Implications of network economics for organization, culture and policy

A paper prepared for the International Symposium on Network Economy and Economic Governance held in Beijing, the People's Republic of China, from 19 to 20 April 2001.
First draft, March 15, 2001

Keith Acheson, Professor
Carleton University, Ottawa, K1S 5B6

Over many centuries, technological developments and organizational innovations have steadily improved the capacity of communications systems to create value. This nurturing flow has been uneven. Periods of gradual change have been interspersed with larger shocks. When a significant source of change, such as the development of the telephone or the radio, has occurred the pace of its dispersion over time and across the world has been relatively gradual. In contrast, a recent cluster of integrated improvements in communications technology has had an unprecedented rapid and wide effect on the commercial and non-commercial aspects of life. Its impact, socially as well as economically within the countries that were at the center of its development, has been significant and compressed into a remarkably short window of time. Its transmission to other countries has also been rapid. The pace of recent change and the inventory of credible new developments give credence to the view that the experienced changes will continue, perhaps more slowly, but still at a rapid rate.

At the core of the complementary developments are significant improvements in computing power, storage capacity, input devices, and programming capabilities. Digital communication links among proliferating nodes of intelligence multiply the value of stored data and of dispersed computing power. Communication satellites expand the span and usefulness of terrestrial connections and enhance the quality of distant linking. Fiber optics technology increases the capacity of physical communication links at the cost of creating an optical and electronic interface. Compression techniques raise the ability of both wireless and physical connections of different generations to carry information. This set of complementary wireless and physical links creates networks with an increased capacity to communicate and add value. Links among networks create networks of networks. The most open of these is the Internet.¹

Many of the Internet services depend on adding value by sharing information. Some of the exchanges of information are targeted. E-mail competes with and complements the traditional mail services. Scholars exchange views on many topics with peers on list services. A student downloads a set of lecture notes for a class. Other services broadcast rather than narrowcast information. Advertising emails are sent to a list of addresses, often to the irritation of the recipients. Government departments and regulatory agencies

¹ The Internet is an international network of computer networks that is based on common communications protocols. I will also use the term Internet generically to represent linked networks. In some contexts the term will represent the set of emerging phenomena with the same technological base.
make policy analyses, regulations, decisions, and laws available to a wide public. Public and private interest groups vie to mobilize public opinion on current issues. Newspapers and magazines grant free access to all, or a selection of, their current content. Businesses advertise in every conceivable niche of the computer screen. Beginning in the 1920s radio and television provided advertising opportunities that accelerated the development of national brands in many countries. The Internet is a vehicle internationalizing the establishment of brands through advertising and infomercials.

New industries have developed that are complemented by the Internet and share the same technological base. The computer game industry, for example, reports revenues that compare with the worldwide box office revenues of the film industry. Old economy industries such as the automotive industry and banking have been partially transformed by the same technologies. Cars are becoming as much electronic as mechanical with navigation devices, diagnostic programs, satellite digital radio receivers, and communication connections to services on the Internet. In finance, the cash card and Internet banking promise to make visits to the bank a rare rather than everyday event. Almost every sector of the economy, new or old, either conducts business differently or believes that it will in the near future. The transformations have occurred throughout the production, distribution and marketing chain.

Consider the traditional activity of writing, publishing, distributing and selling a book. Today, authors routinely research their works on the Internet; create on word processors; insert their editor’s corrections and suggestions; and deliver to their publisher an electronic manuscript that is ready to print. The Internet is integrated into the promotion of the book through email campaigns, touting on the publisher’s web site, and electronic access to reviews and promotional material. On line booksellers compete effectively with both the small neighborhood and the mall bookstore. Those online booksellers that do not also sell books in stores have been able to reduce costs arising from carrying inventory and returning unsold books to the publisher. Books are delivered directly to the consumer by package delivery services from warehouses or in some instances from the publisher. Large on-line sellers can provide personal services and targeted advertising to a customer by coupling his or her purchasing history with information provided at the time of registration. At the site a customer can access published reviews, the comments of other customers or a list of books on the same topic. In the background, readers for electronic books are improving rapidly. The tilting point leading to a rapid increase in the distribution of reading material electronically may not be far off and to new struggles on the copyright front.

In addition to the transfer of some traditional retail business from the store to the Internet, there have been a number of other e-commerce services launched. Many of these have failed. The successes cluster in different areas. I will mention five that are mass-market oriented.

