valid for twelve months from the date of issue. Should this schedule of requirements expire, or the requirements of the PABX user necessitate a change, application shall be made to Telkom SA Ltd for a revised schedule of requirements.
2.99
TELECOMMUNICATIONS ACT
Part 2: Government Notices
Act No. 103 of 1996

(3) The PABX switching unit, extension, reticulation and extension terminals shall be installed by a PABX supplier or type 1 LMO in accordance with the standards required by the Director General and the requirements referred to in subregulation (2) la).

(4) Where a PABX supplier or an LMO makes use of a sub-contractor, the PABX supplier or LMO shall remain responsible for the standard of installation.

(5) No person shall supply, install, alter or maintain a PABX system or any part thereof, unless he is licensed in terms of regulation 2 or 3.

(6) Prior to commissioning of the PABX system the PABX user shall provide Telkom SA Ltd with a guarantee that-

(a) only licensed equipment has been used;

(b) the work has been carried out in accordance with the standards required by the Director-General; and

(c) the equipment and facilities installed are in accordance with the PABX user's requirements referred to in subregulation (2) (a).

(7) Telkom SA Ltd is entitled to do an acceptance test on the exchange line interfaces of the PABX system at its own cost.

Exchange lines

8. (1) The exchange lines shall be rented from Telkom SA Ltd by the PABX user at the prescribed tariff.

(2) The PABX user must ensure that the traffic carrying capacity of the PABX system shall be sufficient to ensure that all the traffic originating from and terminating on it will be carried at the grade of service specified by the Director-General.

(3) Failure to comply with subregulation (2) can result in service being suspended by Telkom SA Ltd.

Extension reticulation and extension terminals

9. (1) The PABX user is responsible for the provision of the extension reticulation and extension terminals on the premises on which the PABX switching unit is situated and on premises under the PABX user's control having a common border with the premises on which the PABX switching unit is situated.
(2) (a) The connections between the premises on which the PABX switching unit is situated and premises not sharing a common border therewith, shall be provided and maintained by Telkom SA Ltd at the prescribed tariffs.

(b) Written exemption from the requirements referred to in paragraph (a) may in certain instances be granted by Telkom SA Ltd.

(3) A PABX user may negotiate the purchase of extension reticulation and extension terminals originally provided by Telkom SA Ltd.

(4) A PABX supplier or LMO may install, alter and maintain extension reticulation and extension terminals only with the written consent of the owner of such extension reticulation and extension terminals,

(5) The equipment practice and materials used for extension line reticulation shall be in accordance with the relevant specifications issued by the Director-General and conditions of service stipulated by Telkom SA Ltd.

(6) Only extension terminals licensed by the Director-General in accordance with Chapter 3 shall be connected to a PABX and the connection of unlicensed extension terminals may result in service being suspended, or a penalty being imposed or both.

**Maintenance**

10. (1) The primary responsibility for the efficient functioning of any PABX system rests with the PABX user of that system.

(2) A PABX user who wishes to maintain his PABX system himself shall be licensed as a type 1 LMO in accordance with regulation 3 (1).

(3) A PABX user who does not maintain his PABX system himself in accordance with subregulation (2) shall make use of the services of the PABX supplier or an appropriate LMO.

(4) Inadequate PABX maintenance which causes an unacceptably high incidence of service complaints, may result in the Director-General requesting Telkom SA Ltd to suspend service to the PABX user.

(5) Service difficulties on PABX systems shall be handled in accordance with a procedure agreed between the PABX user and his PABX supplier or LMO and Telkom SA Ltd.
Indemnity and amendment of conditions

11. (1) The Director-General shall not be liable to any PABX supplier, LMO or PABX user for any loss or damages resulting from-

(a) a service difficulty or fault condition in the PSTN;
(b) the installation, alteration, maintenance or operation of a PABX system;
(c) the revocation of a licence in terms of regulation 5 (2); and
(d) the suspension of service in terms of regulation 8 (3), 9 (6) or 10 (4).

(2) The Director-General reserves the right to amend the conditions of a licence from time to time after consultation with all interested parties.

Penalties

12. Any person contravening a provision of regulation 7 (5) or 9 (6) or failing to comply therewith, shall be guilty of an offence and upon conviction be liable to a fine, or imprisonment for a period not exceeding three months.

CHAPTER 3

TELECOMMUNICATION LINE TERMINAL EQUIPMENT (TLTE)

TLTE must satisfy the Director-General's requirements

13. (1) All TLTE must satisfy the Director-General's requirements, as prescribed in the various specifications obtainable from the Director-General, prior to being connected, either directly or indirectly, to the PSTN.

(2) All TLTE shall be evaluated and tested against the specifications mentioned in subregulation (1) to ensure that they will interwork satisfactorily with the PSTN.

(3) When a TLTE complies with the Director-General's requirements, it will be licensed for distribution and connection to the PSTN after the licence and evaluation fees prescribed in the relevant tariff list have been paid to the Director-General.

(4) Licences shall only be issued to South African citizens or South African registered companies.
Director-General may require certain modifications

14. (1) A licensee is obliged to effect, at his own expense, any modification to the TLTE that may be required in order to comply with the relevant specifications.

(2) All subsequent TLTE of the same make and model supplied for connection to the PSTN shall have the same technical and operational characteristics as the evaluated samples, including any modifications of such samples that may have been indicated by the Director-General.

(3) No person shall, without the written consent of the Director-General, modify TLTE or, add any facility to it, or allow any other person to make such modification or add such facility, thereby causing it to deviate in any way from the conditions of the licence.

Validity of licence

15. A licence referred to in regulation 13 shall be valid until 31 March subsequent to the date of issue and shall be renewed yearly by payment of the prescribed licence fee before or on 30 April.

Licence not transferable and may be revoked

16. (1) Except with the written approval of the Director-General, no person or legal entity to whom a licence has been issued in terms of regulation 13 may transfer such licence, or the authority granted to him by such licence, to any other person or legal entity, or surrender it in any other way in favour of another.

(2) Should it at any time be found that a licensee fails to comply with the conditions of licence or for any other valid reason, the Director-General may, with due warning, revoke a licence issued in terms of regulation 13.

(3) When a licence referred to in regulation 13 is revoked for any reason, the licensee must return the licence to the Director-General within 14 days after receiving notice of the revocation.

Suspension of service

17. The Director-General may authorise Telkom SA Ltd to instruct a Client to disconnect an unlicensed TLTE from an exchange line or extension line and should the Client fail to comply with such instruction within seven days after receiving the instruction, to suspend the service, or the Director-General may institute legal proceedings against the TLTE user.
Licence does not grant exclusive rights to a supplier of TLTE

18. A licence does not grant any exclusive right to the supplier and the Director-General reserves the right to issue a licence to any other person to connect a similar TLTE to the PSTN.

Director-General does not sponsor TLTE

19. (1) A supplier of TLTE shall not verbally or otherwise intimate to any person that the Director-General sponsors or recommends in any way the use of a particular TLTE.

(2) A supplier who is in possession of a valid licence for a particular TLTE may inform potential customers accordingly by means of advertising, public notices etc.

Labelling of telecommunication equipment, facility, radio apparatus and container

3. (1) All type-approved telecommunication equipment, facility or radio apparatus shall have a legible label permanently affixed to the outside of such equipment, facility or radio apparatus bearing-

   (a) The ICASA logo and

   (b) The ICASA issued licence number.

(2) The label must be affixed before the product is made available for sale or lease or is supplied in any other manner.

4. The container in which the equipment, facility or radio apparatus referred to in regulation 3 is supplied shall bear a similar label.

5. The minimum size of the ICASA logo shall be 3 mm high by 3 mm wide.

6. Labels may be obtained from the Authority upon payment of the applicable fee.

7. In the event of a supplier wanting to produce his own label, a sample of the proposed label shall accompany the application for the type-approval of the telecommunication equipment, facility or radio apparatus. This label may only be used if approved by the Authority in writing.
8. No person may use a label similar to that referred to in regulation 3 and 4 for any non-type-approved equipment, facility or radio apparatus.

9. Where it is shown that a permanent affixed label is not desirable or is not feasible, an alternative method of displaying the required information may be used if approved by the Authority in writing. The proposed alternative method of labelling and the justification for its use shall accompany the application for the type-approval of the equipment, facility or radio apparatus.

Application

10. These regulations shall apply to new equipment only, and shall come into effect 6 (six) months from the date of publication.

(Editor's note: This date is 6 September 2002)

Offence (section 96 (3))

11. The licence holder shall be guilty of an offence if he or she fails to comply with these regulations and shall on conviction be liable to a fine not exceeding R250 000 or imprisonment not exceeding six months.

Penalty (Section 100 (3) (b))

12. Where the Authority, after investigation and adjudication in terms of section 100 of the Act, finds that the licence holder concerned has been responsible for a contravention of these regulations, the Authority may impose a fine not exceeding R250 000.

13. A sample of the ICASA label is included below:

![ICASA Label Sample]

[Reg. 19 (3) amended by G.N. R.289 of 6 March 2002]
Installation, performance and maintenance

20. (1) It is the TLTE user's responsibility to install the TLTE in accordance with the conditions of service laid down by Telkom SA Ltd, for supplying the service.

(2) Neither the Director-General nor Telkom SA Ltd shall under any circumstances be responsible for the performance of the TLTE.

(3) Should it be found that a faulty TLTE adversely affects the PSTN, Telkom SA Ltd may instruct the TLTE user to disconnect it from the PSTN and, should the TLTE user fail to comply with such an instruction, the service to the TLTE user may be suspended by Telkom SA Ltd.

Indemnity

21. Neither the supplier of the TLTE nor his client shall have any claim against the Director-General or Telkom SA Ltd in the event of any action taken in terms of regulations 16(2), 17 and 20(3).

Imposition of additional licence conditions

22. The Director-General reserves the right to impose from time to time such additional conditions as he may consider desirable for a licence referred to in regulation 13.

Penalties

23. Any person connecting unlicensed TLTE to the PSTN shall be guilty of an offence and, upon conviction, be liable to a fine or imprisonment for a period not exceeding three months.

Repeal


Z. P. JORDAN,
Minister of Posts, Telecommunications and Broadcasting.
GOVERNMENT NOTICE

DEPARTMENT OF POSTS AND TELECOMMUNICATIONS

No. 1790

17 November 1995

DECLARATION OF CERTAIN APPARATUS TO BE AND NOT TO BE RADIO APPARATUS FOR THE PURPOSES OF ACT No. 3 OF 1952

In terms of the powers vested in me by the definition of "radio apparatus" in section 1 of the Radio Act 1952 (Act No. 3 of 1952), I, Zwelininga Pallo Jordan, Minister for Posts, Telecommunications and Broadcasting, hereby declare the apparatuses mentioned in 1 to 5 below not to be radio apparatus which requires licensing in terms of the said Act. Type approval is obligatory:

(1) Any radio transmitting set with associated receiver that operates within the frequency bands mentioned below and does not exceed the specified power limits as indicated in the second column under the heading Effective Isotropic Radiated Power (EIRP):

<table>
<thead>
<tr>
<th>Frequency band</th>
<th>*EIRP</th>
<th>Examples of apparatus</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 10-150kHz</td>
<td>1 W</td>
<td>Remote control industrial apparatus, metal detectors</td>
</tr>
<tr>
<td>(ii) 175 kHz</td>
<td>1 W</td>
<td>Devices used for conveying instructions to groups</td>
</tr>
<tr>
<td>(iii) 1600-1610 kHz</td>
<td>1 W</td>
<td>Baby alarms, wireless record players</td>
</tr>
<tr>
<td>(iv) 26.96-27.28 MHz</td>
<td>100 mW</td>
<td>(a) Wireless microphones</td>
</tr>
<tr>
<td>26.995; 27.045; 27.095; 27.145 and 27.195 MHz</td>
<td>5 W</td>
<td>(b) Devices used for controlling models, toys, garage doors, cameras, projectors, etc.</td>
</tr>
</tbody>
</table>

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2.108  
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Part 2: Government Notices  
Act No. 103 of 1996

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Power</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(v) 30.84; 33.14 and 35.02 MHz</td>
<td>1 W</td>
<td>Devices used for conveying instructions to groups</td>
</tr>
<tr>
<td>(vi) 36.65-36.75 MHz</td>
<td>100mW</td>
<td>Wireless microphones</td>
</tr>
<tr>
<td>(vii) 40.65-40.70 MHz</td>
<td>100 mW</td>
<td>Wireless microphones</td>
</tr>
<tr>
<td>(viii) 53-54 MHz</td>
<td>5 W</td>
<td>(a) Devices used for controlling models</td>
</tr>
<tr>
<td></td>
<td>100mW</td>
<td>(b) Wireless microphones</td>
</tr>
<tr>
<td>(ix) 54.4500; 54.4625; 54.4750; 54.4875; 54.5000; 54.5125; 54.5250; 54.5375; 54.5500; 60.0250; 60.0375; 60.0500; 60.0625; 60.0750; 60.0875; 60.1000; 60.1125 and 60.1250 MHz</td>
<td>5 W</td>
<td>(a) Devices used exclusively for controlling models</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(b) Devices used exclusively for controlling model aircraft</td>
</tr>
<tr>
<td>(x) 141-142 MHz</td>
<td>100 mW</td>
<td>Remote control industrial apparatus</td>
</tr>
<tr>
<td>(xi) 402-406 MHz</td>
<td>100 mW</td>
<td>Doppler-shift movement detectors, wireless microphones, garage door openers, motor car alarm systems</td>
</tr>
<tr>
<td>(xii) 433.050-434.790 MHz (centre frequency 433,920 MHz)</td>
<td>100 mW</td>
<td>Remote control motor car locking systems, crane control, remote control electricity meter readers</td>
</tr>
<tr>
<td>(xiii) 915 MHz ± 0.0015%</td>
<td>3 W</td>
<td>Anti-theft systems</td>
</tr>
<tr>
<td>(xiv) 1 215-1 225 MHz</td>
<td>100 mW</td>
<td>Doppler-shift movement detectors</td>
</tr>
</tbody>
</table>
(xv) 10.025-10.700GHz 100 mW Doppler-shift movement detectors, devices used for measuring vehicle speed and surface of land

(xvi) 13.4-14GHz 5 mW Microwave fences

* EIRP mean the total radiated power relative to an isotropic antenna. This is effectively the measured average output power of the final radio frequency stage immediately preceding the antenna plus the loss in the antenna cable (if any) plus the gain of the antenna (if any) relative to an isotropic antenna.

(2) Wireless spread spectrum Local Area Networks (LAN's); used for short distance on single sites e.g. in an office complex in the 2.4-2.5 GHz (ISM) band. The standard to be utilised for such systems in this band shall be ETS 300 328 or an equivalent standard. In particular, RF power requirements shall be in accordance with the standards mentioned which are broadly as follows: The maximum * * effective isotropic radiated power is defined as the total power of the transmitter which is - 10 dBW (100 mW). The peak power density is defined as the highest instantaneous level of power in Watts per Hertz generated by the transmitter within the power envelope. This shall be - 10 dBW (100 mW) per 100 kHz EIRP for equipment using Frequency Hopping Spread Spectrum (FHSS) modulation and - 20 dBW (10 mW) per MHz EIRP for other modulation types. The following conditions are applicable:

(a) Only equipment which has been type approved by the Postmaster General may be used. Such type approval shall require compliance with the Radio Regulations and the standard stipulated above.

(b) No interference may be caused to users of other ISM equipment within the band or to other radio users outside the band.

(c) No complaints of interference to spread spectrum systems will be investigated.

(d) LAN's shall be confined to the same premises/buildings and between the computer systems of the same user.

** A* defined in 5.2.2 and 7.2.3 of the Standard and includes the gain of the antenna in dBi.

(3) Wireless LAN's used for short distance, in the following other ISM bands, namely 433,050-434,790MHz and 5 725-5 875 GHz for use on single sites e.g. in an office complex. Spread spectrum/wide band ETS 300 328 will be considered within these bands in accordance with the general standards other than principles listed in (2) for the 2.4-2.5 GHz ISM band, especially with regard to power requirements.
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TELECOMMUNICATIONS ACT
Part 2: Government Notices Act No. 103 of 1996

(4) Cordless telephones:

CT1 In the frequency bands 914-915/959-960MHz.

CT2 In the frequency band 864,100-868,100 MHz.

CTO On the frequency channels 46,610/49,670 MHz; 46,630/49,845 MHz; 46,670/49,860 MHz; 46,770/49,830 MHz; 46,830/49,890 MHz; 46,870/49,930MHz and 46,970/49,970MHz.

The power may not exceed 10 mW and telephones must undergo necessary tests and be type approved by the Postmaster General.

(5) Cellular radio communication service-mobile/portable and handheld units:

(a) C450 465,500-469,480MHz Mobile transmit . . .15W
455,500-459,480MHz Mobile receive . . .15W

(b) GSM 890,200-914,800MHz Mobile transmit...0,8-8W
935,200-959,800MHz Mobile receive....0,8-8w

*** Because of the CT1 cordless telephony, these networks we not permitted to operate in the 914-915 MHz and 959-960 MHz bands.


ZP JORDAN
Minister for Posts, Telecommunications and Broadcasting.
7 November 1995.
GOVERNMENT NOTICE

DEPARTMENT OF COMMUNICATIONS

No. R. 346 6 March 1998

REGULATIONS IN TERMS OF SECTION 96 OF
THE TELECOMMUNICATIONS ACT, 1996

In terms of section 96 (6) of the Telecommunications Act, 1996 (Act No. 103 of 1996), I, Jay Naidoo, Minister for Posts, Telecommunications and Broadcasting, hereby approve and publish the regulations in the Schedule made by the South African Telecommunications Regulatory Authority under section 96 (1), read with section 96 (5) (b), of the said Act.

J. NAIDOO
Minister for Posts, Telecommunications and Broadcasting

SCHEDULE

1. Where it appears to the Authority that a licensee has contravened or failed to comply with the provisions of the Act or terms and conditions of the relevant licence or agreement for the interconnection or provision of telecommunications facilities as contemplated in the Act, the Authority shall-

(a) inform the licensee concerned by notice in writing of the alleged contravention or failure, and require the licensee to submit written representation with regard to such allegation not later than 14 calendar days after receipt of such notice. The Authority may, on application or on its own accord, condone any late filing of such written representation.

(b) investigate the matter in any lawful manner and may for that purpose-

(i) permit evidence to be adduced; appoint and utilise inspectors as contemplated in section 99 of the Act;

(ii) summon and examine witnesses; order the production of any of books or documents or objects as it may deem necessary;
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Part 2: Government Notices

(iii) engage and utilise the services of experts or professional persons to assist in its investigative function; and

(iv) where applicable, take appropriate steps set out in the Code of Practices for Consumer Affairs and agreed to, from time to time, by the Licensee and the Authority in terms of the relevant licence.

2. Any party, aggrieved by an alleged contravention or failure to comply with the provisions of a licence or agreement, may lodge a complaint in writing with the Authority, setting out in full-

(a) the nature of the alleged contravention or non-compliance;

(b) the extent to which such alleged contravention or non-compliance had impacted on the complainant;

(c) the relief sought as a result of such an alleged contravention or non-compliance.

3. The provisions of regulation 1 of this regulation shall to the extent practical apply in any situation contemplated in regulation 2 above.

4. A party lodging a complaint to the Authority against a telecommunications operator shall prior to lodging such complaint with the Authority cause a full text of such a complaint to be served on the said operator.

5. Where the Authority determines that the alleged contravention or failure-

(a) merits a formal hearing, the Authority shall advise the licensee of its determination and of the date, time and the place where the hearing will be held and of the fact that the licensee is entitled to legal representation;

(b) does not merit a formal hearing, the Authority shall advise the licensee of its determination and proceed to decide the matter summarily.

6. After due consideration of all evidence and reports before the Authority, the Authority shall make an appropriate order of determination, or issue an appropriate directive, including without limitation-
(a) making orders and determinations or issuing directives contemplated in sections 5 (2) (b), 36 (1) (d), 43 (1) (c), 43 (4), 43 (5), 44 (7), 53 and 100 of the Act;

(b) that a fine not exceeding R500 000 be paid to the Authority;

(c) where applicable, any monies (plus interest thereon, calculated at the prevailing prime rate), or benefits which unduly accrued to the licensee, be refunded or returned to the payer thereof;

(d) on order to reimburse the Authority for costs and expenditure incurred by the Authority utilising the services of an expert or professional person as the case may be.

7. Any contravention or failure to comply with the provisions of this regulation or of an order, determination or directive issued pursuant to clause 6 hereof shall constitute an offence. Any person found guilty of this offence shall on conviction be liable to a fine not exceeding the amount of R500 000 (five hundred thousand rand) or imprisonment for a period not exceeding six months.
In terms of section 96 (6) of the Telecommunications Act, 1996 (Act No. 103 of 1996), I, Jay Naidoo, Minister for Posts, Telecommunications and Broadcasting, hereby approve and publish the following regulations made by the South African Telecommunications Regulatory Authority in terms of section 34 read with section 96 (1) and 96 (5) (b) of the Act.

J. Naidoo
Minister for Post, Telecommunications and Broadcasting

REGULATIONS IN TERMS OF SECTION 34 READ WITH SECTIONS 96 (1) AND 96 (5) (b) OF THE TELECOMMUNICATIONS ACT, 1996 (Act No. 103 of 1996) REGARDING CERTAIN MATTERS IN THE LICENSING PROCESS IN RESPECT OF ONE MOBILE CELLULAR TELECOMMUNICATION SERVICE LICENCE FOR WHICH APPLICATIONS HAVE BEEN INVITED IN TERMS OF SECTION 34 (2) (a) (ii) OF THE ACT, PUBLISHED IN NOTICE 314 IN GOVERNMENT GAZETTE 19806 DATED 26 FEBRUARY 1999

1. Definitions

1.1. "ex parte contact" includes, without limitation, any approach made to the Authority other than in accordance with a prescribed procedure.

1.1. "normal office hours" means 08h30 to 16h30, Mondays to Fridays excluding South African public holidays.

1.1. "offices of the Authority" means the offices of the Authority situate at Block B, Pinmill Farm, 164 Katherine Street, Sandton.


1.1. "the Authority" means the South African Telecommunications Regulatory Authority.
2.1 The Invitation means the "Invitation to Apply for One Mobile Cellular Telecommunication Service Licence in terms of section 34 (2) (a) (ii) of the Telecommunications Act, 1996" issued by the Minister for Posts, Telecommunications and Broadcasting and published in Notice 314 in Government Gazette 19806 dated 26 February 1999 and the "Document detailing the form in which applications for one mobile cellular Telecommunication Service Licence shall be submitted and the manner in which it is contemplated that the service shall be provided in terms of section 34 (2) (b) (ii) of the Telecommunications Act, 1996 (Act No, 103 of 1996)" made available by the Minister dated 5 March 1996.

2. Confidentiality

2.1 An applicant or interested person who has submitted an application, written representations or other written information to the Authority in terms of the Act or regulations prescribed in terms of the Act, may request that any document or information relating to the financial capacity or business plans of any person or relating to any other matter reasonably justifying confidentiality, shall not be open to public inspection. Such request shall be in writing, shall contain detailed reasons for the request, shall be accompanied by a bundle containing a copy of the relevant document or information and shall accompany the relevant application, written representations or other written information, as the case may be. The application, written representations or other written information submitted to the Authority shall clearly indicate where any document or information has been excluded therefrom, and the nature of such excluded document or information.

2.2 The Authority may grant the request referred to in regulation if such document or information reasonably justifies confidentiality and is able to be separated from the relevant application, written representations or other written information. Otherwise, the Authority shall refuse such request. The Authority shall give notice of its grant or refusal in the Government Gazette and in writing to the applicant or interested person within 14 (fourteen) days after the request is made to the Authority.

2.3 If the Authority refuses the request referred to in regulation, the applicant or interested person may withdraw the relevant document or information within 3 (three) days of the notice referred to in regulation. If the relevant document or information is withdrawn, the application, written representations or other written information, as the case may be, shall be considered by the Authority as if such withdrawn information had not existed.
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2.4 If the Authority refuses the request referred to in regulation and the relevant document or information is not withdrawn in terms of regulation by the applicant or interested person, as the case may be, the Authority shall give notice in the Government Gazette within 7 (seven) days of its decision to refuse the request referred to in regulation, that additional information is open to public inspection and copying at the offices of the Authority during normal office hours. The notice shall specify the relevant application, written representations or other written information.

3. Questions to the Authority in respect of the Licensing Process

3.1 An applicant or interested person may submit written questions in respect of the licensing process for one mobile cellular telecommunication service licence, other than in respect of the Invitation, to the Authority to be delivered at the offices of the Authority during normal office hours marked for the attention of The Project Manager, Third Mobile Cellular Telecommunication Service Licence.

3.2 Within 14 (fourteen) days of receipt of written questions referred to in regulation 3.1, the Authority shall give notice in the Government Gazette of those questions which, in its opinion, are necessary to answer, together with answers thereto.

4. Prohibition of Ex Parte Contact with the Authority

4.1 No person shall engage in or attempt to engage in ex parte contact with the Authority in respect of any matter related to the licensing process initiated by the Invitation.
GOVERNMENT NOTICE

Issued by the
Minister for Posts, Telecommunications and Broadcasting

Please take note that Regulations R.674 and R.675, published in Government Gazette number 20111 dated 22 May 1999 is hereby withdrawn and replaced with the following Regulations.

JAY NAIDOO
MINISTER

No. R.729

4 June 1999

DEPARTMENT OF COMMUNICATIONS

REGULATIONS RELATING TO THE CONTRIBUTIONS TO THE UNIVERSAL SERVICE FUND AND THE APPORTIONMENT THEREOF

The South African Telecommunications Regulatory Authority has, under section 96 read with section 67 of the Telecommunications Act, 1996 (Act No. 103 of 1996), with the approval of the Minister for Posts, Telecommunications and Broadcasting, made the regulations in the Schedule.

JAY NAIDOO
MINISTER

SCHEDULE

Definitions

1. In this Schedule any expression to which a meaning has been assigned by the Telecommunications Act, 1996 (Act No. 103 of 1996) (hereinafter referred to as "the Act"), shall have the same meaning unless the context indicates otherwise.

Contributions payable by license holders to the Universal Service Fund

2. (1) Every holder of a license granted or deemed to have been granted in terms of Chapter V of the Act, shall pay contributions to the Universal Service Fund (hereinafter referred to as "the Fund") as follows:
(a) A holder of a telecommunications licence issued or deemed to have been issued under section 36, 37 or 42 of the Act, shall contribute 0.16% of the annual turnover derived from the provision of the telecommunications service that it is licensed to provide.

(b) A holder of a value added network services licence, (other than Telkom) issued or deemed to have been issued under section 40 of the Act, shall contribute R1 500 per annum.

(c) A holder of a licence to provide private telecommunications network service issued or deemed to have been issued under section 41 of the Act, shall contribute R1 000 per annum.

Payment

3. (1) Contributions to the Fund in terms of regulation 2 shall become due and payable in full on 1 April of each year, except for the year starting on 1 April 1999 for which contributions must be made on or before 18 June 1999.

(2) Payment in terms of regulation 2 (1) (a) shall be calculated on the annual turnover based on the latest available audited accounts of the licensee.

(3) The contributions are calculated on 1 August of every year. The contributions must be based on the audited accounts of the preceding financial year and any payment made on 1 April of that year shall be adjusted accordingly.

(4) Any amount that becomes due as a result of the recalculation, shall become due and payable on 1 August of that year.

(5) Total limits of contribution in terms of these regulations shall be subject to any policy direction that the Minister has made or may make in terms section 5 (4) (a) of the Act.

Formula for the apportionment for monies in the Fund

4. In terms of section 66 (2) of the Act the money in the Fund is apportioned for the separate purposes of sections 66 (1) (a) and (b) to the value of 99% and 1% respectively.

Commencement

5. These regulations shall come into operation upon publication. [This date is 4 June 1999 - Editor]
GOVERNMENT NOTICE

No. R. 730 4 June 1999

DEPARTMENT OF COMMUNICATIONS

REGULATIONS RELATING TO THE CONTRIBUTIONS TO THE HUMAN RESOURCES FUND

The South African Telecommunications Regulatory Authority has, under section 96 (1) read with sections 86 and 96 (5) (b) of the Telecommunications Act, 1996 (Act No. 103 of 1996), with the approval of the Minister for Posts, Telecommunications and Broadcasting, made the regulations in the Schedule.

JAY NAIDOO
MINISTER

SCHEDULE

Definitions

1. In this Schedule any expression to which a meaning has been assigned by the Telecommunications Act, 1996 (Act No. 103 of 1996) (hereinafter referred to as "the Act"), shall have the same meaning unless the context indicates otherwise.

Contributions payable by licence holders to the Human Resources Fund

2. (1) Every holder of a licence granted or deemed to have been granted in terms of Chapter V of the Act, shall pay contributions to the Human Resources Fund (hereinafter referred to as "the Fund") as follows:

(a) A holder of a telecommunications licence issued or deemed to have been issued under section 36, 37 or 42 of the Act, shall contribute 0.08% of the annual turnover derived from the provision of the telecommunications service that it is licensed to provide.

(b) A holder of a value added network services licence, (other than Telkom) issued or deemed to have been issued under section 40 of the Act, shall contribute R750 per annum.
(c) A holder of a licence to provide private telecommunications network service issued or deemed to have been issued under section 41 of the Act, shall contribute R500 per annum.

Payment

3. (1) Contributions to the Fund in terms of regulation 2 shall become due and payable in full on or before 18 June 1999.

(2) Payment in terms of regulation 2 (1) (a) shall be calculated on the annual turnover based on the latest available audited accounts of the licensee.

(3) Total limits of contribution in terms of these regulations shall be subject to any policy direction that the Minister has made or may make in terms section 5 (4) (a) of the Act.

Commencement

4. These regulations shall come into operation on the date of publication (This date is 4 June 1999 - Editor).
GOVERNMENT NOTICE

NOTICE
issued by the Minister for Posts, Telecommunications and Broadcasting

No. R.751 9 June 1999

In terms of section 96 (6) of the Telecommunications Act, 1996 (Act No. 103 of 1996), Jay Naidoo, Minister for Posts, Telecommunications and Broadcasting, hereby approve and publish the following regulations made by the South African Telecommunications Regulatory Authority in terms of sections 34 and 35 read with sections 96 (1) and 96 (5) (b) of the Act.

JAY NAIDOO
Minister

REGULATIONS IN TERMS OF SECTIONS 34 AND 35 READ WITH SECTIONS 96 (1) AND 96 (5) (b) OF THE TELECOMMUNICATIONS ACT, 1996 (ACT NO. 103 OF 1996) REGARDING CERTAIN ADDITIONAL MATTERS IN THE LICENSING PROCESS IN RESPECT OF ONE MOBILE CELLULAR TELECOMMUNICATION SERVICE LICENCE FOR WHICH APPLICATIONS HAVE BEEN INVITED IN TERMS OF SECTION 34 (2) (a) (ii) OF THE ACT, PUBLISHED IN NOTICE 314 IN GOVERNMENT GAZETTE 19806 DATED 26 FEBRUARY 1999

Definitions


3. "Normal office hours" means 08:30 to 16:30, Mondays to Fridays, excluding South African public holidays.

4. "Offices of the Authority" means the offices of the Authority situated at Block B, Pinmill Farm, 164 Katherine Street, Sandton.
Preparation of Applications

5. Applications must be in writing in the English language.

6. Applications must be prepared in Microsoft Word 97 and the financial information must be prepared in spreadsheets in Microsoft Excel 97, both of which are to run under either Microsoft Windows 95 or Windows 98.

7. Applications must be in Arial or a similar font size 12, with 1.5 line spacing.

8. All financial models and plans must be "live-linked", that is, all figures which are sourced from elsewhere within the spreadsheet or in separate spreadsheets must be calculated using a linking formula.

9. The first page of the application must be a cover page; followed by a covering letter indicating that the application and the prescribed application fee is attached, which letter is to be signed by at least two directors of the applicant or similarly responsible persons where the applicant is not a company; followed by proof of authority of the signatories to sign the application on behalf of the applicant; followed by the table of contents; followed by the Application Form and Annexures thereto as set out in the "Document Detailing the Form in which Applications for One Mobile Cellular Telecommunication Service Licence shall be Submitted and the Manner in which it is Contemplated that the Service shall be Provided in terms of Section 34 (2) (b) (ii) of the Telecommunications Act, 1996 (Act No. 103 of 1996)" dated 5 March 1996 made available by the Minister for Posts, Telecommunications and Broadcasting; followed by an affidavit stating that the application is the true and complete application of the applicant, signed by at least the same two persons who sign the covering letter.

10. All pages of applications after the pages referred to in regulation, must be clearly and sequentially numbered and recorded in the table of contents.

11. Applications must be spiral bound and if more than one volume is submitted, each volume thereof must be clearly and sequentially numbered and contain a copy of the table of contents.
Submission of Applications

12. Applications must be submitted by 12:00 on 14 June 1999 and shall be hand delivered to the offices of the Authority.

13. Applications must be submitted in sealed, sturdy and easily portable containers. The exterior of the container must detail the name and address of the applicant and identify the contents of the container.

14. Applications must be submitted in the original together with 25 hard copies and one soft copy thereof, appropriately and clearly marked.

15. The soft copy of the application, which must be consistent with hard copies, must be stored on CD Rom and appropriate file names shall be specified.

16. If the applicant wishes to exclude certain confidential information from public inspection as provided for in section 34 of the Act, the applicant must submit two additional hard copies marked "For Public Inspection", which copies shall exclude such confidential information and shall clearly indicate where such confidential information has been excluded therefrom, together with the applicant's request to the Authority to have that confidential information excluded from public inspection in terms of section 34 (4) (b) of the Act.

17. If the applicant wishes to exclude certain confidential information as contemplated in regulation 16, the applicant must submit a soft copy stored on CD Rom with appropriate file names specified consistent with the file names specified in accordance with regulation 15, containing only the information contained in the "For Public Inspection" copy mentioned in regulation 16 and a soft copy, stored on CD Rom with appropriate file names specified consistent with the file names specified in accordance with regulation 15, containing only the information that the applicant wishes to exclude as confidential.

Submission of Additional Written Information.

18. Applicants and interested parties, when submitting written information to the Authority, whether in the form of written representations, requests or otherwise, must submit such written information to the offices of the Authority during normal office hours together with a covering letter which must contain the name, postal and physical addresses and telephone and facsimile numbers of the person submitting the written
information, and if such written information is in relation to an application or other written information, a copy of such written information shall be hand delivered or sent by registered post to the relevant applicant or interested person to which the written information is in relation.

Obligation to Inform Authority of Changes in respect of the Applications

19. If any change to the information submitted in an application occurs, including, without limitation, any change in the ownership or control of the applicant, after the submission of the application, the applicant shall immediately submit written notification thereof to the Authority.

Intended Decisions and Recommendations on Applications

20. Applicants may, not later than 14 (fourteen) days from the date of notification of the Authority’s intended decision or recommendation, request in writing the Authority to furnish the applicant with reasons therefor, provided that reasons have not been previously provided by the Authority.

21. Applicants may, not later than 14 (fourteen) days from the date of notification of the Authority’s intended decision or recommendation or from the date the reasons are provided by the Authority in terms of regulation, whichever is later, make written representations in relation to the intended decision or recommendation.
Notice in terms of Section 5 (4) of the Telecommunications Act

I, Ivy Matsepe-Casaburri, Minister for Communications, in terms of the above provision, hereby issue the policy directions on Global Mobile Personal Communications by Satellite (GMPCS), contained in the schedule.

IVY MATSEPE-CASABURRI
MINISTER

SCHEDULE

POLICY DIRECTION ON GLOBAL MOBILE PERSONAL COMMUNICATIONS BY SATELLITE IN THE REPUBLIC OF SOUTH AFRICA

ISSUED BY THE MINISTER FOR POSTS, TELECOMMUNICATIONS AND BROADCASTING IN TERMS OF SECTION 5 OF THE TELECOMMUNICATIONS ACT 103 OF 1996

In this Policy Direction, unless the context requires otherwise,

(i) All words and expressions shall have the same meanings ascribed to them in the Telecommunications Act 103 of 1996 and the Telkom Licence;

(ii) Words and expressions not defined in this policy direction or the Telecommunications Act shall be as defined in the International Telecommunications Union, Memorandum of Understanding (Geneva, 14 February 1997) and, the relevant ITU Recommendations on GMPCS, to the extent that such definitions are not inconsistent with the terms of the Republic's telecommunication law and regulations;


1 DEFINITIONS

(a) "GMPCS" means Global Mobile Personal Communications by Satellite;

(b) "GMPCS system" means any satellite system, whether fixed or mobile, broadband and/or narrowband, global or regional, geostationary or non-geostationary, existing or planned, providing telecommunications services directly to end users from a satellite or network or constellation of satellites, other than and excluding those elements of the Public Switched Telecommunication Network (PSTN) by means of which, inter alia, satellite telecommunication services are provided. Such elements include, but are not limited to V-Sat and satellite news gathering network infrastructure and Intelsat;

(c) "GMPCS service" means a telecommunication service, new and distinct from existing telecommunication services as defined in the Telecommunications Act 103 of 1996, which is provided directly to end users by means of a GMPCS system;

(d) "GMPCS system operator" means the person authorised by the ITU to use particular space segments and radio frequencies and who is responsible for the management, administration and operation of a GMPCS system;

(e) "GMPCS country operator" means any person authorised by a GMPCS system operator and includes an authorised agent, charged with the responsibility for the management and administration of a GMPCS service provided in the Republic;

(f) "GMPCS earth gateway station" means a land based facility used to establish, maintain, validate and control communication with the space segment of a GMPCS system utilising feeder links and which is interconnected to one or more telecommunication system(s);

(g) "GMPCS service licence" means a telecommunications service licence issued to a GMPCS country operator in terms of this policy direction and the Act and entitling the holder to provide a GMPCS service in the Republic;

(h) "GMPCS earth gateway operator" means a person which is authorised by a GMPCS system operator, or an authorised agent of a GMPCS system operator, as the entity with responsibility for the management and administration of a GMPCS earth gateway station situated in the Republic;

(i) "GMPCS earth gateway service" means the service provided by a GMPCS earth gateway station in establishing, maintaining, validating and controlling communication with the space segment of a GMPCS system utilising feeder...
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TELECOMMUNICATIONS ACT
Part 2: Government Notices
Act No. 103 of 1996

links and which is interconnected to one or more telecommunication systems;

(j) "GMPCS earth gateway licence" means a telecommunication service licence, issued to a GMPCS earth gateway operator in terms of the Act, entitling the holder to operate a GMPCS earth gateway station in the Republic. Should the GMPCS earth gateway station provide telemetry, tracking, and command functions, such licence may also entitle the holder to provide such telemetry, tracking, and command functions;

(k) "Republic" means the Republic of South Africa;

(l) "The Act" means the Telecommunications Act 103 of 1996;

(m) "The Authority" means the Independent Communications Authority of South Africa (ICASA), established in terms of section 3 of the Independent Communications Authority of South Africa Act, Act No 13 of 2000;

(n) "The Telkom Licence" means the public switched telecommunications service Licence issued to Telkom SA Ltd on 7 May 1997 to provide telecommunication services in terms of section 36 of the Act;

(o) "User terminal equipment" means a GPCS terminal, registered with the ITU, by the GMPCS system operator, and includes GMPCS hand-held and other portable terminals, vehicle-mounted terminals, vessel or platform mounted terminals at sea or in the atmosphere (platforms being inclusive of aeronautical or maritime buoys), fixed private terminals, fixed or mobile public pay telephone terminals and any other type of GMPCS terminal which may be used by an end user to send and/or receive telecommunication traffic directly to and/or from a satellite or system of satellites;

2 INTRODUCTION

2.1 The introduction and provision of GMPCS services in the Republic has inter alia the following potential benefits for the Republic and its citizens:

2.1.1 The provision of telecommunication services in under-serviced areas;

2.1.2 making progress towards the provision of universal access and universal service;

2.1.3 the development of the Republic’s telecommunications infrastructure;
2.1.4 ensuring that the Republic's telecommunications infrastructure remains abreast of and integrated with the world telecommunications infrastructure;

2.1.5 broadening the range of telecommunication services in the Republic;

2.1.6 the integration of the Republic's economy into the global economy;

2.1.7 the promotion of investment in the Republic;

2.1.8 the provision of opportunities for local businesses to participate in global business; and

2.1.9 the promotion of small, medium and micro enterprises (SMMEs).

