The advent of information technology (IT) has generally been heralded as a force for the breakdown of authoritarian political control. One writer describes it as "the greatest democratizer the world has ever seen." Both the volume and form of communication made possible by electronic technology are seen to greatly compromise, if not totally undermine, the capacities of authoritarian regimes to blunt the circulation of opposing views. Seizing printing presses and jamming broadcasting frequencies, for example, is now a limited defense by authoritarian regimes against the flow of information. In the demise of such regimes in Eastern Europe and the coordination of students leading up to the Tiananmen Square massacre in China, attempts by authorities to insulate locals from editorials and reports by the international media proved futile while dissidents had access to facsimile machines and satellite television. More generally, Samuel Huntington emphasizes the unprecedented importance of demonstration effects in the Third Wave of democratization, made possible by changes in global communications. Media proprietor Rupert Murdoch has even proclaimed: "Advances in the technology of telecommunications have proved an unambiguous threat to totalitarian regimes everywhere."

However, since these events in Eastern Europe and China, another electronic medium has been emphasized in the association of IT with political pluralism and democracy: the Internet. This communication medium is nonhierarchical, interactive, and global. Its usage is also growing exponentially. The Internet affords unprecedented access to information and new avenues for individual political expression. The following extract from a letter published in the *South China Morning Post* captures the optimistic liberal mood pervading public discussion of this technology's political significance: "The Internet and associated technology is like a snowball which is rolling and getting bigger. It gives everyone a voice, which is why it will still be going while those who seek to regulate it will have departed the scene."

The Internet's bypassing of the structures of formal political organizations and the scrutiny of government authorities is one factor behind a view that a direct, global democracy is now a prospect. Also celebrated is the interactive, as opposed to passive, nature of this medium which is expected to greatly enhance mediation between decision-makers and citizens. Some even see the Internet "allowing democracy of a more participatory nature than at any time since the ancient Greeks".

In any evaluation of the impact of IT on authoritarian political structures, Singapore presents itself as a fascinating and essential case study. Here we have one of the most comprehensive strategies for the development of IT anywhere in the world, supported by huge state-led infrastructure investments. Indeed, Singapore's policymakers are committed to the transformation of the island economy into an
information hub, trading in ideas rather than commodities. Yet Singapore's authoritarian leaders have no intention of surrendering political control in the process. Certainly they recognize the existence of some tension between their economic and political objectives. However, to date they have shown some capacity for reconciling the two. One technique has involved giving businesses privileged access to satellite television, while steering the general population toward the more content-controllable cable television. More generally, authoritarian rule in Singapore is comparatively sophisticated with legalistic and cooptive methods of political control being especially pronounced and effective.

Although the Internet represents a more difficult technical challenge for Singapore's control-minded officials, the government has embarked on an ambitious attempt to superimpose strict broadcasting censorship on the medium. Other authoritarian regimes in Asia have been inspired by this model of regulation, which raises a number of general questions. First, can access to the Internet be effectively controlled, or will it have the sort of snowballing political effects predicted by some? Second, to what extent is control of the Internet a technical question alone, and how important are social and political structures in shaping the Internet's impact? Do the particular characteristics of authoritarianism in Singapore render it more capable than most authoritarian regimes of restricting the Internet's liberalizing potential? Third, has the Internet's potential political significance been over-estimated? Does a plurality of individual political and social views on Internet necessarily translate into organized political and social action?

The PAP's Brand of Authoritarian Rule

Despite the superficial appearances of a competitive political system, notably regular elections involving a range of political parties, Singapore is a defacto one-party state. Through a variety of means, effective challenges to the ruling People's Action party (PAP) are obstructed. Historically, this included some crude forms of intimidation of political adversaries and critical elements of the media by invoking the Internal Security Act (ISA), under which people can be held indefinitely without trial. However, the more pervasive and definitive features of authoritarianism in Singapore involve a sophisticated and systematic combination of legal limits on independent social and political activities on the one hand, and extensive mechanisms of political cooption to channel contention through state-controlled institutions on the other. This suppression of a genuine civil society not only fundamentally hampers the PAP's formal political opponents, it generally blunts political pluralism, including interest group politics. The PAP's political monopoly is rationalized through an elitist ideology, which depicts government as a technical process that must be the preserve of a meritocracy.