1. The delivery of customized information by portals or different general or specialized news services
2. The provision of supporting information and rules for the exchange or auction of
goods, music, or images by individuals to other individuals.

3. The provision of an increasing array of financial services

4. The delivery of multi-media messages, for example, services providing multi-media greeting cards

5. The supply of content that can be readily stored and distributed electronically, such as image services, music, text, and travel and event information and tickets

Many services that combine the exchange of information and contracting for goods and services among a set of businesses have been launched or proposed. These networks are frequently closed and information on their success is difficult to obtain. Often they are building on, extending, and changing the protocols of interaction for existing “virtual” networks of suppliers and customers. There is continuing experimentation with formats but these developments target fewer parties and are less speculative than mass-market businesses.²

Although the Internet is based on continuing technological innovation, its development has depended on new configurations of public, non-profit and for-profit organizational responses. In section II, I briefly examine some concepts that have been proposed as keys to understanding the organizational response to the challenges posed. These are network economics, lock-in, price and quality discrimination, informational cascades, the durability of media, and piracy. At least some of these concepts have precedents in earlier economic writings but it has been argued they are of much greater significance in the current situation. The concepts help to understand some aspects of the organizational response. They do not shed much light on how such dramatic change has been financed and whether the system that financed the building of the Internet can finance its maintenance and evolution.

The various types of Internet organizations operate within different cultural environments and under a large number of different national policies. The enforcement of some national policies has been made much more difficult because of the international reach of the Internet. Although nation states may reconsider the wisdom of trying to maintain some of the restraints that are being avoided through the Internet, given the gains from participation in the process, one can expect renewed efforts to enforce policies that enjoy wide public support.

As discussed in section III, some predictable areas of regulatory concern will be: to make sanctioned censorship effective, to establish taxation authority over Internet transactions, to limit the abuse of information gathered on the Internet, and to protect domestic economic interests from Internet competition. Improvements in the transmission of audio and audio-visual content on the Internet will impact on national policies that, for example, restrict foreign content on radio and television and in cinemas. Affected companies or state enterprises that do not have parallel interests in the Internet are likely to appeal for protection. In some countries the cultural policies governing media are also

² Good figures are not available but there seems to be a wide consensus that business to business services represent about 80% of total e-commerce.
designed to maintain the viability of a national language. The perceived threat to the integrity of a local language adds to the pressures for protecting cultural industries. If the need to finance e-commerce in services results in an increased use of access charges, some states may also become more active in subsidizing access of targeted groups such as educational institutions.

Many national policy initiatives can be adopted unilaterally without eliciting a response from other countries. For initiatives with significant effects on other countries, attempts will and should be made to negotiate mutually beneficial restrictions on actions that can be taken. These international accords will parallel those governing trade and copyright or be contained within them. Internet concerns are one of the forces driving demands for concessions in the renegotiation of positions originally adopted in the GATS. Similarly and with a more urgent timetable, developments on the Internet are forging a reinterpretation of copyright law to cope with new circumstances. The international implications of providing a legal environment for the Internet will be briefly discussed in section IV.

II Economic concepts and organization

Of the three layers of decision-making that I will discuss—the enterprise, the nation, and the international community of nations, I begin with the smallest. Firms and non-profits are decision-making centers operating in a market network that is conditioned by national and international policy. A number of concepts have been developed to analyze the challenges facing for-profit and non-profit organizations operating in the “new economy” of the Internet: network economies, lock-in effects, price and quality discrimination, informational cascades, the durability of media, and intellectual property management (piracy).

Network economies occur when the value of being a member of a network rises as the size of the network increases. A network may refer to a system with communications links connecting members, such as a telephone network. Less precisely, the concept also refers to a group of people who have a common interest. In this vein, one may talk of the people who use a particular computer operating system. An owner of an Apple computer is assumed to benefit from the number of other owners through the availability of more software options and the like. There are no physical links but a link of interest. Much of the current analysis looks at the problem from the perspective of the firm supplying the telephone service or the computer brand. From that vantage point, the network economy translates to a higher willingness to pay for a telephone service subscription or for the computer if the relevant network is larger.