2.2 It is expected that the implementation of GMPCS systems and services will contribute to the achievement of the objectives listed in Section 2 of the Act.

2.3 GMPCS has received ITU support, and the ITU has and will allocate appropriate radio frequency spectrum to GMPCS system operators globally.

2.4 The Republic wishes to comply with its obligations to the ITU and other international telecommunication authorities and structures.

2.5 It is in the interests of the Republic's citizens that telecommunication services of an international standard be provided in the Republic.

2.6 This policy direction accordingly seeks to facilitate the early implementation of GMPCS services within the Republic in such a manner that the benefit of such services for the public is maximised.

2.7 This policy direction is drafted in accordance with the Republic's international obligations, and in particular with those applicable to or impacting upon GMPCS.
3 OBJECTIVES

The objectives of this policy direction are:

3.1 to allow for the introduction of GMPCS into the Republic as and when GMPCS services become available;

3.2 to ensure that GMPCS services are provided in a manner consistent with the broad public interest;

3.3 to ensure that the needs of users of GMPCS services are satisfied on a fair and non-discriminatory basis;

3.4 to enhance telecommunications between people and organisations within the Republic and those in the Republic and other countries;

3.5 to contribute to making progress towards the goals of universal access and universal service, especially in remote and rural areas;

3.6 to promote the economic development of the Republic and other countries in the Southern African region;

3.7 to contribute to the range of services available to the public, so that the different needs of consumers are served;

3.8 to provide for competition between different GMPCS systems and services and associated user terminal equipment manufacturers, distributors, dealers and service providers, as a means of ensuring a range of services of good quality and affordable prices;

3.9 to facilitate, where possible, participation in the enterprise of GMPCS by local groups, companies and individuals;

3.10 to ensure the efficient use of the radio frequency spectrum;

3.11 to endeavour to ensure that no aspect of GMPCS violates the sovereign rights of the Republic or any other country;

3.12 to promote the empowerment of historically disadvantaged people;

3.13 to retain control over national telecommunication policy objectives, assure the integrity of the legal and regulatory framework;

3.14 To endeavour to ensure that the interests of countries in the Southern African region are respected through appropriate regulation of GMPCS.
services and GMPCS earth gateway services.

4  PROVISION OF GMPCS SERVICES AND GMPCS GATEWAY SERVICES

4.1 Subject to the Act, a single entity may hold more than one licence, and in particular, a single entity may hold both a GMPCS service license and a GMPCS gateway licence simultaneously.

5  COMPETITION BETWEEN GMPCS SYSTEMS AND SERVICES

5.1 The Authority shall endeavour to promote competition between GMPCS systems and services and shall seek to create an environment in which all GMPCS service providers can compete fairly.

5.2 Appropriate frequency assignments shall be made to licensees to facilitate and promote fair competition.

5.3 There shall be no limitation on the number of GMPCS service licences or GMPCS gateway licences, which may be issued by the Authority, provided that appropriate radio frequency spectrum is available.

6  PROMOTION OF THE SOCIAL OBJECTIVES SET OUT IN THE ACT

6.1 The Authority must ensure that the applicant will contribute in a satisfactory manner to the achievement of social objectives, taking into account applicable commercial considerations.

6.2 The Authority may assist an applicant regarding the development of an appropriate plan for the achievement of the social objectives contained in the Act.

7  TARIFFS FOR SERVICES

7.1 The Authority shall ensure that the tariffs for GMPCS services are market related.

8  REQUIREMENTS FOR USER TERMINAL LICENCES

8.1 The Authority shall give effect to the Republic's international obligations in terms of any Memorandum of Understanding or other applicable agreement
with respect to GMPCS user terminal equipment.

8.2 The Authority shall ensure that user terminals comply with, and are registered in terms of the requirements of the GMPCS-MOU.

9 INTERCONNECTION AND BYPASS

9.1 For the period referred to in Section 36 (3) of the Act, and paragraph 3.1 of the Telkom licence:

9.1.1 All earth gateway stations used for the provisions of GMPCS earth gateway services in the RSA shall be interconnected to the PSTN.

9.1.2 Telkom, Sentech and the SNO shall be responsible for the operation of all GMPCS earth gateway stations in the Republic, unless it indicates in writing that it is unable or unwilling to do so.

9.1.3 It is recognise that this policy directions and the Act precludes bypass of the PSTN and therefore certain GMPCS operators cannot be licensed until such time as The Act is properly amended to accommodate the licensing of such operators.

9.2 The provisions of 9.1 above shall not apply in respect of the INMARSAT services that were in operations before 1 April 1998.
GOVERNMENT NOTICE

as amended by Notice No. 652 Of 2002 (Government Gazette No. 23372 of 28 April 2001)

No.791 21 August 2001

POLICY DIRECTIONS ISSUED BY MINISTER OF COMMUNICATIONS*

I, Ivy Matsepe-Casaburri, Minister of Communications, pursuant to section 5 (4) (a) read in conjunction with section 2 of the Telecommunications Act, 1996 (Act No. 103 of 1996) ("the Act") hereby issue revised* Policy Directions in the Annexure hereto.

Ivy Matsepe-Casaburri MP.

In furtherance of and consistent with the objects as set out in Section 2 read with section 5 (4) (a) of the Telecommunications Act, 1996 (Act No. 103 of 1996) (the "Act") I, Ivy Matsepe-Casaburri, hereby direct:

[* Editor's Note: Although it does not expressly state so, it would appear that this Government Notice replaces: General Notice No. 1756 of 2001 published in Government Gazette No. 22503 of 23 July 2001]
OBJECTIVE

This Policy Direction contemplates the promotion of a managed liberalisation of telecommunications matters in the public interest, pursuant to section 2 of the Act.

1. Application of this Policy Direction

1.1 This Policy Direction shall be applicable to the telecommunications industry in the following matters:

1.1.1 the provision of telecommunications services;
1.1.2 the provision of universal access and universal service;
1.1.3 the provision of telecommunications services to public schools;
1.1.4 the advancement of economic empowerment of persons from historically disadvantaged groups;
1.1.5 the advancement of consumer protection;
1.1.6 the provision for the administration of numbering, number portability and carrier pre-selection;
1.1.7 the provision of public emergency communications services; and
1.1.8 the provision of directories and directory inquiry services.
1.1.9 the provision of maritime services
1.1.10 the establishment of a telecommunications museum

1.2 In this Policy Direction, unless the context indicates otherwise, all terms shall have the meanings assigned in terms of the Act and, where appropriate, the South African Schools Act, 1996 (Act No. 84 of 1996), the Interception and Monitoring Prohibition Act, 1992 (Act No. 1 27 of 1992), the National Heritage Resources Act, 1999 (Act No. 25 of 1999), the Sentech Act, 1996 (Act No. 63 of 1996).

1.3 This Policy Direction shall become effective on the date of publication.
2. Interpretation of the Policy Direction

2.1 For the purposes of this Policy Direction, the following meanings shall apply:

2.1.1 "Directories" means the compilation of customer information of designated licencees which shall include, at a minimum, for each customer in the relevant area (other than those customers who have specifically asked not to be included): their names, addresses, and telephone numbers; a list of national and international dialling codes; and a listing of the numbers of national, provincial and local government authorities, institutions and offices, and the public emergency number;

2.1.3 "Directory enquiry service" means the provision of information contained in directories;

2.1.4 "Fixed-mobile service" means a connection to the public switched telephone network that will be provided by the holder of a PSTS licence by means of a wireless connection between such licencee's end office and the end user's premises, provided that nothing in this definition shall exempt the provider of a fixed mobile service from holding a licence under section 30 or section 37;

2.1.5 "Major licence" means a telecommunications service licence as contemplated in terms of section 34 (2) (a) of the Act;

2.1.6 "Public school" means any primary or secondary ordinary school, a public school for learners with special education needs that is funded by the state and public further education and training institutions (FETIs) in terms of section 34 of the South African Schools Act, No 84 of 1996;

2.1.7 "Public switched telecommunications networks or PSTN" means the telecommunications systems which are installed or otherwise provided, maintained and operated by a licencee for the purpose of providing the public switched telecommunications services and fixed-mobile services as defined;

2.1.8 "Second National Operator (SNO)" means the holder of the second public switched telecommunications services (PSTS) licence;
MARKET STRUCTURE FOR TELECOMMUNICATIONS SERVICES

1. Second National Operator ("SNO")

1.1 An Invitation to Apply ("the ITA") for the SNO for a PSTS licence shall be issued in 2001 by the Minister.

1.2 The SNO shall be permitted to use Telkom’s telecommunications facilities until 7 May 2004, in accordance with an agreement between the parties, to be concluded within 60 days of the issuing of the PSTS licence. Provided that where the parties fail to agree, ICASA shall, within 30 days, determine such terms and conditions.

1.3 The SNO shall develop their own facilities and infrastructures by 7 May 2004. Defined targets of infrastructure roll-outs, universal service obligations, universal access targets and time frames and, penalties associated with failure to achieve the infrastructure roll-out shall be specified in the ITA and in the licence.

1.4 Process to be followed for the licensing of the SNO shall be set out in the following phases.

1.4.1 The first phase will involve the allocation of 19% (nineteen percent) equity stake to person from historically disadvantaged groups.

1.4.2 The second phase shall be the allocation of the 51% (fifty one percent) equity stake to a local and or international investor.

1.4.3 30% (thirty percent) equity interest will be allocated to Eskom and Transnet.

1.5 ....

[Par. 1.4 and 1.5 deleted and par. 1.4 substituted by Notice 652 of 2002]

2. Telkom SA Limited

Telkom’s current licence shall be amended to allow for the provision of PSTS in the form of fixed-mobile services.
3. Sentech (Pty) Ltd

3.1 The Act shall be amended to license Sentech (Pty) Ltd. to provide international telecommunication gateway services enabling it to operate as a carrier of carriers and multimedia services with effect from 7 May 2002. Accordingly, the Sentech Act, 1996 (No. 63 of 1996) shall be amended.

3.2 Sentech licence shall exclude the termination of international telecommunication services directly to end users in the Republic.

4. Additional licences(s)

4.1 The Minister shall direct ICASA to conduct a market assessment to be completed by 31 December 2004 into the economic feasibility of the provision of additional PSTS licences and shall make known its findings by notice in the Gazette.

4.2 The Minister shall issue an ITA for at least one or more services-based licencee(s) to commence with the provision of services in 2005.

5. Under-serviced areas

5.1 Small, micro and medium enterprises (SMMEs) shall be permitted to provide telecommunications services including Voice over Internet Protocol (VoIP) for the specific purpose of advancing universal access in geographical areas with a tele-density of up to five percent (5%) from 7 May 2002.

5.2 SMMEs shall be permitted to provide such services using their own or leased infrastructure.

5.3 A standard interconnection regime applicable to all SMMEs shall be developed by ICASA for implementation as from 7 May 2002.

6. Value Added Network Services (VANS)

6.1 The prohibition to carry VoIP and voice in terms of section 40 (3) of the Act, is subject to the following:

(a) the exception as specified in clause 5 above;

(b) Telkom's existing privilege under the PSTS licence; and
(c) the SNO's privileges, as contemplated in this Policy Direction.

6.2 VANS operators shall have the privilege to provide end-to-end electronic commerce services.

6.3 VANS shall have the right to operate Virtual Private Networks to provide telecommunications services except voice.

6.4 The Minister shall after a period of two years conduct a policy review in order to determine the feasibility of extending VoIP to other operators in the telecommunications industry.

7. Assignment of 1800 MHz Radio Frequency Spectrum

7.1 Within six months of publication of this policy direction ICASA shall:

7.1.1 assign the 1800MHz radio frequency spectrum to Cell-C, MTN, the SNO, Telkom and Vodacom; and

7.1.2 make regulations for new conditions of access and a new interconnection regime.

7.2 Access fees in respect of 1800 MHz shall be determined by the Minister.

7.3 In computing the access fees for 1800 MHz radio frequencies the Minister shall have regard to, amongst others, the following considerations:

(a) MHz pair per population per licence year;

(b) provision of paired/unpaired spectrum; and

(c) technical and administrative cost of spectrum management.

7.4 Sale, alienation or disposition of assigned spectrum by any operator(s) and/or persons shall be prohibited.

8. Third Generation (3G)

8.1 ICASA shall on application and payment of the fee determined by the Minister, issue the third generation service licences to Cell-C, MTN, the SNO, Telkom and Vodacom.
8.2 In computing the licence fee for the 3G licence the Minister shall have regard to, amongst others, the following considerations:

(a) MHz pair per population per licence year;

(b) provision of paired/unpaired spectrum; and

(c) technical and administrative cost of spectrum management.

8.3 ICASA shall make regulations to provide for conditions of the licence and interconnection guidelines.

UNIVERSAL ACCESS AND UNIVERSAL SERVICE: BRIDGING THE DIGITAL DIVIDE

1. Universal access and universal service objectives

1.1 Pursuant to the objects as set out in section 2 (a), (c) and (h) of the Act, the targets for universal access shall include accelerated access for differently abled persons to services such as text and speech relay services, emergency speed dialling and specialised operator assistance.

2. Restructuring of the Universal Service Agency (USA)

2.1 The USA shall encourage, facilitate and offer guidance in the evaluation, monitoring and implementation of universal access and service schemes. Institutional capacity to support effective evaluation and monitoring of attainment of universal access and service schemes shall be a priority.

2.2 The Minister shall appoint a board comprising seven persons, one of whom shall be a chairperson, to oversee the schemes.

2.3 The Board shall report to the Minister from time to time and/or as required by the Minister.

3. Contribution to the Universal Service Fund (Fund)

3.1 All telecommunications licencees, including Value Added Network Service licencees, shall from April 2003 contribute to the Fund a percentage of their turnover as prescribed by the Independent Communications Authority of South Africa (ICASA). Provided that the prescribed percentage shall not exceed 0.5%.
3.2 The PTN's and under-serviced area licencees shall be exempt from the provisions of this section.

3.3 The extent of the contributions shall be reviewed by the Minister from time to time.

ECONOMIC EMPOWERMENT OF PERSONS FROM HISTORICALLY DISADVANTAGED GROUPS

1. Economic Empowerment of persons from historically disadvantaged groups

Pursuant to the objects set out in section 2(1) and (q) of the Act it shall be a condition of all new major telecommunications licences issued, that an aggregate amounting up to thirty percent (30%) of the shareholding of an applicant company and/or entity shall be set aside for the above mentioned groups. In this regard ICASA shall:

1.1 ensure incorporation of this condition in all new major telecommunications licences;

1.2 when considering any applications for other telecommunications licences, it shall give due regard to applications from persons from historically disadvantaged groups including women; and

1.3 will be required to develop the necessary criteria that will give priority to persons from historically disadvantaged groups including women.

2.1 ICASA shall:

2.1.1 make regulations for all operators, service providers, equipment suppliers and vendors regarding their contributions to the economic empowerment of persons from historically disadvantaged groups including women;

2.1.2 formulate licence conditions for all operators and service providers regarding their respective contribution towards the economic empowerment of persons from historically disadvantaged groups including women;

2.1.3 ensure that such regulations and licence conditions will provide that no reduction in the level of the shareholding of persons from historically disadvantaged groups including women in all major telecommunications licences shall be permitted without prior consent of the Minister; and
2.1.4 from time to time report or at the instance of the Minister report on the overall status of the economic empowerment of persons from historically disadvantaged groups including women in the telecommunications industry.

CONSUMER PROTECTION

1 Furtherance and Ensuring Consumer Protection

Pursuant to the objects set out in section 2 (f) and (m) of the Act, ICASA shall:

1.1 make regulations to promote the development and the protection of the interests of telecommunications users and consumers;

1.2 from time to time report or at the instance of the Minister report on the overall status of consumer protection in the telecommunications industry.

NUMBERING

1. Numbering

1.1 Number portability shall be introduced from April 2005;

1.2 ICASA shall:

(a) allocate numbers, maintain, manage and update the central database system on an impartial and non-discriminatory basis, by no later than May 2002;

(b) on a monthly basis require all operators to submit data on new numbers allocated, including numbers of pre-paid subscribers to be included in the central database;

(c) develop a cost allocation model regulation, for the apportionment of costs for the maintenance of the database and the routing system;

(d) develop a cost allocation model regulation, for the apportionment of costs for number allocation, number portability and carrier pre-selection;

(e) prescribe a fee on all operators for the costs and maintenance contemplated under paragraph (c) above.
1.3 Mechanisms, including carrier pre-select, shall be introduced to ensure effective competition among service providers from 7 May 2005.

PUBLIC EMERGENCY COMMUNICATIONS

1. 112 Emergency Centre(s)

Public Emergency Communications Centre(s) (PECCs) designated as 112 Emergency Centre(s) shall be established to promote the health, safety and security of all persons and to provide efficient support and co-ordination of public emergency communications.

2. Public Emergency number

2.1 112 shall be the exclusive national public emergency number;

2.2 the 112 Emergency Centre(s) shall have voice, data and global positioning systems (GPS) capability; and

2.3 calls to the 112 Emergency Centre(s) shall be free and override any other calls.

2. Standards and operating procedures

The 112 Emergency Centre(s) shall develop and apply common technical standards and standard operating procedures which shall be published by notice in the Gazette with the approval of the Minister.

3. Public safety radio communications service (PSRCS)

3.1 There shall be a common and interoperable digital public safety radio communications service.

3.2 Any of the existing public and future radio communications infrastructure in the Republic shall be utilised only for a public safety radio service.

DIRECTORIES AND DIRECTORY ENQUIRY SERVICE

1. Subscriber privacy
1.1 Specific procedures must be implemented by licensed operators to prohibit unauthorised disclosure and use of subscriber information.

1.2 Subscribers shall have the right to elect not to have their personal details/particulars published in a directory or made available from directory enquiries.

1.3 No subscriber information may be used for any purpose other than the purposes listed below:
   1.3.1 providing directory or directory enquiry information;
   1.3.2 billing for any service or equipment ordered by the customer;
   1.3.3 fraud prevention;
   1.3.4 facilitating roaming and interoperability between operators;
   1.3.5 providing assistance to law enforcement agencies subject to the Interception and Monitoring Prohibition Act of No. 127 of 1992 and the Promotion of Access to Information Act No. 2 of 2000; and
   1.3.6 providing assistance to a public emergency communications centre(s).

2. Directories and directory information

2.1 There shall be a single consolidated database for all telecommunications directory information and it shall be made accessible, free of charge, to each subscriber to a telephone line service within the Republic of South Africa.

2.2 A national directory information database shall be established by May 2002 and maintained by an entity designated by the Independent Communications Authority of South Africa (ICASA) for that purpose.

2.3 All operators shall submit to the database existing and future telephone numbers, within a period as prescribed by ICASA.

2.4 The allocation of pre paid telephone numbers to any person shall be made upon receipt of identification and contact particulars of the applicant, which shall be recorded and submitted to the database.
2.5 All operators shall ensure that all pre-paid numbers allocated prior to the date of publication of this Policy Direction shall be verified for confirmation of identity and contact particulars of the subscribers for submission to the database. This verification shall be completed by no later than January 2003. Any numbers not verified by this date shall be re-allocated.

3. Directory enquiry services

3.1 Directory enquiry services must be available throughout the Republic of South Africa including from payphones and must be provided free of charge.

3.2 Any network operators licensed to provide directory enquiry services may conclude a contract with any person in terms of which such person will provide such services, provided that such person is subject to the same conditions for providing such services as those provided for under the licence of the network operator.

MARITIME SERVICES

1. Maritime

1.1 The Minister of Communications in consultation with the Minister of Transport shall establish an entity to construct and operate a private telecommunications network to fulfil South Africa's obligations in terms of the International Convention for the Safety of Life at Sea (SOLAS) 1974/78, Annexure 12 to the Convention on International Civil Aviation, to be referred to as Maritime and Aeronautical Radio Services (MARS).

1.2 MARS shall be deemed to be a holder of a PIN licence as defined in the Act.

MUSEUM FOR COMMUNICATIONS IN SOUTH AFRICA

1. Museum

1.1 A Museum depicting the evolution and the history of the Communications sector shall be established in the Republic in terms of the National Heritage Resources Act, 1993 (No. 25 of 1999) in consultation with the Minister of Arts, Culture, Science and Technology.
### SCHEDULE

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<td>Policy Direction No. 1756 of 2001 published on the 23rd July 2001</td>
<td>Policy Directions</td>
<td>Amended with effect from 21st August 2001 as follows: Broadband licences and services withdrawn Fixed-mobile definition revised Foreign ownership restriction removed Number portability and <strong>Carrier pre-selection</strong> postponed to 2005 Sentech licence provisions clarified TNO licence postponed subject to feasibility study</td>
</tr>
</tbody>
</table>
GOVERNMENT NOTICE

No. R.1248 26 November 2001

REGULATIONS: FEES AND CHARGES IN THE PUBLIC SWITCHED TELECOMMUNICATIONS SECTOR

In terms of section 96 (6) of the Telecommunications Act, 1996 (Act No. 103 of 1996), I, Ivy Matsepe-Casaburri, Minister for Communications hereby approve and publish the regulations in the Schedule made by the Independent Communications Authority of South Africa (ICASA) in terms of section 96 (1) read with section 45, of the said Act.

IVY MATSEPE-CASABURRI
MINISTER
26 November 2001

SCHEDULE

1. Definitions

In these regulations a word or expression shall have the meaning assigned to it in terms of the Telecommunications Act, 1996 (Act No. 103 of 1996), and, unless the context indicates otherwise-

"average residential bill" means the average bill for residential customers obtained through a statistical sampling approach developed by Telkom and assented to by the Authority.

"basket services" means the telecommunication services listed in Schedule A to which price regulation applies.

"business day" means any day except a Saturday, Sunday or Public holiday.

"customer premise equipment" means an item of equipment approved under Chapter IV of the Act, which does not form part of the Public Switched Telecommunication Network, but is connected or intended to be connected, to Terminal Connection Equipment, whether fixed or portable, and by means of which signals are initially transmitted or ultimately received.

Issue No. 12 (2002)
"effective date" means the date on which these regulations are promulgated by the Minister.

"exchange line" means a local line provided to connect a Terminal connection point to the Local Exchange.

"ISDN" means Integrated Services Digital Network, which is defined as Switched Services Digital Network providing end-to-end digital connection for simultaneous transmission of voice and/or data over multiple multiplexed communication channels and employing transmission that conforms to internationally defined standards.

"local exchange area" means a geographically defined area within which all exchange lines are connected to, and served by, the same Local Exchange.

"local exchange" means that part of a telecommunication system comprised in the Local Access Network installed in the local exchange area to provide switched Local Access Telecommunication Services to customers connected Local Lines comprised in that local exchange area.

"n" means the number of services in the basket.

"operator" means any person licensed to provide a telecommunications service pursuant to a licence of a type referred to in section 34 (2) of the Act.

"price control period" means a period which shall be calculated from the date of promulgation of these regulations until a new regulatory regime has been prescribed.

"price control year" means a 12 month period commencing on the first of January ending on the 31st of December of any year.

"PSTS" means Public Switched Telecommunications Services.

"public pay telephone" means apparatus (including any kiosk, booth, acoustic hood, shelter or other similar structure in which that apparatus may be installed) at which public pay telephone services are made available to the public or segments of the public, and which contains a device to accept payment for those services.

"RC" means Revenue Change.

"residential sub-basket" means telecommunication services made available to residential customers including line rental, local calls, national calls and international calls. Payphones will also form part of this sub-basket.

"t" means the current year in the Price control period.
2.147

TELECOMMUNICATIONS ACT
Part 2: Government Notices Act No. 103 of 1996

"terminal connection point" means any point within an item of Terminal Connection Equipment at which signals are conveyed to or from one or more items of customer premises equipment.

2. Application of these regulations

(1) These regulations shall be applicable to fees and charges (together "prices") payable, pursuant to the Telecommunications Act as amended, to Telkom for the telecommunications services listed in Schedule A ("the basket services"), as such may be modified from time to time in accordance with the provisions of these regulations.

(2) These regulations shall be effective as from the effective date and shall remain in force for a period of at least eighteen (18) months or until such time that a new regulations regime is prescribed.

3. General Price Control Formula

(1) Telkom shall ensure that in each price control year the price charged for the basket services shall be set so as to satisfy the criteria in the formulae set forth below:

\[
\left( \frac{RC_{t}}{RR_{t-1}} \right) \times 100 \leq \triangle CPI_{t-1} \times X_{t}
\]

(2) The level of \( X_{t} \) shall be set at 1.5% until reviewed by the Authority. This review shall commence after the promulgation in the gazette of the Chart of Accounts and Cost Allocation Manual regulations or by 1 June 2002 whichever date is the earliest.

Where:

\( (t) \): is the current year in the price control period

\( (t-1) \): is the preceding year

\( X_{t} \): is the productivity factor

\( \triangle CPI_{t-1} \): is the year-on-year change in the Consumer Price Index, which is defined as follows:

\[
\triangle CPI_{t-1} = \left( \frac{CPI_{t-1} - CPI_{t-2}}{CPI_{t-2}} \right) \times 100
\]
Where:

\( (t-2) \): is the year preceding \( (t-1) \)

\( \text{CPI}_{t-2} \): is the Consumer Price Index for the month of September the year \( (t-2) \).

\( \text{CPI}_{t-1} \): is the Consumer Price Index for the month of September of year \( (t-1) \)

\( \text{RC}_{i, t} \): is the total Revenue Change, which is calculated as follows:

\[
\text{RC}_{i, t} = \sum_{i} \text{RC}_{i, t} = \text{RR}_{i, t} \cdot \Delta P_{i, t}.
\]

Where:

\( \text{RC}_{i, t} \): is the revenue change of the \( i \)-th service in year \( (t) \), which is calculated as follows:

\[
\text{RC}_{i, t} = \text{RR}_{i, t} \cdot \Delta P_{i, t}.
\]

Where:

\( \text{RR}_{i, t} \): is the Reported Revenue of Telkom for the \( i \)-th service in the basket from the relevant financial year ended 31 March commencing with 31 March, 2001 for the first year and each subsequent financial year ended 31 March for the duration of the Price control period.

\( \Delta P_{i, t} \): is the average percentage change in the unit tariff of the \( i \)-th service, in year \( (t) \), which is defined as follows:

\[
\Delta P_{i, t} = \frac{\text{Average unit tariff of the } i \text{-th service at the end of year } (t)}{\text{Average unit tariff of the } i \text{-th service at the end of year } (t-1)} - 1 \times 100;
\]

\( \text{RR}_{t-1} \): is the reported revenue of Telkom, in year \( (t-1) \), of all the service in the basket, and is calculated as follows:

\[
\text{RR}_{t-1} = \sum_{i} \text{RR}_{i, t-1}.
\]

A worked example of the formula set out in 3(1) above is illustrated in Schedule B to these regulations.
4. Residential sub-basket

(1) Telkom shall implement a residential sub-basket consisting of the following elements: Line rental, Local calls, National calls, International calls. Payphones will also be subject to this sub-cap.

(2) Telkom will determine an Average Residential Bill, which will be used in determining the level of increase applicable to residential customers.

(3) The weighted-average annual rate increase for the sub-basket of basic residential services shall be set to satisfy the criteria in the formula below:

\[ \Delta CPI \times X_n \]

where \( X_n = 1.5\% \)

(4) The level of \( X_n \) shall be set at 1.5% until reviewed by the Authority. This review shall commence after the promulgation in the gazette of the Chart of Accounts and Cost Allocation Manual regulations or by 1 June 2002 whichever date is the earliest.

5. Carry over

Telkom shall be allowed to carry over to the next price control year any unused part of the allowed tariff increase. The unused part of the allowed tariff increase in both the general and the residential baskets will lapse if not used in the next price control year.

6. Tariff Filing

(1) Telkom shall file the rates as well as the relevant terms and conditions with the Authority pursuant to which it proposes to offer Public Switched Telecommunication Services that are subject to these regulations.

(2) Such tariffs shall be filed at least 30 business days before the proposed date on which such rates are to become effective in a form specified by the Authority.

(3) If the Authority does not deliver to Telkom a notice in writing of disapproval at least 15 business days before the proposed effective date of the rates, the rates shall be deemed approved.

(4) The Authority may disapprove the proposed tariffs only where:

(a) The calculations contain mathematical errors; or
(b) The terms and conditions violate applicable laws, including, without limitation, policy directions, regulations and the Rate Regime, in a material respect.

7. Changes to the Basket Services

(1) Subject to subsections (2) and (3) below, Telkom shall be entitled to add or replace telecommunication services in respect of the basket services only if such telecommunications services are either:

(a) Wholly or substantially in substitution of an existing telecommunication service; or

(b) Wholly or substantially in substitution of an existing package offering of existing telecommunication services or of elements of existing telecommunication services. For the avoidance of doubt, a package offering of existing telecommunication services would include a scheme the effect of which would be to reduce the licensee's standard prices, as published in accordance with these regulations, including, without limitation, a residential low user scheme.

(2) Telkom shall notify the Authority in writing of its intention to add or replace a telecommunication service in respect of the basket services pursuant to subsection (1) above at least 30 business days before the proposed date on which such service will be implemented.

(3) The Authority shall inform Telkom in writing of its approval or disapproval of changes to the basket services proposed by the licensee in terms of subsection (1) above at least 15 business days before the proposed date on which such service will be implemented.

8. Maximum Prices

(1) With effect from the effective date, prices may not exceed the limits set pursuant to these regulations.

(2) Prices for any of the basket services set pursuant to these regulations may be adjusted by Telkom from time to time during the price control period in which it is to apply in accordance with these regulations and the provisions of its licence, but may not be increased in real terms by a margin of more than five percent based on the Consumer Price Index for September of yeat (t-1) except where specific approval has been received from the Authority for a higher margin of increase. Specific approval for increases of more than 5% in real terms will only be considered in exceptional instances where a clear case on cost grounds has been made by Telkom to the Regulator.
9. Value Added Taxes

Prices set pursuant to these regulations are exclusive of any value-added tax, which may be levied in addition to the Prices.

10. Publication of Prices

(1) Publication of the details of tariffs shall be made by:

(a) Sending a copy of the relevant details to the Authority;

(b) placing the relevant details in every registered office of the licensee so that it is available for inspection, free of charge, by members of the public, as soon as practicable after sending a copy of them to the Authority;

(c) sending a copy of the relevant details (or extracts of them as may, in the circumstances, be appropriate) to any person in the Republic who requests a copy; and

(d) including a pro forma statement indicating the effect of the proposed increases on the bills to customers with the statements to customers prior to the implementation of such tariffs, where possible;
SCHEDULE A

Basket services

The following services shall be comprised in the basket services:

1. Installation Services
   1.1 The installation and bringing into service of exchange lines to residenti,
       customers.
   1.2 The installation and bringing into service of exchange lines to business.
   1.3 The installation and bringing into service of direct dialling inward/outward
       exchange lines to business customers:
       1.3.1 analogue lines;
       1.3.2 2 MBPS digital lines.
   1.4 The installation and bringing into service of ISDN exchange lines.
       1.4.1 basic rate access;
       1.4.2 primary rate access.
   1.5 The installation and bringing into service of exchange lines to switched
       telematic services:
       1.5.1 telex services;
       1.5.2 teletex services;
       1.5.3 Saponet-P services.

2. Rental Services
   2.1 The provision and maintenance of exchange lines to residential customers.
   2.2 The provision and maintenance of exchange lines to business customers.
2.3 The provision and maintenance of direct dialling inward/outward exchange lines to business customers:

2.3.1 analogue lines;

2.3.2 2 MBPS digital lines.

2.4 The provision and maintenance of ISDN exchange lines to business customers:

2.4.1 basic rate access;

2.4.2 primary rate access.

2.5 The provision and maintenance of access lines to switched telematic services:

2.5.1 telex services;

2.5.2 teletex services;

2.5.3 Saponet-P services.

2.6 The provision and maintenance of point-to-point telecommunication circuits leased to customers for the provision of private circuits or for use in Private Telecommunication Networks:

2.6.1 fixed rental element, if any;

2.6.2 distance dependent rental element, if any;

2.6.3 capacity/bandwidth dependent rental element, if any;

but excluding any circuits made available to an operator in terms of any agreement for interconnection services.

3. Call Services

3.1 Calls made to and from terminal connection points within the same local exchange area (local calls) served by an automatic or manual exchange:

3.1.1 from an item of customer premises equipment;

3.1.2 from a public pay telephone.
3.2 Calls made from a terminal connection point in a local exchange area served by a manual or an automatic exchange to a network providing a mobile telecommunication service:

3.2.1 from an item of customer premises equipment;

3.2.2 from a public pay telephone.

3.3 Calls made from a terminal connection point in a local exchange area served by an automatic or manual exchange to a terminal connection point in another local exchange area via the national long-distance telecommunication network:

3.3.1 from an item of customer premises equipment, per each long distance metering band;

3.3.2 from a public pay telephone, per each long distance metering band.

3.4 International calls made from a terminal connection point in a local exchange via the international telecommunication network per country of destination.

3.5 Calls made by means of the networks providing switched telematic services:

3.5.1 Telex calls per each distance band;

3.5.2 Teletex calls per each distance band;

3.5.3 Saponet-P services.

3.6 Directory information services.

3.7 Telephone operator services.

4. Excluded Services

The following services are not included in the basket services:

4.1 Interconnection Services;

4.2 Value Added Network Services;

4.3 Mobile Cellular Telecommunication Services;
2.155

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Part 2: Government Notices Act No. 103 of 1996

4.4 emergency services;

4.5 customer premises equipment; and

4.6 services that are eliminated by the Authority from the basket services from time to time.
Example Calculations of $\Delta CPI_{t-1} - X_{t0}$

<table>
<thead>
<tr>
<th>Service</th>
<th>Reported Revenue</th>
<th>Average Unit tariff</th>
<th>Average Unit Price Change</th>
<th>Revenue Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service 1</td>
<td>100.0</td>
<td>1</td>
<td>10%</td>
<td>10.0</td>
</tr>
<tr>
<td>Service 2</td>
<td>200.0</td>
<td>2</td>
<td>-5%</td>
<td>-10.0</td>
</tr>
<tr>
<td>Service 3</td>
<td>150.0</td>
<td>3</td>
<td>0%</td>
<td>0.0</td>
</tr>
<tr>
<td>Service 4</td>
<td>300.0</td>
<td>40</td>
<td>5%</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Total

Reported Revenue

Change

$\frac{RR_{t-1}}{RR_{t0}} = 750.0$

$RC_{t0} = 15.0$

Where:

(d) = (c/b - 1) * 100

(e) = (a) * (d)

Example calculation of $\Delta CPI_{t-1} - X_{t0}$:

Assumed $\Delta CPI_{t0} = 5.0%$

$\frac{RC_{t0}}{RR_{t-1}} * 100 < ACPI_{t-1} - X_{t0}$

$(15.0/750.0) * 100 \leq 5.0% -1.5%$

$2.0% < 3.5%$
Summary

Since the change in the revenue basket is equal to $\Delta CPI_{t+1} - \chi_{t+1}$, the proposed price changes are acceptable.

Notes

- The requirement to respond at least 15 business days before proposed tariffs become effective as indicated in Section 4 above, is as a result of the Licence issued to Telkom.
- Reported Revenue, in respect of the General Price Formula, is sourced from Telecom's statutory accounts.
- The revenue change is notional revenue and does not equate to changes in the real revenue due to the tariff changes.
GOVERNMENT NOTICE

No. R.1251 28 November 2001

TELECOMMUNICATIONS ACT, 1996 (ACT No. 103 OF 1996)

REGULATIONS RELATING TO THE MANNER IN WHICH APPLICATION.
FOR CERTAIN TELECOMMUNICATION SERVICE LICENCES ARE TO BE
MADE; THE PERIOD WITHIN WHICH APPLICANTS MAY MAKE CERTAIN
REQUESTS; AND THE PERIOD WITHIN WHICH APPLICANTS MAY MAKE
CERTAIN REPRESENTATIONS TO THE AUTHORITY

In terms of section 96 (6) of the Telecommunications Act, 1996 (Act No. 103 of 1996),
I, Dr. Ivy Matsepe-Casaburri, Minister of Communications hereby approve and publish the
regulations in the Schedule made by the Independent Communications Authority of South
Africa under section 96 of the said Act.

Dr. Ivy Matsepe-Casaburri
Minister of Communications

SCHEDULE

Definition

1. In this Schedule any expression to which a meaning has been assigned by the
Telecommunications Act, 1996 (Act No. 103 of 1996) (hereinafter referred to as the Act)
shall have the same meaning unless the context otherwise indicates.

Manner in which applications for certain telecommunication service licences are to be made
(section 34 (1))

2. (1) An application for a telecommunications service licence, other than a
telecommunication service licence contemplated in section 34 (2) (a) (i) to (v) of the Act
must:
Part 2: Government Notices

Act No. 103 of 1996

(a) be made in writing;

(b) identify the applicant, and for this purpose:

(i) if the applicant is a natural person, the following information must be furnished:

(aa) the full names of the applicant;

(bb) the identity number of the applicant;

(cc) the applicant's permanent residential address;

(dd) the applicant's business address; and

(ee) the applicant's telephone and fax numbers.