After coming to power with self-government in 1959, the PAP was beset with internal divisions between Lee Kuan Yew's faction of English-educated middle class nationalists and more left-wing representatives of labor and student movements dominated by the Chinese-educated. This friction culminated in a formal party split in 1961 and the formation of the Barisan Sosialis as a rival to the PAP. Although the PAP
was stripped of its grassroots organizational networks with the left's exodus, the PAP retained the executive power of government. This proved a decisive strategic advantage during the 1960s. The independent and militant trade union movement was brought to its knees through a series of security swoops on its leadership and legislative curbs on its activities. At the same time, the state-sponsored National Trades Union Congress (NTUC) was promoted.

As a complement to this and following a spate of residual student activism and protest outside the parliamentary realm, changes to the Societies Act in 1967 were enacted barring political engagement by organizations not specifically registered for such purpose. Apart from severing opposition parties from social bases, this virtual outlawing of pressure groups shielded the government from organized public scrutiny. Meanwhile, the PAP not only used state instrumentalities for blatant party-political propaganda, it also developed a host of community-level state and parastatal organizations to mobilize support for the government. Engagement in 'politics' by organizations not strictly registered for such purposes was not in itself of concern to authorities. Rather, it was engagement in non-PAP or anti-PAP politics that was problematic.

In conjunction with the PAP hampering its opponents and critics, it also undertook economic and social reforms that generated a support base for the party. Without this, the PAP could not have survived regular elections, let alone consistently achieve resounding victories. The PAP presided over real and substantial benefits for Singaporeans in terms of public housing, employment, education and poverty eradication. Importantly, though, this social and economic transformation has involved a consolidation and extension of state economic assets and social jurisdiction. By 1990, for example, through just three holding companies, the Singapore state was the sole shareholder of fifty companies with interests in a further 566 subsidiaries and total assets of U.S.$6.51 billion. The co-ordination and control of resources is greatly enhanced by tight inter-locking directorships involving a small coterie of politically-trusted civil servants. This gives the PAP a considerable, even if sometimes indirect, capacity to influence the delivery of services, the awarding of business contracts and the shaping of career opportunities.

As a result, the increasing affluence of many Singaporeans has gone hand in hand with a growing dependence on the state, producing vulnerability to both co-option and political discipline. During the 1997 election campaign, the PAP nakedly exploited this. Prime Minister Goh Chok Tong warned that multi-million dollar commitments to upgrade public housing, in which around 90 percent of Singaporeans live, would be undertaken on a priority basis, with areas supporting the opposition last in line. To reinforce this threat, the government announced a new system of vote counting, which enabled it to ascertain voting preferences down to a precinct level of 5,000 votes. Whether out of fear of retribution or the seduction of government rewards, the electorate responded by arresting a sustained decline in the government's share of votes at every general election since 1980.

However, the increasing social complexity accompanying the city-state's economic development has posed challenges for the authoritarian system. In particular,
the PAP has found that more diverse social interests require some sort of political accommodation to preempt pressure for civil society. Accordingly, we have seen initiatives in cooption reaching out to sectional interests, including domestic business groups, women's groups, and professionals. Mechanisms to open up consultation with such groups are intended to divert disaffection from competitive political processes and reinforce the PAP's elitist and technocratic ideology. Thus, whether it be through the Nominated Member of Parliament (NMP) scheme or the incorporation of wider community involvement in Government Parliamentary Committees, individuals are officially brought into such fora to add particular expertise to the decision-making process on a non-confrontational basis, rather than to represent any constituency. Instead of opening up space for civil society, the PAP state is in effect expanding its own space.

An even more significant feature of contemporary authoritarian rule in Singapore has been the increasing recourse to legal techniques of political control. Certainly, extensive surveillance by the Internal Security Department continues within Singapore. However, with the communist threat long extinguished, stable domestic race relations, and no challenges to the sovereignty of the Singapore state, the use of the ISA to imprison PAP critics is more open to question. It also invites international attention and risks creating political martyrs of opponents. Since the early 1980s, but especially following the last arrests under the ISA in 1988, there has therefore been an accelerated shift towards the use of administrative law to further restrict the political activities of organizations as well as the use of defamation, libel, and contempt of court actions by government figures against individual political adversaries and critics.