Books of advice on how one firm can steal a march on others through pricing and promotions in the face of network economics are currently popular. These pricing and promotional tactics tax existing customers and subsidize new ones. To tax existing

---

3 A leading theorist of the firm, Coase (1990, 12) put it this way: “Most production in a Western economy is carried out in this planned society, the firm.”
customers something must prevent them from quitting the service (leaving the ranks of the taxed) and signing on as a new customer (joining the ranks of the subsidized). Lock-in is the term that describes the “something.” A customer can be locked in an obvious manner by a long term contract. Lock-in can also occur through concentrating the subsidy on a complementary good that has no value except in conjunction with the service. For example, if the telephone service requires the purchase of a cellular telephone, the subsidy may be limited to the phone and not affect the monthly service charges. The existing customer is locked in to the high service charge. An existing subscriber does not gain anything by quitting and signing up again if a second phone is worth less than the subsidized price. Had the phone been rented on a short-term basis this type of lock-in would not be feasible.

Similarly, software written for a particular operating system and embedded in a medium such as a disk is a durable good that is typically bought and not rented for short periods of time. If it were rented for short periods of time, a cheaper rental price to new subscribers would not be a means for “growing” the network as the old customers would quit and join again. The customer who has already purchased his or her software, on the other hand, is locked-in and cannot gain from lower prices for new customers. From the established firm’s point of view locking-in customers makes it more difficult for a new firm to enter at a threatening scale by signing up large numbers of its customers.

Lock-in allows price discrimination between old and new customers. Many of the services and products based on the new technologies have been subject to other forms of price and quality discrimination. Producers can choose the quality variants of products so as to create separate markets that have the most total profit potential. The cost differences between the two variants interact with demand conditions to determine the price differences. In some instances it may actually cost more to produce the poorer quality variant that is sold at the discounted price.

Potential customers are often uncertain as to the value of new products and services. Lacking experience with the product, they turn to other sources of information. They may do time-consuming research on the product or service or try and deduce what others know about the service from their behavior. If the potential customers perceive a lot of people using the service or product or are told by many friends that it is worthwhile, the inferred information may override any discoveries done in personal research. A process of this type has been called an informational cascade. In an informational cascade, many people may end up buying a good or service because of the influence of a few early consumers. If these trend-setting consumers were mislead or had very different tastes from the followers, there will be many disappointed consumers and a subsequent collapse in demand. On the other hand a service or product that might have generated a lot of economic value to consumers, may fail because no early enthusiasm for them was generated.

---

4 The phenomenon described is identical to or similar to admonition 2 of the organizational literature, noted above, that optimal contract arrangements are affected by the specificity of the asset.
No one knows with certainty how to seed an informational cascade but it is clear that the Internet can play a role in the process. Internet induced cascades can relate to entertainment or cultural products, the success of a low-budget American film, the Blair Witch Project, is often cited as an example in this category, or to public policy, the campaign against the MAI is a Canadian example in this category. A more recent example of an attempt to use the Internet to increase interest in public policies is the live 40 minute forum given by Russia’s Prime Minister Vladimir Putin and carried world wide by the BBC through the Internet. According to the New York Times of March 6, 2001, a spokesman for Mr. Putin’s staff said “We wanted to show that we understand that the Internet is an important part of forming public opinion. This is well known in the West, but not yet so widespread here.”

The durability of the asset generating a service can be an important element in lock-in. It also has other effects. A song heard at a web site is enjoyed at the time it is played. If the person controlling the web site removes or requires payment for it to be played, outsiders can no longer access it for free. If the song is downloaded to a hard drive on another computer, the person that posted it retains control over his or her copy but loses control of the downloaded copy. From one perspective the song has been made available to another person at a trivial cost. The new owner has it stored on a durable medium and can play it at any time. This process can continue with the one song being distributed to a large number of listeners at a very low cost of multiple downloads.

If we are only concerned with the pleasure derived from an existing song, a process of granting free access to a song is benign. Unfortunately songs are not often gifts of a Nature but the results of creative production. When we consider their production, controlled distribution may be warranted. Without it, those who produced the song will not earn the revenue necessary to cover their investment. If that is anticipated, no song will be produced to enjoy the distribution generated by free access. The example illustrates the economic compromise embodied in intellectual property law. The trade off is between the creativity inducing incentives of granting a temporary monopoly in the song through copyright law and the costs engendered by excluding some listeners who value the song more than the costs of distribution but less than the price set by the owner of the copyright.