(ii) if the applicant is a juristic person, the following information must be furnished:

(aa) business name and address, the telephone and fax numbers of the applicant, and where applicable, certified copies of all the founding documents of the applicant;

(bb) full names, business and residential addresses and the telephone numbers of each shareholder or member owning shares or interests exceeding five percent of the total shares or interests in the applicant;

(cc) the percentage of shares or interests of each shareholder or member owning shares or interests in excess of five percent of the total shares or interests in the applicant;

(dd) the number of shares or interests of each shareholder or member owning shares or interests in excess of five percent of the total shares or interests in the applicant;

(ee) the classes of shares or interests of each shareholder or member owning shares or interests in excess of five percent of the total shares or interests in the applicant; and

(ff) affiliated ownership interests of the applicant in other telecommunication licensees or entities which the applicant has the potential of competing with in South African telecommunications markets.
(2) An application for a telecommunication service licence must contain information as to—
   (a) employment strategies related to women;
   (b) the percentages of beneficial ownership by historically disadvantaged individuals; and
   (c) the percentages of control by historically disadvantaged individuals.

(3) An application for a telecommunication service licence must contain a full description of—
   (a) the service to be provided;
   (b) the frequency spectrum requirements;
   (c) the network; and
   (d) the geographical area where the service will be provided, including relevant maps.

(4) A detailed business plan for the service to be provided together with the projection of the market size, target groups and revenue for the first three years must accompany the application.

(5) In respect of any telecommunications equipment to be connected to the public switched telecommunication network, a certificate of approval by the Authority of the telecommunications equipment to be used must accompany the application.

Period within which the applicant may request the Authority to furnish the applicant with reasons for its intended decision (section 35 (1) (a) (iii))

3. (1) An applicant may not later than ten business days after the date of notification of the Authority's intended decision, request the Authority in writing to furnish the applicant with its reasons for such decision.

(2) For the purposes of sub-regulation (1), the date of notification shall be deemed to be;
   (a) the date of delivery if the notification is delivered by hand at the applicant's address;
   (b) the seventh business day following the date of posting if the notification is posted by way of prepaid registered post; or
(c) the date on which the facsimile was sent if the notification is transmitted by facsimile.

Period within which the applicant may make representations to the Authority in relation to the intended decision or recommendation (section 35 (1) (b))

4. (1) An applicant may, not later than ten business days after the date of notification of the Authority's intended decision, make written representations in regard thereto.

(2) For the purposes of sub-regulation (1), the provisions of regulation 3 (2) above shall apply with the necessary changes in relation to the date of notification.
GOVERNMENT NOTICE

No. 1389 18 December 2001

as amended by Notice No. 276 of 21 February 2002

DETERMINATION OF UNDER SERVICED AREAS

I, Dr. Ivy Matsepe-Casaburri, Minister of Communications, in accordance with Section 40A (1) of the Telecommunications Act, (Act No. 103 of 1996) as amended, hereby determine the areas in schedule "A" as under serviced. The determined areas will be licenced to small business in the prescribed manner.

Dr. Ivy Matsepe-Casaburri
Minister of Communications

SCHEDULE A

List of Under Serviced Areas. This a list of district names as well as numbers in which these municipalities belongs to as described by the Municipal Demarcation Board established in terms of Local Government Act (No. 209 of 1993).

Abbreviations: CBDC-Cross Border District Council
DC-District Council

a) Northern Province
   (i) CBDC3 Sekhukhune
   (ii) CBDC4 Bushbuckridge/Lowveld Municipality
   (iii) DC33 Mopani
   (iv) DC34 Vhembe
   (v) DC35 Capricon

b) Kwazulu Natal
   (i) DC21 Ugu Municipality
   (ii) DC26 Zululand
   (iii) DC22 uMgungundlovu
   (iv) DC23 Uthekela
   (v) DC24 Umzinyathi

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(vi) DC27 Umkhanyakude
(vii) DC28 Uthungulu
(viii) DC29 King Shaka

c) Eastern Cape

(i) DC12 Amatole
(ii) DC13 Chris Hani
(iii) DC14 Ukwahlamba
(iv) DC15 OR Tambo Municipality

d) Free State Province

(i) DC20 Northern Free State
(ii) DC19 Thabo Mafutsanyana
(iii) DC18 Lejweleputswa

e) Gauteng

(ii) CBDC2 Metsweding
(ii) CBDC8 Westrand

f) Mpumalanga

(i) DC31 Nkangala
(ii) DC30 Eastvaal

g) North West

(i) DC37 Bojanala Platinum
(ii) DC38 Central
(iii) DC39 Bophirima

SCHEDULE B

Areas in this schedule will be licenced in the first stage.

Northern Province

(i) CBDC4 Bushbuckridge/Lowveld Municipality
(ii) DC35 Capricon District

Kwazulu Natal
(i) DC21 Ugu District Municipality
(ii) DC26 Zululand District

Eastern Cape

(i) DC15 OR Tambo Municipality
(ii) DC12 Amatole District

Free State Province

(i) DC20 Northern Free State District
(ii) DC18 Lejweleputswa
(iii) DC19 Thabo Mafutsanyana

North West Province

(i) DC38 Central

The remaining areas in schedule "A" will be licenced in subsequent stages to be prescribed by the Authority after the licencing process of the areas in schedule "B" has been completed.

GOVERNMENT NOTICE

No. R.26 8 January 2002

APPLICATION AND LICENCE FEES FOR THE PROVISION OF GMPCS SERVICE OR GMPCS EARTH GATEWAY SERVICE

[Editor's Note: No heading provided in this notice, this heading was inserted to facilitate tracing and for the sake of clarity. This notice is exactly the same as Notice No. 2393 of 20 December 2001 but does not state whether the latter substitutes Notice 2393 of 2001]

TELECOMMUNICATIONS ACT, 1996 (ACT No. 103 OF 1996)

In terms of section 96 (6) of the Telecommunications Act, 1996 (Act No. 103 of 1996), I, Ivy Matsepe-Casaburri, Minister of Communications hereby approve and publish the regulations in the Schedule made by the Independent Communications Authority of South Africa under section 96 (5) (b) read with section 88 (1), section 88 (2) and section 88 (3) of the said Act.

Ivy Matsepe-Casaburri
Minister of Communications

SCHEDULE

Definitions

1. In this Schedule any expression to which a meaning has been assigned by the Telecommunications Act, 1996 (Act 64 of 2001) (hereinafter referred to as, “the Act”) and the Global Mobile Personal Communication by Satellite (GMPCS) Policy Direction No.____ shall have the same meaning unless the context otherwise indicates;

Application Fee

2. The application fee in respect of applications for licences to provide GMPCS service or GMPCS earth gateway service is R50 000.00 (fifty thousand rand) payable by way of a bank guaranteed cheque, crossed and marked, “Not Transferable”, and made out to the Independent Communications Authority of South Africa.
Time when licence fees shall be paid

3. A licence fee shall be paid on the date of issue of the licence and annually thereafter.

Licence fee

4. (a) A licence fee for the GMPCS Service licence shall be R75 000 000,00 (seventy five million rand).

(b) The annual licence fee for the GMPCS service licence shall be 0.075% of annual turnover.

Penalty for a late payment of a licence fee

5. Licence fees that are overdue will attract interest charges at the applicable prime rate as determined by Nedbank SA.

MANDLA LANGA
CHAIRPERSON, ICASA

Date: 8 December 2001
GOVERNMENT NOTICE

No. R.27 8 January 2002

CATEGORIES OF LICENCES AND THE TELECOMMUNICATION SERVICES AUTHORISED THEREBY

Editor’s Note: No heading provided in this Notice, this heading was inserted to facilitate tracing and for the sake of clarity. This notice is exactly the same as Notice No. 2394 of 20 December 2001 but does not state whether the latter substitutes Notice 2394 of 2001

TELECOMMUNICATIONS ACT. 1996 (ACT No. 64 OF 2001)

In terms of section 96 (6) of the Telecommunications Act, 1996 (Act No. 64 of 2001), I, Ivy Matsepe-Casaburri, Minister of Communications hereby approve and publish the regulations in the Schedule made by the Independent Communications Authority of South Africa under section 96 (5) (b) read with section 34 (2) (a) (v) of the said Act.

Ivy Matsepe-Casaburri
Minister of Communications

SCHEDULE

Definitions

In this Schedule any expression to which a meaning has been assigned by the Telecommunications Act, 1996 (Act 64 of 2001) shall have the same meaning unless the context otherwise indicates;

1. Categories of licences and the telecommunication services authorised thereby

   (1) The Authority may on application grant and issue the following categories of telecommunication licences:

   (a) GMPCS service licence.

   (b) GMPCS earth gateway service licence.
(2) The telecommunication services which shall be authorised by the licences contemplated in regulation 2(1) above are:

(a) GMPCS service.

(b) GMPCS earth gateway service.

MANDLA LANGA Date: 8 December 2001

CHAIRPERSON, ICASA
TELECOMMUNICATION ACT

Part 2: Government Notices

Act No. 103 of 1996

GOVERNMENT NOTICE

No. R. 290

6 March 2002

TELECOMMUNICATIONS ACT, 1996, (ACT 103 OF 1996)

REGULATIONS IN RESPECT OF THE PROCEDURE FOR THE REGISTRATION OF SUPPLIERS OF TELECOMMUNICATION FACILITIES AND EQUIPMENT

In terms of section 96 (6) of the Telecommunications Act, 1996 (Act 103 of 1996), I, Dr. Ivy Matsepe-Casaburri, Minister of Communications, hereby approve and publish the regulations in the schedule made by the Independent Communications Authority of South Africa in terms of section 96 read with section 56 and 88 of the said Act.

Dr. Ivy Matsepe-Casaburri
Minister of Communications

SCHEDULE

Definitions

1. In this schedule any expression shall have the same meaning ascribed to it in the Telecommunications Act, 1996, (Act 103 of 1996), unless the context indicates otherwise.

Procedure

2. The relevant application form obtainable at any office of the Authority must be completed in full and submitted with the prescribed application fee at any office of the Authority.

3. In the event that the applicant is a natural person a certified copy of the applicant’s identity document must also be submitted with the application form.

4. In the event that the applicant is a juristic person or an association, a certified copy of the applicant’s company registration certificate or constitution of the association must also...
be submitted with the application form.

5. Registration certificates shall only be issued to South African residents or South African registered companies or close corporations.

6. The issuing of a certificate does not grant sole rights with regard to the supply of any particular type of telecommunication facility or equipment.

**Application fee and registration fee**

7. The application fee to be registered as a supplier of telecommunication facilities and equipment shall be R100 (one hundred rand).

8. The registration fee as a supplier of telecommunication facilities and equipment shall be R100 (one hundred rand), payable on the date of issue of the certificate and annually thereafter.

9. The registration of a supplier shall lapse if the supplier fails to pay the registration fee on due date.
GOVERNMENT NOTICE

No. R. 291

REGULATIONS IN RESPECT OF APPLICATIONS FOR RADIO FREQUENCY SPECTRUM LICENCES, STATION LICENCES, CERTIFICATES AND AUTHORITIES

In terms of section 95 (3) of the Telecommunications Act, 1996 (Act no. 103 of 1996), I, Dr. Ivy Matsepe-Casaburri, Minister of Communications, hereby approve the regulations in the Schedule made by the Independent Communications Authority of South Africa in terms of section 95 (1) read with section 30 (2) (b) of the said Act.

Dr. Ivy Matsepe-Casaburri
Minister of Communications

SCHEDULE

Definitions

1. In this schedule any expression shall have the same meaning ascribed to it in the Telecommunications Act, 1996, (Act 103 of 1996), unless the context indicates otherwise.

PROCEDURES IN RELATION TO APPLICATIONS FOR RADIO FREQUENCY SPECTRUM LICENCES, STATION LICENCES, CERTIFICATES AND AUTHORITIES (SECTION 30(2)(b))

1. The relevant application form obtainable at any office of the Authority must be completed in full and submitted with the prescribed application fee at any office of the Authority.

2. In cases where the frequency(ies) on the existing licence is an exclusive frequency(ies) and not a shared frequency(ies), a business plan along the lines shown in Appendix A must be submitted by the applicant.

3. A business plan shall not be submitted with regard to applications made by the South African National Defence Force, South African Police Services, National Intelligence...
Agency, Certificate and Licence holders such as Maritime, Aeronautical, Citizen Band, Civil Defence/Merit, Amateur Radio, 27 MHz and 29 MHz band two-way Radio, Shared Simplex HF, VHF and UHF, Very Short Range Band and Low Power Devices.

4. In the event that the applicant is a juristic person or an association, a certified copy of the applicant’s registration certificate or constitution of the association must also be submitted with the application form.

5. When applying for a General Certificate of Competency in Radio Telephony (Aeronautical) Restricted Radio Operator’s Certificate (Aeronautical), General Operator’s Certificate (Maritime), Restricted Radio Certificate (Maritime), Global Maritime Distress and Safety Systems (GMDSS), the following must be supplied by the applicant:

   (i) Examination results.
   (ii) Completed entry form for examination.
   (iii) Two identical passport size ID photos.
   (iv) The prescribed application fee.

6. When applying for a licence for high frequency cross border communication system in a territory other than in the Southern African Development Community, the following must be supplied by the applicant:

   (i) Completed application form.
   (ii) A copy of the licence issued in the foreign country.
   (iii) Proof of validity of the foreign licence.
   (iv) Indication that point to point communication is required.
   (v) Completed form of notice (AP1 /A15) in respect of a transmitting terrestrial station.
   (vi) The prescribed application fee.

7. When applying for a licence for high frequency cross border communication system in the Southern African Development Community, the following must be supplied by the applicant:
(i) Completed application form.
(ii) The prescribed application fee.

8. When applying for an Amateur Radio Operator's Certificate required for an Amateur Radio Station Licence, the following must be supplied by the applicant:

(i) Completed application form.
(ii) Examination results.
(iii) The prescribed application fee.

9. When applying for an authority to operate Radio Apparatus, authorising the holder of any certificate of competence to operate radio apparatus in accordance with the provisions of such certificate the following must be supplied:

(i) Certified copy of the original certificate to be evaluated.
(ii) Completed application form.
(iii) The prescribed application fee.

10. No application will be considered if there is any outstanding licence fee owed by the applicant to the Authority.
Appendix A

Appendix to Frequency Assignment/Radio Licensing Guideline

Information Required for the Evaluation of Licence Applications

Introduction Applicants must provide sufficient detail in the business plan to enable SATRA to analyse and determine from the plan alone, the extent to which the plan would lead to a sustainable business.

Information required Please provide the following information in respect of:

1. Applicant
2. Description of service
3. Market analysis
4. Construction of the network
5. Technical information on system design
6. Business planning
7. Tariffs and fees

Note:

See below for detail on each of these points.

Very important Note that SATRA may incorporate the information given in this business plan as conditions in the licence.

See point 8.

1. Applicant Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>• Name, address and registration number of Applicant</td>
</tr>
<tr>
<td></td>
<td>• Company's registration certificate</td>
</tr>
<tr>
<td></td>
<td>• Names &amp; addresses of directors &amp; principal executives</td>
</tr>
<tr>
<td></td>
<td>&quot;Company/association's main objective &amp; constitution</td>
</tr>
<tr>
<td>b</td>
<td>Annual Reports of the applicant and its main shareholders for the previous three years, when available</td>
</tr>
<tr>
<td>c</td>
<td>Full particulars of the experience and expertise of the Applicant, its shareholders, partners, suppliers and contractors in the business contemplated</td>
</tr>
<tr>
<td>d</td>
<td>• Extent of beneficial ownership of the applicant by the historically disadvantaged</td>
</tr>
<tr>
<td></td>
<td>• Extent of beneficial ownership by women.</td>
</tr>
</tbody>
</table>

Issue No. 12 (2002)
2. **Description** of service  Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>A full description of the services to be provided</td>
</tr>
<tr>
<td>b</td>
<td>Proposed annual coverage, rollout indicating the exact areas and location concerned</td>
</tr>
<tr>
<td>c</td>
<td>Guarantees that the proposed coverage will be met</td>
</tr>
<tr>
<td>d</td>
<td>Guarantees as required by the Frequency Assignment/Licensing Guidelines.</td>
</tr>
</tbody>
</table>

Market analysis  Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Projection of the market size and the different target markets</td>
</tr>
<tr>
<td>b</td>
<td>Marketing strategy for the first five years of service</td>
</tr>
<tr>
<td>c</td>
<td>Types of services to be provided to different target markets</td>
</tr>
<tr>
<td>d</td>
<td>Marketing strategy</td>
</tr>
<tr>
<td>e</td>
<td>Distribution strategy for customer equipment.</td>
</tr>
</tbody>
</table>

4. Construction of the network  Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Availability and experience of planning and project management capabilities required for construction of the network</td>
</tr>
<tr>
<td>b</td>
<td>Mechanisms used for the planning of any radio portion of the network</td>
</tr>
<tr>
<td>c</td>
<td>Plans to acquire resources such as access to sites, other property, technology, personnel and capital.</td>
</tr>
</tbody>
</table>

**Technical information**  

*Technical information (system design)*  Indicate the technical, operational and maintenance aspects of the proposed telecommunications system. Some of these aspects could be as follows:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>A full description of the technology to be implemented</td>
</tr>
<tr>
<td>b</td>
<td>The Applicant's approach to network development and expansion</td>
</tr>
<tr>
<td>c</td>
<td>Description of all interfaces in the network</td>
</tr>
</tbody>
</table>
### Requirements for interconnection to other telecommunications networks or services and the transmission medium and links required

- **Upgrading** of the network to new standards and technical developments
- Compliance with recognised international technical standards and specifications.

### Information required

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Details of radio network planning including methods to reserve frequency.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site-Name/s</td>
<td>Name of the place where equipment is located</td>
</tr>
<tr>
<td></td>
<td>Site Code</td>
<td>Code assigned to place</td>
</tr>
<tr>
<td></td>
<td>Site/s Co-ordinates (ddmmss)</td>
<td>Geographical co-ordinates used to locate a place on a map: ddmmss = degrees, minutes, seconds</td>
</tr>
<tr>
<td></td>
<td>Frequency/frequencies</td>
<td>Air waves through which radio waves are transmitted</td>
</tr>
<tr>
<td></td>
<td>Bandwidth of Transmitted Signal (MHz)</td>
<td>Amount of frequency occupied by the transmitted signal</td>
</tr>
<tr>
<td></td>
<td>Modulation Scheme and Bit-Rate</td>
<td>Method and speed of transmitting radio signal</td>
</tr>
<tr>
<td></td>
<td>Antenna Site</td>
<td>Where antenna is situated</td>
</tr>
<tr>
<td></td>
<td>Antenna Type</td>
<td>Type of antenna</td>
</tr>
<tr>
<td></td>
<td>Antenna Diameter (meter)</td>
<td>Diameter of antenna</td>
</tr>
<tr>
<td></td>
<td>Antenna Gain (dB)</td>
<td>Given in specifications for antenna</td>
</tr>
<tr>
<td></td>
<td>Antenna Polarisation (H/V)</td>
<td>Polarisations horizontally or vertically polarised transmission</td>
</tr>
<tr>
<td></td>
<td>Transmit Power (dBm/Watt)/Receiver Sensitivity Threshold (dBm)</td>
<td>Wattage (Watt = measurement of power)</td>
</tr>
<tr>
<td></td>
<td>Fixed Loss (dB): Transmit and receive</td>
<td>Percentage of lost power</td>
</tr>
<tr>
<td></td>
<td>Type of Service</td>
<td>Whether it is data service, voice, paging, telemetry etc</td>
</tr>
<tr>
<td></td>
<td>Area and Direction of Operation</td>
<td>Geographical area of service</td>
</tr>
</tbody>
</table>

*dB = decibel  
*H/V = horizontal/vertical  
*Wattage (Watt = measurement of power)  
*Receiver sensitivity threshold = the lowest value that can be detected by a receiver
Notes on (5g) in the table on the previous page:

<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>Refers to the actual Bandwidth of the Signal Transmitted and not to the Baseband value, for example</td>
</tr>
<tr>
<td>Baseband value</td>
<td>This is the frequency during the signal processing stage</td>
</tr>
<tr>
<td>Reflectors</td>
<td>In the case where a Reflector is used as part of a Radio link, the Link will be treated as consisting of two parts, i.e. two separate links. The applicant must calculate hypothetical values for • antenna parameters • transmit power etc. in order to supply the information required for the Site containing the Reflector.</td>
</tr>
</tbody>
</table>

Diagrams or sketches (5g) Applicants must supply diagrams or sketches of proposed operations, systems or Radio Links for explanatory purposes. Insufficient or incorrect information will result in an unsuccessful application.

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>h</td>
<td>Adherence to EMC specifications</td>
</tr>
<tr>
<td>i</td>
<td>Theoretical traffic volume forecasts and alternate routing and redundancy requirements</td>
</tr>
<tr>
<td>j</td>
<td>Numbering plan for the service</td>
</tr>
<tr>
<td>k</td>
<td>Quality systems employed and the quality targets used</td>
</tr>
<tr>
<td>l</td>
<td>Details of fixed network planning</td>
</tr>
<tr>
<td>m</td>
<td>Presentation of network planning data in the form of schedules, tables, diagrams and maps for the initial phase and two subsequent phases</td>
</tr>
<tr>
<td>n</td>
<td>Network management, fault detection, service and maintenance mechanisms</td>
</tr>
<tr>
<td>o</td>
<td>Equipment specifications/type approval certificates</td>
</tr>
<tr>
<td>p</td>
<td>Regulatory requirements (ITU &amp; Radio Act)</td>
</tr>
<tr>
<td>q</td>
<td>Technical expertise</td>
</tr>
<tr>
<td>r</td>
<td>Service monitoring capabilities.</td>
</tr>
</tbody>
</table>
6. **Business planning** Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>The fundamental assumptions for the business plan</td>
</tr>
<tr>
<td>b</td>
<td>Indication of all factors over which the Applicant has no control</td>
</tr>
<tr>
<td>c</td>
<td>Balance sheet, profit and loss accounts, cash flow statement, discounted cash flow statement for the first five years</td>
</tr>
<tr>
<td>d</td>
<td>A sensitivity analysis showing how costs to the subscriber changes with a 10% variation in the factors indicated in (b)</td>
</tr>
<tr>
<td>e</td>
<td>Key financial policies such as dividend rate, debt to equity ratio, etc</td>
</tr>
<tr>
<td>f</td>
<td>Full particulars of financing requirements and how the operation will be financed throughout the licence period</td>
</tr>
<tr>
<td>g</td>
<td>The amount of external capital used must be clearly indicated (both loans and equity).</td>
</tr>
</tbody>
</table>

7. **Tariffs and fees** Please provide the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>A full tariff plan indicating all tariffs and fees to be charged at the wholesale level and the subscriber level when the service is launched</td>
</tr>
<tr>
<td>b</td>
<td>Projection of the tariffs and fees up to the fifth year</td>
</tr>
<tr>
<td>c</td>
<td>Substantiated costs for the customer equipment and an estimate of charges in unit costs</td>
</tr>
<tr>
<td>d</td>
<td>Data management and billing systems.</td>
</tr>
</tbody>
</table>

8. **Important: general notes** Please take careful note of the following important points:

<table>
<thead>
<tr>
<th>No.</th>
<th>Information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Should a licence be issued, the information contained in the business plan may be incorporated by SATRA as conditions in the licence</td>
</tr>
<tr>
<td>b</td>
<td>Licensees will be required to supply certain data on an annual basis on issues such as empowerment, employment and training of the historically disadvantaged, women and the disabled.</td>
</tr>
</tbody>
</table>
GOVERNMENT NOTICE

No. R. 294

6 March 2002

REGULATIONS IN RESPECT OF THE PROCEDURE FOR OBTAINING A PERMIT FOR POSSESSION OF RADIO APPARATUS, THE RELEVANT APPLICATION FEE AND THE PERMIT FEE

In terms of section 95 (3) of the Telecommunications Act, 1996 (Act No. 103 of 1996), I, Dr. Ivy Matspe-Casaburri, Minister of Communications, hereby approve and publish the regulations in the schedule made by the Independent Communications Authority of South Africa under section 95 (1) and 96 read with section 31 (2) and 88 of the said Act.

Dr. Ivy Matspe-Casaburri
Minister of Communications

SCHEDULE

Definitions

1. In these regulations, words shall have the same meaning assigned to them in the Telecommunications Act, 1996 (Act No. 103 of 1996) unless the context indicates otherwise.

Procedure

2. A person who wishes to possess a radio apparatus shall apply in writing to the Authority for a permit authorizing such possession.

3. An application for a permit referred to in regulation 1 above shall be accompanied by the prescribed application fee and shall contain the following details:

   (1) Full name, address and contact details of the applicant.

   (2) If the applicant is a company, a certified copy of the registration certificate, whether the company is registered in South Africa or in a foreign country.
(3) The storage location of the radio apparatus for which the permit is applied.

(4) Radio apparatus make and model number.

(5) The number of units in question.

(6) Technical parameters of such radio apparatus, including, but not limited to, frequency, power and applicable standard.

4. Where the radio apparatus is not type-approved for use in South Africa and is intended for export purposes only, the applicant shall provide a sworn affidavit stating:

   (1) The country from which the equipment originates.

   (2) Country(ies) to which the radio apparatus will be exported.

   (3) that the radio apparatus and containers thereof are sealed.

   (4) that the radio apparatus is not intended for use, sale or distribution in South Africa.

5. A permit shall only be issued to the applicant upon approval of the application and after payment of the prescribed permit fee to the Authority.

**Application fee**

6. The application fee to possess a radio apparatus shall be R100.

**Permit fee**

7. A fee of R100 shall be paid in relation to every permit issued by the Authority.
DEPARTMENT OF POSTS AND TELECOMMUNICATIONS

ISSUE OF LICENCES TO PROVIDE NATIONAL CELLULAR TELECOMMUNICATION SERVICES

It is hereby notified for general information that telecommunications licences were issued to Vodacom Group (Pty) Ltd and Mobile Telephone Networks (Pty) Ltd to provide national cellular telecommunication services in South Africa and a Multiparty Implementation Agreement concluded with the following parties.

Vodacom Group (Pty) Ltd.
Mobile Telephone Networks (Pty) Ltd.
Telkom SA Ltd.
Department of Posts and Telecommunications.
Ministry of Transport and of Posts and Telecommunications.

The contents of the Multiparty implementation Agreement and the general terms and conditions of the communications licence referred to above are the same for both licensees and are published herewith for general consumption.

NATIONAL CELLULAR TELECOMMUNICATIONS LICENCE

(English version issued by the Postmaster General as the official documentation. The Afrikaans version is for information purposes only and does not substitute the official version)

DEFINITIONS

In this licence-

(a) all words and expressions used shall, unless the context otherwise requires, have the same meanings as ascribed thereto in terms of the Post Office Act;

(b) unless the context otherwise requires-
"CCITT" means Comité Consultatif International Télégraphique et Téléphonique;

"cellular" means radio telecommunications designed to use limited radio frequency spectrum between cellular Terminal Equipment and network transceivers for the provision of GSM bearer, tele- and supplementary services across the cellular network, by allocating a limited number of frequencies within each of a number of defined geographical areas or cells, allowing the re-use of the same frequencies in different non-adjacent cells, and enabling users to maintain connections whilst moving through different geographical areas by making use of call handover between adjacent cells;

"Commercial Date" means 1 June 1994, the date on which the Licensee may commence using Licensed Lines for commercial purposes;

"Community Centre" means schools, railway stations and such other locations as requested by the Licensee and approved by the Postmaster General in response to such request;

"Community Service Telephone" means Terminal Equipment which-

(i) is registered as such by a Licensee in its own records; and

(ii) is made available to the general public for the provision of the Service, and to this end is freely accessible; and

(iii) is located in an Under-serviced Area or in a Community Centre; and

(iv) is provided at tariffs which include a Community Service Telephone Tariff in terms of this Licence;

"customer" means any person who-

(i) has indicated willingness in writing to enter into a contract with the Licensee for the provision of the Service by means of the Licensed Lines on the Licensee’s terms and conditions lodged in accordance with paragraph 11.5, or has either written or otherwise entered into and is not in breach of such a contract; or

(ii) is a customer of a Service Provider;

"disaster" also includes any event or circumstance resulting from major accidents, natural phenomena, and incidents involving toxic and radio active...
materials.

"Emergency organisation" means in respect of any locality the relevant governmental SA and traffic police, fire, ambulance, and the National Sea Rescue Institute;

"ETSI" means European Telecommunications Standard Institute;

"Fixed Link" means a telecommunications line connecting two points neither of which is Terminal Equipment;

"GSM" means Global System for Mobile communications as defined in the ETSI structure of technical specifications and operating in the 900 MHz frequency band;

"Interconnection Agreement" means the agreement to be concluded between Telkom, the Licensee and a similarly licensed person defining the commercial and technical arrangements for-

(i) the transfer of messages in either direction between Telkom and the Licensee and/or similarly licensed person; and

(ii) the use of Leased Lines; and

(iii) the provision of related services; and

(iv) the payment of Interconnect Fees;

"Interconnect Fees" means the fees payable in terms of an Interconnection Agreement for-

(i) the carriage of messages originating in one network by means of another network, and/or

(ii) Leased Lines;

"Interim Roaming Agreement" means the agreement contemplated in paragraph 5.3 (a);

"Joint Economic Development Plan Agreement" means the plan proposed by the Licensee as agreed to by the Postmaster General to assist in the development of the South African economy and in particular the telecommunications industry;
"Leased Line" means a dedicated point-to-point circuit, complying with CC@ recommendations, leased from Teikom for the purpose of carrying telecommunications traffic;

"Licensed Line" means a telecommunications line or any part thereof which the Licensee is authorised to construct, maintain and use in terms of this Licence;

"Master Frequency Plan" means the manifestations of the actions of the Postmaster General to exercise control over and manage the radio frequencies spectrum in accordance with accepted international standards and subject to the provisions of the Radio Act, Act No. 3 of 1952;

"message" means any sound, signal, sign or image sent, or to be sent, for conveyance by means of a Licensed Line;

"Net Operational Income" means the total invoiced revenue of the Licensee (less discounts, VAT and other indirect taxes) derived from customers of the Licensee for the provision to them of the Service, less net Interconnect Fees and bad debts actually incurred and as provided for in terms of the Income Tax Act;

"Operator" means any of Teikom, the Licensee and any similarly licensed person;

"PABX" means customer switching systems capable of all of the following:

(i) initiating, receiving, holding or transferring a call;

(ii) handling voice communications;

(iii) being configured with two or more telephones; and

(iv) allowing a private conversation.

"PLMN" means Public Land Mobile Network;

"population" means demographic density as established in terms of the Statistics Act, Act No. 66 of 1976;

"Service" means a service consisting of-

(a) the provision of any Licensed Line;

(b) the conveyance of any message by means of such Line;
(c) the provision of any directory, voice mail, GSM bearer, tele- and supplementary services, or information service provided by those means; or

(d) the access to Emergency Organisations by those means, together with any billing, data processing or other operation which is necessary to provide that service whether or not the Licensee charges a separate fee for it;

"Service Provider" means any person who is in the business of providing the Service to another and who has a contract with the Licensee for such purpose;

"Telecommunications Licence" means a National Cellular Telecommunications Licence granted to each of Vodacom and MTN in terms of the Post Office Act on even date;

"Telkom" means Telkom SA Limited;

"Terminal Equipment" means a GSM terminal, including a Community Service Telephone connected via a GSM radio link which may be used by an end user to send and/or receive messages which are to be or have been conveyed by means of the PLMN all of which duly licensed by the Postmaster General;

"Territory" means the geographical area of the Republic of South Africa;

"Under-serviced Area" means a city, town, township, shantytown, location, village or human settlement or any part thereof as prescribed by the Postmaster General from time to time but in any event the areas listed in the Implementation Timetable.

LICENCE FEES

1.1 In consideration for the granting to the Licensee of the rights to construct, maintain and use Licensed Lines as provided for in paragraph 2 the Licensee shall pay to the Postmaster General:

(a) An amount of R 100,000,000 (one hundred million Rand) payable on date of issue of this licence, or at the instance of the Licensee the following amounts:

(i) R 10,000,000 payable on date of issue of the licence; plus
3.6

TELECOMMUNICATIONS ACT

Part 3: General Notices Act No. 103 of 1996

(ii) R 10 000 000 payable on the Commercial Date; plus

(iii) R 22 310 000 payable on the first anniversary of the Commercial Date; plus

(iv) R 24 900 000 payable on the second anniversary of the Commercial Date; plus

(v) R 27 780 000 payable on the third anniversary of the Commercial Date; plus

(vi) R 30 990 000 payable on the fourth anniversary of the Commercial Date,

but subject to an 11% discount in the event of the early payment of any or all of the above amounts calculated on such amount(s).

(b) An annual amount constituting 5% of the audited net operational income of the Licensee payable within three months after the end of the first year of the Licence and thereafter quarterly on assessed net operational income within 45 days of the end of each quarter to be adjusted immediately on receipt of the audited annual statements of the Licensee.

(c) The Licence Fees payable for and in respect of any renewal of the licence shall be as agreed between the Postmaster General and the Licensee.

1.2 The Licence Fees as set out above shall be inclusive of any sales or value added taxes or taxes on such Licence Fees.

1.3 Notwithstanding the provisions of paragraph 1.1 (a), in the event that one or more additional Telecommunications Licences using analogue or digital cellular radio technology are issued for the Territory by the Government of the Republic of South Africa within the first four years of the date of issue of this Licence, save for the Licence issued to the similarly licensed person on the same date as that on which this Licence is issued, the Licensee shall be entitled to a discount on the remaining licence fees payable in terms of paragraph 1.1 (a) only. This discount shall be-

(a) fifty percent of the remaining Licence fees if any additional licence is issued between the first and second anniversary of the date of issue of this Licence;
(b) forty percent of the remaining Licence fees if any additional licence is issued between the second and third anniversary of the date of issue of this Licence;

(c) thirty percent of the remaining Licence fees if any additional licence is issued between the third and fourth anniversary of the date of issue of this Licence; and

(d) twenty percent of the remaining Licence fees if any additional licence is issued between the fourth and fifth anniversary of the date of issue of this Licence.

1.4 The provisions of paragraph 1.3 shall not apply in the event that the Licensee is in default regarding any of its material obligations in terms of this Licence.

LICENCE AUTHORITY

2.1 The Licensee is authorised by this licence to construct, maintain and use a national PLMN for the Territory to-

(a) provide a GSM national mobile radio telephony Service operating in the 890 MHz to 960 MHz frequency band, and

(b) connect fixed and mobile Terminal Equipment using GSM cellular radio telephony technology for the provision of Service and Community Service Telephones, and

(c) interconnect with the Telkom network and with the PLMN of a similarly licensed person,

all of which subject to the provisions of paragraph 3.

2.2 The above rights may be exercised partially through agents, contractors or Service Providers of the Licensee. The Licensee shall be responsible for their acts or omissions in respect thereof on the basis that-

(a) the liability of the Licensee for any acts or omissions of any Service Provider in relation to the exercise of such rights, shall be limited to acts or omissions which constitute a contravention of the conditions of this licence;
3.8

TELECOMMUNICATIONS ACT
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(b) the Licensee shall stipulate adequate provisions in its contracts with its agents, contractors and Service Providers to ensure that their exercise of any of the above rights do not contravene any of the conditions of this licence;

(c) should an agent, contractor or Service Provider of the Licensee commit any act or omission in contravention of a condition of this licence, the License shall upon becoming aware thereof act as expeditiously as is reasonably possible to remedy such contravention and the Licensee shall be afforded reasonable time for such purposes; and

(d) the Postmaster General shall upon becoming aware of any contravention of licence conditions by agents, contractors or Service Providers of the Licensee or any complaints lodged with the Postmaster General in relation thereto forthwith in writing notify the Licensee accordingly.

2.3 Nothing in this licence shall be construed or understood as to relieve the Licensee or any other party of the obligations to comply with any other applicable Statutory prohibition or obligation and in particular the obligation to comply with the provisions of the Radio Act.

2.4 The licence shall not be transferable unless the prior written approval of the Postmaster General had been obtained and then only on such conditions as he may prescribe, including the payment of a fee.

LICENCE DETAILS

3.1 The Licensee shall be obliged to use Leased Lines for:

te) all connections between the elements of its own PLMN;

(b) interconnections between its PLMN elements and the PLMN elements of a similarly licensed person;

(c) interconnection of its PLMN elements and the public switched telephone network of Telkom, unless Telkom has indicated that it is unwilling or unable to provide these links in which instance the Licensee may apply to the Postmaster General to procure, construct or use its own links.

3.2 The Licensee is hereby authorised to procure, construct, maintain and use its own Fixed Links to connect its own PLMN elements of these elements are installed on the same premises as well as adjacent premises occupied by
3.3 The Licensee shall undertake an implementation programme in accordance with an Implementation Timetable as agreed to between the Licensee and the Postmaster General and as lodged with the Postmaster General to give effect to the following:

(a) After 24 months from the Commercial Date the Licensee shall be in a position to provide Class II or Class IV area coverage to 60% of the population of the Republic of South Africa;

(b) After 48 months from the Commercial Date the Licensee shall be in a position to provide Class II or Class IV area coverage to 70% of the population of the Republic of South Africa.

3.4 All international calls originating within or destined for the cellular network shall be routed via the Telkom international exchange(s).

3.6 Subject to the approval of the Postmaster General after consultation with Telkom, the Licensee and a similarly licensed person and on such terms and conditions as may be prescribed by him the Licensee shall be allowed to connect a PABX to his PLMN by means of a Leased Line provided that such PABX is already connected and remains connected to the Telkom public switched telephone network.

COMMUNITY SERVICE OBLIGATIONS

4.1 The Licensee shall undertake an implementation programme in respect of Community Service Telephones in the areas listed in the Implementation Timetable as agreed to between the Licensee and the Postmaster General and as lodged with the Postmaster General.

4.2 The implementation of the Licensee's obligation may, subject to the provisions of the Implementation Timetable, be coordinated between the Licensee, the other similarly licensed person and Telkom under the chairmanship of the Postmaster General.

4.3 Services provided in Community Centres shall not qualify or be taken into consideration for the purposes of the Community Service Telephone obligation of the Licensee as set out in the Implementation Timetable unless such centres are in Underserviced Areas.
COMMENCEMENT AND PERIOD OF LICENCE

5.1 The licence does not authorise the use of any Licensed Line until after-

(a) R100 000 000 (one hundred million Rand) or the fees specified in paragraph 1.1 (a) (i) and (ii) together with the applicable Radio Licence fees have been paid; and

(b) the later of-

(i) the date when the Interconnection Agreement referred to in paragraph 7.1 has been concluded by both the Licensee and the similarly licensed person; or

(ii) the date when the Joint Economic Development Plan Agreement has been entered into; or

(iii) the provision of a Performance Guarantee in terms of paragraph 21; or

(iv) the Commercial Date.