The nature of the compromise depends on the net effect of the different dimensions of copyright law—the duration and breadth of protection, the exemptions granted for fair dealing or for particular purposes, and various provisions of copyright and related laws that affect contracting and pricing. My discussion of distributing a song could have focused on taping of recorded music. That variant of the problem explains why those that favor a more protective copyright compromise supported the inclusion of Article 14 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) annex of the WTO accord requiring members to create a rental right for records. A rental right allows

---

5 Jim Banister, executive vice president of Warner Bros. Online, is said to have observed that in response to the Blair Witch Project success “filmmakers are already demanding that Internet marketing campaigns be included in their contracts.” (Reported by the Internet news service Newsbytes see us.imdb.com Movie TV/News 4th August 1999)
record companies to sell CDs or cassettes that cannot legally be rented. This makes illegal copying more difficult. Computer programs and films received a similar right (Article 11). 6

Both copyright and censorship are policy mechanisms for controlling the distribution of content. With censorship the state forbids the distribution of specified content. With copyright the owner can forbid or permit the distribution of protected content. The rationales for exercising control differ in the two cases. The rationale may also differ among copyright holders. Commercial firms manage their copyrights for profit while charitable organizations and state enterprises have different motivations.

Content providers can also control access to their sites or part of their sites. The openness of their sites depends on a calculated decision. They may make content freely available, deny access or allow access at a charge. Denying access requires the equivalent of building fences during the enclosure period in the development of agriculture. The security of protected information on networks attached to the Internet depends on the effectiveness of the electronic fences or firewalls. Commercial operations will balance the net effect on profits of their access policy with respect to different types of information.

Without charging for access media and other service sites are limited to raising revenue from advertising, fees garnered from channeling visitors to other sites where they make a transaction, or public subsidy. Advertising is the main support in my society. Advertising spending is cyclical and the value of advertising on the Internet to those who purchase it is still uncertain. With the current downturn in advertising and more expensive financing I expect that more services will be separating out their most attractive features and charging access to them.

With media services, some experimentation has occurred in North America in identifying the best combination of access charge and advertising rate for on-line publications. 7 In general on-line publications have not found it profitable to limit access but there are exceptions. Another way of raising revenue from users is to link access to content with the purchase of a complementary good and market the bundle. In magazine publishing, for example, those who subscribe to the printed version of the Economist obtain access to the same content and some archival material on its web site.

6 For phonograms (recordings) the following qualification applies: “If on 15 April 1994 a Member has in force a system of equitable remuneration of right holders in respect of the rental of phonograms, it may maintain such system provided that the commercial rental of phonograms is not giving rise to the material impairment of the exclusive rights of reproduction of right holders.” The obligation is also waived for a member not allowing the industry to deny rentals of videos, for example, unless “rental has led to widespread copying of such works which is materially impairing the exclusive right of reproduction conferred in that Member on authors and their successors in title.”

7 In March of 1998, the on-line magazine Slate began charging $19.95 a year instead of granting free access. Estimated readership fell from more than 200,000 to less than 30,000 (figures from Newsweek, July 28, 1998). It has subsequently abandoned the policy of charging for access. The American financial newspaper The Wall Street Journal is an exception among newspapers in charging for access to current content.
To summarize, network economies provide an incentive for a commercial enterprise to price and position its services to expand rapidly and to lock in its customers. More revenue can be generated from the customer base by price and quality discrimination and through careful management of its intellectual property. To what avail? For commercial enterprises the answer is to derive more profit. The trend in North America and Europe has been to make copyright more protective and to be permissive of price and quality discrimination. One of the considerations in drawing a line is the configuration of costs over time. Many Internet services and the production of audio-visual content is incur large up front fixed costs that are sunk and relatively low costs of servicing another customer. The ease of financing the establishment of a market presence for an Internet service provider or a content producer depends on their cash flow prospects over time. The scope of the pricing, marketing, and intellectual management strategies that can be legally exercised determine those cash flows and the probabilities of survival. Even with the best of strategic plans and a permissive environment, many new ventures have failed.

Given the high initial costs and their uncertain prospects, one would expect that financing new Internet initiatives would be more expensive than financing projects. Much of the initial financing has come from venture capital, which is a traditionally expensive source of capital. Until recently in North America and parts of Europe, a significant number of companies that had financed establishing their service found that they could obtain additional funds through initial public offerings. There was a surge of equity offerings. For a firm that did establish a market for its equity, shares also proved an effective means of paying for all or part of growing through acquisition. The increase in equity financing depended on the liberal valuation of the prospects of firms by investors. From the beginning of the process, some analysts have thought that the market evaluations driving this expansion in equity financing depended on beliefs about future success that were out of line with reality and that this bubble (a destructive informational cascade) would burst. More think that way today. If that judgment is true, alternative and presumably more costly modes of financing will sustain experimentation by new ventures on the Internet. As a result, that expansion is likely to be more modest than its predecessor and have a different financing pattern.

The non-commercial sectors have also benefited from the Internet. Many foundations, public interest groups, and educational institutions have used the Internet to inform and to raise funds. A frequently noted aspect of the Internet is the promotion of a sense of sharing in the cooperative developments of software and protocols and participating in committees and other managerial tasks both for non-profit local networks linked to the Internet and the Internet itself. An example was the development by Cornell University researchers of a modular software program, GateDaemon (GateD) that reads information from the transportation system and routes the packets containing the digital elements of a communication accordingly. The U.S. National Science Foundation funded the development of GateD. Cornell has made it available at no charge to users in the United

---

8 Costs are sunk if they have little value in other uses. If the enterprise fails the salvage value of assets is a low proportion of the costs of creating them.
States and internationally. This is unusual. In many areas of science, North American Universities have become quite mercenary in their intellectual property management.9

The analysis provides some rationales for the pricing and choice of different versions of services and products offered of successful Internet sites and services in North America and Europe. Other countries may want to orient price discrimination and versioning decisions to non-commercial purposes. The approach of any country will, of course, be shaped by its values, political and economic systems, and its organizational and technological capacities. If a country relies more on state enterprises to develop new initiatives lessons derived from pricing and bundling in market economies can be adapted to assess user charges or taxes. Financing sources will also differ depending on the circumstances and systems of a country but reading the experiences elsewhere will help in making realistic assessments of values that can be attained from the Internet.

III National policies and the Internet

The second layer of analysis addresses national policy. Understanding the world of the Internet enterprise is only one of the many factors influencing Internet policy. As a country’s citizens gain access to the Internet its reach into other jurisdictions may create problems for the enforcement of domestic policies or introduce new problems that elicit a demand for regulation. With a credit card and connection to the Internet a person may, for example, participate in activities that are forbidden, such as gambling or accessing censored content. An individual or enterprise may be defrauded and find that taking action is prohibitively expensive because of the location of the person or company acting illegally. Similarly, enterprises in the country may find that intermediaries abroad that, for example, purchase tourist packages, renege on payment commitments. It may be very costly to take remedial action when opportunistic enterprises locate in areas that give them more latitude to commit fraud or deceptive practices. These problems are not new but some of them have a unique intensity on the Internet.

With respect to the provision of information, the privacy of an individual or company may be violated as confidential information is sold or used in a manner that is either illegal or not accepted practice in the country. The advertising practices on foreign sites may be considered misleading by national law. Citizens may access newspaper articles or posted comments that would violate national defamation laws. So called “Hate” laws of the country may be violated by material that is legally made available on a site situated in another country.

Once interconnected to the Internet, cybercrimes become a potential problem. Sensitive content on government or business computers may suffer from hacking attacks leading to financial loss or political damage. Hackers may also succeed in penetrating the defenses of financial institutions and successfully transfer funds to themselves or alter records. E-mail connections or downloaded files may distribute viruses that spread within the

9 In documenting Cornell’s decision, Hallgren and McAdams (1996) give it as an example of “an economic public good that is efficiently allocated through asymmetric pricing that no “market” can bring about.”
country.

Internet users and enterprises will implement remedies for some problems. Blocking software in the home can protect children from inappropriate content. Regulators may require that schools and public libraries provide content filtering on computers that they make available to the public. Some scrupulous suppliers will succeed in differentiating themselves from unscrupulous ones by establishing systems that make their probity evident and by developing reputations for non-opportunistic behavior. Consumers also exchange information on Internet forums and talk with their friends about their transacting experiences. Public interest groups provide information on products and issues in competition with more narrowly focused interest groups. The state has to assess the outcome of these reactions and decide whether to prohibit, regulate, or forbear from intervening. The mix of policies chosen will depend on the values of the society and the historical role of the state. If the state is traditionally responsible for more of the initiatives in the society the Internet’s role may change. Those affected by policy and new ideas can communicate their reactions and suggestions through the Internet.