5.2 Notwithstanding the provisions of paragraph 5.1 the Licensee shall be entitled from 1 March 1994 to undertake testing of its Licensed Lines, which may include providing Service to not more than 2000 SIM card holders.

5.3 Further notwithstanding the provisions of paragraph 5.1 the Licensee shall be permitted limited use of any Licensed line at any time from 1 April 1994, provided that-

(a) an Interim Roaming Agreement has been concluded between the Licensee and the similarly licensed person by 15 December 1993 in terms whereof the customers of each Licensee may obtain access to the Service offered by the other similarly licensed person by means of Licensed Lines constructed or used by similarly licensed persons, such Agreement being applicable from 1 April 1994 to 31 October 1994; or

(b) failing paragraph 5.3 (a), an Interim Roaming Agreement has been determined by the Postmaster General by 15 January 1994; and

(c) the Licensee not to provide Service to more than 10 000 Customers of each Licensee during the period 1 April 1994 to 1 June 1994; and
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(d) the Licensee and the similarly licensed person had not agreed by 28 February 1994 that roaming cannot be successfully implemented; and

(e) interim tariffs for the period 1 April 1994 to the Commercial Date are not to be less than the maximum of the tariff plans lodged with the Postmaster General by the Licensee and the similarly licensed person.

5.4 Subject to the conditions of this licence and any other instrument applicable either to this licence or to the operations of the Licensee the validity period of this licence shall be 15 years from the Commercial Date provided that either party may terminate this licence upon 5 (five) years written notice to the other, provided further that no such notice may be given to the effect that the licence is terminated earlier than 15 (fifteen) years after the Commercial Date.

5.5 Should no notice of termination be given in terms of paragraph 5.4 this licence shall automatically be renewed on mutatis mutandis the same terms and conditions unless the Postmaster General and the Licensee agree in writing on any new or amended terms and conditions.

PERFORMANCE SPECIFICATIONS

6.1 The Licensed Lines installed, maintained and used by the Licensee shall throughout the term of the licence conform to such GSM specifications and standards and CCITT recommendations as prescribed by the Postmaster General.

6.2 The Licensee shall at all times fully comply with the recommendations of the International Telecommunication Union and its associated organisations as they apply to the Republic of South Africa from time to time.

6.3 The Licensee shall introduce measures and at all times use its resources to ensure that apparatus in the Licensed Lines including Terminal Equipment owned by the Licensee shall comply with-

(a) the requirements for Electro Magnetic Compatibility; and

(b) the requirements for network interface,

both as prescribed by the Postmaster General in accordance with international specifications and standards.
6.4 The Licensee shall design, construct, maintain and use the Licensed Lines with the objective that the Service shall be available within the areas specified in paragraph 3.3 for 90% of their actual area of coverage at least 95% of the time and use its best endeavours to achieve a grade of service standard of at least 2%.

6.5 If requested by a customer the Licensee or its Service Provider shall provide such customer with a personalised account which shall contain at least the following level of detail: name, address, telephone number, account number, itemised billing number, number called, time of call, call duration and call charge.

6.6 The Licensee shall not knowingly provide Services to customers other than by means of Terminal Equipment.

INTERCONNECTION

7.1 The Licensee shall be obliged to enter into an Interconnection Agreement. Should the Licensee be unable to do so and if requested thereto by any party the Postmaster General reserves the right to determine the terms and conditions of any Interconnection Agreement required for the effective use of the PLMN provided such terms and conditions are no less favourable than those for any similarly licensed person and the Licensee shall comply with such terms and conditions as so determined as if they constituted an agreement entered into by the Licensee.

7.2 The fees and tariffs payable for fixed network services by the Licensee in terms of any Interconnection Agreement entered into by the Licensee shall be approved by the Postmaster General, which approval shall not be withheld unreasonably.

EMERGENCY SERVICES OBLIGATION

8.1 The Licensee shall provide by means of its Licensed Lines such facilities as would enable a caller free of charge to communicate in the event of an emergency in the area serviced by the Licensee with an Emergency Organisation.

CUSTOMER PRIVACY

9.1 The Licensee shall use all reasonable endeavours to ensure that information obtained or received in the performance of the Service by itself or its Service...
Providers is kept confidential, not disclosed or made accessible to third parties or used otherwise than for the purposes or furtherance of the Service.

9.2 The Licensee shall not directly or indirectly communicate any information about a customer otherwise than in the normal course or conduct of the business of the Licensee to any other business of the Licensee or any other person engaged in the supply of apparatus.

DIRECTORY INFORMATION

10.1 The Licensee shall provide directory services, inclusive of directory enquiries and printed directories, to each of its customers on request and in return for such charges as the Licensee may levy in accordance with the duly lodged tariff plans.

10.2 In order to enable the Licensee, Telkom and a similarly licensed person to give effect to obligations in respect of directory enquiries and printed directories the Licensee shall forward to the person nominated for the time being by the Postmaster General (which person until informed otherwise in writing shall be Telkom) such directory information and on such conditions as prescribed by the Postmaster General from time to time.

FAIR TRADING

11.1 The Licensee and its agents, contractors and Service Providers shall not show any undue preference to, or exercise undue discrimination against any person or class or description of persons in respect of the provision of any Service or in respect of the construction or maintenance of the Licensed Lines.

11.2 The Licensee shall include a provision in its contracts with its Service Providers requiring that they comply with a code of practice for consumer affairs to be established by the Licensee at least containing:

(a) guidance to their customers in respect of disputes or complaints relating to the provision of the Service by them;

(b) advice to such customers on charging and billing and concerning such enquiries;
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(c) advice and procedures on the proper use of the Service by such customers; and

(d) standards of conduct expected in the provision of the Service by Service Providers to their customers.

11.3 Notwithstanding the provisions of paragraph 11.1, the Licensee may provide the Service to a customer or Service Provider on charges, terms and conditions which are preferential if-

(a) the charge in question is in accordance with a tariff plan which has previously been lodged as required; or

(b) the Service is provided by means of a Community Service Telephone or Service Provider who operates a Community Service Telephone; and

(c) the terms and conditions have been duly lodged.

11.4 The sharing of infrastructure and facilities with other similarly licensed persons and the terms and conditions thereof shall be subject to the prior approval of the Postmaster General.

11.5 The Licensee shall lodge with the Postmaster General representative sample copies of all contracts relating to the Service or the provision of the Service entered into between the Licensee and any customer, Service Provider and supplier of telecommunications facilities.

ACCOUNTS

12.1 The Licensee shall maintain proper accounting records in a form which is sufficient to show and explain its transactions and in this connection will maintain such records as fairly represent the costs, revenue and financial position of the Licensee's business. For this purpose the Licensee shall maintain accounting records in accordance with a Chart of Accounts and Cost Allocation Manual (or any amendment thereof) to be determined by the Postmaster General in consultation with the Licensee provided always that any amendment shall not impose any unreasonable burden on the Licensee.

12.2 Within three months of the end of each financial year of the Licensee, the Licensee shall present to the Postmaster General audited annual financial statements prepared in accordance with generally accepted accounting practice and as approved by the Licensee.
TARIFTS AND FEES

13.1 The Licensee shall not charge any tariffs or fees for the Service and any other services whatsoever until such tariffs and fees have been lodged in writing with the Postmaster General.

13.2 The tariffs and fees must be in a form approved by the Postmaster General who shall provide written reasons in the event of non-approval. The notice of tariffs and fees lodged with the Postmaster General must state the period (ie the term) for which it is to be in force. The term must not begin before the seventh day after the notice has been lodged with the Postmaster General. In relation to each kind of service that the licensee proposes to offer during the term, the notice must set out-

(a) a description of the service; and
(b) details of the nature and amounts of charges payable for the service.

13.3 If the charges in a tariff plan vary, in their nature, in their amounts or both, the notice must set out, why and how the charges vary.

13.4 The notice must be precise and detailed enough to be used to work out the nature and amounts of charges payable for the supply of Service in particular cases.

13.5 The Licensee shall not without the approval of the Postmaster General increase any existing tariff plan by an amount which is greater than the percentage year on year increase in the Consumer Price Index for all goods as published by the Department of Statistics from time to time unless such a change constitutes a special promotion for marketing or advertising purposes. If the Postmaster General disallows or delays the proposed tariff increase, he must provide written reasons to the Licensee for the decision.

13.6 Notwithstanding the provisions of paragraph 13.5 any increase in Community Service Telephone tariff plan as annexed to this Licence and as amended from time to time shall be approved by the Postmaster General. If the Postmaster General disallows or delays the proposed Community Service Telephone tariff plan increase, he shall provide written reasons to the Licensee for the decision.

13.7 The base tariffs and fees which the Licensee may apply as from the Commercial Date are annexed hereto and shall be treated as having been lodged with the Postmaster General.
13.8 Where the Postmaster General has approved an increase in tariffs and fees, these increased tariffs and fees shall constitute the new base tariffs and fees.

13.9 The Licensee shall publish details of its tariffs and fees and any other terms and conditions on which its services are provided by:

(a) making them available for inspection at its major places of business during normal business hours, and

(b) sending the appropriate parts thereof to any person who may request same.

13.10 Notwithstanding the provisions of paragraph 13.7, the Licensee shall decrease the Community Service Telephone Tariff after consultation with the Postmaster General if the Interconnect Fees and other charges payable by the Licensee to Telkom in terms of the Interconnect Agreement are less than those provided for in the Invitation to Apply or at any point of time in the future. The decrease in Community Service Telephone Tariffs will relate to the magnitude of the decrease in Interconnect Fees and other charges payable by the Licensee to Telkom.

SERVICE PROVIDERS

14.1 The Licensee shall have full discretion to determine and implement the appropriate means of marketing and distribution of its Services inclusive of the appointment and the termination thereof of agents and Service Providers.

ACCESS TO INSPECTORS

15.1 The Licensee shall grant unhindered access to all its facilities, installation and records to all officers authorised as inspectors by the Postmaster General for such purposes.

15.2 The Licensee shall provide details of its facilities, installations and networks in such format and at such times as may reasonably be requested by the Postmaster General from time to time.

FREQUENCIES

16.1 The Postmaster General shall assign for the duration of the licence, at least 1.0 MHz of paired frequencies in the frequency band 890 MHz to 960 MHz.
to the Licensee in accordance with a Master Frequency Plan as amended from time to time by the Postmaster General to conform with internationally accepted standards.

16.2 The Licensee shall only be entitled to utilise an assigned frequency after the issue by the Postmaster General of a valid Radio Licence covering such frequency.

CUSTOMER SERVICE STANDARDS

17.1 A Licensee must develop, publish and enforce guidelines for use by its personnel when handling enquiries and complaints from a customer to whom it supplies telecommunications facilities and provide similarly in its contracts with Service Providers.

17.2 The guidelines relating to enquiries and complaints are to be published and be available to customers at the commencement of Service to such customer.

17.3 The guidelines are to address the following areas of the provision of customer services:

(a) The Licensee's procedures for the handling of customers' complaints;

(b) the time frame for handling complaints through this procedure;

(c) further recourse available to a customer who is dissatisfied with the Licensee's complaints handling procedure;

(d) procedures adopted by the Licensee to check the accuracy of a customer's telephone account;

(e) procedures to be adopted by the Licensee to assist customers in disaster situations;

(f) availability to customers of quality of Service information relating to the Licensee's network services.

17.4 A Licensee must keep and maintain statistics on complaints made to the Licensee by customers with which the Licensee deals in accordance with the guidelines.

17.5 A Licensee shall provide the statistics kept in terms of paragraph 17.4 to the Postmaster General at least once in each period of six months. The
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Postmaster General may after consultation with the Licensee publish the statistics kept in terms of paragraph 17.4 provided such publication shall relate to a period of not less than three months and shall be published together with similar information pertaining to any similarly licensed person.

REPRESENTATIVE

18.1 A Telecommunications Representative may be appointed by the Postmaster General to assist him in examining any bona fide complaints from customers and the Licensee shall provide all reasonable assistance to such Telecommunications Representative for such purposes. The Licensee shall afford its customers (not being a Service Provider) and shall require that its Service Providers in their contracts give its customers the opportunity to refer disputes between them relating to the Service to the Telecommunications Representative.

18.2 The Licensee or Service Provider shall provide all reasonable assistance to the Telecommunications Representative who shall in a fair and impartial manner have the right to adjudicate such disputes. The Licensee or Service Provider shall abide by all the decisions of and give effect to the written recommendations of the Representative in respect of such adjudication.

18.3 In the event of the Licensee or Service Provider disputing a finding of the Representative or objecting to the outcome of the adjudication such disagreement or objection shall be submitted to the Postmaster General for his decision, which decision supported by his written findings shall be final.

RESTRICTION ON TRANSFER OF SHARES, DIRECTORSHIPS, ETC

19.1 Any transfer of shares which would result in the direct or indirect ownership of 25 percent of the issued voting share capital of the Licensee changing hands or a change in the ownership of the issued voting share capital that results in a change to the composition of one-quarter of the Board of Directors, shall require prior written approval of the Postmaster General.

19.2 The provisions of paragraph 19.1 shall not preclude the shares of the Licensee from being listed on the Johannesburg Stock Exchange, provided that such listing shall not have the effect of vesting greater than 50% (fifty per centum) of the issued voting share capital of the Licensee in—

(a) any non-resident of the Republic of South Africa; or
AMENDMENT

20.1 The Postmaster General shall, until such time as a statutory regulator is appointed, be entitled after a hearing with the Licensee, the other similarly licensed person and Telkom and the provision of written reasons to amend the licence conditions provided that-

(a) no amendment may be made by the Postmaster General unless the amendments are necessary for the fulfilment of the Postmaster General's duties and do not unduly prejudice the Licensee or the Licensee's business or affect any rights or authorizations granted hereunder; or

(b) such amendments are specifically agreed with the Licensee in writing.

PERFORMANCE GUARANTEE

21.1 The Licensee shall procure a performance guarantee substantially in accordance with the draft document attached hereto to the satisfaction of Postmaster General underwriting the performance obligations of the Licensee in terms of this Licence.

REPORTING

22.1 The Licensee shall report in writing to the Postmaster General on or within 30 days of 30 September and 31 March of each year with effect from 31 March 1994.

22.2 Each report until and including the report of 30 September 1998 shall include detail of its Service provided in terms of this Licence and in particular its progress in achieving its commitments provided for in paragraphs 3.3 and 4.1.

REVOCATION

23.1 The Postmaster General may, after having satisfied himself and with the approval of the Minister, for such reasons as given in writing, revoke this licence by not less than 60 days written notice to the Licensee if any amount payable in terms of paragraph 1.1 and 2.4 of this licence or any
other instrument listed under paragraph 5.1 (a) remains unpaid for a further period of 14 days after having been notified in writing thereof by the Postmaster General and the Licensee fails to remedy such default within 30 days after receipt of a notice in writing from the Postmaster General describing such default and requiring that it be remedied.

23.2 The Postmaster General may, otherwise than is provided for in paragraph 23.1, and with the approval of the Minister, revoke this licence by written notice to the Licensee only in the following circumstances:

(a) Where the Licensee agrees in writing to such cancellation;

(b) if the Licensee is placed in liquidation, whether voluntary or compulsory or is placed under judicial management, either provisionally or finally;

(c) a breach of paragraph 19.1 where prior written approval of the Postmaster General had not been obtained;

(d) if the Licensee takes steps to deregister itself or is deregistered;

EFFECT OF TERMINATION

24.1 Within a period of 90 days of the date of termination of the licence, the Postmaster General may by notice in writing to the Licensee or its successor in title, elect to acquire the Licensed Lines of the Licensee or any portion thereof. In return for such assets he shall pay to the Licensee or its successor in title compensation in an amount as follows:

(a) in the event of termination for reasons other than the reasons giving rise to a termination referred to in subparagraph (b) hereunder, the greater of the fair market value of all such licensed Lines or the fair market value of the complete cellular business or the Licensee as going concern including all liabilities; or

(b) the lesser of the values referred to in subparagraph (a) above in the event of a termination pursuant to a voluntary liquidation referred to in paragraph 23.2 (b) or a deregistration referred to in paragraph 23.2 (d), as valued by reference to such values immediately prior to the termination and disregarding whether any termination has taken or may take effect by an independent valuator, experienced in the field of valuation of businesses of the same kind as that of the Licensee, agreed to between the parties facing which, as nominated by the President of the Transvaal Law Society, all of which subject to the
approval of the Auditor-General.

EXERCISE OF POWERS

25.1 In exercising any power granted to the Postmaster General in terms of this licence the Postmaster General shall-

(a) act reasonably having regard to all surrounding circumstances;

(b) prior to exercising such power afford the Licensee every reasonable opportunity to make representations to the Postmaster General in respect of all relevant issues; and

(c) at the request of the Licensee furnish written reasons for any decision so made.

MULTIPARTY IMPLEMENTATION AGREEMENT

(English version concluded between the Postmaster General and the respective parties and constitutes the official documentation. The Afrikaans version is for information purposes only and does not substitute the official version.)

INTRODUCTION

This agreement is entered into this 30th day of September 1993 between-

1. The Government of the Republic of South Africa as represented by the Minister of Transport and Posts and Telecommunications ("The Minister");

2. The Postmaster General;

3. Telkom SA Ltd ("Telkom");

4. Vodacom Group (Pty) Ltd ("Vodacom"), a company incorporated in the Republic of South Africa;

5. Mobile Telephone Networks (Pty) Ltd ("MTN"), a company incorporated in the Republic of South Africa;

Whereas the Minister announced on the 14th of February 1993 his intention to grant two licences to provide a National Cellular Telephony Service and invited applications for licences to construct, operate and maintain such a Service on a non-exclusive basis; and
Whereas Vodacom and MTN each submitted applications in response to and in accordance with the invitation and in those applications each made diverse undertakings as to the actions it would take if a licence were granted to it; and

Whereas the Minister and the Postmaster General have carried out an evaluation of those applications and on the basis thereof and the undertakings contained therein the Minister announced on 22 September 1993 the decision to grant Licences to Vodacom and MTN under the Radio Act and the Post Office Act; and

Whereas a Radio Licence permitting the Licensees to use radio frequencies in the 890 MHz to 960 MHz bands and a Telecommunications Licence authorising the construction, maintenance and use of GSM Telecommunications Lines have been granted on even date to each of Vodacom and MTN and such Licences are conditional on each of Vodacom and MTN entering into supplemental agreements; and

Whereas the effective use of the radio frequencies and the Licensed Lines and the implementation of the undertakings made by each of the Licensees requires certain arrangements to be set in place which involve cooperation between the Minister, Postmaster General, Telkom, Vodacom and MTN and the provision by Telkom, Vodacom and MTN of certain services to each other which they have agreed to provide; and

Whereas all of the above have culminated, after comprehensive negotiations between the Postmaster General, Telkom, Vodacom and MTN, in the preparing and issuing of the relevant comprehensive Telecommunications Licence documents consolidating the rights and obligations of each of the Licensees in substitution of all other prior documentation;

Now, therefore, it is agreed as follows:

1. DEFINITIONS

In this agreement, unless the context otherwise requires-

"CCITT" means Comité Consultatif International Télégraphique et Téléphonique;

"Cellular" means radio telecommunications designed to use limited radio frequency spectrum between cellular Terminal Equipment and network transceivers for the provision of GSM bearer, tele- and supplementary services across the cellular network, by allocating a limited number of frequencies within each of a number of defined geographical areas or cells, allowing the re-use of the same frequencies in different non-adjacent cells, and enabling users to maintain connections whilst moving through different geographical areas by making use of call handover between adjacent cells;
"Commercial Date" means 1 June 1994 the date on which the Licensees may commence using Licensed Lines for commercial purposes;

"Community Centre" means schools, railway stations and such other locations as requested by a Licensee and approved by the Postmaster General in response to such request;

"Community Service Telephone" means Terminal Equipment which-

(i) is registered as such by a Licensee in its own records; and

(ii) is made available to the general public for the provision of the Service, and to this end is freely accessible; and

(iii) is located in an Under-serviced Area or in a Community Centre; and

(iv) is provided at tariffs which include a Community Service Telephone Tariff in terms of a Telecommunications Licence;

"Customer" means any person who-

(i) has indicated willingness in writing to enter into a contract with a Licensee for the provision of the Service by means of the Licensed Lines on the Licensee's terms and conditions lodged in accordance with the applicable Telecommunications Licence, or has either written or otherwise entered into and is not in breach of such a contract; or

(ii) is a Customer of a Service Provider;

"Community Service Telephone Timetable" means the timetable set out in Schedule 2A or 2B;

"Connect" means to install, maintain and use any Telecommunications Line or other apparatus used for telecommunications so that Messages which are-

(a) conveyed by one Operator are also conveyed by another Operator; or

(b) sent by means of one item of apparatus are conveyed or received by means of another item of apparatus.

"Disaster" also includes any event or circumstance resulting from major accidents, natural phenomena, and incidents involving toxic and radio active materials.

"Emergency Organisation" means in respect of any locality the relevant governmental SA and traffic police, fire, ambulance, and the National Sea Rescue
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Institute;

"ETSI" means European Telecommunications Standard Institute;

"Fixed Link" means a Telecommunications Line connecting two points neither of which is Terminal Equipment;

"Foreign Line" means a Telecommunications Line not operated by an Operator;

"GSM" means Global System for Mobile communications as defined in the ETSI structure of technical specifications and operating in the 900 MHz frequency band;

"Interconnection Agreement" means the agreement to be concluded between Telkom, Vodacom and MTN defining the commercial and technical arrangements for:

(i) the transfer of messages in either direction between Telkom and the Licensee(s); and

(ii) the use of Leased Lines; and

(iii) the provision of related services; and

(iv) the payment of Interconnect Fees;

"Interconnect Fees" means the fees paid in terms of an Interconnection Agreement for:

(i) the carriage of messages originating in one network by means of another network, and/or

(ii) Leased Lines;

"Leased Line" means a dedicated point-to-point circuit, complying with CCITT recommendations, leased from Telkom for the purpose of carrying telecommunications traffic;

"Licensed Line" means a telecommunications line or any part thereof which the Licensee is authorised to construct, maintain and use in terms of a Telecommunications Licence;

"Licensee" means either Vodacom or MTN as the context may require

"Licence Period" means the period for which the applicable Radio Licence and Telecommunications Licence continue in force (including any period for which those
Licences may be renewed or further renewed);

"Master Frequency Plan" means the manifestations of the actions of the Postmaster General to exercise control over and manage the radio frequency spectrum in accordance with accepted international standards and subject to the provisions of the Radio Act, Act No. 3 of 1952;

"Message" means any sound, signal, sign or image sent, or to be sent, for conveyance by means of a Licensed Line;

"Network Implementation Timetable" means the timetables set out in Schedule 1A or 1B;

"Number" means any alpha-numerical identifier of any Customer, Terminal Equipment or component of the Service;

"Operator" means any of Telkom, Vodacom or MTN;

"PLMN" means Public Land Mobile Network;

"Prescribed Date" means 1 November 1993 or any such later date as determined by the Postmaster General;

"Population" means demographic density as established in terms of the Statistics Act, Act No. 66 of 1976;

"Post Office Act" means the Post Office Act, Act No. 44 of 1958, as amended;

"Radio Act" means the Radio Act, Act No. 3 of 1952, amended;

"Radio Licence" means the licence granted to a Licensee in terms of the Radio Act on even date;

"Retail Business" means that part of a Licensee's business which involves the sale or making available of Services to Customers who are not Operators or Service Providers;

"Service" means a service consisting of-

(a) the provision of any Licensed Line;

(b) the conveyance of any message by means of such Line;

(c) the provision of any directory, voice mail, GSM bearer, tele- and supplementary services, or information service provided by those means; or
(d) the access to Emergency Organisations by those means,

together with any billing, data processing or other operation which is necessary to
provide that service by a Licensee whether or not the Licensee charges a separate
fee for it;

"Service Provider" means any person who is in the business of providing the
Service to another and who has a contract with Licensee for such purpose;

"Specified Link" means a Fixed Link of a quality, capacity and location as specified
by a Licensee and required to provide the Service;

"Telkom" means Telkom SA Limited;

"Telecommunications Licence" means a National Cellular Telecommunications
Licence granted to each of Vodacom and MTN in terms of the Post Office Act on
even date;

"Telecommunications Line" has the meaning as defined in the Post Office Act;

"Telecommunications Service" has the meaning as defined in the Post Office Act;

"Terminal Equipment" means a GSM terminal, including a Community Service
Telephone connected via a GSM radio link which may be used by an end user to
send and/or receive messages which are to be or have been conveyed by means of
the PLMN all of which duly licensed by the Postmaster General.

"Territory" means the geographical area of the Republic of South Africa;

"Under-serviced Area" means a city, town, township, shantytown, location, village
or human settlement or any part thereof as prescribed by the Postmaster General
from time to time but in any event the areas listed in the Implementation Timetable
referred to in the relevant Telecommunications Licence;

"Wholesale Business" means that part of the business of a Licensee which is not
Retail Business;

"Wholesale Charges" means charges made by one Licensee to another Licensee or
Service Provider for the conveyance of Messages which have been or are to be
conveyed by the first Licensee.
2. UNDERTAKINGS BY THE MINISTER AND THE POSTMASTER GENERAL

2.1 The Minister agrees that during the Licence Period the Government of the Republic of South Africa will

(a) use its powers, where they are applicable and where to do so is consistent with overall Government policy from time to time, to assist the Operators to give effect to the matters which are the subject of this agreement, a Radio Licence or a Telecommunications Licence; and

(b) not enact any legislation or implement any regulatory action which will subject a Licensee to any specific obligations other than those provided for in this Agreement or impose any specific obligation which prejudices matters that are the subject of this agreement, a Radio Licence or a Telecommunications Licence; and

(c) procure that all Operators shall not engage in any act, practice or course of conduct which constitutes an abuse of a dominant position or which otherwise prevents, restricts or distorts fair competition.

2.2 The Postmaster General agrees that during the Licence Period he will use his powers under the Radio Act and the Post Office Act, where those powers are applicable and where to do so is consistent with overall Government policy from time to time, to assist the Operators in giving effect to the matters which are the subject to this agreement, a Radio Licence or a Telecommunications Licence.

2.3 Nothing in this agreement, but subject to the principles as set out in paragraph 2.1 above, will limit in any way the ability of the Government to enact legislation or to implement regulatory provisions of general application.

3. RADIO FREQUENCIES

3.1 The Postmaster General agrees that he will continue throughout the Licence Period-

(a) to grant or renew its Radio Licence each year in terms of the Radio Act so as to make available to the Licensees each of the radio frequencies specified in its Radio Licence; and

(b) to exercise his functions under the Radio Act and the Post Office Act so as to facilitate the construction, maintenance and use of the Licensed Lines by the Licensees, provided that each Licensee
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continues to comply with the provisions of its Radio License and to use such frequencies efficiently in accordance with GSM recommendations for the purpose of providing its Service.

3.2 Nothing in this paragraph shall prevent the Postmaster General substituting a different frequency in the GSM frequency band 890 MHz to 960 MHz for any of the frequencies so assigned at no cost to the Postmaster General if this is reasonably necessary-

(a) for the implementation of any international agreement entered into by the Government of the Republic of South Africa; or

(b) to ensure the proper management of the radio spectrum; or

(c) for the avoidance of harmful interference,

but the Postmaster General agrees that he will give as much notice as is reasonably practicable and that, before taking any such action, he will consult the Licensee and will take into account, so far as he considers reasonable, its representations and objections and provide a written report incorporating the reasons for his findings.

4. INSTALLATION OF THE LICENSED LINES

4.1 Each Licensee agrees that-

(a) (i) in the case of Vodacom, it will before the date specified in Column 1 of the Vodacom Network Implementation Timetable set out in Schedule 1 A;

(ii) in the case of MTN, it will before the date specified in Column 1 of the MTN Network Implementation Timetable set out in Schedule 1 B construct, maintain and thereafter use not less than one Licensed Line in each of the places specified in Column 2 thereof;

(b) at the time when a Licensed Line is first constructed, maintained and used in that place and at all subsequent times during the Licence Period it will construct, maintain and thereafter use sufficient additional Licensed lines to support the specific Grade of Service as defined in paragraph 6.4 of the telecommunications Licence in that place.

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4.2 Each Licensee agrees that, if it fails without reasonable cause so to construct, maintain and use any Licensed Line in any particular place as required in terms of paragraph 4.1, it will, in respect of any month or part of a month commencing on the day when either-

(a) one Licensed line ought to have been constructed, maintained and used as required in terms of paragraph 4.1 (a); or

(b) the Postmaster General notifies the Licensee, supported by his written reasons that, insufficient Licensed lines have been constructed, maintained and used as required in terms of paragraph 4.1 (b)

and ending on the day when the Postmaster General is informed by such Licensee that the Licensed Line or as the case may be additional Licensed Lines have been constructed, maintained and used as so required, pay to the Postmaster General a sum equal to one tenth of the estimated cost of installing the Licensed Line in that place up to 100% of such costs, such payments to be made monthly in arrears on the first business day of the month.

4.3 the contents of Schedule 1 A (the Vodacom Implementation Timetable) is confidential to the Minister, the Postmaster General and to Vodacom; and

(b) [sic], there is no [sic] the contents of Schedule 1B (the MTN Implementation Timetable) is confidential to the Minister, the Postmaster General and to MTN,

and that such contents is not to be disclosed to the other parties to this agreement or to any other person without the written consent of the Licensee.

5. COMMUNITY SERVICE TELEPHONES

5.1 Each Licensee agrees that-

(a) in the case of Vodacom, it will before the date specified in Column 1 of the Vodacom Community Service Telephone Timetable set out in Schedule 2A, either-

(i) construct, maintain and thereafter use a Community Service Telephone at each of the places specified in Column 2 thereof; or
(ii) enter into contractual arrangements with another person obliging such person to provide a Community Service Telephone at each of those places; and

(iii) in either case do, or secure that there are done, the additional things mentioned in the notes to that Timetable;

(b) in the case of MTN, it will before the date specified in Column 1 of the MTN Community Service Telephone Timetable set out in Schedule 2B either-

(i) construct, maintain and thereafter use a Community Service Telephone at each of the places specified in Column 2 thereof; or

(ii) enter into contractual arrangements with another person obliging such person to provide a Community Service Telephone at each of those places; and

(iii) in either case do, or secure that there are done the additional things mentioned in the notes to that Timetable.

5.2 Each Licensee agrees that at all times thereafter during the Licence Period it will provide the Service, or secure that the Service is provided, by means of-

(a) not less than one Community Service Telephone at each of those places; or

(b) if in any of those places the demand for the Service from persons who can obtain the Service only by means of a Community Service Telephone cannot be satisfied by a single Community Service Telephone, sufficient additional Community Service Telephones at that place to meet all reasonable demands for the Service by such persons,

but the Licensee will not be required to install further Community Service Telephones that the maximum number of Community Service Telephones provided for in the Community Service Telephone Timetable set out in Schedule 2A or 2B.

5.3 Each Licensee agrees that, if in any particular specified place it falls without reasonable cause so to provide the Service by means of such one or additional Community Service Telephones as required in terms of paragraphs 5.1 or 5.2, it will, in respect of any month or part of a month commencing
on the day when either-

(a) one Community Service Telephone and the Service ought to have been provided in that place as required in terms of paragraph 5.1; or

(b) the Postmaster General notifies the Licensee, supported by his written reasons that, the Service is provided by means of less than the number of Community Service Telephones required in terms of paragraph 5.2 and ending on the day when the Postmaster General is informed by such Licensee that the Community Service Telephone or as the case may be additional Community Service Telephones have been constructed, maintained and used as so required, pay to the Postmaster General a sum equal to one tenth of the estimated cost of installing the Community Service Telephone or Telephones in that place up to a maximum of 100% of such costs, such payments to be made monthly in arrears on the first business day of the month.

5.4 It is agreed that-

(a) the contents of Schedule 2A (the Vodacom Community Service Telephone Timetable) are confidential to the Minister, the Postmaster General and to Vodacom; and

(b) the contents of Schedule 2B (the MTN Community Service Telephone Timetable) are confidential to the Minister, the Postmaster General and to MTN,

and that such contents are not to be disclosed to the other parties to this agreement or to any other person without the written consent of the Licensee.

6. RESOLUTION OF DISPUTES

6.1 If a Licensee disputes any application of the provisions of paragraphs 4.2 or 5.3 it may refer the matter to a Committee comprised of one representative of the Postmaster General, one representative of the Licensee and a third person who shall be nominated by both the Postmaster General and the Licensee failing which by the President of the Transvaal Law Society, and the Committee's determination shall be final.

6.2 If the Committee finds in favour of the Licensee such monies paid to the Postmaster General in respect of the matter as determined by the Committee shall be refunded to the Licensee with interest at the Statutory rate.
7. FIXED LINKS

7.1 Telkom shall have the right to provide all Fixed Links required by the Licensees to construct, maintain and use their networks and to interconnect their respective networks with each other and with Telkom's network unless Telkom is unwilling or unable to do so.

7.2 The following procedure shall be followed to meet the requirements of the Licensees for Specified Links:

(a) Any request for Specified Links by a Licensee must be made in writing to Telkom at an address and directed to a person to be nominated in writing by Telkom. Each request must set out the number of Specified Links, the points between which and the time within which each Specified Link is required and the capacity of the Specified Links required.

(b) Telkom shall respond in writing to each such request as follows:

(i) Where the Specified Links are required between two connecting points within the same metropolitan area-

   (A) up to 30 Specified Links within five working days:

   (B) for every additional 50 Specified Links or part thereof, an additional five working days.

(ii) In all other cases-

   (A) up to three Specified Links within five working days;

   (B) for every additional five Specified Links or part thereof, an additional five working days.

7.3 In its response Telkom shall state:

(a) whether it is willing and able to provide the Specified Links required and, if so,

(b) the time within which Telkom will be able to provide the Specified Links.

7.4 After receipt of Telkom's written response as aforesaid the Licensee may place an order in writing on Telkom in terms of Telkom's written response which shall be binding upon the Licensee and Telkom.
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7.5 Telkom undertakes to provide the Specified Links so ordered on the date required by the Licensee provided that such an order is placed at least 90 days prior to the required date.

7.6 If Telkom is late in the provision of any Specified Link as stipulated in paragraph 7.5 it shall be liable to pay penalties to the Licensee based on a percentage of the total annual rental of the Specified Link as follows:

(a) 1 to 30 days late 25%;
(b) 31 to 60 days late 50%;
(c) more than 60 days late 75%.

7.7 If Telkom is unable to provide any particular Fixed Link of the specified capacity, it shall specify in its response what capacity link it will in fact be able to provide and when it will be able to provide the required capacity.

7.8 If Telkom is unwilling or fails to provide the Specified Link within the period specified in paragraph 7.3 (b) the Licensee shall be entitled to apply to the Postmaster General for permission to procure the Specified Link otherwise than from Telkom.

7.9 Each of the parties agree that the Postmaster General may act on the basis set out below where it is alleged by a Licensee that Telkom failed to respond in terms of paragraph 7.2 or that Telkom's inability to provide Specified Links of the required capacity, is unreasonable or that Telkom has failed to provide the Specified Link within the period stipulated in paragraph 7.3 (b):

(a) The Licensee must lodge a written complaint with the Postmaster General setting out fully the grounds for its complaint and the facts upon which the complaint is based, together with copies of its written request and Telkom's written response.

(b) The Licensee must furnish a copy of its written complaint to Telkom at the office of the person nominated by Telkom in terms of paragraph 7.2, together with all supporting documents.

(c) Within five working days of the receipt of the written complaint, Telkom will have the opportunity to state its case in writing to the Postmaster General and must furnish a copy thereof to the Licensee concerned.

(d) The Postmaster General shall have the right to request the parties to furnish such further information as he may require.
The Postmaster General shall duly consider the reasonableness of the complaint and Telkom's explanation thereof and, having done so, shall have the authority to-

(i) dismiss the complaint, or

(ii) authorise the Licensee to procure, construct, maintain and use its own Specified Link, or

(iii) make such other directions as he may deem fit to ensure the Specified Link is obtained by the Licensee.

7.10 The Postmaster General undertakes to communicate his decision in writing to the parties concerned within seven working days after receipt of Telkom's statement of case in terms of paragraph 7.9 (c) or receipt of further information requested in terms of paragraph 7.9 (d).

7.11 Telkom and the Licensees agree that the Postmaster General's decision shall be final and binding on them.

8. INTERCONNECTION OF NETWORKS

8.1 Telkom, Vodacom and MTN each agrees to use its best endeavours to enter into an Interconnection Agreement with each of the others before the Prescribed Date for the purposes of securing that any Message originating from-

(a) Telkom as part of the Telecommunications Service provided by Telkom may, if so required, be conveyed to the intended destination-

(i) by means of a Licensed Line constructed, maintained and used by Vodacom; or

(ii) by means of a Licensed Line constructed, maintained or used by MTN;

(b) Vodacom by means of a Licensed Line constructed, maintained or used by Vodacom may, if so required, be conveyed to the intended destination-

(i) by means of the Telecommunications Service provided by Telkom; or
(ii) by means of a Licensed Line constructed, maintained and used by MTN; and

(c) MTN by means of a Licensed Line constructed, maintained or used by MTN may, if so required, be conveyed to the intended destination-

(i) by means of the Telecommunications Service provided by Telkom; or

(ii) by means of a Licensed Line constructed, maintained and used by Vodacom.

8.2 Telkom, Vodacom and MTN each agrees that, if for any reason there is failure to enter into an Interconnection Agreement before the Prescribed Date-

(a) the Postmaster General shall within 30 days of the Prescribed Date determine in writing the terms and conditions of such agreement; and

(b) each shall comply with such terms and conditions as so determined as if those terms and conditions constituted an agreement voluntarily entered into by it,

8.3 Telkom, Vodacom and MTN each agrees that, if at any time thereafter it is requested by any one or more of the others to enter into negotiations with a view to the modification of such agreement, it shall unless directed otherwise by the Postmaster General in writing forthwith enter into negotiations with the relevant parties and will use its best endeavour to reach agreement on such modification.