Less speculatively, the Internet can be an effective medium in traditional areas of state involvement, education and medical care. The Internet may also play a positive role in generating social capital in mobilizing voluntary services provided at local or national levels. In North America and Europe, it has been an incubator for widespread organizational non-profit experimentation by educational and cultural institutions as well as individuals. The continuing vitality of shareware software is an example. Hybrid mixes of communal and commercial interests have coalesced on projects such as the development of Linux. The extent of communal learning without a formal structure that occurs in chat rooms is another.

With respect to the Internet itself, decisions have to be made on how to provide for the transportation infrastructure that services the Internet nationally. The financing mechanisms and governance structures are important, as are the control of the terms of access by component networks and the processes of determining priorities for traffic. The Internet transportation links can become congested. Pricing schemes can both alleviate congestion and contribute to the financing of the transportation backbones.10

Initiatives to encourage wider participation in the Internet are a priority in many countries. One approach is to offer a bare bones access package at a subsidized rate. The level of access will depend on the aspirations of the country and its means. The most economical approach is to provide access through schools and libraries. A proposed Brazilian initiative is more ambitious. Brazilian university researchers are developing a computer with considerable functionality that can be delivered to users at US$300 that will have flash storage rather than a hard disk. The researchers are also developing a set of software programs--browser, e-mail, text, and spreadsheet—that will run on the computer’s Linux operating system.11

10 A number of schemes are discussed in different chapters of McKnight and Bailey (1996).
Most governments view the Internet as both a threat to national culture and an opportunity for enhancing it. This concern can manifest itself as a demand to impose quotas on content from other countries similar to those that some countries impose on television signals retransmitted on cable systems or on films shown in cinemas. A similar concern is expressed with respect to the threat of the Internet to the viability of national languages. English is by far the most prominent language on the Internet but there is no barrier to entry for sites in any language.12

IV National regulation and other countries

Our third level of policy concern is the international. In some areas of Internet policy international accords exist that limit national options. For example, the copyright provisions of the Berne convention plus some additional restrictions included in the TRIPs apply to all WTO members.13 Countries that are members of the Rome Convention (The International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations) of 1961 are obliged to provide protection to the performers and producers of recorded music and broadcasters. The most important of the rights supported by the Rome Convention is an equitable remuneration right for performers and producers of recordings for the broadcasting or public communication of their works (Article 12). The remuneration scheme must include performers and producers from other member countries only to the extent that they receive remuneration in their own country.14

Copyright is a constantly evolving legal structure that has been adapted to the idiosyncrasies of many different technologies. Adjustment typically occurs through interpretations of existing law to accommodate a new technology. More rarely national laws are revised; and even less frequently international arrangements are modified. The Internet profoundly changes the economics of promoting and distributing copyrighted material, particularly music and audio-visual content. Adaptation has elicited changes at all three of these levels for both copyright and neighboring rights.15

---

12 Web Pages by language July 5, 2000 for largest seven language groups

<table>
<thead>
<tr>
<th>Language</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>214,250,996</td>
<td>68.39</td>
</tr>
<tr>
<td>Japanese</td>
<td>18,335,739</td>
<td>5.85</td>
</tr>
<tr>
<td>German</td>
<td>18,069,744</td>
<td>5.77</td>
</tr>
<tr>
<td>Chinese</td>
<td>12,113,803</td>
<td>3.87</td>
</tr>
<tr>
<td>Spanish</td>
<td>7,573,064</td>
<td>2.42</td>
</tr>
<tr>
<td>Russian</td>
<td>5,900,956</td>
<td>1.88</td>
</tr>
<tr>
<td>Italian</td>
<td>4,883,497</td>
<td>1.56</td>
</tr>
</tbody>
</table>

Source: http://cyberatlas.internet.com/big_picture-demographics/article/0.1323,5901-408521.00.html

13 As of November 30, 2000, there were 140 member countries of the WTO.
14 As of January 15, 2001, there were 67 member countries of Rome.
15 With respect to the public performance rights of performers and producers that were protected by the
National copyright laws of many countries have been quickly modified to address Internet issues. A new Internet sensitive international copyright treaty was negotiated in 1996 under the auspices of WIPO and is in the process of being ratified by its members. In the same year, a new WIPO Performances and Phonograms Treaty covering the rights of record producers and performers was also negotiated. Both treaties include clauses providing legal support for digital rights management systems and protective technological measures and clarifying that a communication to the public includes the Internet. In addition, important legal cases are being decided in different national jurisdictions that are clarifying how copyright will be impact on the development of the Internet. The extent to which key aspects of recent court decisions, revised national laws and new international agreements are enforceable is yet to be revealed.