8.4 Telkom, Vodacom and MTN each agrees that, if for any reason there is failure to agree on the modification of that agreement as envisaged in paragraph 8.3 and if he is so requested by any of them in writing-

(a) the Postmaster General may determine that the terms and conditions of the Interconnection Agreement should be modified and, if he does so determine, the form of the modification that is to be incorporated into the agreement; and

(b) if any such modification is incorporated into the Interconnection Agreement, each of them who is party to that agreement will comply with the agreement incorporating such modification as so determined as if that agreement as modified had been voluntarily entered into by it.
8.5 Telkom, Vodacom and MTN each agrees that any term or condition of any Interconnection Agreement may be modified by agreement in writing between them whether such term or condition was voluntarily entered into by it, were determined by the Postmaster General or were modified by him pursuant to the provisions of paragraphs 8.4 and 8.7.

8.6 No Interconnection Agreement and no modification of the terms and conditions of such agreement may enter into force-

(a) until 28 days after full particulars of the terms and conditions of that agreement or modification, together with a sufficient explanation of the purpose and effect of the agreement or modification, have been furnished to the Postmaster General and each of the Licensees; or

(b) if the Postmaster General has, subject to the provisions of paragraph 8.2, within the period of 28 days determined by notice in writing delivered to each party to the agreement or modification that the agreement or modification should not enter into force at all or should enter into force subject to such further modifications as are specified in the notice and supported by his reasons.

8.7 The Postmaster General agrees that he will make any determination which it fails to him to make by virtue of this paragraph 8 diligently, in the best interests of the rapid and effective provision of the Service and so far as practicable at the least cost to the Customer by applying the following principles:

(a) any Customer of any Operator should be able to send Messages to, and to receive Messages from, any other Customer of any Operator;

(b) the methods used and to be used to connect the Licensed Lines of Vodacom and MTN to each other and to the facilities used by Telkom to provide the Telecommunications Service should conform with good engineering principles and practice;

(c) connections between the Licensed Lines of each of the Licensees and between the Licensed Lines of each of them and the facilities used by Telkom to provide the Telecommunications Service shall be established in sufficient numbers and with sufficient capacity to convey all Messages which have been sent by Customers of any one of the Operators to the places to which those Customers wish the Messages to be conveyed;

(d) a Licensee should be enabled to hand over and accept Messages to and from the Telkom Public Switched Telephone Network at a place
or places (or apparatus) chosen by the Postmaster General as selected from the lists of points of interconnect (real or virtual), submitted by each of the Operators;

(e) all Fixed Links provided by Telkom to the Licensees for connection to the PSTN shall be Leased Lines;

(f) each Licensee's Wholesale Charges for any Service shall so far as practicable be the same as the charges which are included in the Licensee's books of account in respect of the same Service when it is provided by its Wholesale Business for the Retail Business;

(g) each of the Licensees' terms and conditions for interconnection to Telkom shall be and remain no less favourable than those for the other Licensee.

Such initial determination will not be more onerous to the Licensees than is provided for in the proposed interconnect principles as contained in the Appendices 3, 4 and 5 of the Invitation to Apply for a Licence to Provide a National Cellular Radio Telephony Service.

8.8 Notwithstanding any other provision in this agreement, the principle of far end handover for calls originating from Licensed Lines of the Licensees, and near end handover for calls originating from the Telkom network is accepted and will be applied by all parties.

8.9 For the purposes of an interim Roaming Agreement referred to in the Telecommunications Licences the Postmaster General shall within 30 days of being requested to do so by either Licensee have the power to determine the provisions of such agreement in accordance with the principles set out in paragraph 8 above.

9. DIRECTORY INFORMATION

9.1 Each Licensee agrees, subject to paragraphs 9.3 and 10.2, to supply to each of its Customers on request and in return for such charges as the Licensee may determine-

(a) a directory enquiry service covering the Customers of the Licensee, Customers of the other Operators and Customers of telephone operators outside the Republic of South Africa by means of either live voice or at the instance of the Licensee direct on-line access to a computer or a combination of those means;
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(b) a Telkom printed directory with addresses in the same geographical area as such Customer.

9.2 Each Licensee shall furnish to Telkom the name, address and telephone number of each Customer to whom a number has been allocated (in this paragraph "the information") and who has requested such information to be included in the relevant Telkom directory no later than two working days after commencing the Service to that Customer.

9.3 Telkom shall include free of charge the information relating to each Customer referred to in paragraph 9.2 above as a single normal light face entry per appropriate white pages printed directory.

9.4 Each Operator shall provide to the other Operators facilities enabling their directory enquiry operators to gain on-line access to its directory database (but excluding Telkom's yellow pages data-base) for the purpose of retrieving such information contained therein as is needed for the Operators to provide operator-assisted directory enquiry service.

9.5 Telkom shall supply copies of its printed directories to the Licensees at Telkom's normal charges to enable the Licensees to provide the printed directories referred to in paragraph 9.1 (b) above.

9.6 All copyright in Telkom's directories shall remain vested in Telkom.

10. OPERATOR-ASSISTED SERVICES

10.1 Each Licensee agrees that it will provide either independently or in concert with other Operators an operator-assisted service whereby any Customer (including for the purpose of this paragraph any person using a Community Service Telephone) may receive through the agency of live speech (or a combination of live speech and either recorded or synthesised speech)-

(a) assistance with the sending or reception of any Message; or

(b) information (other than directory enquiry information) about any aspect of the Licensee's Service.

10.2 A Licensee may recover the costs which it incurs in providing this operator-assisted service described in paragraph 10.1 from its Customers;
11. EMERGENCY SERVICES

11.1 Each Licensee agrees that it will provide independently or in concert with other Operators from the Commercial Date such operator-assisted service in such manner as to provide an emergency call service by means of which any member of the public may, at any time and without incurring any charge, communicate as swiftly as practicable by means of live voice with any of the Emergency organisations for the purpose of notifying it of any emergency.

11.2 The Licensees also agree that each will provide from a date or dates to be prescribed by the Postmaster General but not earlier than the Commercial Date such operator-assisted service in such manner as to provide, in any emergency or other circumstance where calls cannot be dialled direct, facilities which enable the public to communicate by means of live speech with any Emergency Organisation.

11.3 Each Licensee agrees that it will provide the services described in paragraphs 11.1 and 11.2 with priority over all other aspects of the Service.

11.4 It is agreed that the Licensees may restrict the public emergency call services described in paragraphs 11.1 and 11.2 to the extent that such restriction is agreed to by the Emergency Organisation concerned, or in the absence of such agreement, to such extent as may be determined by the Postmaster General by notice in writing sent to the Licensee(s) and the Emergency Organisation concerned.

11.5 Each Licensee agrees that it will, after consultation with the relevant authorities and Emergency Organisations as appropriate, make plans or other arrangements for the provision, or as the case may be, the rapid restoration of the Service as are practicable and may reasonably be required in Disasters.

11.6 Nothing in this paragraph precludes a Licensee from-

(a) recovering the costs which it incurs in making or implementing any such plans or arrangements as are mentioned in paragraph 11.5 from those on behalf of or in consultation with whom the plans or consultations are made; or

(b) making the implementation of any such plan or arrangement conditional upon the person for whom or on whose behalf that plan or arrangement is to be implemented indemnifying the Licensee for all reasonable costs incurred as a consequence of the
implementation.

11.7 Telkom agrees to provide access free of charge to all Emergency Organisations with a national number.

12. NUMBERING ARRANGEMENTS

12.1 Telkom agrees to allocate the access codes 082 to Vodacom and 083 to MTN. Allocation of telephone numbers by the Licensees to their Customers within the allocated blocks are totally under each Licensee's discretion and control.

13. METERING AND BILLING ARRANGEMENTS

13.1 The Licensees each agree to install and to use metering and billing systems which accurately record the extent of the Service provided to any other Operator or Customer of a Licensee.

13.2 The Licensees each agree that it shall set out in any account or invoice sent to any such Operator or Customer the true extent of the Service actually provided to that Operator or Customer in the period to which the account or invoice relates.

13.3 The Licensees each agree to-

(a) open its metering and billing system for inspection by the Postmaster General, or by any person acting with his written authority, at any time and to cooperate in facilitating any such inspection; and

(b) alter, adapt, modify or improve such system in accordance with any reasonable requirement which the Postmaster General may specify in writing from time to time for the purposes indicated in paragraphs 13.1 and 13.2 above.

13.4 Telkom agrees to open its metering and billing system in so far as it relates to services rendered to the Licensees for inspection by the Postmaster General.

13.5 The Postmaster General agrees that-

(a) when inspecting, or arranging the inspection of any metering and billing system he will do so at reasonable times and on giving reasonable notice to the Operator concerned except in any case...
where same would frustrate the purpose of the inspection; and

(b) before specifying any alteration, adaption, modification or improvement he will-

(i) take account of the general state of development of the Operator's networks and the availability of finance to the Operator; and

(ii) consult the Operator and take full account of any representations made by the Operator.

14. CONNECTION AND USE OF CUSTOMER EQUIPMENT

14.1 The Licensees each agree-

(a) to permit any Customer to connect Terminal Equipment to its Licensed Lines at any place in the Republic of South Africa where Services are offered;

(b) to permit any Customer to use Terminal Equipment when so connected to send and receive Messages by means of its Licensed Lines; and

(c) not to show any preference to or to exercise any discrimination against any Customer or class of Customer when granting any such permission.

14.2 Nothing in this paragraph shall restrict any of the Licensees from-

(a) disconnecting any apparatus from any of its Licensed Lines; or

(b) disallowing continued use of any apparatus; or

(c) refusing permission to a Customer to connect if-

(i) the Terminal Equipment in question ceases for any reason to be; or

(ii) the person using the Terminal Equipment is in arrears with payment of the Licensee's telephone account or is otherwise in contravention of the Licensee's terms and conditions of service duly lodged with the Postmaster General; or
it has reason to believe that the Customer is unable or is unlikely to regularly pay the Licensee for rendered services and the Postmaster General has not determined otherwise in any particular case.

15. ARRANGEMENTS IN AREAS WHERE ONLY ONE LICENSEE HAS CONSTRUCTED LINES

15.1 Nothing in this agreement shall prevent the Licensees from entering into a voluntary agreement or agreements for the purposes specified in paragraph 15.2 without compromising the competitive advantage of either of them but each Licensee agrees to furnish the terms and conditions of any such agreement to the Postmaster General and any direction given by the Postmaster General may cancel or modify such voluntary agreement in the event of his being of the opinion that such agreement is detrimental to the best interest of Customers.

15.2 The purposes are to secure that-

(a) in any area of the Territory where Vodacom has not constructed, or does not use Licensed Lines a Customer of Vodacom may obtain the Service normally provided by Vodacom by means of Licensed Lines constructed or used by MTN; and

(b) in any area of the Territory where MTN has not constructed, or does not use Licensed Lines a Customer of MTN may obtain the Service normally provided by MTN by means of Licensed Lines constructed or used by Vodacom.

16. PREVENTION OF RESTRICTIONS ON INTERNATIONAL CALLS ETC.

16.1 The Licensees each agree not to restrict or enter into any agreement or arrangement with any other Operator or with any person who operates a Foreign Line without the approval of the Postmaster General the effect of which would be to prevent or restrict-

(a) any person in the Republic from sending Messages by means of any Licensed Line in the Republic for reception by means of any Foreign Line; and

(b) any person outside the Republic from sending Messages by means of a Foreign Line for reception in the Republic by means of any Licensed Line used by any Operator.
16.2 **Telkom** agrees to provide access to the Customers of the Licensees to all international services to which **Telkom's** own customers have access.

17. **PREPARATION OF ACCOUNTS**

17.1 The Licensees each agree that it shall maintain proper accounting records in accordance with the Chart of Accounts and Cost Allocation Manual to be prescribed by the Postmaster General. Until such time the Licensees shall maintain proper accounting records in accordance with generally accepted accounting practice in such form as is sufficient to-

(a) show all the activities of the Licensee taken together and the activities of each of the Licensee's businesses engaged in-

(i) the construction of the **Licensed** Lines;

(ii) the maintenance of the Licensed Lines;

(iii) the Retail Business;

(iv) the Wholesale Business;

(v) the supply of Terminal Equipment (other than Community Service Telephones);

(vi) the supply of Community Service Telephones and the provision of the Service by means of Community Service Telephones;

(vii) the provision of supplementary services;

(viii) the supply of printed directories;

(ix) such other categories as the Postmaster General may from time to time require,

separately from each other and from the other businesses of the Licensee; and

(b) explain its transactions and those of each of those businesses.

17.2 The **Licensees** each agree that it shall record in such accounting records at full or market related cost any material transaction between-
(a) it and any of the businesses of the Licensee specified in paragraph 17.1;

(b) one such business and another; and

(c) it and any other person in which the Licensee has shares; and

(d) it and any other person who has shares in the Licensee or in the shareholders of the Licensee; and

(e) it and a subsidiary company as defined in the Companies Act, Act No. 61 of 1973 of such Licensee.

17.3 Within three months of the end of each financial year of a Licensee, each Licensee shall present to the Postmaster General accounting statements truly and fairly presenting the costs (including capital costs), revenue and financial position of the businesses specified in paragraph 17.1 together with a report of the Licensee’s auditor on those statements.

17.4 Telkom agrees to maintain proper accounting records in accordance with generally accepted accounting practice regarding any material transaction with-

(a) either of the Licensees; and

(b) any subsidiary company as defined in terms of the Companies Act of either of the Licensees,

and to furnish this information to the Postmaster General on his request and to open the said records to independent audit by an auditor appointed by the Postmaster General for that purpose.

18. AMENDMENTS

18.1 No variation, modification or waiver of any provision of this agreement nor consent to any departure from it by any party shall have any effect unless it is confirmed in writing and executed by all the parties concerned.

19. ENFORCEMENT

19.1 If the Postmaster General is of the opinion that there has been a fundamental breach by any of the Licensees of one or more of the undertakings set out in this agreement, the Postmaster General shall provide
to the defaulting party a written notice containing the following information:

(a) Identification of the obligations that it is alleged have been breached;

(b) full particulars of the alleged breach;

(c) notice to the defaulting party indicating such time as may reasonably be required, but in any event not less than 60 days, to remedy the breach.

19.2 The defaulting party shall respond to the Postmaster General within the time stipulated in the notice as follows:

(a) That it either confirms or denies the alleged breach and, where applicable, the extent to which the alleged breach is only partly denied; or

(b) to the extent that it accepts the alleged breach-

   (i) advising the Postmaster General how it intends the breach to be remedied and the time required therefore; and

   (ii) informing the Postmaster General of the reasons for such breach and requesting an extension of time (if any) which is reasonably required to remedy the breach.

19.3 The Postmaster General shall reasonably exercise his discretion in the granting of any such extension of time and shall in the event of his refusing an extension provide his reasons therefor in writing.

19.4 If the breach has not been remedied within the time stipulated in the relevant notice or such extension of time granted by the Postmaster General then the Postmaster General shall be entitled without prejudice to his rights to demand specific performance where possible remedy such breach himself or appoint another party to remedy such breach in any event at the cost of the defaulting party, provided that the aggregated liability of the defaulting party in respect of any breach or breaches arising from the same cause of action, including any such costs shall be limited to the payment of R 10 000 000 (ten million Rand).

19.5 Any claim of the Postmaster General for a breach in respect of the Network Implementation Timetable or the Community Service Telephone Timetable shall be limited to and reduced by an amount equal to any sum or sums already paid or payable in terms of paragraphs 4.2 and 5.3 above.
19.6 The provisions of this paragraph shall be without prejudice to any other remedies or rights to which the Operators may be entitled in law.

20. FORCE MAJEURE

20.1 Should an Operator be prevented from performing its obligations in terms of this agreement on account of any event as set out hereunder, the Operator, shall not be regarded as being in breach of the terms of this agreement and shall not be held liable on account thereof.

20.2 For purposes of this paragraph an event shall mean any legislation or regulation of the Republic of South Africa, fire, Act of God, accident, explosion, acts of war, terrorism, insurrection, sabotage, labour disputes, transportation embargo, act or omission of any government or government agency, failure in performance of any supplier as a result of any of the above, all of which beyond the control of the Operator.

20.3 The Operator shall advise the Postmaster General as soon as practicable after becoming aware of the existence of any such event or circumstances likely to lead to such an event.

21. REMEDY OF LICENSEE

21.1 In the event that the Government, the Minister or the Postmaster General exercises or refuses to exercise any power or introduces any measure in contravention of or in conflict with the Telecommunications or Radio Licence of a Licensee or the provisions of this agreement the Postmaster General shall be liable to pay to the Licensee such damages to which the Licensee is entitled in law.

21.2 In exercising any function or power assigned to the Postmaster General in terms of this agreement the Postmaster general shall:

(a) act reasonably having regard to all surrounding circumstances; and

(b) prior to exercising such function or power afford the Operators every reasonable opportunity to make representations in relation to all relevant issues; and

(c) at the request of any party furnish written reasons for any decision so made.
21.3 In the event of any dispute occurring between the Postmaster General and a defaulting party in relation to a breach of this agreement or the time period set for the remedy thereof, such dispute shall, unless resolved by negotiation between the Postmaster General and the defaulting party, be referred to arbitration at the instance of either party, which arbitration shall be held in terms of the provisions of the Arbitration Act, Act No. 42 of 1956, as amended, on the basis that such determination of the dispute shall be final and binding on the parties to the dispute.

22. INTER PARTY AFFAIRS

22.1 It is recorded that the contents of any documentation referred to in this agreement to which a party is not privy shall not in any way bind or affect the rights and obligations of such a party.

22.2 A dispute between any of the parties to this agreement shall not affect the rights and obligations of any other party not involved in such dispute.

22.3 Pending the outcome and finalisation of any dispute the rights and obligations of all the parties to this agreement shall remain and continue as provided for in this agreement and no party shall be entitled to withhold any service or refrain from making any payment due.

22.4 The termination of the Telecommunications Licence of any of the Licensees for whatever reason or the termination of this agreement in respect of a party shall not affect the validity of this agreement in respect of the remaining Licensee or Licensees or any of the other parties in as much as it relates to the remaining parties.

23. DURATION

23.1 This agreement shall remain in force until terminated by all the parties thereto by written agreement or until the termination of the last remaining Telecommunications and Radio Licence, but in any event until any outstanding issue or dispute in terms thereof has been resolved or finalised.

24. PRECEDENCE

24.1 The provisions of a Telecommunications Licence shall be utilised in interpreting the provisions of this agreement where required to give proper effect thereto.
24.2 The provisions of a Telecommunications Licence shall take precedence in any instance where the wording or provisions of this agreement and the Telecommunications Licence are irreconcilable.

25. CONFIDENTIALITY

25.1 The parties to this agreement recognise the proprietary interest of the other parties to the subject matter of the agreement and all information in respect thereof and the parties each hereby agrees that no such information shall be made available to any party not privy thereto without the prior written approval of the other parties having been obtained.

26. NOTICE

26.1 Any notice given pursuant to this agreement shall be delivered as follows:

(a) In the case of a notice to the Minister (address).

(b) In the case of a notice to the Postmaster General:

The Postmaster General
15th Floor, Mutual and Federal Building
152 Vermeulen Street
PRETORIA

(c) In the case of a notice to Telkom:

The Managing Director
Telkom SA Ltd
Telkom Towers North
Proes Street
PRETORIA

(d) In the case of a notice to Vodacom:

The Chief Executive Officer
Vodacom Group (Pty) Ltd
Hatfield Gardens B
corner of Arcadia and Hilda Streets
Hatfield
PRETORIA

(e) In the case of a notice to MTN:

The Chief Executive Officer
Mobile Telephone Networks (Pty) Ltd
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First Floor, Media Park
75 Republic Road
RANDBURG

or to such other address as any party may from time to time notify all the other parties in writing.

27. ENTIRE AGREEMENT

27.1 This agreement constitutes the entire agreement between the parties with regard to the matters dealt with herein. There are no terms, conditions or warranties, express or implied, of whatever nature other than those contained therein.

27.2 The provisions of this agreement shall be binding on the assigns or successors in title of the parties to this agreement.

27.3 Nothing in this agreement shall be construed or interpreted as broadening the scope of the Licences beyond the authority to provide a National Cellular Telecommunications Service using GSM technology in the 890 MHz to 960 MHz bands.

I. L. WILKINSON,
Mobile Telephone Networks (Pty) Ltd

A. DE V. C. KNOTT-CRAIG,
Vodacom Group (Pty) Ltd

G. VAN DIJK,
Telkom SA Ltd

P. J. T. OOSTHUIZEN,
Postmaster General

P. J. WELGEMOED,
Minister
REVISION OF SOUTH AFRICAN FREQUENCY ALLOCATION PLANS (BAND PLANS) AND MIGRATION STRATEGIES

Universal service has a very high priority in Government. In line with this focus and other key Government strategies, revisions to current band planning are necessary to facilitate the introduction of Wireless Local Loop technologies and hence promote universal service.

In accordance with my duty to control radio activities within the Republic of South Africa, under the control and direction of the Minister, and as a result of the strategies mentioned above, I have found it necessary to revise the band plan and migration strategy produced as an output of the SABRE process and published in Government Gazette 17701, Notice 18 of 27 December 1996. Furthermore I have found it necessary to revise the band planning for additional strategic areas of the frequency spectrum, namely 3.4 GHz to 3.6 GHz. Henceforth Notice 18 referred to above and the plans on record for 3.4 GHz to 3.6 GHz are replaced by the band plans and migration strategies contained in this notice.

The following is included and forms part of this Notice:

i) the revised South African Frequency Allocation plan (Band Plan) for the frequencies 20 MHz to 3 GHz.

ii) the revised migration strategy to implement the band plan for the frequencies 20 MHz to 3 GHz.

iii) the new South African band plan for the frequencies 3.4 GHz to 3.6 GHz.

iv) the new migration strategy to implement the band plan for the frequencies 3.4 GHz to 3.6 GHz.

ANDILE NGCABA
DIRECTOR-GENERAL
DEPARTMENT OF COMMUNICATIONS
Department of Communications

Project SABRE
(South African Band Re-planning Exercise)

Band plan for the frequencies
20 MHz to 3 GHz

Version 2.0
24 April 1997
1 Introduction

1.1 General

This document presents the band plan for the future use of the radio spectrum in South Africa between the frequencies 20 MHz and 3 GHz. The document has been produced by the Department of Communications (hereinafter referred to as the Department) in South Africa, with the assistance of Smith System Engineering and the CSIR, as part of Project SABRE (South African Band Re-planning Exercise).

1.2 Project SABRE

The need for Project SABRE emerged over a period of time, in response to factors such as the increased demand for radio spectrum and developments elsewhere in the world that could potentially benefit South Africa. The project was established by the former Department of Posts and Telecommunications in 1995 in order to re-plan the radio frequency spectrum between 20 MHz and 3 GHz. The project has been conducted by the Department, together with an international team of consultants, led by Smith System Engineering from the UK and including the CSIR in South Africa, the UK Radiocommunications Agency and the economic consultants NERA.

The principal aims of the project are as follows:

- to review the usage of the radio spectrum between the frequencies 20 MHz and 3 GHz;

- to produce a band plan for the future use of the spectrum, which is both agreed nationally in South Africa and consistent with international trends.
In order to achieve these aims, the project is divided into four phases:

- Phase 1 - "Current spectrum usage", has reviewed the current spectrum usage in South Africa.
- Phase 2 - "Requirements capture", has identified the requirements for the future use of the spectrum in South Africa.
- Phase 3 - "International trends", has examined relevant international trends, both in technology and services and in the usage of the spectrum in other countries.
- Phase 4 - "Band plan", has taken as input the results of the previous three phases, and has balanced these in order to produce the band plan which is presented in this document. The production of this final version follows the distribution of a draft version and the subsequent consultation process.

### 1.3 Methodology

The development of this future band plan has taken account of inputs from a wide variety of sources. In particular, the process has involved achieving an appropriate balance between the following three (sometimes contradictory) forces:

- the current usage of the radio spectrum in South Africa, and other related aspects of the current situation (any move from the current situation will inevitably create problems for those required to change);

- the future requirements and aspirations of spectrum users, industry and other interested parties in South Africa (it would be impossible for any future band plan to satisfy everyone's wishes);

- developments and trends elsewhere in the world (these are important in order to be able to source equipment economically and to be able to take advantage of emerging systems, technologies and services).

The capture of the current situation and future requirements has involved an extensive consultation and information gathering process conducted in South Africa. This has included the following activities:

- A series of interviews with major users of the radio spectrum, and manufacturers and suppliers of systems which utilise the spectrum. Over 50 interviews have taken place with representatives from, among others, the military, the police, the parastatals, local and regional authorities, other big radio users, telecommunications operators, broadcasters and signal
distributors, dealers and manufacturers of radio equipment, groups representing disadvantaged communities, and other representative groups such as SARL, LMRA, BEAPS, etc. Each interview took place in South Africa, with typical attendees including senior executives and personnel responsible for communications and spectrum management. The interviews took place in the period January to March 1996.

The distribution of a questionnaire to a larger set of stakeholders and other interested parties. The questionnaire was initially sent out in January 1996 to a list of around 200 organisations, the majority of which were big users of the radio spectrum. At the same time, advertisements were placed in the national press, the Government Gazette and trade publications inviting input from the general public. The questionnaire was sent out to respondents to these advertisements. The questionnaire was also distributed by the LMRA to its members, and a separate mailing was made to paging operators. In excess of 300 questionnaires were sent in total, and over 100 completed questionnaires were received by the Project SABRE team.

The Project SABRE team has also drawn on previous exercises which have invited input concerning the radio spectrum in South Africa. In particular, extensive use has been made of submissions to previous Department spectrum review exercises, in particular the review of the spectrum between 30 and 470 MHz in 1994, and the request in February 1995 for proposals for technologies to be implemented in the 440-470MHz band. Submissions in response to the recent telecommunications Green Paper have also been consulted, especially the answers to the questions regarding radio frequency spectrum management.

The above consultation and information gathering process formed the basis of Phases 1 and 2 of Project SABRE. Phase 3 of the project, which was performed in parallel with Phases 1 and 2, was aimed at ensuring that South Africa is able to make full use of emerging opportunities from elsewhere in the world, and that the band plan is as far as possible future-proof to anticipated advances internationally. This phase included a wide ranging information gathering process concerning international trends relating to technologies, services, growth rates, spectrum plans, spectrum pricing, neighbouring countries, etc. This included discussions with a range of organisations around the globe, including regulatory and standardisation bodies, major international manufacturers, and experienced industry analysts.

Following the completion of Phases 1 to 3, a draft version of the future band plan was produced. This draft was distributed to industry at a launch conference on 12 June 1996, at which time written comments on the draft band plan were requested. These comments were evaluated and formed an input into the production of the band plan (Government Gazette No. 17701, 27 December 1996). A revised version of this plan follows.
1.4 Importance of the exercise

Project SABRE has resulted in a frequency band plan which indicates how the radio spectrum between 20 MHz and 3 GHz is to be used in South Africa in the future. This radio spectrum is utilised by a wide range of systems and services, which are either already being used or will in future be used by almost every person in South Africa.

Many different types of systems and services utilise this section of the radio spectrum. The following is only a small selection of these:

- telephone services to rural areas and disadvantaged communities;
- television and radio broadcasts;
- mobile radio systems used by commercial organisations;
- emergency communications by the police, fire and ambulance services, etc;
- cellular, cordless telephones and pagers;
- satellites (for telecommunication and broadcasting);
- alarm systems, remote control devices, etc.

The radio spectrum is not currently being utilised as efficiently and effectively as it could be. This has a number of implications:

- there is congestion and interference in some frequency bands;
- opportunities for the introduction of new technologies and services are restricted;
- users are not able to obtain as many frequencies as they would like;
- there are costs to business in terms of operational efficiency and equipment costs.

The aim of Project SABRE has been to produce a frequency band plan for the future that will make effective use of the scarce resource that is the radio frequency spectrum. This has been done in a way that will benefit all South Africans and will aid the social and economic development of the country.

There are thus a wide range of benefits that should result from Project SABRE and the frequency band plan that is produced. The following are some examples:
- helping to enable the provision of telephone services to communities that do not at present have any telecommunications;

- making more efficient use of the spectrum so that more users are able to benefit from it;

- providing opportunities for the use of advanced broadcasting technologies which will enable higher quality and wider ranging broadcasts;

- improving the quality of service for existing users;

- helping to enable businesses to operate more effectively, and to generate additional revenue for the country.

### 1.5 Structure of this document

This document is divided into the following sections;

- Section 2 presents, in tabular format, the proposed future band plan for the use of the radio spectrum in South Africa between 20 MHz and 3 GHz.

- Section 3 provides supporting notes to explain and give more information about the future band plan.

- Section 4 presents the future band plan in diagrammatic form, in order to aid comprehension.

- Appendix A provides a list of abbreviations used in the document.

### 2 Future band plan

The following table presents the band plan for the future use of the radio spectrum in South Africa between 20 MHz and 3 GHz. The plan represents a target that the country should strive to achieve.

The table is divided into the following columns:

- Frequency Band. The range of frequencies associated with the main allocations (in MHz). The frequency indicated as the start of the band is the centre frequency of the first channel included within the band. The frequency used to denote the end of the band is not included in the band.
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Main Allocations. This column indicates the main services to which each band is to be allocated. The service types are as defined by the ITU, and the allocations are in most cases consistent with the ITU Radio Regulations for Region 1 (as modified as a result of the World Radio Conference WRC-95). The allocations are all primary unless otherwise indicated, with different services delimited by oblique strokes. The service that will have most widespread use in the future is generally listed first.

Sub-Allocations. This column gives details of any sub-allocations within a band, including proposed usage of the sub-band and range of frequencies in MHz. Where no sub-bands are indicated, the column may in some cases provide further details of the proposed usage of the band.

Notes and comments. The comments in the right hand column give further information concerning the band, in particular when changes to its usage are proposed. This may include details such as major utilisations, the nature of the usage, and implications for migration. Where additional explanation is required a reference is made to the supporting notes in section 3, which might, for example, explain the rationale behind the proposed changes or give an outline of the proposed migration strategy.

For some bands, the last column is divided into two, with the right-most column indicating significant geographic variations. Within certain bands different uses may be authorised based on geographical separation (coastal and inland, or urban and rural, for example). Such instances are noted in this manner.

The table and supporting notes make reference to a number of sources of information, including the following:

- The frequency allocation tables within the ITU Radio Regulations, as modified following WRC-95. Notes within these Radio Regulations are referred to by references of the form "RR S5.XYZ".

- The results of the ERC's Detailed Spectrum Investigation into the band 29.7 - 960 MHz (referred to as the "European DSD.

- ITU Recommendations (eg ITU-R F1098)

- CEPT Recommendations (eg T/R 13-01) and ERC Decisions.

Throughout the band plan and the supporting notes in section 3, reference is made to broad timescales for the realisation of objectives. These timescales are being addressed in more detail in separate migration planning documentation, but in this document the terms immediate short, short, medium and long term are broadly used to indicate the following:

- immediate short term: 1 - 2 years (ie before 1999);
- short term: 2 - 5 years (ie 1999 - 2002);
- medium term: 5 - 10 years (ie 2002 - 2006);
- long term: 10 - 15 years (ie beyond 2006).
<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Main Allocations</th>
<th>Sub-Allocations (MHz)</th>
<th>Notes and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.995 - 20.01</td>
<td>Standard Frequency and Time Signal</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>20.01 - 21</td>
<td>Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>21 - 21.45</td>
<td>Amateur / Amateur-Satellite</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>21.45 - 21.85</td>
<td>Broadcasting</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>21.85-21.924</td>
<td>Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>21.924 - 22</td>
<td>Aeronautical Mobile</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>22 - 22.855</td>
<td>Maritime Mobile</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>22.855 - 23.2</td>
<td>Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>23.2 - 23.35</td>
<td>Aeronautical Mobile / Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>23.35 - 24.89</td>
<td>Mobile/ Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>24.89 - 24.99</td>
<td>Amateur / Amateur-Satellite</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>24.99-25.01</td>
<td>Standard Frequency and Time Signal</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>25.01 - 25.07</td>
<td>Mobile / Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>25.07 - 25.21</td>
<td>Maritime Mobile</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>25.21 - 25.55</td>
<td>Mobile / Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>25.55 - 25.67</td>
<td>Radio Astronomy</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>25.67 - 26.1</td>
<td>Broadcasting</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>26.1 - 26.175</td>
<td>Maritime Mobile</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>26.175 - 27.5</td>
<td>Mobile / Fixed</td>
<td>Single Frequency Mobile</td>
<td>Includes existing assignments for low power paging in 26.175 - 27.75 MHz and CB radio in 27.185 - 27.275 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26.175 - 27.5</td>
<td>International ISM band (RR 65.150 refers)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ISM 26.857 - 27.283</td>
<td>See also Govt Gazette of 17 Nov 1995</td>
</tr>
<tr>
<td>27.5 - 28</td>
<td>Mobile / Fixed / Meteorological Aids</td>
<td></td>
<td>No change</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Main Allocations</th>
<th>Sub-Allocations (MHz)</th>
<th>Notes and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 - 29.7</td>
<td>Amateur / Amateur-Satellite</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>29.7 - 30.005</td>
<td>Mobile / Fixed</td>
<td>Single Frequency Mobile 29.7 - 29.99</td>
<td>29.7 - 30 MHz to be allocated to Amateur on secondary basis (see note 3.3.1)</td>
</tr>
<tr>
<td>30.006 - 30.01</td>
<td>Mobile / Fixed / Space Operation</td>
<td>Government 29.99 - 32</td>
<td></td>
</tr>
<tr>
<td>30.01 - 50</td>
<td>Mobile / Fixed</td>
<td>Single Frequency Mobile 32 - 32.325</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>Mobile 1 MTX</td>
<td>32.325 - 33.675</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>Mobile 2 MTX</td>
<td>34.175 - 35</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>Model Aircraft Control</td>
<td>35 - 35.25</td>
<td>Demonstration frequency at 34.7 MHz unchanged (paired with 41.15 MHz)</td>
</tr>
<tr>
<td></td>
<td>Single Frequency Mobile</td>
<td>35.25 - 35.5</td>
<td>New allocation for control of model aircraft (see note 3.3.2)</td>
</tr>
<tr>
<td></td>
<td>Mobile 3 BTX</td>
<td>35.5 - 36.825</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>Single Frequency Mobile</td>
<td>38.825 - 38.5</td>
<td>36.85 - 38.45 MHz currently assigned to Government Radio Astronomy at 38.45 MHz</td>
</tr>
<tr>
<td></td>
<td>Mobile 3 MTX</td>
<td>38.5 - 39.825</td>
<td>No change</td>
</tr>
</tbody>
</table>

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<tr>
<th>Frequency Band (MHz)</th>
<th>Main Allocations</th>
<th>Sub-Allocations (MHz)</th>
<th>Notes and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile / Fixed (continued)</td>
<td>Mobile 2 BTX 40.625 - 41.45</td>
<td></td>
<td>No change 34.175 - 35 MHz 40.675 - 40.685 MHz to be allocated to Amateur for propagation study (max ERP 10W) Current low power paging at 40.68 MHz to be migrated Wireless microphones in 40.65 - 40.7 MHz (Govt Gazette of 17 Nov 1995 refers) 40.66 - 40.7 MHz is international ISM band (RR 85.150 refers) Demonstration frequency at 41.15 MHz unchanged (paired with 34.7 MHz)</td>
</tr>
<tr>
<td></td>
<td>Mobile 1 BTX 41.65 - 43</td>
<td>No change</td>
<td>Paired with 32.325 - 33.675 MHz</td>
</tr>
<tr>
<td></td>
<td>Meteor Burst 45.3 - 46.9 and 47.5 - 49.1</td>
<td>New allocation for meteor burst communications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CTO Cordless Telephones BTX 46.61 - 46.97 MTX 48.67 - 49.97</td>
<td>7 frequency pairs assigned to CTO (see note 3.3.4)</td>
<td></td>
</tr>
<tr>
<td>50 - 54</td>
<td>Amateur</td>
<td></td>
<td>No change Wireless microphone and model control assignments in 53 - 54 MHz (Govt Gazette of 17 Nov 1896 refers) and low power paging in S3 025 - 53.225 MHz remain unchanged</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Main Allocations</th>
<th>Sub-Allocations (MHz)</th>
<th>Notes and comments</th>
</tr>
</thead>
</table>
| 54 - 66              | Mobile / Fixed   | **Single Frequency Mobile**  
54 - 54.325  
Mobile 1 BTX  
54.326 - 54.45  
**Demonstration frequency** at 54.35 MHz to be removed  
Government  
54.45 - 55.46  
**Model control still required** at 54.45 - 54.55 MHz  
Mobile 2 BTX  
55.45 - 56.85  
**Paired with** 58.5 - 59.9 MHz  
Single Frequency Mobile  
56.85 - 58.5  
Mobile 2 MTX  
58.5 - 59.9  
**Paired with** 65.45 - 65.85 MHz  
Mobile 1 MTX  
59.9 - 60.026  
**Paired with** 54.325 - 54.45 MHz  
**Demonstration frequency** at 59.825 MHz to be removed  
Government  
60.025 - 66  
Current assignments for model aircraft control in 60.1375 - 60.375 MHz to be phased out in medium term (see note 3.3.2)  
| 66 - 68             | Mobile / Fixed   | **National Emergency Alarm Radio (NEAR)**  
60.1375 - 60.375  
**Block allocation for NEAR** (see note 3.4.1)  
| 68 - 74.8           | Mobile / Fixed   | **Single Frequency Mobile**  
68 - 69.25  
Mobile 1 BTX  
69.25 - 70  
**Paired with** 76.175 - 76.925 MHz  
Mobile 2 BTX  
70 - 70.975  
**Allocation to Amateur is on a secondary basis** (see note 3.4.3)  
70 - 71.3  
**Current assignments to fire fighting**  
Single Frequency Mobile  
70.975 - 71.475  
Mobile 3 BTX  
71.475 - 72.525  
**Paired with** 76.925 - 77.975 MHz  
Single Frequency Mobile  
72.525 - 73.425  
Mobile 4 BTX  
73.425 - 74.8  
**Paired with** 78.625 - 80 MHz  

*Note* and comments:
- No change
- Paired with 59.9 - 60.025 MHz
- Demonstration frequency at 54.35 MHz to be removed
- Model control still required at 54.45 - 54.55 MHz
- Paired with 58.5 - 59.9 MHz
- Paired with 65.45 - 65.85 MHz
- Demonstration frequency at 59.825 MHz to be removed
- Current assignments for model aircraft control in 60.1375 - 60.375 MHz to be phased out in medium term (see note 3.3.2)
- Block allocation for NEAR (see note 3.4.1)
- Paired with 76.175 - 76.925 MHz
- Allocation to Amateur is on a secondary basis (see note 3.4.3)
- Current assignments to fire fighting
- Paired with 76.925 - 77.975 MHz
- Paired with 78.625 - 80 MHz

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<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Main Allocations</th>
<th>Sub-Allocations (MHz)</th>
<th>Notes and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>74.8 - 76.2</td>
<td>Aeronautical Radiodetection</td>
<td>Instrument Landing System markers</td>
<td>No change</td>
</tr>
<tr>
<td>75.2 - 87.5</td>
<td>Mobile / Fixed</td>
<td>Mobile 2 MTX: 75.2 - 76.175</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 1 MTX: 76.175 - 76.925</td>
<td>Paired with 69.25 - 70 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 3 MTX: 76.925 - 77.975</td>
<td>Paired with 71.475 - 72.525 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 4 MTX: 77.975 - 78.625</td>
<td>Paired with 82.975 - 83.625 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 5 MTX: 78.625 - 80</td>
<td>Paired with 73.425 - 74.8 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 6 MTX: 80 - 80.5</td>
<td>Paired with 87 - 87.5 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single Frequency Mobile: 80.5 - 81</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 7 MTX: 81 - 81.625</td>
<td>Paired with 86.375 - 87 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 8 MTX: 81.625 - 82.975 MHz</td>
<td>Paired with 85.025 - 86.375 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 5 MTX: 82.975 - 83.625</td>
<td>Paired with 77.975 - 78.625 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single Frequency Mobile: 83.625 - 85.025</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 8 MTX: 85.025 - 86.375</td>
<td>Paired with 81.625 - 82.975 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 7 MTX: 88.375 - 87</td>
<td>Paired with 81 - 81.625 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile 6 MTX: 87 - 87.5</td>
<td>Paired with 80 - 80.5 MHz</td>
</tr>
<tr>
<td>87.5 - 106</td>
<td>Broadcasting</td>
<td>FM Sound Broadcasting</td>
<td>No change</td>
</tr>
</tbody>
</table>

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---|---|---|---

117.975 - 137 | Aeronautical Mobile | | No change

137 - 138 | Mobile-Satellite / Meteorological-Satellite / Mobile / Space Operation / Space Research | M3S: 137 - 138, NOAA meteorological satellite: 137.5 - 137.62 | All except mobile are space-to-Earth MTX assignments at 137.775 - 138 MHz to be migrated

138 - 144 | Mobile / Fixed | Mobile 1 MTX: 138 - 140.6 | Paired with 141.5 - 144 MHz; New allocation includes current MTX assignments at 138 - 138.426 and 138.476 - 138.85 MHz (pairings to change); Current SF assignments at 138.975 - 140.5 MHz to be migrated or changed to DF

| Mobile 1 BTX | 141.5 - 144 | Paired with 138 - 140.5 MHz; New allocation includes current BTX assignments at 142.8 - 143.275 and 143.325 - 143.975 MHz (pairings to change); Current SF assignments at 141.5 - 142.775 MHz to be migrated or changed to DF; Demonstration frequency at 143.9 MHz to be removed

144 - 146 | Amateur / Amateur-Satellite | | No change

146 - 148 | Mobile / Fixed | Mobile 2 MTX: 146 - 148 | Paired with 153.06 - 155.05 MHz; New allocation includes existing MTX assignments at 146.05 - 148.9 MHz
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<td>148 - 149.9</td>
<td>Mobile-Satellite (E-to-s) / Mobile / Fixed</td>
<td>MSS 148 - 149.9, Mobile 2 MTX 148 - 148.95, Single Frequency Mobile 148.95 - 149.8</td>
<td>See note 3.6.3, Band allocated at WARC-92 to MSS (Little LEOs), Current MTX and SF assignments can remain in short-medium term</td>
</tr>
<tr>
<td>149.9 - 150.05</td>
<td>Radiolocation-Satellite / Land Mobile-Satellite (E-to-s)</td>
<td>MSS 149.9 - 150.05, Single Frequency Mobile 149.9 - 150.05</td>
<td>See note 3.6.3, Current SF assignments can remain in short-medium term</td>
</tr>
<tr>
<td>150.05 - 156.7625</td>
<td>Mobile / Fixed</td>
<td>Paging 150.05 - 151, Government 151 - 152.05, Alarms 152.05 - 152.55, Single Frequency Mobile 152.55 - 153.05</td>
<td>Block allocation (or paging see note 3.6.4), Current SF assignments at 150.05 - 150.5 MHz to be migrated, No change, See note 3.6.2, Current SF assignments to be migrated, Plan to migrate towards BTX leg of duplex pair with 141 - 141.5 MHz a use of SF reduces</td>
</tr>
<tr>
<td>156 - 156.375</td>
<td>Mobile 3 MTX 156 - 156.7625</td>
<td>International maritime MTX (ship station) at 156 - 156.375 MHz, Single frequency maritime at 156.375 - 156.7625 MHz, International distress (digital) at 156.525 MHz</td>
<td>156 - 156.375 MHz allocated to land mobile MTX in Inland area* (paired with 160.6 - 160.975 MHz), 156.375 - 156.7625 MHz allocated to SF mobile in inland areas</td>
</tr>
</tbody>
</table>

---

*Note and comment*

See note 3.6.3

Band allocated at WARC-92 to MSS (Little LEOs)

Current MTX and SF assignments can remain in short-medium term

See note 3.6.3

Current SF assignments can remain in short-medium term

Block allocation (or paging see note 3.6.4)

Current SF assignments at 150.05 - 150.5 MHz to be migrated

No change

See note 3.6.2

Current SF assignments to be migrated

Plan to migrate towards BTX leg of duplex pair with 141 - 141.5 MHz a use of SF reduces

International maritime MTX (ship station) at 156 - 156.375 MHz, Single frequency maritime at 156.375 - 156.7625 MHz

International distress (digital) at 156.525 MHz

International distress, safety and call frequency at 156.8 MHz unchanged

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<td>156.8375 - 174</td>
<td>Mobile / Fixed</td>
<td>Mobile 3 MTX</td>
<td>Single frequency maritime at 156.8375 - 156.875 MHz unchanged</td>
</tr>
<tr>
<td></td>
<td></td>
<td>156.8375 - 157.95</td>
<td>158.8375 - 156.875 MHz allocated to SF mobile in inland areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>International maritime MTX (ship station) at 156.875 - 157.95 MHz paired with 161.475 - 162.05 MHz unchanged</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Private maritime MTX at 157.45 - 157.95 MHz paired with 162.05 - 162.55 MHz unchanged</td>
</tr>
<tr>
<td></td>
<td>Mobile 4 BTX</td>
<td>Paired with 182.55 - 165.2 MHz</td>
<td></td>
</tr>
<tr>
<td>157.95 - 160.6</td>
<td></td>
<td>Tx/Rx separation to be altered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mobile 3 BTX</td>
<td>International maritime BTX (coast station) at 160.6 - 160.975 MHz paired with 156 - 156.375 MHz unchanged</td>
<td></td>
</tr>
<tr>
<td>160.6 - 162.55</td>
<td></td>
<td></td>
<td>Single frequency mobile at 160.975 - 161.475 MHz unchanged</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>International maritime BTX (coast station) at 161.475 - 162.05 MHz paired with 156.875 - 157.45 MHz unchanged</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Private maritime BTX at 162.06 - 162.55 MHz paired with 157.45 - 157.96 MHz unchanged</td>
</tr>
</tbody>
</table>

*Note:* Each frequency allocation is specific to the type of service and the region, ensuring efficient and effective communication.
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<th>Notes and comments</th>
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<td>Mobile / Fixed (continued)</td>
<td>Mobile 4 MTX 162.55 - 165.2</td>
<td>Paired with 157.95 - 160.6 MHz</td>
<td>Restrictions on civilian use of 161.875 - 173.875 MHz (Sonobuoy frequencies) in coastal areas to be relaxed (see note 3.6.5)</td>
</tr>
<tr>
<td>Mobile / Fixed (continued)</td>
<td>Mobile 5 MTX 165.2 - 169.4</td>
<td>Paired with 169.8 - 174 MHz</td>
<td></td>
</tr>
<tr>
<td>Paging</td>
<td>169.4 - 169.8</td>
<td>New allocation of national paging band for ERMES (see note 3.6.6)</td>
<td></td>
</tr>
<tr>
<td>Mobile / Fixed</td>
<td>Mobile 5 BTX 169.8 - 174</td>
<td>Paired with 165.2 - 169.4 MHz</td>
<td></td>
</tr>
<tr>
<td>174-238</td>
<td>Broadcasting</td>
<td>Band III TV Broadcast Channels 4 to 11</td>
<td>No change</td>
</tr>
<tr>
<td>238 - 246</td>
<td>Mobile / Fixed</td>
<td>International Distress Frequency 242.95 - 243.05</td>
<td>This band is currently kept clear for the International Distress frequency</td>
</tr>
<tr>
<td></td>
<td>International Distress Frequency</td>
<td>242.95 - 243.05</td>
<td>Spillover from NICAM transmissions on Channel 11 affects low end of this band</td>
</tr>
<tr>
<td></td>
<td>Digital Audio Broadcasting (T-DAB)</td>
<td>238.4 - 239.9</td>
<td>Current wireless microphone and other low power device assignments unchanged</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Allocation of Initial T-DAB channel at 236.432 - 239.968 MHz. Possibility of further T-DAB channels either above or below this</td>
</tr>
<tr>
<td>246 - 254</td>
<td>Broadcasting</td>
<td>Band III TV Broadcast Channel 13</td>
<td>Problems with use of NICAM on Channel 13 (see note 3.7.2)</td>
</tr>
<tr>
<td>254 - 272</td>
<td>Mobile / Fixed</td>
<td>Public Trunking (MPT 1327) BTX 254 - 258.4</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government 259.4 - 262</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Trunking (MPT 1327) MTX 262 - 267.4</td>
<td>See note 3.7.3</td>
</tr>
</tbody>
</table>

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### Frequency Band (MHz) | Main Allocations | Sub-Allocations (MHz) | Notes and comments
--- | --- | --- | ---
272 - 273 | Mobile / Fixed (continued) | Government 257.45 - 400

#### 273 - 328.6
| Mobile / Fixed / Space Operation | Paging 700 kHz from 278 - 286 | Proposed new band for 2-way paging (700 kHz from within 278 - 286 MHz, paired with 325 - 925 MHz). See note 3.7.4

#### 328.6 - 335.4
| Aeronautical Radiolocation | ILS Glide Path 328.6 - 335.4 | See note 3.7.5

#### 335.4 - 399.9
| Mobile / Fixed | WLL 335.4 - 336.346 Trunked Mobile MTX 380 - 390 BTX 390 - 400 | To be used for digital trunking in the long term (see note 3.7.6)

#### 399.9 - 400.05
| Radiolocation - Satellite / Land Mobile-Satellite | No change

#### 400.05 - 400.15
| Standard Frequency and Time Signal | No change

#### 400.15 - 401
| Mobile-Satellite / Meteorological-Satellite / Meteorological Aids / Space Research | No change

#### 401 - 402
| Meteorological Aids / Space Operation (E-to-E) | No change

#### 402 - 406
| Meteorological Aids Low Power Devices 402-406 | No change

#### 406 - 406.1
| Mobile-Satellite (E-to-E) Emergency Position Indicating Radio Beacon (EPIRB) | No change

---

**Notes:**
- Proposed new band for 2-way paging (700 kHz from within 278 - 286 MHz, paired with 325 - 925 MHz).
- To be used for digital trunking in the long term (see note 3.7.6).
- No change.
- All except Meteorological Aids are space-to-Earth.
- Govt Gazette of 17 Nov 1995 refers.
<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Main Allocations</th>
<th>Sub-Allocations (MHz)</th>
<th>Notes and comments</th>
</tr>
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<tbody>
<tr>
<td>406.1 - 420</td>
<td>Mobile / Fixed</td>
<td>Single Frequency Mobile 406.1 - 407.625</td>
<td>See note 3.8.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile MTX 407.626 - 413</td>
<td>Migration of fixed links to higher frequencies as far as possible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile Data MTX 413 - 413.7625</td>
<td>See note 3.8.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Trunking MTX 413.7625 - 417.25</td>
<td>Allocation for Government / public safety usage (mainly trunked)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migration of fixed links to higher frequencies as far as possible</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Paired with 417.625 - 423 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile BTX 417.625 - 420</td>
<td>See notes 3.8.3 &amp; 3.8.5</td>
</tr>
<tr>
<td></td>
<td>Trunked Mobile MTX (Urban) 417.625 - 420</td>
<td></td>
<td>Paired with 407.625 - 410 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Trunked Mobile MTX paired with 427.625 - 430 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Allocation for Government / public safety usage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Possibility to Introduce other trunked mobile radio in urban areas in medium term</td>
</tr>
</tbody>
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<tr>
<td>420 - 430</td>
<td>Mobile / Fixed</td>
<td>Trunked Mobile BTX</td>
<td>Trunked mobile radio for Government / public safety, <strong>paired with</strong> 410 - 413 MHz (see note 3.8.3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>420 - 423</td>
<td>Current single frequency links to be <strong>migrated</strong></td>
</tr>
<tr>
<td></td>
<td>Mobile Data BTX</td>
<td>423 - 423.7625</td>
<td>New band for public mobile data, paired with 413 - 413.7626 MHz (see note 3.8.4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Trunked Mobile BTX</strong></td>
<td>Current single frequency links to be <strong>migrated</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Urban) 427.625 - 430</td>
<td><strong>New band for public trunking using digital mobile radio</strong> (see note 3.8.4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single Frequency Fixed</td>
<td>Paired with 413.7626 - 417.625 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Rural) 427.625 - 430</td>
<td>Current single frequency links to be <strong>migrated</strong> (see note 3.8.1)</td>
</tr>
<tr>
<td></td>
<td>Amateur / Radiolocation</td>
<td>Amateur 430 - 440</td>
<td>See note 3.8.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ISM / Low Power Devices</td>
<td>Use for <strong>trunked</strong> mobile radio in urban areas in medium term (paired with 417.625 - 420 MHz)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>433.05 - 434.79</td>
<td>Frequencies will only be assigned for SF links where migration above 1 GHz would be impractical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amateur-Satellite</td>
<td><strong>See note 3.8.6</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>435 - 438</td>
<td>Used for low power <strong>applications</strong> such as remote control. Centre frequency 433.92 MHz. <strong>Govt Gazette of 17 Nov 1995 refers</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Subject to conditions in RR S5.282</td>
</tr>
</tbody>
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<tr>
<td>440 - 450</td>
<td>Mobile / Fixed</td>
<td>Telemetry / Data BTX</td>
<td>Scanning telemetry, dual frequency alarms, and other fixed point-to-multipoint data services that require to use mobile technology (see note 3.8.7) Paired with 445 - 446 MHz Existing links to be migrated</td>
</tr>
<tr>
<td></td>
<td>Mobile / Fixed</td>
<td>440 - 441</td>
<td>Paired with 446 - 450 MHz (see note 3.8.7) Existing links to be migrated</td>
</tr>
<tr>
<td></td>
<td>Mobile / Fixed</td>
<td>441 - 445</td>
<td>Paired with 446 - 450 MHz (see note 3.8.7) Existing links to be migrated</td>
</tr>
<tr>
<td></td>
<td>Telemetry / Data MTX</td>
<td>445 - 446</td>
<td>Paired with 440 - 441 MHz Existing links to be migrated</td>
</tr>
<tr>
<td></td>
<td>Mobile MTX</td>
<td>446 - 450</td>
<td>Paired with 441 - 441 MHz (see note 3.8.7) Existing links to be migrated</td>
</tr>
<tr>
<td>450 - 470</td>
<td>Mobile / Fixed</td>
<td>Fixed Links</td>
<td>Paired with 460 - 483 MHz (see note 3.8.8) Existing links will be migrated in accordance with fixed link strategy (see notes 3.2.1 &amp; 3.8.1). Dual frequency link that have to remain in UHF will be migrated to this band Assignments to data in 451.5 - 452.675 MHz will migrate to 440 - 441 MHz</td>
</tr>
<tr>
<td></td>
<td>Single Frequency Mobile</td>
<td>453.025 - 453.975</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td>Paging</td>
<td>453.975 - 454.425</td>
<td>New regional paging band, including 4 channels for on-site paging (see note 3.8.8) Current MTX assignments at 454.025 - 454.125 MHz and SF assignments at 454.275 - 454.725 MHz to be migrated</td>
</tr>
<tr>
<td></td>
<td>Trunked Mobile MTX</td>
<td>454.425 - 460</td>
<td>Paired with 464.425 - 470 MHz (see note 3.8.8) Current BTX assignments at 454.875 - 454.975 and 459 - 459.975 MHz will be affected C450 license (BTX at 455.5 MHz) expires in 1999</td>
</tr>
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<td>Mobile / Fixed (continued)</td>
<td><strong>Fixed Links</strong> 460 - 463</td>
<td><strong>Sub-Allocation</strong></td>
<td>Paired with 450 - 453 MHz (see note 3.8.8)</td>
</tr>
<tr>
<td><strong>Single Frequency Mobile</strong> 463.025 - 463.975</td>
<td></td>
<td></td>
<td>Existing links will be migrated in accordance with fixed link strategy (see notes 3.2.1 &amp; 3.8.1). Dual frequency links that have to remain in UHF will be migrated to this band.</td>
</tr>
<tr>
<td><strong>Low Power Mobile Radio</strong> 463.975 - 464.425</td>
<td></td>
<td><strong>Includes short range business radios</strong></td>
<td>Assignments to data in 461.5 - 462.675 MHz will migrate to 445 - 446 MHz</td>
</tr>
<tr>
<td><strong>Trunked Mobile</strong> 464.425 - 470</td>
<td></td>
<td><strong>Paired with 454.425 - 460 MHz (see note 3.8.8)</strong></td>
<td>465 - 470 MHz (paired with 455 - 460) allocated to WLL in rural areas (see note 3.8.2)</td>
</tr>
<tr>
<td>TV Broadcasting Channels 21 - 68</td>
<td><strong>No change</strong></td>
<td><strong>Current single frequency assignments at 464.525 - 464.975 MHz will be affected</strong></td>
<td>Sharing of broadcasting spectrum with WLL and links in 700 - 854 MHz (see note 3.9.2)</td>
</tr>
<tr>
<td><strong>Fixed</strong></td>
<td><strong>Current links in this band can remain unchanged in the short term (see note 3.9.3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CT2 Cordless Telephones</strong> 864.1 - 868.1</td>
<td></td>
<td><strong>Limited frequencies will be assigned or retained in this band only where migration would be impractical</strong> (see note 3.9.3)</td>
<td>Part of 869 - 894 MHz (paired with 824 - 849 MHz) to be allocated to WLL in rural areas (see note 3.92)</td>
</tr>
</tbody>
</table>

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<th>Sub-Allocations (MHz)</th>
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<tr>
<td></td>
<td><strong>Trunked Mobile MTX</strong></td>
<td>876 - 880</td>
<td>Reserved for digital trunked mobile radio services, eg using GSM-R or TETRA (see note 3.9.6) Paired with 921 - 925 MHz Links in this band to be migrated In accordance with fixed link strategy (see note 3.2.3)</td>
</tr>
<tr>
<td></td>
<td><strong>E-GSM Cellular MTX</strong></td>
<td>880.4 - 890</td>
<td>Reserved for Extended GSM (see note 3.9.7) Paired with 925.4 - 935 MHz Links in this band to be migrated in accordance with fixed link strategy (see note 3.2.3) Lower 400 kHz unavailable due to paging at 925 - 925.4 MHz</td>
</tr>
</tbody>
</table>

872-905 MHz (paired with 917-950 MHz) to be allocated to WLL in rural areas (see note 3.9.5)
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<tr>
<td>890 - 960</td>
<td>Mobile/Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>GSM Cellular MTX</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>890 - 914</td>
<td>Paired with 935 - 959 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CT1 Cordless Telephones 914-915</td>
<td>No change (see note 3.9.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Paired with 959 - 960 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reserved</td>
<td>Part of Region 2 ISM band at 892-928 MHz (see note 3.9.9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>915.4 - 921 Low Power Devices</td>
<td>Govt Gazette of 17 Nov 1995 refers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>915 MHz ± 0.0015%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vehicle location systems 915.025 - 915.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Radio tagging systems 915.2 - 915.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trunked Mobile BTX</td>
<td>Reserved for use for digital trunked mobile radio services, eg using GSM-R or TETRA (see note 3.9.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>921 - 925</td>
<td>Paired with 876 - 880 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paging</td>
<td>See note 3.9.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>825 - 825.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-GSM Cellular BTX</td>
<td>Reserved for Extended GSM (see note 3.9.7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>925.4 - 935</td>
<td>Paired with 880.4 - 890 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GSM Cellular BTX</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>935 - 959</td>
<td>Paired with 890 - 914 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CT1</td>
<td>No change (see note 3.9.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>959 - 960</td>
<td>Paired with 914 - 915 MHz</td>
</tr>
<tr>
<td>960 - 1215</td>
<td>Aeronautical Radionavigation</td>
<td>Distance Measuring Equipment / Secondary Surveillance / Radar</td>
<td>No change</td>
</tr>
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<td>1215 - 1240</td>
<td>Radiolocation / Radiocommunication Satellite (s-to-E)</td>
<td>Low Power Devices 1215 - 1225, GPS L2 1215 - 1260</td>
<td>Govt Gazette of 17 Nov 1995 refers</td>
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<tr>
<td>1240 - 1260</td>
<td>Radiolocation / Radiocommunication Satellite (s-to-E) / Amateur</td>
<td>Amateur 1240 - 1300</td>
<td>Amateur at 1240 - 1300 MHz on secondary basis</td>
</tr>
<tr>
<td>1260 - 1300</td>
<td>Radiolocation / Amateur</td>
<td>Air Traffic Control Radar 1240 - 1350</td>
<td></td>
</tr>
<tr>
<td>1300 - 1350</td>
<td>Aeronautical Radiocommunication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1350 - 1400</td>
<td>Fixed / Mobile / Radiolocation</td>
<td>Fixed links (Go) 1350 - 1375, Fixed links (Return) 1375 - 1400</td>
<td>Allocation for dual frequency links migrated from other bands. Paired with 1492 - 1517 MHz. CEPT T/R 13-01 refers. (see note 3.10.1)</td>
</tr>
<tr>
<td>1400 - 1427</td>
<td>Earth Exploration Satellite / Radio Astronomy / Space Research</td>
<td></td>
<td>No change Earth Exploration-Satellite and Space Research are passive</td>
</tr>
<tr>
<td>1427 - 1429</td>
<td>Fixed / Mobile / Space Operation (E-to-s)</td>
<td>Fixed links (Go) 1427 - 1452 MHz</td>
<td>Allocation for dual frequency links migrated from other bands. Paired with 1375 - 1400 MHz. CEPT T/R 13-01 refers. (see also notes 3.10.1 and 3.10.3)</td>
</tr>
<tr>
<td>1429 - 1452</td>
<td>Fixed / Mobile</td>
<td></td>
<td>1429 - 1465 MHz paired with 1477 - 1513 MHz to be allocated to WLL on shared basis (see note 3.10.2)</td>
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<tr>
<td>1452 - 1492</td>
<td>Broadcasting</td>
<td>Terrestrial Digital Audio Broadcasting (T-DAB) 1462 - 1467</td>
<td>See note 3.10.4</td>
</tr>
<tr>
<td></td>
<td>Broadcasting-Satellite</td>
<td>Satellite Digital Audio Broadcasting (S-DAB) 1487 - 1482</td>
<td>1477 - 1513 MHz paired with 1429 - 1465 MHz (excl. 1447 - 1452 MHz) to be allocated to WLL on shared basis (see note 3.10.2)</td>
</tr>
<tr>
<td></td>
<td>Fixed / Mobile</td>
<td>Fixed Links (Return) 1492 - 1517</td>
<td>No fixed links to be migrated</td>
</tr>
<tr>
<td>1525 - 1535</td>
<td>Maritime Mobile-Satellite (s-to-E)</td>
<td>Inmarsat</td>
<td>No change</td>
</tr>
<tr>
<td>1535 - 1544</td>
<td>Maritime Mobile-Satellite (s-to-E)</td>
<td>No change</td>
<td></td>
</tr>
<tr>
<td>1544 - 1545</td>
<td>Mobile-Satellite (s-to-E)</td>
<td>No change</td>
<td></td>
</tr>
<tr>
<td>1545 - 1555</td>
<td>Aeronautical Mobile-Satellite (s-to-E)</td>
<td>No change. Paired with 1646.5 - 1658.5 MHz</td>
<td></td>
</tr>
<tr>
<td>1555 - 1559</td>
<td>Land Mobile-Satellite (s-to-E)</td>
<td>No change</td>
<td></td>
</tr>
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<tr>
<td>1559 - 1610</td>
<td>Aeronautical Radionavigation / Radionavigation-Satellite (E-to-E)</td>
<td>GPS L1</td>
<td>No change for GPS in 1559 - 1610 MHz. ARC (Aeronautical Public Correspondence) BTX in 1593 - 1594 MHz, paired with MTX in 1625.5 - 1628.5 MHz. Situation may need reviewing in long term.</td>
</tr>
<tr>
<td>1610 - 1626.5</td>
<td>Mobile-Satellite (E-to-s)</td>
<td></td>
<td>1610 - 1626.5 MHz designated worldwide for emerging MSS systems. Paired with 2483.5 - 2500 MHz for some systems. (see note 3.10.5)</td>
</tr>
<tr>
<td>1626.5 - 1645.5</td>
<td>Maritime Mobile-Satellite (E-to-s)</td>
<td>Inmarsat</td>
<td>No change</td>
</tr>
<tr>
<td>1645.5 - 1640.5</td>
<td>Mobile-Satellite (E-to-s)</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>1640.5 - 1655.5</td>
<td>Aeronautical Mobile-Satellite (E-to-s)</td>
<td></td>
<td>No change. Paired with 1545 - 1555 MHz</td>
</tr>
<tr>
<td>1655.5 - 1660.5</td>
<td>Land Mobile-Satellite (E-tM)</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>1660.5 - 1668.4</td>
<td>Radio Astronomy / Space Research</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>1668.4 - 1670</td>
<td>Meteorological Aids / Radio Astronomy / Mobile/ Fixed</td>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>1670 - 1700</td>
<td>Meteorological Aids / Meteorological-Satellite (E-to-E) / Mobile / Fixed</td>
<td>Terrestrial Flight Telephone System (TFTS) 1870 - 1675</td>
<td>Possible allocation for TFTS ground stations (paired with 1800 - 1805 MHz) (see note 3.10.6)</td>
</tr>
<tr>
<td>1700 - 1710</td>
<td>Fixed / Mobile / Meteorological-Satellite (E-to-E)</td>
<td>Fixed Links</td>
<td>Current fixed links to be migrated in long term according to fixed links strategy (see note 3.2.3)</td>
</tr>
<tr>
<td>Frequency Band (MHz)</td>
<td>Main Allocations</td>
<td>Sub-Allocations (MHz)</td>
<td>Notes and comments</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------</td>
<td>----------------------</td>
<td>-------------------</td>
</tr>
</tbody>
</table>
| 1/10 - 1980         | Mobile / Fixed   | Personal Communication Networks (PCN) MTX 1710 - 1785 | See note 3.10.7  
Paired with 1805 - 1880 MHz. CEPT TR22-07 refers  
Current fixed link assignments to be migrated according to fixed link strategy (see note 3.2.3)  
PCN band also to be used for WLL (see note 3.10.2) |
| Reserved 1785 - 1800 | Migration of fixed links out of this band in long term |
| Terrestrial Flight Telephone System (TFTS) 1800 - 1805 | Possible allocation for TFTS aircraft stations (paired with 1670 - 1675 MHz) (see note 3.10.6)  
No immediate plans to migrate fixed links out of this band |
| Personal Communication Networks (PCN) BTX 1805 - 1880 | See note 3.10.7  
Paired with 1710 - 1785 MHz. CEPT TR22-07 refers  
Current fixed link assignments in this band to be migrated according to fixed link strategy  
PCN band to be used also for WLL (see note 3.10.2)  
1850 - 1900 MHz (paired with 1930 - 1980 MHz) to be used for WLL on shared basis (see note 3.10.2) |
| DECT 1880 - 1900    | DECT band to be used for short range cordless telephones, wireless PABX, local loop provision, radio LANs, etc  
Migration of fixed links out of this band an immediate requirement (see note 3.10.8)  
DECT band to be used also for WLL (see note 3.10.2) |
| WLL 1900 - 1920     | See note 3.10.10 |
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<td>Mobile-Satellite (E-to-E) / Fixed / Mobile</td>
<td>Satellite component of FPLMTS/UMTS</td>
<td>See note 3.10.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Terrestrial component of FPLMTS to be introduced from the top of this band (i.e. just below 1980 and 2170 MHz)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migration of fixed links out of this band in long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terrestrial component of FPLMTS/UMTS</td>
<td>1930 - 1980 MHz (paired with 1850 - 1900 MHz) to be used for WLL on shared basis (see note 3.10.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1920-2300 MHz to be used for WLL on a shared basis (see note 3.10.2)</td>
</tr>
<tr>
<td><strong>2010 - 2025</strong></td>
<td>Mobile / Fixed</td>
<td>Terrestrial component of FPLMTS/UMTS</td>
<td>See note 3.10.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1920-2300 MHz to be used for WLL on a shared basis (see note 3.10.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Band also to be used for MSS system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fixed Links 2025 - 2075</td>
<td>See note 3.10.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fixed Services pertaining to the provision of WLL 2075 - 2110</td>
<td>Paired with 2200 - 2285 MHz ITU-R F.1088 and CEPT 13-01 refer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A H except Fixed and Mobile are Earth-to-space and space-to-space</td>
</tr>
<tr>
<td><strong>2110 - 2170</strong></td>
<td>Mobile / Fixed</td>
<td>Terrestrial component of FPLMTS / UMTS</td>
<td>See note 3.10.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Terrestrial component of FPLMTS to be introduced from top of band (i.e. just below 1980 and 2170 MHz)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migration of fixed links out of this band in long term</td>
</tr>
<tr>
<td><strong>2170 - 2200</strong></td>
<td>Mobile-Satellite (E-to-E) / Fixed / Mobile</td>
<td>Satellite component of FPLMTS/UMTS</td>
<td>See note 3.10.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Paired with 1900 - 2010 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Satellite component of FPLMTS/UMTS expected to be introduced from top of band</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Band also to be used for MSS system</td>
</tr>
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<td>2200 - 2290</td>
<td>Fixed / Mobile / Space Operation / Earth-Exploration-Satellite / Space Research</td>
<td>Fixed Links 2200 - 2250 Fixed Services pertaining to the provision of WLL 2250 - 2285 WLL 2285 - 2290</td>
<td>See note 3.10.11 Paired with 2025 - 2110. ITU-R, 1098 and CEPT T/R 13-01 refer All except Fixed and Mobile are space-to-Earth and space-to-space</td>
</tr>
<tr>
<td>2290 - 2483.5</td>
<td>Fixed / Mobile</td>
<td>Fixed links Fixed Services pertaining to the provision of WLL 2300 - 2360 ISM 2400 - 2500</td>
<td>Some migration of fixed links will be required (see note 3.10.12) Existing frequencies for 28 MHz OB links to remain (ie 2377 and 2471 MHz on primary basis plus 4 others on secondary basis) International ISM band, including for spread spectrum links. RR 86.150 and Govt Gazette of 17 Nov 1995 refer</td>
</tr>
<tr>
<td>2483.5 - 2500</td>
<td>Mobile-Satellite (s-to-E) / Fixed / Mobile</td>
<td>MSS 2483.5 - 2500</td>
<td>MSS allocation for emerging systems (paired with 1610 - 1626.5 MHz). (see also note 3.10.5)</td>
</tr>
<tr>
<td>2500 - 2520</td>
<td>Fixed / Mobile / Mobile-Satellite (s-to-E)</td>
<td>MMDS band 2500 - 2590</td>
<td>Need for re-planning of MMDS band to use more effectively (see note 3.10.13)</td>
</tr>
<tr>
<td>2520 - 2670</td>
<td>Fixed / Mobile / Broadcasting-Satellite</td>
<td>Fixed links</td>
<td>CEPT 13-01 refers to use of 2520 - 2593 / 2597 - 2670 MHz for fixed links</td>
</tr>
<tr>
<td>2670 - 2690</td>
<td>Fixed / Mobile / Mobile-Satellite (E-to-s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2690-2700</td>
<td>Earth Exploration-Satellite / Radio Astronomy / Space Research</td>
<td></td>
<td>Earth Exploration-Satellite and Space Research are passive</td>
</tr>
<tr>
<td>2700 - 3000</td>
<td>Aeronautical Radionavigation</td>
<td></td>
<td>No change</td>
</tr>
</tbody>
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3 Supporting notes

3.1 General

This section provides notes to support and explain the future band plan presented in section 2 of this document. The notes relate in particular to those frequency bands where changes in the usage are proposed. In most cases the notes are concerned with the rationale behind the proposed changes, or the strategy for migrating from the current to the proposed future position.

For convenience the notes are divided according to frequency bands as follows. This is the same division as has been used in previous phases of Project SABRE:

- 20 - 50 MHz;
- 50 - 87.5 MHz;
- 87.5 - 137 MHz;
- 137 - 174 MHz;
- 174 - 400 MHz;
- 400 - 470 MHz;
- 470 - 960 MHz;
- 960 - 3000 MHz.

The notes relating to these bands are presented in sections 3.3 to 3.10 respectively. In addition, section 3.2 describes fundamental principles that have been used in the construction of the band plan, and which relate to the band plan as a whole rather than to particular bands of spectrum within it.

3.2 Fundamental principles

3.2.1 General

This section describes some of the most important principles that have driven the development of the future band plan presented in this document.

The following are fundamental long term aims that are encompassed within the future band plan:

- Migrating of fixed links to higher frequencies, in particular from bands below 1 GHz, and to frequencies above 3 GHz where possible.

- More efficient use of military spectrum, and hence release or sharing of spectrum for non-military applications.
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- Making spectrum available for new technologies and services, such as wireless local loop, digital truncked radio, mobile satellite systems, etc.

- Increasing the amount of spectrum available for land mobile radio.

These objectives reflect international trends in spectrum management.

3.2.2 Alignment with ITU Region 1

South Africa is part of ITU Region 1 (as is Europe), and thus the country has an obligation to base its frequency allocations on those specified for Region 1 in the ITU Radio Regulations. Further, the future band plan presented in this document has in many areas been based around band plans adopted by European countries, in order to make it easier to introduce new technologies and source equipment from Europe.

However, South Africa is different from Europe in many ways, and any decisions to follow Europe have not been taken without careful consideration. Where there may be benefits to South Africa in the use of technologies and equipment from outside Region 1, efforts have been taken to try to incorporate these within the band plan, or at least to avoid taking decisions that would prevent their use in the future.

3.2.3 Strategy for migration of fixed links

The overall strategy for migrating fixed link frequencies to higher in the spectrum has a number of strands:

- UHF (400 - 470 MHz) links should be moved above 3 GHz where possible. However, spectrum will be allocated in the UHF band for cases where a sound case can be made why a link should remain at UHF.

- Links in the 800 MHz band (854 - 900 MHz) should in general also be moved above 3 GHz where possible, although in some cases it may be possible for these to remain where this can be justified.

- Links in the range 1.3 - 2.7 GHz should be moved above 3 GHz where possible. However, in some cases the links can remain unchanged, or be moved to new spectrum in 1.3 - 2.7 GHz, if a case can be made why they should not move to higher frequencies.

- New allocations for fixed links will be made in the bands 1350 - 1525 MHz and 2025 - 2290 MHz in accordance with the plans agreed in CEPT Issue No. 12 (2002)
Recommendation T/R13-01. These frequencies will be used in cases where a user is migrating links from the UHF band, or from other frequencies around 1.5 GHz, but for some well-justified reasons it is unreasonable to insist that the links are moved above 3 GHz.

The decision as to whether a particular link may remain below 3 GHz will be judged on a case-by-case basis, and will depend upon a sound justification being made as to why the link cannot be moved higher. The decision will be based upon a number of parameters, including the capacity required, distance to be covered, geographical location, and the cost of alternative means of providing the link. As a general rule, for example, the Department will discourage the use of radio for low capacity links over short distances.

3.2.4 Wireless Local Loop

An important aim in the band re-planning exercise has been to make spectrum available for a variety of different wireless local loop technologies in different areas of the spectrum (eg for the Telkom Million Line Project). Spectrum has been made available in a number of different bands, in some cases on an exclusive basis but in many cases on a shared basis, and between them it is believed that the allocations should provide the possibility for a wide variety of WLL systems to be used which are available from a range of suppliers and are suitable for use in the range of scenarios required for South Africa.

The basis for sharing between WLL and other services will depend upon the case in question. Factors will include the locations where the other services (and the WLL) are required to be used, and technical characteristics of the systems. For example, where the split is between ‘urban’ and ‘rural’ and the other service is already used in ‘urban’ areas (eg for cellular), then the ‘rural’ areas where WLL can be used will generally be those where it can be used without interfering with the other service (eg a suitable distance away from major population centres and major roads). The precise details of the sharing criteria will need to be established on a case-by-case basis.

3.2.5 Single frequency assignments

Spectrum can often be used more efficiently if assigned in frequency pairs, especially where the frequencies are used at high sites. This has been one of the major reasons for the move in the future band plan towards more dual frequency and less single frequency spectrum for mobile radio (in particular in VHF High band). In certain cases, single frequency assignments may be allowed for non high site use within dual frequency bands.
3.3 20 - 50 MHz

3.3.1 29.7 - 30 MHz (extension of amateur band)

It is proposed that this segment of spectrum should be allocated to the amateur service on a secondary basis for use during disaster exercises and emergency situations. This is in addition to the existing exclusive amateur band 28 - 29.7 MHz, which is to retain its primary status. The additional spectrum is currently used for single frequency mobile applications.

3.3.2 35 - 35.25 MHz (model aircraft control)

South Africa currently uses the frequency band 60.1375 - 60.375 MHz for the control of model aircraft, which differs from bands used elsewhere in the world. In order to allow the model aircraft community to benefit from international economies of scale, to facilitate international competitions, etc, it is proposed that the model aircraft control band will be moved to be in line with the European band at 35 - 35.25 MHz. The existing model aircraft control band could be released in the medium term. It should be noted that the new band will not be available immediately for use for model aircraft control, as existing users will need to be migrated out.

3.3.3 41 - 44 MHz (removal of ITU footnote regarding aeronautical use)

A footnote in the ITU tables (RR S5.160) provides for the additional allocation in Southern Africa of the band 41 - 44 MHz to the aeronautical radionavigation service on a primary basis. These frequencies are not currently used for this purpose in South Africa, and it is recommended that South Africa should be removed from this footnote.

3.3.4 46.61 - 46.97 / 49.67 - 49.97 MHz (CTO cordless telephones)

CTO cordless telephones are widely used in South Africa, and their use on the nominated frequencies within these ranges (as specified in the Government Gazette dated 17 November 1995) should continue.