Copyright has been subject to agreement covering a number of countries for well over a century. Other Internet policy areas have typically not been subject to regional or international agreement. A number of countries have recently introduced national “privacy” legislation to protect citizens from abuse of information that they provide in using the Internet. These national laws impact on other countries. For example, the Canadian Personal Information Protection and Electronic Documents Act requires that a website collecting personal information have transparent policies identifying the operator, the purpose for collecting data, and how it will be subsequently used. Data can only be collected from an individual without his or her knowledge if it is clearly in the interests of the individual. By January 1, 2004, the Act will apply to all personal information in all international transactions by a broad range of organizations undertaking commercial activities in Canada. This legislation augments and adapts the existing Canadian Privacy Act to reflect Internet technology.

The European Commission issued a Directive on Data Privacy that came into effect in late 1998. It also has a direct effect on other countries. The directive required European Union members to introduce legislation prohibiting the transfer of personal data to other countries. As of Feb. 1, 2001, 51 countries had signed and 22 ratified the 1996 copyright treaty and 50 had signed and 20 ratified the phonogram treaty.

16 As of Feb. 1, 2001, 51 countries had signed and 22 ratified the 1996 copyright treaty and 50 had signed and 20 ratified the phonogram treaty.

17 Article 8 of the Copyright Treaty states that “authors of literary and artistic works shall enjoy the exclusive right of authorizing any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them.” Article 15 section 4 of the Performances and Phonograms Treaty uses similar wording to define the right to remuneration.

18 Geist and Van Loon examined the privacy policies of a sample of web sites serving the Canadian public just before the legislation came into force. It found that 27% of the sites had no private policy and that Canadian-based sites were performing “much worse than sites outside the country that target Canadian users.” Forty-two of sites were foreign servers that targeted Canadian users, labeled dual-origin sites (Most of these were US based), and 194 were Canadian sites. They also found that among the Canadian sites those in the culture, government and media sectors had consistently poor performance with respect to privacy goals (Michael Geist and Gabe Van Loon, “Canadian E-Commerce and Privacy Study 2000: A Failure to Communicate” University of Ottawa, Faculty of Law, Common Law Section 2000.)
countries that fail to attain the European privacy standards. The United States worked out a safe harbor agreement that established criteria by which U.S. sites could be certified as meeting the European standards.¹⁹

As e-commerce expands, countries are negotiating codes establishing liability for non-contractual disputes that arise. The European Commission has also been at the forefront of developing a code that will govern non-contractual liability in cross-border disputes within the European Union. The code proposes that law in the consumer's country should apply should disputes arise. As mentioned the Internet community has generated its own set of communal values and norms. One of these is opposition to any government regulation. The introduction of the code has raised criticisms from a number of Internet players in Europe.

In activities with strong network and scale economies a few firms are likely to dominate the industry. Potential entry provides some discipline. Firms in this area are also subject to competition policy or its equivalent in each country but the international scale of their operations may make the enforcement of national policy impossible without the cooperation of other countries. Many countries do not have antitrust policies. Even they may have an incentive to cooperate in competition policy investigations, launched in other countries, of firms that operate in their jurisdictions. Initiatives to coordinate competition policy among countries that have similar laws have frequently been announced but the results to date are limited. Countries have a more obvious interest in cooperating to enforce against cybercrimes such as hacking, fraud, and child pornography rings.

Countries also differ in opinion as to whether an activity warrants regulation or not. Gambling is an example. In federal countries in which the regulation of gambling is a state responsibility, one observes diverse regulatory structures. The ambivalence is reflected in a recent Australian initiative. At the end of 2000, for example, Australia introduced a ban for twelve months on new Australian Internet-based gambling operations. The moratorium does not affect foreign sites. The government is assessing an unlimited ban and examining ways of blocking access of Australians to foreign sites.