3.4 50 - 87.5 MHz
3.4.1 66 - 68 MHz (block allocation for NEAR)

The band 66 - 68 MHz currently contains several sub-allocations, eg for the MARNET system. It is proposed that the band should be treated as a single block allocation, to be known as National Emergency Alarm Radio (NEAR). It is also proposed that the channel spacing should be reduced from 25 kHz to 12.5 kHz, in order to address the congestion problems that have been reported.

3.4.2 68 - 87.5 MHz (VHF Mid band)

It was proposed in the draft band plan that the land mobile sub-bands of the VHF Mid band should be re-organised, with the new plan for this part of the spectrum to be based on the European DSI. Following inputs in response to the draft band plan and further consideration of the associated migration process, which would inevitably be long, complex and costly, it has been concluded that the long term benefits that such a re-farming exercise would bring cannot currently be justified.

Hence it is now proposed that this part of the spectrum should, at least in the short term, remain largely unchanged. This does not rule out the possibility of smaller scale changes to particular sub-bands in order to address specific local problems (eg interference from broadcasting). The overall situation will also be periodically reviewed, since it is likely that at some time in the future a major re-planning may be more appropriate than at present, for example due to changing patterns of usage in the band or developments elsewhere in the world.

3.4.3 70 - 70.3 MHz (use for amateur service)

It is proposed that this sub-band should be allocated to the amateur service on a secondary basis in order to undertake experimental work on propagation. The change is in line with recommendations made in the European DSI.

3.5 87.5 - 137 MHz

The use of this band is to remain as at present:
- 87.5 - 108 MHz: FM audio broadcasting;
- 108 - 137 MHz: Aeronautical services.

3.6 137 - 174 MHz
3.6.1 138 - 174 MHz (VHF High band re-planning)

It is proposed that the land mobile sub-bands within the VHF High band will be re-planned in order to bring them more in line with the rest of ITU Region 1. The sub-band boundaries and Tx/Rx separations in the proposed future band plan are based on those in the European DSI, and are illustrated in the relevant figure in Appendix B of this document.

The reforming of this band will be done in a phased and effective manner. The migration will be effected largely by making use of the recently created 12.5 kHz "interleaved channels". As far as possible, users will be moved only when they would normally upgrade their equipment, although some forced migration will inevitably be required at some stages in the process.

3.6.2 140.5 - 141 and 152.05 - 152.5 MHz (alarms)

It is proposed that these two blocks of spectrum are allocated for use for alarm systems (both single and dual frequency). Demand in the short term is expected to be primarily for single frequency systems, although a small number of frequency pairs will be reserved for early dual frequency systems. It is anticipated that in the long term the industry will move towards more extensive use of dual frequency systems, and hence it is planned that the frequencies in the two blocks will increasingly be used as duplex pairs. Some frequencies may also be assigned for dual frequency alarms in other parts of the spectrum, namely VHF Mid band (81 - 81.625 / 86.375 - 87 MHz) and UHF (440 - 441 / 445 - 446 MHz).

3.6.3 148 - 149.9 MHz (little LEOs)

This band was allocated internationally at WARC 92 for the mobile satellite systems known as little LEOs. The band is allocated for the space-to-Earth direction, and is extended up to 150.05 MHz for some little LEO systems. The space-to-Earth link is generally provided at either 137 - 138 MHz or 400.15 - 401 MHz, depending on the system.

In South Africa the band 148 - 149.9 MHz (and the other relevant MSS bands also) is proposed to be allocated for possible use in the medium term for little LEOs, which could potentially provide useful store-and-forward data communications to remote areas of the country. The future of little LEOs on a global scale is uncertain at this stage, however, and no immediate clearing of the band is proposed. Even if little LEO systems are used in South Africa, it is possible that they will be able to co-exist with existing services in the band, although it has yet to be shown conclusively that this will be possible.
3.4 150.05 - 151 MHz (block allocation for paging)

It is proposed that this band should be used to provide a block allocation for paging. The situation regarding assignments for paging systems should gradually be rationalised by moving paging assignments to frequencies within this band (and also to 169.4 - 169.8 MHz (ERMES) and other paging bands).

3.5 161.875 - 173.875 MHz (sharing of Sonobuoy frequencies)

There are currently severe restrictions on the civilian use of these frequencies used for Sonobuoy operations, which lie in prime VHF mobile spectrum. The Sonobuoy frequencies between 161.875 and 173.875 MHz are currently unavailable for other uses to a distance of 200 km inland from the coast. This appears to be unnecessarily restrictive. Restrictions elsewhere in the world are generally less severe; in the UK, for example, there is no exclusive allocation to sonobuoys, and they are forced to share with other users in coastal areas. It is believed that there should be scope for increased sharing of Sonobuoy frequencies compared with what is allowed at present, and it is proposed that further study should be undertaken to investigate the possibilities, with a view to relaxing any protection criteria that are found to be excessive.

3.6 169.4 - 169.8 MHz (ERMES)

This band is allocated to the digital paging system ERMES. The progress of this technology will be monitored and should there be no requirement in South Africa, this band will be re-allocated to paging in general.

In order to use the band for paging it will be necessary to move existing single frequency radio users elsewhere. It is proposed that interleaved channels elsewhere in VHF High band should be used for this purpose.

3.7 174 - 400 MHz

3.7.1 216 - 246 MHz (frequencies for T-DAB)

The introduction of T-DAB (Terrestrial Digital Audio Broadcasting) is in Europe most likely to occur in the band 216 - 240 MHz. (The plan for this introduction is detailed in the so-called Wiesbaden plan.) In South Africa, the frequencies in this band up to 238 MHz are currently used for TV broadcasting (TV channels 9 to 11), while 238 - 246 MHz is allocated to fixed and mobile services and is lightly used, except for the international distress frequency at 243 MHz.
It is proposed that in South Africa the initial introduction of T-DAB in the VHF spectrum is in the band 238.432 - 239.968 MHz, in accordance with the Wiesbaden plan. The allocation of up to 4 further T-DAB channels might be possible within the band 238 - 246 MHz, but further technical study would be required to establish the feasibility of this, in particular regarding possible interference to the international distress frequency, and the future availability of equipment to operate above 240 MHz is also uncertain. An alternative in the event that T-DAB is not feasible above 240 MHz is to share T-DAB with existing TV channels in 216 - 238 MHz. The possibility also exists to introduce T-DAB in South Africa in the band 1452 - 1467 MHz (see note 3.10.4).

3.7.2 246 - 254 MHz (TV channel 13)

This channel is used for TV broadcasting in Southern Africa, unlike all other regions of the world. However, it is not possible to use the so-called 'channel 12' (238 - 246 MHz) for TV broadcasts, due to the need to keep the international distress frequency at 243 MHz free from interference. This, combined with the significant guard bands that are generally required between spectrum used for broadcasting and telecommunications, effectively makes it impossible to use the radio spectrum around these frequencies efficiently. A long term solution to address this situation would be to use channel 13 for a different purpose (e.g. mobile radio, as is the case in other parts of the world), but in the short term it is not practical for channel 13 to cease being used for TV broadcasting.

A further problem is that the broadcasters wish to use NICAM on channel 13 in metropolitan areas, but this results in spillage into the public trunking channels immediately above 254 MHz, thus making a substantial portion of the trunking band unusable. The problem is accentuated by the fact that channel 13 is used with a slightly offset vision and sound carrier (the vision carrier is at 247.43 rather than the standard 247.25 MHz), thus causing interference further into the trunking band than would otherwise be the case.

Discussions should continue between the Department and the IBA on how best to minimise the problems. Attempts should continue to find a technical solution, but until the matter has been resolved it will be necessary to prohibit the use of NICAM on channel 13. The longer term solution to avoid spillover from NICAM into the public trunking band is likely to involve some combination of (a) moving the vision down to 247.25 MHz from 247.43 MHz, (b) tighter filtering of the NICAM transmitters, and/or (c) reducing the width of the NICAM sound carrier.
3.7.3 254 - 259.4 / 262 - 267.4 MHz (public trunking)

This band is currently used by public trunking network operators. The licenses of these operators are due to expire in 2008, after which the spectrum will revert to mobile use. It is anticipated that the public trunking will by this date have migrated to digital trunking networks.

3.7.4 278 - 286 MHz (2-way paging)

It is proposed that 700 kHz from within this band should be allocated to 2-way paging (ie 600 kHz + 2 x 50 kHz guard bands). This is for the outbound leg, paired with 925 - 925.4 MHz for inbound (ie 300 kHz + 2 x 50 kHz guard bands). This is consistent with expected future availability of equipment for the FLEX system, especially for the large Asian market. The band is currently allocated to Government, and the exact location of the 700 kHz used will follow further discussion (278 - 278.7 MHz is a likely option).

3.7.5 300 - 380 MHz (20 MHz for wireless local loop)

This spectrum is potentially very useful for providing telecommunications to rural areas. The band 336 - 346 / 356 - 366 MHz is allocated to WLL on an exclusive basis, as from 1 May 1997.

3.7.6 380 - 400 MHz (use of government spectrum for digital trunked radio)

This military band has been designated in Europe for use for digital trunked mobile radio (CEPT T/R 22-05), in particular TETRA systems for use by the emergency services. In South Africa the band is currently used by government, and it is believed that the short term needs for digital trunking can be satisfied in spectrum above 400 MHz. Hence it is proposed that the current usage remain in the short term, but that the spectrum should be used for trunked mobile radio in the long term.

3.8 400 - 470 MHz

3.8.1 406 - 470 MHz (migration of fixed links)

Much of this band is currently used for fixed links. Throughout the world, there is a strong trend for fixed links to be migrated to higher bands (above 3 GHz where possible), and the band is increasingly being used for mobile services, a purpose to
which it is very well suited. For these reasons, a general transition away from fixed links and towards mobile radio is proposed for the band. Further details regarding specific sub-bands are given in the following paragraphs. The overall plan for the band is illustrated in the relevant figure in Appendix B of this document.

It is very difficult at this time to predict accurately what the take-up of trunked mobile radio in South Africa will be, and what the possibility of migrating fixed links to higher frequencies is. For this reason the plan is intended to incorporate some flexibility to allow adjustments to be made as the demand for different types of systems and services becomes clearer.

3.8.2 406.1 - 407.625 / 416.1 - 417.625 MHz (current ESKOM frequencies)

This spectrum is currently used by ESKOM for both mobile and fixed applications. The use of these frequencies for fixed links should be minimised as far as possible, by migration of links to higher frequencies where practical. Mobile usage of the band by ESKOM may continue in the short term where necessary, but mobile users should also be migrated if possible, for example to a trunked system elsewhere in the UHF band.

As ESKOM move out of the band, other (single frequency) users can be introduced in 406.1 - 407.625 MHz. The other half of the band (416.1 - 417.625 MHz) is part of the band which is to be used for future public digital trunking networks, and hence any residual usage of the band by ESKOM will limit the spectrum available when such networks are introduced.

3.8.3 407.625 - 413 / 417.625 - 423 MHz (Government and Public Safety)

407.625 - 410 / 417.625 - 420 MHz is currently used by Government for a variety of fixed and mobile applications. The 2 x 3 MHz immediately above this (ie 410 - 413 / 420 - 423 MHz) is currently used for single frequency fixed links.

It is proposed that the band should be treated as a single block allocation to be used primarily for public safety and local/regional authorities. This should provide for more effective frequency planning, site management, co-ordination, etc, and would also give more flexibility regarding how the frequencies are used. The use of the band for fixed links should be minimised as far as possible, thus releasing additional spectrum for mobile use.

The band 407.625 - 413 / 417.625 - 423 MHz will provide spectrum for local and regional authorities for mobile radio (primarily trunked). It is envisaged that the band 410 - 413 / 420 - 423 MHz (together with 417.625 - 420 / 427.625 - 430 MHz) will be used primarily for digital trunked radio (the frequencies are within one of the bands designated for TETRA in Europe). Priority in migration of fixed links
should be given to clearing the frequencies immediately above 410 / 420 MHz, in order to allow a rapid transition and provide the municipalities with frequencies in this block, which will be useful when co-operation with Government is required.

3.8.4 413 - 417.625 / 423 - 427.625 MHz

These frequencies are primarily used for fixed links at present, with the exception of the ESKOM frequencies 416.1 - 417.625 MHz (see note 3.8.2). It is proposed that these fixed links are migrated elsewhere, with the frequencies released to be used as follows:

- 413 - 413.7625 / 423 - 423.7625 MHz. Public mobile data network(s). This spectrum would enable the setting up of a number of public data networks in South Africa. The band would provide a total of 60 2x12.5 kHz frequency channels.

- 413.7625 - 417.625 / 423.7625 - 427.625 MHz. Public trunking network using digital trunked radio. It is proposed that in the longer term this band could be freed for use for digital trunking. The band is part of the spectrum which is designated for TETRA in Europe. It is envisaged that the band would most likely be used for public digital trunking networks, although other applications such as private radio systems could also be implemented in the band.

- 415 - 417.2 / 425 - 427.2 MHz. Wireless local loop sharing. In addition to the above mobile and fixed services, this band will also be shared with WLL in rural areas. There are a number of different WLL systems available from suppliers which are able to operate in this band.

3.8.5 427.625 - 430 MHz (trunked mobile radio and single frequency links)

The band 420 - 430 MHz is currently used primarily for single frequency links. Although these will where possible be moved to higher bands or changed to dual frequency, it is recognised that in practice it will be necessary to retain some single frequency links in UHF. It is proposed that the band 427.625 - 430 MHz should be used for single frequency links in rural areas.

It should also be possible in the long term for the band 417.625 - 420 / 427.625 - 430 MHz to be used for trunked mobile radio in urban areas. This application would need to share with usage of the band 417.625 - 420 MHz by Government, local and regional authorities (which should be concentrated in rural areas in the long term), as well as with the single frequency links in 427.625 - 430 MHz.
3.8.6 430 - 440 MHz (amateur band and low power applications)

This band is allocated to the amateur service in South Africa, as elsewhere in ITU Region 1. The sub-band 433.05 - 434.79 MHz, however, is also designated as an ISM band in Region 1, subject to the special authorisation of the administration concerned (see RR S5.138), and it has effectively been treated as an ISM band in South Africa for a number of years. Further, the Government Gazette of 17 November 1995 specifies the use of the band for low power devices on an unlicensed basis, subject to obligatory type approval. The consequence of this is that the amateur service may not claim protection from (in-band) emissions from ISM equipment operating in the band, nor can ISM equipment and low power devices claim protection from amateur users in the band. (Note that dedicated spectrum has been assigned at 464.375 - 464.425 MHz for the control of cranes and other hazardous equipment.)

Note that the European DSI recommended that the sub-band 430 - 432 / 438 - 440 MHz should be allocated to mobile and used for PMR. It is not proposed to adopt this recommendation in South Africa at this stage, but the situation will be reviewed periodically to assess developments elsewhere and the emerging needs in South Africa.

3.8.7 440 - 450 MHz (migration from fixed to mobile)

This band is currently used primarily for fixed links. The aim in the medium term is to use this band primarily for mobile services (PMR in particular). A 5 MHz Tx/Rx separation is to be used, in accordance with the European DSI. Fixed links currently in the band should be moved to higher frequencies (above 3 GHz where possible), although in some cases it may be necessary for the move to be to elsewhere in UHF (eg 427.625 - 430 MHz for single frequency or 450 - 470 MHz for dual frequency).

It is also proposed that part of this band (440 - 441 / 445 - 446 MHz) is used for fixed point-to-multipoint data services such as scanning telemetry and dual frequency alarm systems. The nature of these systems is such that, although they provide communications between fixed stations, they are generally implemented using mobile radio technology to provide wide area coverage, and in many cases it will not be feasible to implement them at higher frequencies.

3.8.8 450 - 470 MHz

This band is currently used for a variety of fixed and mobile applications. The band includes the frequencies used for the C450 analogue cellular system (455.5 - 459.48 / 465.5 - 469.48 MHz), which is due to cease operation in 1999. It is proposed that the band should retain is current Tx/Rx separation of 10 MHz, and
that the future use of the band should be as follows:

- **450 - 453 / 460 - 463 MHz.** Fixed links and mobile data. This band should continue to be used for dual frequency fixed links where it is not practical to move to higher frequencies.

- **453 - 453.975 and 463 - 463.975 MHz.** Single frequency mobile, as at present.

- **453.975 - 454.425 MHz.** Block allocation for paging. Paging assignments from elsewhere in UHF should be migrated to this band. The sub-band **454.325 - 454.425 MHz** is allocated specifically for on-site paging.

- **463.975 - 464.425 MHz.** Block allocation for low power mobile radios, including short range business radio. The sub-band **464.375 - 464.425 MHz** is allocated exclusively for the control of hazardous equipment (eg cranes).

- **454.425 - 460 MHz / 464.425 - 470 MHz.** Trunked mobile radio. It is proposed that this band should provide further spectrum for trunked mobile radio systems. This could be for a variety of applications, but it is envisaged that it will primarily be used for private trunked radio systems. The band includes spectrum currently used by Transtel for their trunked radio system (455 - 455.4875 / 465 - 465.4875), for which the BTX and MTX frequencies will need to be swapped in due course.

In addition to the above mobile and fixed services, it is also proposed that sharing with WLL would occur in the band **455 - 460 / 465 - 470 MHz**, for rural areas. There are a number of potential WLL systems that can operate in this band.

### 3.9 470 - 960 MHz

#### 3.9.1 470 - 854 MHz (digital TV experimentation)

The future introduction of digital TV is an important long-term spectrum management issue. In order to plan for this it is suggested that a single 8 MHz analogue TV broadcasting channel should be reserved for digital TV, to allow simultaneous broadcasting of digital signals when the technology becomes available.

#### 3.9.2 790 - 854 MHz (sharing of broadcast channels with WLL and links)

The broadcast channels at the upper end of the UHF broadcasting range (790 - 854 MHz) are primarily used for TV broadcasting at present (they also contain some
studio transmitter links). It is believed that there is scope for using these channels more effectively, either by re-planning of the way in which the UHF TV channels are utilised, or by sharing of this part of the spectrum with other services.

A number of WLL systems, in particular those based on US cellular technology such as CDMA and AMPS, are currently available to operate at these frequencies, in particular 824 - 849 MHz (paired with 869 - 894 MHz). Such WLL systems are available from a range of suppliers, and the ability to use them in South Africa could potentially bring significant social benefit to the country.

It is proposed that, in order to allow the introduction of such WLL systems, sharing of WLL with broadcasting is allowed in at least one of the UHF TV channels, primarily in rural areas. TV channels 65, 66 and 67 (822 - 830, 830 - 838 and 838 - 846 MHz) are the most likely candidates, which would need to be paired with 867 - 875, 875 - 883 and 883 - 891 MHz respectively. Further discussions and study will be required in order to work out the details of the sharing, and in particular sharing criteria will need to be formulated and appropriate protection ratios established in order to ensure that the two services are able to co-exist effectively with each other. The sharing will also need to be co-ordinated with neighbouring countries.

There is also a requirement for certain Government redeployable link equipment to be able to operate in the UHF TV band (and in other dedicated UHF link spectrum) on a shared basis. This equipment is to be migrated into the band in the immediate short term. Appropriate criteria for the sharing will need to be drawn up. In the long term it is intended that that the link equipment will be moved to higher frequencies.

3.9.3 856 - 900 MHz (migration of fixed links to higher frequencies)

There are currently a range of fixed links within these frequencies, including point-to-point links in 856 - 888 MHz and troposcatter links in 862 - 900 MHz. In line with the international trends, the aim should be to migrate these links to higher frequencies at the earliest opportunity. The move should be to frequencies above 3 GHz if possible, with the possibility to move to frequencies around 1.5 GHz in the event that there is a sound case why they cannot be moved to higher frequencies. Such migration will be particularly important in cases where the band is to be used for another purpose and sharing with the new application is not possible. Note, however, that the existing fixed troposcatter systems can remain on their current frequencies in the medium-to-long term.
3.9.4 864.1 - 868.1 MHz (CT2)

The CT2 cordless telephony system has not to date become heavily used in South Africa. Furthermore, CT2 has not been a great success in Europe either, although it is heavily used in some densely populated areas of the Asia-Pacific region (e.g., Hong Kong and Singapore). However, there is no great pressure in South Africa to use the CT2 spectrum for other purposes, and CT2 does provide a potential technology for short range WLL applications.

It is thus proposed that the allocation of the band to CT2 should be retained, for both cordless telephony and WLL applications. The situation will be reviewed periodically in order to monitor the growth in usage in South Africa, and determine whether any alternative uses would be beneficial. The use of CT2 is likely to be confined almost exclusively to urban areas, and hence sharing with CT2 may be possible in order to allow the use of the frequencies for other purposes in rural areas.

3.9.5 872 - 905 / 917 - 950 MHz (wireless local loop sharing)

It is proposed that spectrum should be allocated on a shared basis in rural areas for sharing of WLL with other services (primarily GSM and private mobile radio). There are a number of different WLL systems that could operate in this band, including systems based on TACS, GSM and CDMA.

3.9.6 876 - 880 / 921 - 925 MHz (possible use for digital PMR)

This band is currently proposed in Europe for digital private mobile radio for the railways using a PMR system based on GSM (GSM-R). In South Africa also, this band offers the possibility for large organisations (such as the railways) to use GSM-based PMR systems. The band might also be one in which TETRA-based equipment is available in the future. There may also be a possibility of WLL sharing these frequencies, particularly in rural areas.

A final decision on this band should not be taken until after the situation in Europe has become clearer, which will probably happen during 1998. It is proposed that the band should remain reserved in South Africa until the international situation clarifies and the local demand has become clear.

3.9.7 880 - 890 / 925 - 935 MHz (reserved for GSM extension)

This band is reserved within Europe for extended GSM. A final decision on the use of the band in South Africa should not be taken until the major European countries
have clarified their position, which will probably occur during 1997 and 1998.

The extended GSM band would be required almost exclusively for use in urban areas. In rural areas the band could thus be shared with WLL, and there are a number of WLL technologies available for use in this band (eg based on TACS and CDMA).

3.9.8 914 - 915 / 959 - 960 MHz (CT1)

The system known as CT1 in South Africa (CT1 refers to a different system in other countries) uses frequencies which encroach on the band allocated in Europe to GSM. CT1 is widely used in South Africa, and no change to the usage of the band is proposed in the short term, although it is intended that CT1 will be phased out in the medium term. More immediate action should be taken, however, to stamp out the illegal usage by cordless telephones of GSM frequencies in the band 904 - 905 / 949 - 950 MHz so that these may be used for GSM.

3.9.9 915 - 921 MHz

This is part of Region 2 ISM band 902- 928 MHz (centre frequency 915 MHz), and there has been some suggestion that at least part of this band (eg 915 - 919.5 MHz) should be adopted in South Africa as a general band for ISM equipment and low power devices. There would be several dangers in doing this, however:

- The fact that the Region 2 band extends outside 915 - 921 MHz will tend to mean that emissions from some of the equipment made for the band will not be well confined within the sub-band available in South Africa. This may result in interference to neighbouring services, particularly below 915 MHz (ie existing CT1 and GSM assignments).

- The deregulated nature of ISM will make it difficult to control equipment entering South Africa, eg from the US, and to ensure that emissions from such equipment do not fall into other bands.

- Once an ISM band has been created and equipment has come into use, it is almost impossible to later clear the band of such equipment so that the spectrum can be used for other purposes.

It is thus considered to be inadvisable to allocate the spectrum immediately above 915 MHz as a general ISM / LPD band.

There are some specific low power applications, however, for which a case can be made for an allocation in this area of the spectrum. The Government Gazette of 17
November 1995 already allows for low power devices (e.g., anti-theft systems) in the band 915 MHz ± 0.0015%, and it is further proposed that spectrum should be allocated to the following specific applications:

- vehicle location systems in 915.025 - 915.2 MHz (on a licensed basis);
- radio tagging systems in 915.2 - 915.4 MHz (with passive tags).

In general, however, further allocations in this band should be minimised as far as possible, since it is likely that in the medium-to-long term the spectrum will become valuable for mobile radio use, e.g., for further extension of cellular systems or for digital trunked radio.

3.9.10 925 - 925.4 MHz (2-way paging)

This is provisionally allocated to 2-way paging (inbound leg), paired with 700 kHz from 278 - 286 MHz, and is consistent with expected FLEX allocations in other countries (see note 3.7.4).

3.10 960 - 3000 MHz

3.10.1 1350 - 1375 / 1492 - 1517 and 1375 - 1400 / 1427 - 1452 MHz (fixed links)

These bands are allocated in Europe (CEPT Recommendation T/R 13-01) for consolidation of fixed links around 1.5 GHz which cannot move to higher frequencies. The band 1427 - 1452 / 1492.5 - 1517.5 MHz is currently used for fixed links in South Africa, and these would need to migrate to the new plan over a period in order to implement this. The band 1350 - 1400 MHz is currently under-utilised in South Africa.

The use of the bands will be limited to low capacity links. For each of the two bands, the basic channel arrangement proposed in T/R 13-01 provides for 122 x 2 MHz channels, with channels with carrier spacings of 1000, 500, 250 and 25 kHz derived from this by means of subdivision. The precise channel plans to be adopted will follow after further analysis of the requirements for channels in these bands, but it is proposed that they should be primarily at the low capacity end of the range, since they are likely to be required mostly for low capacity links which are moving from UHF.

The sub-band 1395-1400 / 1447-1452 MHz will be capped for a period of 5 years. During this period only Fixed Services pertaining to the provision of WLL will be allowed in this band.
3.10.2 1400 - 2700 MHz (wireless local loop above 1 GHz)

Allocations are to be made in a number of bands in the range 1.4 - 2.5 GHz to enable sharing of WLL with other services in rural and in some cases urban areas. WLL will also be allowed on an exclusive basis in one area of this spectrum. Sharing will require sharing criteria to be established to ensure that WLL can coexist satisfactorily with the other services in the band. In some cases the WLL technology may be the same as that used for other services in the band (eg DECT, PCN), in which case the sharing will be relatively straightforward.

The spectrum above 1 GHz to be allocated for WLL on an exclusive basis is as follows (see note 3.10.11):

- 2285 - 2290 MHz.
- 1900-1920 MHz

The following bands will be allocated for possible use for WLL on a shared basis:

- 1429 - 1465 / 1477 - 1513 MHz;
- 1710 - 1785 / 1805 - 1880 MHz (PCN);
- 1880 - 1900 MHz (DECT);
- 1850 - 1900 MHz;
- 1920 - 2300 MHz;
- 2360 - 2400 MHz.

The decision as to whether a particular technology can be used in a shared band in a particular (eg urban) area will generally have to be taken on a per-case basis in order to judge properly whether the required sharing is feasible.

3.10.3 1427 - 1452 / 1492.5 - 1517.5 MHz (fixed links)

In accordance with international trends these links will move to frequencies above 3 GHz where possible, or migrate to the new channel plans specified in CEPT T/R 13-01. Links that fall into the sub-band 1395-1400 / 1447-1452 MHz, and that are problematical to the new service, will be given a high priority in the migration.

3.10.4 1452 - 1492 MHz (digital audio broadcasting)

This band has been allocated internationally for use for digital broadcasting (S-DAB and T-DAB). In South Africa the band is currently unused above 1464 MHz, but below 1464 MHz it is used for fixed links. The unused section of the band should be reserved for digital audio broadcasting (in particular S-DAB in 1467-1492 MHz), with the long term aim to migrate the fixed link users of the frequencies 1452-
3.10.5  **1610 - 1626.5 MHz (MSS)**

These frequencies have been allocated worldwide for emerging mobile satellite systems (Earth-to-space links), such as Globalstar, Odyssey and Iridium. In the case of Globalstar and Iridium the band is paired with 2483.5 - 2500 MHz, while for Iridium the space-to-Earth links are also in 1610 - 1626.5 MHz. Mobile satellite communications have the potential to provide valuable benefits for South Africa, in particular in providing telecommunications to remote areas. These frequencies are largely unused in South Africa at present, and should be reserved for MSS use.

3.10.6  **1670 - 1675 / 1800 - 1805 MHz (TFTS1)**

These frequencies have been reserved in Europe for the Terrestrial Flight Telephone System (TFTS). ERC decision ERC/DEC/(92)01 refers. Although TFTS may be of use in South Africa in the future, it is far from certain that it will be applicable, given South Africa's geographical location. Hence, no action is required in the immediate future, unless specific demand emerges.

3.10.7  **1710 - 1785 / 1805 - 1880 MHz (PCN frequencies)**

These are the frequencies at which the European PCN standard DCS1800 operates (CEPT Recommendation T/R 22-07 refers), which are currently used for fixed links in South Africa. The use of PCN in South Africa is likely to be important in order to increase the capacity of the current cellular networks (and to provide for the possibility of competition to the existing cellular operators). These frequencies are being allocated to PCN in countries around the world, although not necessarily the whole band in each country. Sharing of these frequencies by WLL applications is also likely to be possible, especially in rural areas.

No new fixed link assignments should be made in this band in South Africa, and the long term aim should be to move fixed links to frequencies above 3 GHz wherever possible. In the shorter term, the amount of spectrum that needs to be cleared for use by public operators is an important telecommunications policy issue related to the number of PCN licenses to be granted, expansion of capacity for GSM operators, etc. It is unlikely that the whole of the band will be needed for PCN, at least for the medium term, but additional spectrum may also be required from within the band for WLL applications.
3.10.8 1880 - 1900 MHz (DECT)

These frequencies have been allocated to DECT. No new fixed link assignments are being made within the band, and the band will in due course be cleared of fixed links. DECT frequencies may be used for cordless telephony, office wireless PABXs, local telepoint systems, to increase the capacity of the cellular networks and to provide WLL systems in dense areas. For these reasons, the allocation to DECT is seen as important in South Africa.

3.10.9 1885 - 2025 and 2110 - 2200 MHz (FPLMTS/UMTS)

These bands are intended for use on a worldwide basis for the implementation of FPLMTS/UMTS. Within this, the bands 1980 - 2010 and 2170 - 2200 MHz are intended for the satellite component of FPLMTS. This is a long term requirement, and it will be well into the first decade of the next century before the system becomes available, and even then only a small part of the band will initially be needed.

The FPLMTS bands are currently used for fixed links in South Africa. The future of FPLMTS is still uncertain, and it would be premature at this stage to move any fixed links solely in preparation for FPLMTS. However, it would be wise to make as few new fixed link frequency assignments as possible in these bands, and to gradually move links to frequencies above 3 GHz when possible, in accordance with international trends. In this respect, the most immediate need in South Africa is likely to be for frequencies for the satellite components (ie 1980 - 2010 / 2170 - 2200 MHz), which are also the frequencies that have been assigned for the ICO-P system.

3.10.10 1900 - 1920 MHz (WLL)

This band is to be used exclusively for WLL. The DECT and PHS technologies will primarily be used in this band. Other technologies will be considered. Tests conducted on behalf of the Office of the Telecommunications Authority in Hong Kong have established that it is possible for DECT and PHS (1895 - 1918.1 MHz) to co-exist satisfactorily in the overlapping sub-band 1895 - 1900 MHz.

3.10.11 2025 - 2110 and 2200 - 2290 MHz (fixed links and wireless local loop)

Channel arrangements for the use of this band for fixed services are described in both ITU-R Recommendation F.1098 and CEPT Recommendation T/R 13-01. These recommendations describe a channel plan in which the band is divided into dual-frequency channels with carrier spacing 14 MHz and Tx/Rx separation 175 MHz.
MHz. Carrier spacings of 7, 3.5 and 1.75 MHz are also possible by means of channel subdivision. It is proposed that this arrangement is adopted in the band for fixed services, with a certain portion of the band used for wireless local loop.

The proposed division of the band is as follows:

- 2025 - 2075 / 2200 - 2250 MHz to be used for fixed links;
- 2075 - 2110 / 2250 - 2285 MHz to be used exclusively for Fixed Services pertaining to the provision of WLL;
- 2285 - 2290 MHz to be used exclusively for WLL.

3.10.12 2300 - 2360 MHz

This band was not previously intended for migration, however to the high Government priority given to Universal Service, this band is allocated exclusively to Fixed Services pertaining to WLL.

3.10.13 2500 - 2700 MHz

This band is currently used primarily for MMDS, but it is believed that the current MMDS plan does not utilise the spectrum at all efficiently. Hence it is proposed that the band is re-planned, with the MMDS links concentrated together in a smaller portion of the spectrum. The exact amount of spectrum needed for MMDS should be determined as part of the review. The radio astronomy band 2690 - 2700 MHz should be avoided in the resulting MMDS plan, and the remainder of the band should be allocated for fixed links, in accordance with the plan in CEPT Recommendation T/R 13-01 for the use for the fixed service of the band 2520 - 2593 / 2597 - 2670MHz.

A List of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>APC</td>
<td>Aeronautical Public Correspondence</td>
</tr>
<tr>
<td>BEAPS</td>
<td>Business Equipment Association Paging Services Division</td>
</tr>
<tr>
<td>BTX</td>
<td>Base Transmit</td>
</tr>
<tr>
<td>CB</td>
<td>Citizens Band</td>
</tr>
<tr>
<td>CDMA</td>
<td>Code Division Multiple Access</td>
</tr>
<tr>
<td>CEPT</td>
<td>European Conference of Postal and Telecommunications Administrations</td>
</tr>
<tr>
<td>CT</td>
<td>Cordless Telephony</td>
</tr>
<tr>
<td>DECT</td>
<td>Digital European Cordless Telecommunications</td>
</tr>
<tr>
<td>DF</td>
<td>Dual Frequency</td>
</tr>
<tr>
<td>DPT</td>
<td>Department of Posts and Telecommunications</td>
</tr>
<tr>
<td>DSI</td>
<td>Detailed Spectrum Investigation</td>
</tr>
<tr>
<td>E-GSM</td>
<td>Extended GSM</td>
</tr>
</tbody>
</table>

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Diagrammatic representation of band plan

The figures presented on the following pages illustrate the proposed future band plan in diagrammatic form, in order to aid comprehension of the plan. The diagrams illustrate the following:
The first 3 diagrams show the division of the band 20 MHz to 3 GHz between service types, which is in most cases in accordance with ITU Region 1 allocations. For clarity, only a limited number of colour-coded service types are used (i.e. mobile, fixed, amateur, maritime, aeronautical, broadcasting and "other"), rather than the full set of services defined by the ITU. The service type shown for each sub-band corresponds to the future use of the band which is expected to be the most widespread in the future. The whole frequency range is divided into the following 3 sections:

- 20 - 30 MHz;
- 30 - 470 MHz;
- 470 - 3000 MHz.

The next 5 diagrams "zoom in" on the most important and congested areas of the spectrum, in particular those which are allocated to the mobile service. The diagrams show features such as single and dual frequency bands, Tx/Rx pairings, and allocations to particular systems, applications and user groups. The bands shown in the 5 diagrams are as follows:

- VHF Low and Mid bands (30 - 87.5 MHz);
- VHF High band (137 - 174 MHz);
- UHF mobile band (406 - 470 MHz);
- 800 / 900 MHz band (806 - 960 MHz);
- 1.35 - 2.7 GHz.

The final diagram indicates the bands that are to be allocated on a shared basis to wireless local loop.
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South African Frequency Allocations

THE RADIO SPECTRUM

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Service Types

1

Mobile

Fixed

Amateur

Maritime

Aeronautical

Broadcasts

Other

South African Frequency Utilizations

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South African Frequency Allocations
VHF Low & VHF Mid
3.108
TELECOMMUNICATIONS ACT
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South Africa Frequency Allocation

1.35 - 2.7 GHz

Issue No. 12 (2002)
Department of Communications

Project SABRE
(South African Band Re-planning Exercise)

Migration strategy for the frequencies
20 MHz to 3 GHz

Version 2.0
24 April 1997
1 Introduction

1.1 General

This document presents the migration strategy for aligning existing radio communications systems with the South African Band Plan for the frequencies 20 MHz to 3 GHz. This document should be read in conjunction with the revised band plan (Version 2.0).

1.2 Project SABRE

The need for Project SABRE emerged over a period of time, in response to factors such as the increased demand for radio spectrum and developments elsewhere in the world that could potentially benefit South Africa. The project was established in 1995 in order to re-plan the radio frequency spectrum between 20 MHz and 3 GHz. The project is being conducted by the Department of Communications, together with an international team of consultants, led by Smith System Engineering from the UK and including the CSIR in South Africa, the UK Radiocommunications Agency and the economic consultants NERA.

The principal aims of the project are as follows:

- to review the usage of the radio spectrum between the frequencies 20 MHz and 3 GHz;
- to produce a band plan for the future use of the spectrum, which is both agreed nationally in South Africa and consistent with international trends.

In order to achieve these aims, the project is divided into four phases:

- Phase 1 - "Current spectrum usage", has reviewed the current spectrum usage in South Africa.
Phase 2 - "Requirements capture", has identified the requirements for the future use of the spectrum in South Africa.

Phase 3 - "International trends", has examined relevant international trends, both in technology and services and in the usage of the spectrum in other countries.

Phase 4 - "Band plan", has taken as input the results of the previous three phases, and has balanced these in order to produce the final band plan. As supplement to the band plan, a "Migration strategy" has been developed which is presented in this document.

1.3 Principles of migration

In implementing a migration strategy the following points should be considered:

- Precisely what are the systems presently operating in the proposed spectrum and what geographic areas are served by them?
- What spectrum will be available for incumbents to relocate to?
- What impact will different propagation characteristics of the new band have on the incumbent's new replacement system?
- Will existing infrastructure support a band change?
- The approximate costs of replacement systems, providing same type and quantity of units, and same coverage area.
- Will other inducements be required to expedite band clearing?
- How will cost to incumbents who must relocate from one band to a different band be funded?
- How will the relocation of the incumbent systems be accomplished and what timeline issues pertain thereto?
- If an incumbent who must relocate chooses instead to use commercial services in lieu of relocating its previous system to another band, what financial consideration for band clearing is appropriate and how would it be funded?
- If temporary use of commercial services is a viable method of expediting band clearing prior to an incumbent's cut over to a new system, how should
that be funded?

Similar exercises in other countries have shown that deadlines for migration are very important. If they are not imposed, the existing operations can/will go on indefinitely. For that reason, mandatory transition is required.

Keeping the above mentioned points in mind, especially the cost of migration and the opportunity for better spectrum utilisation, certain general principles were applied.

In the period 1990 - 1996 many of the LMR bands were migrated from 25 kHz channel spacing to 12.5 kHz. The interleaved channels that were created by this process can now be used for the migration. Where the mobile transmit, base transmit and transmit-receive arrangements have not changed, the process of assigning the interleaved channels can start immediately. In some cases guard channels were also reserved between different transmit-receive blocks which can also be subdivided.

Any new assignments will be based on the new bandplan. Frequencies not intended for certain services, will not be assigned for those services.

If the transmit-receive separation has changed, the interleaved channels can be used (with the new transmit-receive separation), if new mobile transmit overlaps with old mobile transmit, and new base transmit overlaps with old base transmit or simplex.

In general dual frequency operations are more spectrally efficient than single frequency operations, because of restrictions on single frequency operations at high-sites due to intermodulation products. For this reason many single frequency blocks will be migrated to dual frequency. If a continuous block of single frequencies were reserved for a high site, only the channels with adequate adjacent channel separation and no interfering intermodulation products could be used. This is because both transmit and receive is used in the same frequency block in the same geographic area. In the case of dual frequency blocks, the transmit an receive parts are separated and there are less restrictions on the number of frequencies in a block that can be used at a high site.

1.4 About this document

This document is divided into the following sections:

- Section 2 presents, in tabular format, the proposed migration strategy for aligning use of the radio spectrum between 20 MHz and 3 GHz with the new South African Band Plan.
Section 3 provides a more detailed strategy for particular services, in particular fixed links, mobile services in VHF-High, paging and alarms.

2 Migration strategy for bands

2.1 Introduction

The tables in this section provide an indication of which bands have changed and the timescales for implementing those changes. N/C in the second column indicates no significant changes have been made to that specific band.

Time for migration is indicated by Year x - y, where year x is included and year y excluded. Year 0 begins on 1 January 1997.

The term migrate is used where systems in one frequency band will move to a different frequency band, or to different frequencies within the band. The term assign is used where a band is available for assignment to new licenses, which is not part of the migration process.
### 2.2 20 - 50 MHz

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 28.957</td>
<td>Various</td>
<td>N/C</td>
<td>Migrate low power paging from 40.68, (Year 0-5)</td>
</tr>
<tr>
<td>26.957 - 27.283</td>
<td>Low power paging</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>27.283 - 29.7</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>29.7 - 30</td>
<td>Mobile</td>
<td>Mobile/ Amateur</td>
<td>Available for assignment to Amateur on secondary basis for use during emergency situations. (Immediate)</td>
</tr>
<tr>
<td>30 - 35</td>
<td>Mobile</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>35 - 35.25</td>
<td>35 - 35.15 MTX paired with 41.45 - 41.6</td>
<td>Model Aircraft</td>
<td>Migrate mobile users to adjacent blocks. (Year 0-3)</td>
</tr>
<tr>
<td></td>
<td>35.2 - 35.25 Single Frequency</td>
<td></td>
<td>Available for assignment to model aircraft. (Year 3+)</td>
</tr>
<tr>
<td>35.25 - 40.675</td>
<td>Mobile</td>
<td>N/C</td>
<td>Restricted assignment in 38 MHz block due to interference on television intermediate frequencies.</td>
</tr>
<tr>
<td>40.675 - 40.685</td>
<td>ISM</td>
<td>Amateur</td>
<td>Migrate low power paging at 40.68 to 27.12 MHz, 53 MHz or UHF paging, (Year 0-5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Available for assignment to Amateur for propagation study, max. ERP 10W. (Year 3+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Accept mutual interference in Year 3 - 5.</td>
</tr>
<tr>
<td>40.885 - 41.45</td>
<td>Mobile</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>41.45 - 41.6</td>
<td>Mobile BTX paired with 35 - 35.15</td>
<td>Single Frequency</td>
<td>Migrate with block 35 - 35.15 MHz, (Year 0-5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Available for Single Frequency assignments. (Year 5+)</td>
</tr>
<tr>
<td>41.6 - 50</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
</tbody>
</table>
2.3 50 - 87.5 MHz

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 - 60.025</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>60.025 - 60.225</td>
<td>Mobile/Aircraft</td>
<td>Mobile</td>
<td>Migrate to 35-35.25 (Year 0 - 8)</td>
</tr>
<tr>
<td>60.225 - 68</td>
<td>Mobile</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>66 - 68</td>
<td>Mobile</td>
<td>NEAR</td>
<td>Migrate from 25 kHz to 12.5 kHz channel spacing for increased capacity.</td>
</tr>
<tr>
<td>68 - 70</td>
<td>Mobile</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>70 - 70.3</td>
<td>70.025 - 70.3 BTX paired with 75.225 - 75.525</td>
<td>Mobile/Amateur</td>
<td>Available for assignment to Amateur (Year 3+) on shared basis.</td>
</tr>
<tr>
<td>70.3 - 87.5</td>
<td>Various</td>
<td>N/C</td>
<td>Assignment to dual frequency alarms in 81 - 81.625 BTX paired with 86.375 - 87 MHz. (Immediate)</td>
</tr>
</tbody>
</table>

2.4 87.5 - 108 MHz

No change in this part of the spectrum. (FM Broadcasting)

2.5 108 - 137 MHz

No significant change in this part of the spectrum. (Aeronautical mobile). Reduced channel spacing (from 50 kHz to 25 kHz) should be used to alleviate congestion where necessary.
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2.6 **137 - 174 MHz**

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>137 - 137.75</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>137.75 - 138</td>
<td>MSS / Space Operations</td>
<td>MSS / Space Operations</td>
<td>Migrate mobile users to <strong>138 - 144</strong> mobile bands. (Year 5 - 7) See detailed VHF-high migration (section 3.3).</td>
</tr>
<tr>
<td>137.75 - 138.75</td>
<td>137.75 - 138 MTX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>138 - 144</td>
<td>Mobile</td>
<td>New mobile arrangement</td>
<td>7 Year migration. See detailed VHF-high migration (section 3.3).</td>
</tr>
<tr>
<td>144 - 146</td>
<td>Amateur</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>146 - 148</td>
<td>Mobile</td>
<td>N/C</td>
<td>Immediately available for assignment.</td>
</tr>
<tr>
<td>148 - 149.95</td>
<td>MSS</td>
<td>N/C</td>
<td>No new assignments, pending development of MSS.</td>
</tr>
<tr>
<td>148 - 149.95</td>
<td>148 - 148.95 MTX</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>paired with</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>155.05 - 156</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>148.9 - 149.95 SF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>149.95 - 152.2</td>
<td>Mobile</td>
<td>Mobile (Government and Paging)</td>
<td>5 Year migration. See detailed VHF-high migration (section 3.3).</td>
</tr>
<tr>
<td>152.2 - 155.05</td>
<td>Mobile</td>
<td>N/C</td>
<td>Immediately available for assignment.</td>
</tr>
<tr>
<td>155.05 - 156</td>
<td>155.05 - 156 BTX</td>
<td>N/C</td>
<td>Migration with 148 - 148.9, ie no new assignments, pending development of MSS. See detailed VHF-high migration (section 3.3).</td>
</tr>
<tr>
<td></td>
<td>paired with</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>148 - 148.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>156 - 174</td>
<td>Various</td>
<td>New mobile arrangement</td>
<td>10 Year migration. See detailed VHF-high migration (section 3.3).</td>
</tr>
</tbody>
</table>

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### 2.7 174 - 400MHz

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>174 - 238</td>
<td>Broadcasting</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>238 - 240</td>
<td>Mobile / Fixed</td>
<td>Digital Audio Broadcasting</td>
<td>Migrate links. (Year 0 - 5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Available for DAB assignments. (Immediate)</td>
</tr>
<tr>
<td>240 - 248</td>
<td>Mobile / Fixed</td>
<td>Digital Audio Broadcasting</td>
<td>Migrate links. (Year 0-5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Available for DAB assignments (Year 5+), pending equipment availability.</td>
</tr>
<tr>
<td>248 - 254</td>
<td>Broadcasting</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>254 - 286</td>
<td>Mobile</td>
<td></td>
<td>Government to clear 700 kHz for 2-way paging paired with 825 - 925.4.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Clear as required)</td>
</tr>
<tr>
<td>286 - 335.4</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>335.4 - 380</td>
<td>Mobile/Fixed</td>
<td></td>
<td>336 - 345/356 - 366 MHz will be available for WLL from 1 May 1997</td>
</tr>
<tr>
<td>380 - 400</td>
<td>Mobile</td>
<td></td>
<td>Migration towards TETRA in long term. (Year 10 - 15)</td>
</tr>
</tbody>
</table>
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#### 2.8 400 - 470 MHz

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old</th>
<th>New</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>406.1 - <strong>407.625</strong></td>
<td>BTX paired with 416.1 - 417.625.</td>
<td>SF</td>
<td>Migrate links according to link plan. (Year 0-3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>407.625 - 413</td>
<td><strong>SAPS: 407.625 - 410 BTX paired with 417.825 - 420</strong></td>
<td><strong>407.625 - 413 MTX paired with 417.825 - 423</strong></td>
<td>Migrate links according to link plan. (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Government and Public Safety</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>413 - 413.7825</td>
<td>Links</td>
<td>Mobile Data MTX paired with 423 - 423.7625</td>
<td>Migrate links according to link plan. (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Private and Public Networks</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>413.7625 - 416.1</td>
<td>Links</td>
<td>Trunked Mobile MTX paired with <strong>423.7825 - 426.1</strong></td>
<td>Migrate links according to link plan. (Year 0-3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Trunking</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>416.1 - 417.625</td>
<td>BTX paired with <strong>406.1 - 407.625</strong></td>
<td>Trunked Mobile MTX paired with <strong>426.1 - 427.625</strong></td>
<td>Migrate ESKOM to 455 - <strong>460, 465 - 470 utilities band (Year 3 - 5)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Trunking</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>417.625 - 423</td>
<td><strong>SAPS: 417.625 - 420 BTX paired with 407.625 - 410.</strong></td>
<td><strong>417.625 - 423 BTX paired with 407.625 - 413.</strong></td>
<td>Migrate links according to link plan. (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>417.625 - 420 MTX paired with 427.625 - 430 In urban areas.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Government and Public Safety</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As soon as SAPS is on new plan, band 417.625 - 420 would be available for **trunking** in urban areas.

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<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>423 - 423.7625</td>
<td>SF Links</td>
<td>Mobile Data BTX paired with 413 - 413.7625&lt;br&gt;&lt;em&gt;Private and Public networks.&lt;/em&gt;</td>
<td>Migrate links according to link plan. (Year 0-3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Trunk Mobile BTX paired with 413.7625 - 417.625</strong>&lt;br&gt;&lt;em&gt;Public Trunking&lt;/em&gt;</td>
<td>Migrate links according to link plan. (Year 0-5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Trunking BTX paired with 417.625 - 420 in urban areas.</strong>&lt;br&gt;&lt;em&gt;Rural: SF Links&lt;br&gt;Urban: Government and Public Safety&lt;/em&gt;</td>
<td>Migrate links in urban areas according to link plan. (Year 0-5)</td>
</tr>
<tr>
<td>427.625 - 430</td>
<td>SF Links</td>
<td>Mobile MTX &lt;br&gt;441 - 445 paired with 446 - 450&lt;br&gt; <strong>Telemetry / Data MTX 445-446 paired with 440 - 441&lt;br&gt;Mobile MTX 446 - 450 paired with 441 - 445</strong>&lt;br&gt;&lt;em&gt;Data block available for dual frequency alarms. (Immediate)&lt;br&gt;Migrate links according to link plan. (Immediate)&lt;br&gt;Migrate SF mobile to adjacent mobile band or alternative mobile bands. (Year 0 - 5)&lt;br&gt;Migrate mobile from 450 - 470 MHz. (Year 0-5)</td>
<td></td>
</tr>
<tr>
<td>430 - 440</td>
<td>Amateur</td>
<td>N/C</td>
<td></td>
</tr>
</tbody>
</table>
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#### Frequency Band (MHz)

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>450 - 453</td>
<td>Fixed</td>
<td>Paired with 460 - 463.</td>
<td>Migrate links according to link plan.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migrate Swiftnet to 440-441. (Year 0-7)</td>
</tr>
<tr>
<td>453 - 453.975</td>
<td>SF Mobile</td>
<td>N/C</td>
<td>Migrate low power paging from 40.68 MHz. (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migrate single-site paging from VHF-High. (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migrate current SF and DF assignments to 440 - 450 MHz or alternative mobile bands. (Year 0-5)</td>
</tr>
<tr>
<td></td>
<td>454.275 - 454.725 SF Mobile</td>
<td>Upper 4 channels for on-site paging.</td>
<td>Migrate current DF mobile assignments to 440 - 450 MHz or alternative mobile bands. (Year 0-5)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Migrate Transtel from VHF High. (Year 0 - 5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migrate Eskom from 406.1 - 407.625 / 416.1 - 417.625. (Year 3 - 5)</td>
</tr>
<tr>
<td></td>
<td>455.5 - 458.98</td>
<td></td>
<td>Migrate current SF assignments to 463 - 463.975 MHz (SF), DF or LPMR (ERP=500 mW). (Year 0 - 5)</td>
</tr>
<tr>
<td></td>
<td>C450 BTX</td>
<td></td>
<td>Migrate current SF assignments to 463 - 463.975 MHz (SF), DF or LPMR (ERP=500 mW). (Year 0 - 5)</td>
</tr>
<tr>
<td></td>
<td>459 - 460 BTX</td>
<td></td>
<td>Migrate current SF assignments to 463 - 463.975 MHz. DF or LPMR.</td>
</tr>
<tr>
<td>460 - 463</td>
<td>Fixed</td>
<td>Paired with 450 - 453.</td>
<td>Migrate Swiftnet to 445 - 446 MHz. (Year 0-7)</td>
</tr>
<tr>
<td>463 - 463.975</td>
<td>SF Mobile</td>
<td>NIC</td>
<td>Migrate current SF assignments to 463 - 463.975 MHz (SF), DF or LPMR (ERP=500 mW). (Year 0 - 5)</td>
</tr>
<tr>
<td>463.975 - 464.425</td>
<td>SF Mobile</td>
<td>Low Power Mobile Radio (LPMR)</td>
<td>Migrate current OF mobile assignments to 440 - 450 MHz or alternative mobile bands. (Year 0 - 5)</td>
</tr>
<tr>
<td></td>
<td>465.5 - 468.98</td>
<td></td>
<td>Migrate current OF mobile assignments to 440 - 450 MHz or alternative mobile bands. (Year 0 - 5)</td>
</tr>
<tr>
<td></td>
<td>C450 MTX</td>
<td></td>
<td>Migrate current SF assignments to 463 - 463.975 MHz. DF or LPMR.</td>
</tr>
<tr>
<td></td>
<td>469 - 469.975MTX</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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#### 2.9 470 - 960 MHz

No significant changes to these bands. Links within this band should migrate according to the link migration plan.

#### 2.10 960 - 3000 MHz

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>960 - 1350</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>1350 - 1400</td>
<td>Mobile / Radiolocation</td>
<td>Fixed links (CEPT T/R 13-01)</td>
<td>Migrate Radar to 860 - 1350 MHz. (Immediate). Links that fall into the sub-band 1385-1400/1447-1452 MHz, and that are problematical, will be given a high priority in the migration</td>
</tr>
<tr>
<td>1400 - 1427</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>1427 - 1452</td>
<td>Fixed</td>
<td>Fixed Links (CEPT T/R 13-01)</td>
<td>Migrate links according to link plan (Year 0 - 3). Links that fall into the sub-band 1385-1400/1447-1452 MHz, and that are problematical, will be given a high priority in the migration</td>
</tr>
<tr>
<td>1452 - 1467</td>
<td>Fixed</td>
<td>Terrestrial Digital Audio Broadcasting</td>
<td>Migrate links according to link plan. (Year 0 - 5)</td>
</tr>
<tr>
<td>1487 - 1492</td>
<td>Fixed</td>
<td>Satellite Digital Audio Broadcasting</td>
<td>No migration</td>
</tr>
<tr>
<td>1492 - 1525</td>
<td>Fixed</td>
<td>1492 - 1517 Fixed links. (CEPT T/R 13-01)</td>
<td>Existing links to migrate according to link plan. (Year 0 - 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1517 - 1525 Single Frequency Fixed links.</td>
<td>Migration of SF links from other bands (Year 0 - 3)</td>
</tr>
<tr>
<td>1525 - 1710</td>
<td>Various</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>1710 - 1785</td>
<td>Fixed links</td>
<td>Personal Communication Networks (PCN)</td>
<td>Migrate links according to link plan (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Migrate Radar to radiolocation block (Immediate)</td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Period</th>
<th>Category</th>
<th>NIC</th>
<th>Migrate links according to link plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1785 - 1805</td>
<td>Various</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1805 - 1880</td>
<td>Fixed links</td>
<td>Personal Communication Networks (PCN)</td>
<td>(Year 0 - 3)</td>
</tr>
<tr>
<td>1880 - 1920</td>
<td>Fixed links</td>
<td>1880 - 1900 DECT</td>
<td>Migrate links according to link plan (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1900 - 1920 WLL</td>
<td></td>
</tr>
</tbody>
</table>
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### 2.1 CORRECTIONS TO PAGE 82

This section introduces corrections to page E2 of Government Gazette No. 17983. 6 May 1996:

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920 - 2025</td>
<td>Various</td>
<td>N/C</td>
<td>Migrate links according to links plan (Immediate)</td>
</tr>
<tr>
<td>2025 - 2110</td>
<td>Fixed links</td>
<td>2025 - 2075 Fixed links (CEPT/R 13-01)</td>
<td>Migrate links according to links plan (Year 0 - 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2075 - 2110 Fixed Services pertaining to the provision of WLL</td>
<td></td>
</tr>
<tr>
<td>2110 - 2200</td>
<td>Various</td>
<td>N/C</td>
<td>Migrate links according to links plan plan (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migrate radar to radiolocation blocks (Immediate)</td>
</tr>
<tr>
<td>2200 - 2290</td>
<td>Fixed links</td>
<td>2200 - 2250 Fixed links (CEPT/R 13-01)</td>
<td>Migrate links according to links plan (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2250 - 2285 Fixed Services pertaining to the provision of WLL</td>
<td>2250 - 2285 MHz Migrate links according to links plan (Year 0 - 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Migrate radar to radiolocation blocks (Immediate)</td>
</tr>
<tr>
<td>2290 - 2300</td>
<td>Various</td>
<td>N/C</td>
<td>Migrate links according to links plan (Immediate)</td>
</tr>
<tr>
<td>2300 - 2360</td>
<td>Various</td>
<td>Fixed Services pertaining to the provision of WLL</td>
<td>Migrate links according to links plan (Year 0 - 4). Links that are problematical to the new service will have a high priority in the migration.</td>
</tr>
<tr>
<td>2360 - 2500</td>
<td>Various</td>
<td>N/C</td>
<td>Replan MMDS traffic plan.</td>
</tr>
<tr>
<td>2500 - 2700</td>
<td>Fixed links</td>
<td>2500 - 2690 MMDS</td>
<td>Migrate links according to links plan.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2690 - 2700 Radio Astronomy</td>
<td></td>
</tr>
<tr>
<td>2700 - 3000</td>
<td>Aeronautical Radionavigation</td>
<td>N/C</td>
<td></td>
</tr>
</tbody>
</table>

[Page replaced by Notice No. 1334 of 1998]
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3 Migration of particular services

3.1 Introduction

This section provides more detailed strategies for migration of particular services:

- fixed links (section 3.2);
- mobile services in VHF High Band (section 3.3);
- paging (section 3.4);
- alarms (section 3.5).

3.2 Fixed links

One of the fundamental long term aims that is encompassed within the future bandplan is the migration of fixed links to higher frequencies, in particular from bands below 1 GHz, and to frequencies above 3 GHz where possible. This has a number of effects:

- UHF (400 - 470 MHz) links should be moved above 3 GHz where possible. However, spectrum in 427.625 - 430 MHz is reserved for single frequency links in rural areas, and spectrum in 450 - 453 paired with 460 - 463 MHz is reserved for dual frequency links.

- Links in the 800 MHz band (854 - 960 MHz) should in general also be moved above 3 GHz where possible, although in some cases it may be possible for these to remain where this can be justified.

- Links in the range 1.3 - 2.5 GHz should be moved above 3 GHz where possible. However, in some cases the links can remain unchanged, or be moved to the new channelling plan in 1.3 - 2.5 GHz, if a case can be made why they should not move higher.

- New allocations for fixed links will be made in the band 1350-1525 MHz, in accordance with the plans in CEPT Recommendation T/R 13-01. These frequencies will be used in cases where a user is migrating fixed links from the UHF band, or from other frequencies around 1.5 GHz, but for some well-justified reasons it is unreasonable to insist that the links are moved above 3 GHz.

Currently links exist in the following bands below 470 MHz:

- VHF High. This is a very valuable part of the spectrum for mobile services and should definitely not be restricted by fixed links.
238 - 246 MHz. Relatively few links have been assigned frequencies in this band. These will have to move to a higher frequency band for the roll-out of digital audio broadcasting.

406.1 - 420 MHz. Some medium-capacity links exist which should be moved to frequencies between 1 and 3 GHz.

420 - 430 MHz. Most of the low capacity single frequency links are in this part of the band. These will mainly have to migrate to the band 1517-1525 MHz, to be assigned from the lower frequencies upwards.

440 - 450 MHz. Some single and dual frequency links are used in this part of the spectrum. They will be migrated out of this band and assigned in the appropriate bands for the capacity required.

450 - 453 MHz paired with 460 - 463 MHz. Users would be required to rationalise their use of frequencies in these bands and motivate why they should not move. Spectrum will be provided for dual frequency, low capacity systems in 1350 - 1375 MHz paired with 1492 - 1517 MHz or 1375 - 1400 MHz paired with 1427 - 1452 MHz.

In evaluating the necessity of maintaining a lower frequency link the following factors will be taken into account:

- alternative possibilities (eg landlines, shared links, etc);
- link capacity;
- distance to be covered;
- area of use (rural or urban);
- relevant ITU recommendations.

The following pages presents two tables: the bands that links will have to migrate out of and the bands that links will migrate to.
### Bands that links will have to migrate out of

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>New Allocation</th>
<th>Existing Capacity</th>
<th>Time for migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>238 - 240</td>
<td>DAB</td>
<td></td>
<td>Year 0 - 3</td>
</tr>
<tr>
<td>240 - 246</td>
<td>DAB</td>
<td></td>
<td>Year 3 - 10</td>
</tr>
<tr>
<td>406.1 - 407.625</td>
<td>SF Mobile</td>
<td></td>
<td>Year 3 - 5</td>
</tr>
<tr>
<td>407.625 - 413</td>
<td>Government and Public Safety</td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>413 - 413.7625</td>
<td>Mobile Data</td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>413.7625 - 418.1</td>
<td>Public Trunking</td>
<td></td>
<td>Year 3 - 10</td>
</tr>
<tr>
<td>416.1 - 417.625</td>
<td>Public Trunking</td>
<td></td>
<td>Year 3 - 10</td>
</tr>
<tr>
<td>420 - 423</td>
<td>Government and Public Safety</td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>423 - 423.7625</td>
<td>Mobile Data</td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>423.7625 - 426.1</td>
<td>Public Trunking</td>
<td></td>
<td>Year 3 - 10</td>
</tr>
<tr>
<td>426.1 - 427.625</td>
<td>Public Trunking</td>
<td></td>
<td>Year 3 - 10</td>
</tr>
<tr>
<td>427.625 - 430</td>
<td>Urban : Government and Public Safety</td>
<td></td>
<td>Year 5 - 10</td>
</tr>
<tr>
<td>440 - 449</td>
<td>Mobile</td>
<td></td>
<td>Year 0 - 3</td>
</tr>
<tr>
<td>854 - 884</td>
<td>Links</td>
<td></td>
<td>Migrate to shared Broadcasting spectrum or higher frequencies where possible (Year 0 - 5)</td>
</tr>
<tr>
<td>868.1 - 876</td>
<td>Links</td>
<td></td>
<td>Migrate to shared Broadcasting spectrum or higher frequencies where possible (Year 0 - 5)</td>
</tr>
<tr>
<td>876 - 880</td>
<td>Digital Trunking</td>
<td></td>
<td>Year 3 - 5</td>
</tr>
<tr>
<td>880 - 890</td>
<td>E-GSM</td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>915 - 921</td>
<td>Reserved</td>
<td></td>
<td>Year 3 - 5</td>
</tr>
<tr>
<td>921 - 925</td>
<td>Digital Trunking</td>
<td></td>
<td>Year 3 - 5</td>
</tr>
<tr>
<td>925 - 925.4</td>
<td>Two-way Paging</td>
<td></td>
<td>Year 0 - 3</td>
</tr>
<tr>
<td>925.4 - 935</td>
<td>E-GSM</td>
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<td>Immediate</td>
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</tbody>
</table>

*Page replaced by Notice 1334 of 1998*
This section introduces corrections to page 86 of Government Gazette No. 17983, 6 May 1996:

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>New Allocation</th>
<th>Existing Capacity</th>
<th>Time for migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1427 - 1454.5</td>
<td>1427-1452 Low Capacity Links</td>
<td>74 x 500 kHz</td>
<td>Year 0 - 3 Immediate</td>
</tr>
<tr>
<td></td>
<td>1452 - 1487 T-DAB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1492.5 - 1530</td>
<td>1492 - 1525 Low Capacity links</td>
<td>74x500 kHz</td>
<td>Immediate</td>
</tr>
<tr>
<td></td>
<td>1525 - 1535 Maritime Mobile Satellite (E-to-E)/Fixed/Space Operation (E-to-E)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1710 - 1784</td>
<td>1710 - 1785 PCN MTX</td>
<td>22 x 3.5 MHz</td>
<td>Immediate</td>
</tr>
<tr>
<td>1829 - 1903</td>
<td>1880 - 1900 : DECT</td>
<td>22 x 3.5 MHz</td>
<td>Immediate</td>
</tr>
<tr>
<td>1900 - 1920</td>
<td>1900 - 1920 : WLL</td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>1911.5-2087</td>
<td>1895 - 1980 FPLMTS (Satellite)</td>
<td>8 x 7 MHz and 3 x 29 MHz</td>
<td>Year 5 - 10 Immediate Year 0 - 3. 1885 -2010 MHz will be given a high priority in the migration</td>
</tr>
<tr>
<td></td>
<td>1960 - 2010 Mobile-Satellite (E-to-E)/Fixed/Mobile</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2010 - 2025 FPLMTS (Terrestrial)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2025 - 2067 Low Capacity Links</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2075 - 2110 Fixed Services pertaining to the provision of WLL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2124 - 2280</td>
<td>2110 - 2170 FPLMTS (Terrestrial)</td>
<td>8 x 7 MHz and 3 x 29 MHz</td>
<td>Year 5 - 10 Immediate Year 0 - 3. 2110 - 2280 MHz will be given a high priority in the migration</td>
</tr>
<tr>
<td></td>
<td>2170 - 2200 FPLMTS (Satellite)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2200 - 2260 LOW Capacity Links</td>
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</tr>
<tr>
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<td>2290 - 2285 Fixed Services pertaining to the provision of WLL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2306 - 2390</td>
<td>2290 - 2300 Links</td>
<td>4.2 x 2 MHz</td>
<td>No immediate migration Year 0 - 4. Certain problematic links will be given a high priority in the migration</td>
</tr>
<tr>
<td></td>
<td>2300 - 2390</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2402 - 2484</td>
<td>2400 - 2484 ISM</td>
<td>42 x 2 MHz</td>
<td>No immediate migration</td>
</tr>
<tr>
<td>2500 - 2600</td>
<td>MWDS band</td>
<td>8 MHz</td>
<td>Immediate replanning</td>
</tr>
<tr>
<td>2890 - 2700</td>
<td>Radio Astronomy</td>
<td></td>
<td>Immediate</td>
</tr>
</tbody>
</table>

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3.3 VHF High

This section proposes a strategy for migrating systems in the VHF high (137 to 174 MHz) band to the new band plan for that part of the spectrum. The band is broken up into four sub-bands:

- 137 - 146 MHz;
- 146 - 156 MHz;
- 156 - 165 MHz;
- 165 - 174 MHz.

For each of these sub-bands a diagrammatic presentation of the migration is given. Shaded areas in the diagrams indicate bands where systems currently exist or where systems are migrated to. Clear areas indicate bands which are unused or to be cleared in the process of migration. In each diagram the bands are presented as two adjacent bars with the current 25 kHz spacing on top and the interleaved channels (channels created in-between because of the 25 kHz to 12.5 kHz channel spacing change) on the bottom bar.

Overall migration principles applicable to the VHF High band include:

- Migration of all paging systems to bands allocated for paging;
- Migration of all alarm systems to bands allocated for alarms;
- Migration of all municipality, local and regional authorities to Government and Public Safety band in UHF.
Phase 1: Year 0 - 5

- Transtel move their systems (MTX 138.475 - 138.95, BTX 142.8 - 143.325, SF 138.95 - 141.45) to the utilities tanking band (UHF 450-470).

- Single frequency operations (SF 141.475 - 142.8) consolidate in (SF 141 - 141.5) by using interleaved channels or move to dual frequency systems.

- No new assignments to low power devices (141-142 MHz) in this band. Low power devices to naturally migrate to 402 - 406 MHz, 433.92 MHz or other ISM bands.

Phase 2: Year 5 - 7

- **Clear** MSS band (MTX 137.775 - 138 paired with BTX 143.325 - 143.525) by using interleaved channels in (MTX 138.45 - 139.3, BTX 141975 - 142.8).

- Move (BTX 143.525 - 144) to (BTX 141.5 - 141.975) to achieve 3.5 MHz transmit-receive separation.
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146 - 156 MHz

Phase 1: Year 0 - 1
- Consolidate Government in (150.575 - 152.2) in (151 - 152.05).
- Migrate (SF 150.05 - 150.575) to (SF 152.2 - 153.05) or DF systems.
- Migrate (SF 152.05 - 153.05) to DF systems where practical.

Phase 2: Year 1 - 5
- Migrate paging systems in the VHF high band to the paging band (150.05 - 151 MMz). See also 3.4 - detailed paging migration.
- Migrate alarms in 146 - 174 MHz to the alarm band (152.05 - 152.55).
- Migrate SF in 146 - 174 MHz to (SF 152.55 - 153.05).
Phase 1: Year 0 - 5

- Migrate (BTX 157.95 - 160, MTX 162.95 - 165) to (BTX 157.95 - 160, MTX 162.55 - 164.6) to re-adjust offset to 4.6 MHz. (BTX moves 12.5 kHz, MTX moves 387.5 kHz)

- Migrate (BTX 157.45 - 157.95, MTX 162.45 - 162.95) to (BTX 160.6 - 160.975, MTX 156 - 156.375) to clear 157.45 - 157.95 for BTX/MTX swap.

- Migrate (SF 156 - 156.375, 156.875 - 157.45, SF 160.6 - 160.975, SF 161.5 - 162.05, SF 162.05 - 162.45) to (SF 156.375 - 156.7625, SF 160.975 - 161.475) or DF bands.

Phase 2: Year 5 - 7

- Migrate (BTX 165.5 - 167.5, MTX 172 - 174) to (BTX 157.95 - 160, MTX 182.55 - 164.6) interleaved channels to clear blocks in upper bands for MTX/BTX swap.
• Migrate (SF 160.06 - 160.6) to (BTX 162.05 - 162.55, MTX 157.95 - 180.45, SF 160.975-161.475) to dear band for DF assignments.

Phase 3: Year 7 - 10

• Migrate (SF 156.375 - 156.725, SF 156.8375 - 156.875, SF 160.975 - 161.5) to (BTX 157.95 - 160.5, MTX 162.55 - 165.05) where practical.

• Migrate (MTX 165.05 - 185.5, BTX 170.05 - 170.55) to (BTX 170.55 - 173.55, MTX 165.45 - 168.95) to dear for new DF arrangement.
Phase 1: Year 0 - 5

- Migrate (SF 169.4 - 169.8) to other SF or DF bands to clear band for ERMES. ERMES protocol to be prescribed. Assignment to paging with other protocols pending changes in market.

Phase 2: Year 5 - 7

- Migrate (BTX 165.5-167.5, MTX 172 - 174) to (BTX 157.96 - 160, MTX 162.55 - 164.6) interleaved channels to clear blocks for MTX/BTX swap. Phase 3: Year 7 - 10

- Migrate (BTX 170.55 - 171.95) to (BTX 172.5 - 173.5) to adjust to new transmit-receive separation.

- Migrate (BTX 170.05 - 170.55, MTX 165.05 - 165.5, SF 168.95 - 169.4, SF 169.8 - 170.05) to (BTX 170.55 - 173.55, MTX 165.95 - 168.95) to clear blocks for new DF bands.

- Migrate (MTX 165.05 - 165.5, BTX 170.05 - 170.55) to (BTX 170.55 - 173.55, MTX 165.45 - 168.95) to clear for new DF arrangement.
3.4 Paging

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.995 - 27.195</td>
<td>Low power paging</td>
<td>Available for assignment</td>
</tr>
<tr>
<td>40.675 - 40.685</td>
<td>Amateur</td>
<td>Migrate existing low power paging to 26.12 MHz, 53 MHz or UHF Paging. (Year 0 - 5)</td>
</tr>
<tr>
<td>53.025 - 53.225</td>
<td>Low power paging</td>
<td>Available for assignment</td>
</tr>
<tr>
<td>137.775 - 174</td>
<td></td>
<td>National paging to migrate to 150.05 - 151 MHz. (Year 0-5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All other paging to migrate to relevant paging bands, mostly 453.975 - 454.425 MHz. (Year 0-5)</td>
</tr>
<tr>
<td>150.05 - 151</td>
<td>Wide area paging</td>
<td>Government to migrate from 150.5 - 151 MHz and consolidate in 151 - 152.05 MHz. (Immediate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single Frequency assignments in 150.05 - 150.5 migrate to adjacent blocks. (Immediate)</td>
</tr>
<tr>
<td>169.4 - 169.8</td>
<td>ERMES</td>
<td>Current SF assignments to migrate to adjacent mobile blocks. (Year 3 - 5)</td>
</tr>
<tr>
<td>278 - 286 (700 kHz)</td>
<td>FLEX Outbound leg</td>
<td>Government to clear 700 kHz. (Year 0-3)</td>
</tr>
<tr>
<td>453.975 - 454.425</td>
<td>Regional Paging</td>
<td>Current MTX assignments in 454.025 - 454.125 to migrate. (Year 0-3)</td>
</tr>
<tr>
<td></td>
<td>On-site paging (top 4 channels)</td>
<td>Current MTX assignments in 454.025 - 454.125 to migrate. (Year 0-3)</td>
</tr>
<tr>
<td>925 - 925.4</td>
<td>FLEX Inbound leg</td>
<td>Migrate links according to link plan. (Year 0-3)</td>
</tr>
</tbody>
</table>
3.5 **Alarms**

Alarm systems are mostly used in VHF-High spectrum. These will be consolidated in the following blocks:

<table>
<thead>
<tr>
<th>Frequency Band (MHz)</th>
<th>Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>81 - 81.625 BTX paired with 88.375 - 87 MTX</td>
<td>DF Alarms / Mobile</td>
<td>Interleaved channels immediately available for assignment.</td>
</tr>
<tr>
<td>140.5 - 141</td>
<td>Alarms (SF)</td>
<td>Interleaved channels immediately available for assignment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Non-interleaved</strong> channels available for assignment in Year 5+</td>
</tr>
<tr>
<td>152.05 - 152.55</td>
<td>Alarms (SF)</td>
<td>Interleaved channels immediately available for assignment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-interleaved channels available in Year 3+</td>
</tr>
<tr>
<td>440 - 441 BTX paired with 445 - 446 MTX</td>
<td>Telemetry / Data</td>
<td>Immediately available for assignment.</td>
</tr>
</tbody>
</table>
Band plan for the frequencies
3.4 GHz to 3.6 GHz

Version 1.0
24 April 1997
1 Introduction

This document presents the band plan for the frequencies 3.4 GHz and 3.6 GHz and was produced to facilitate certain key Government strategies regarding universal service.

2. Band Plan

The following table presents the band plan for the future use of the radio spectrum in South Africa between 3.4 GHz and 3.6 GHz.

- Frequency Band. The range of frequencies associated with the main allocations (in MHz). The frequency indicated as the start of the band is included within the band. The frequency used to denote the end of the band is not included in the band.

- Main Allocations. This column indicates the main services to which each band is to be allocated. The service types are as defined by the ITU, and the allocations are in most cases consistent with the ITU Radio Regulations for Region 1 (as modified as a result of the World Radio Conference WRC-95). The allocations are all primary unless otherwise indicated, with different services delimited by oblique strokes. The service that will have most widespread use in the future is generally listed first.

- Sub-Allocations. This column gives details of any sub-allocations within a band, including proposed usage of the sub-band and range of frequencies in MHz. Where no sub-bands are indicated, the column may in some cases provide further details of the proposed usage of the band.

- Notes and comments. The comments in the right hand column give further information concerning the band, in particular when changes to its usage are proposed.
### 3.142

**TELECOMMUNICATIONS ACT**

Part 3: General Notices  

**Act No. 103 of 1996**

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<table>
<thead>
<tr>
<th>Frequency Band (GHz)</th>
<th>Main Allocations</th>
<th>Sub-Allocations (MHz)</th>
<th>Notes and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4 - 3.6</td>
<td>Fixed</td>
<td>WLL</td>
<td>see note 3.1</td>
</tr>
</tbody>
</table>

---

### 3. Supporting notes

#### 3.1 3.4 - 3.6 GHz (200 MHz for wireless local loop - WLL)

This band is allocated to WLL on an exclusive basis and will facilitate the major thrust of the provision of lines through WLL. This allocation is in line with technology developments, with regard to WLL, in Europe. The existing Outside Broadcast links will be required to migrate to alternate bands.
Department of Communications

Migration strategy for the frequencies
3.4 GHz to 3.6 GHz

Version 1.0

24 April 1997

Contents

1 Introduction

2 Migration strategy for bands

1 Introduction

1.1 General

This document presents the migration strategy for aligning existing radio communications systems with the South African Band Plan for the frequencies 3.4 GHz to 3.6 GHz. This document should be read in conjunction with the band plan for the frequencies 3.4 GHz to 3.6 GHz (Version 1.0).
2. Migration strategy for bands

2.1 Introduction

The table in this section provides an indication of which bands have changed and the timescales for implementing those changes.

Time for migration is indicated by Year x - y, where year x is included and year y excluded.

The term migrate is used where systems in one frequency band will move to a different frequency band, or to different frequencies within the band. The term assign is used where a band is available for assignment to new licenses, which is not part of the migration process.

4. Migration Strategy

<table>
<thead>
<tr>
<th>Frequency Band (GHz)</th>
<th>Old Allocation</th>
<th>New Allocation</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4 - 3.6</td>
<td>Outside Broadcast</td>
<td>WLL</td>
<td>Year 0 - 3. Links that are problematic to the new service will be given a high priority in the migration</td>
</tr>
</tbody>
</table>