One of the most important national concerns with e-commerce and the expansion of Internet services is the ability to enforce tax obligations on the parties. In some countries, e-commerce and e-services have been effectively exempted from tax responsibilities that their non-networked competitors incur. Given the speed with which the Internet is currently developing and the political valence of similar tax treatment across substitute modes of distributing and marketing goods and services, the tax breaks enjoyed by Internet businesses are likely to be temporary. Many national tax authorities are putting in place the infrastructure to identify parties liable for taxes and to audit the businesses to

¹⁹ There are seven criteria that determine compliance with the standards: the consumer is informed of the purpose that the data will service; can choose as to whether he or she participates; the data can only be transferred for the purposes given when it was collected; the data is secure; reasonable steps have been taken to assure that the data are accurate, complete, and current; an individual can check the data on file to verify its accuracy; and mechanisms exist to ensure that the standards are being met.
enforce compliance. Achieving agreement among countries with respect to the incidence of taxes on exports and imports is difficult, but all countries have an interest in constraining beggar-thy-neighbor tax policies and to cooperate in reducing collection costs.

National cultural policy initiatives also affect the trade of other countries, as the cultural industries are inherently international. The negotiators in the Uruguay Round that led to the creation of the WTO were not able to reach an agreement to liberalize significantly trade in the audio-visual sector. Currently, a group of countries, including Canada and France, are sounding out the possibility of developing a cultural diversity instrument outside of the WTO. At least to date the public announcements have been at the “warm feeling” stage and have not revealed a willingness to address the difficult issues of market access. At the same time, the audio-visual sector will be a focus of attention in negotiations that have begun with respect to WTO members’ commitments under the GATS. No matter what the forum, national negotiators will be aware of the prospective impact of the Internet on the delivery of audiovisual services when exchanging “concessions” as to market access.

Finally, since the Internet is international its governance is of international concern. Internet governance decisions concern Internet protocols, the structure of domain names, the languages of domain names, interconnection terms between networks and its regional backbones and among regional backbones. The open philosophy that has informed protocol and interconnection decisions has contributed to enhancing interoperability of diverse networks and hardware configurations. As the system matures, suppliers and those that are investing in the expansion of Internet segments around the world have an interest in the framework decisions being made. To date, the system has been remarkably simple. It is unlikely to remain so.

Although many closed networks serve specialized interests that are not connected to the Internet. Some large Internet Service Providers are evolving structures that are similar to that of the Internet. For example, some are proposing to sell addresses to service providers that are only available from within the ISP’s own network for a lower price than the cost of an Internet address.21 Subscribers to the ISP will have access to the Internet but outsiders will not have access to some of the sites open to members. It is fair to say that at the moment there is no system that offers competing opportunities. This absence of competition among different “Internets” makes representation in decision making in the Internet of greater importance.

---

20 A case not focused on the Internet that illustrates this general point is the ongoing dispute between the European Union and the United States with respect to US foreign sales corporations. In response to a complaint by the EU a WTO panel ruled that US policy was not in compliance with its WTO commitments. An appellate panel confirmed the main elements of this decision. The EU has not accepted the US’s amendments of its tax laws undertaken in response to the decisions as representing an appropriate remedy and announced sanctions affecting $4000 million in trade. After negotiations the EU has asked another WTO panel to rule on whether the US modifications bring its law into compliance or not. The United States intends to appeal the level of the sanctions if the WTO panel supports the European position on the inadequacy of its tax amendments.

21 See, for example, Damien Cave, “A Web of Babel” Salon, Marc 14, 2001
Important international issues on the horizon are the pricing of access by local networks to the Internet backbones in different countries and whether to continue with open interconnection among the transport systems of different regions or adopt some settlement scheme. Seemingly innocuous decisions at the international level can have important effects. For example, in the domain name area, a new level of generic top-level domains (gTLDs) has been proposed. Michael Geist has noted that the International Air Transport Association has submitted an application for a dot-travel domain. IATA proposes to set the standards and enforce them for a member of the travel industry to qualify for a dot-travel domain name. The legitimacy of such regulatory power being exercised over an aspect of the Internet by IATA is of international interest.

Problems and issues are always arising. When one considers the challenges of financing innovative uses of the Internet, coping with the national regulatory issues raised, harmonizing the international implications of national regulatory decisions, and developing an effective and just governance of the Internet, the achievements of the past two decades appear miraculous. This growth has had a dynamic that combined planning, state support, for profit, non-profit, and governmental entrepreneurial initiatives, and in general constructive regulatory policy responses. The development of informed policy responses by those countries that have lagged in deriving benefits from the Internet can contribute significantly to closing the digital divide. In my opinion, they can shape policies that are consistent with their heritage, respect their values, and give scope to the creativity of their citizens.

References


---

22 Toronto Globe & Mail, Thursday, November 2, 2000.