Significant examples of the former include modifications in the late 1980s to the acts covering legal and other professions and the introduction of the Maintenance of Religious Harmony Bill in 1990, effectively outlawing uninvited public social or political comment from institutions that had hitherto escaped the strictures of the Societies Act. Meanwhile, the scale and propensity of legal actions has escalated, with the most capable and combative opposition figures primary targets. In this exercise, Lee Kuan Yew continues to consolidate his reputation as "the most successful individual litigant in history", but more of his colleagues in the PAP are following the example. In 1997, Lee was joined by ten other government leaders in a total of thirteen libel actions against Tang Liang Hong of the Workers' party. Tang had accused government leaders of lying during the January 1997 election campaign after they labeled him? Some contend baited him? as a "dangerous Chinese chauvinist". A total of U.S.$5.65 million was awarded in damages to the PAP members of parliament. Tang also faces thirty-three counts of tax evasion, not the first time the Inland Revenue Department has shown a sudden interest in an individual after that person has locked horns with the government.

A similar technique is applied to the international press, where the trend has been away from the expulsion of journalists toward tightened legal limits on the media and punitive court actions. Amendments to the Newspaper and Printing Presses Act in 1986 gave the minister of Communications and Information the capacity to restrict the
circulation of foreign publications in Singapore that were deemed to be 'engaging in
domestic politics'. A string of disputes ensued thereafter, many centering around the
reluctance of publishers to concede to the government an unedited right of reply to
critical articles. Further amendments in 1990 tied foreign publications even closer to
the jurisdiction of local courts, requiring them to secure an annual permit and deposit
a substantial fixed bond toward any legal liabilities that might be incurred. After
costly losses of access to Singapore's circulation and advertising markets, foreign
publishers have generally adopted a more cautious reporting approach. Nevertheless,
the International Herald Tribune was hit with two expensive suits arising from
different articles in 1994. They touched on government sensitivities over charges of
PAP nepotism and the absence of judicial independence in Singapore.

What seems clear in all of this is that forsaken profits and stiff legal penalties
have been more effective in fostering self-censorship than earlier methods of
intimidation. However, the information media in general and related enterprises have
to contend with similar pressures. Academic books, for example, are not banned; but
publishers, distributors, and retailers will often decide against any association with a
critical or contentious manuscript or publication for fear of legal repercussions or the
loss of annually renewable licenses.

The centrality and distinctiveness of legalism to the reproduction of authoritarian
rule in Singapore has not escaped theorists' attention. Essentially making the same
point, Kanishka Jayasuriya describes this as "rule through law rather than rule of law;,
while Christopher Tremewan characterizes it as "thinly disguised rule by decree". In
contrast with legal institutions in liberal democratic systems, where challenges to state
power are not only possible but common, in Singapore they serve more to consolidate
and expand the power of the state and to enforce the government's objectives and
policies. The structural conditions under which the judiciary operates, including the
granting of short-term appointments to the Supreme Court that may or may not be
renewed at the government's discretion and the potential for untenured lower court
judges to be transferred between judicial and government service, provide an avenue
through which political influence and pressure can be exerted over the judiciary.
Considerable ideological store is placed by the PAP, however, in the depiction of
Singapore's judicial system as independent and fair. Ironically, such is the
government's insistence on this that it is virtually impossible to publicly debate the
question without inviting an action for contempt of court. As Jayasuriya observes:
"The distinguishing feature of this legalism is the use of liberal language, rhetoric and
the ritual of law to pursue its distinctly illiberal political objectives".

Singapore's IT Strategy

Singapore's economic planners began promoting the widespread application of
IT in the early 1980s, seeing it as strategic in the restructuring of the economy toward
higher value-added production. They also wanted Singapore to be a production site
for the IT industry. Accordingly, in 1980 a ministerial-level committee, the Committee
on National Computerization (CNC), was established to ensure the computerization of
the civil service, to boost training of software professionals, and to encourage the
indigenous software and services industry. Economic recession in 1985-1986 only served to reinforce the emphasis on IT as a basis for deriving new competitive advantages. Thus the National IT Plan in 1986 saw the National Computer Board, Singapore Telecom, the Economic Development Board, and the National University of Singapore collaborate to achieve a more integrated strategy between hardware manufacturing, and telecommunication and software services. In support of this plan, the late 1980s saw a range of complementary institutional initiatives and substantial state investments in physical and social infrastructure.

In 1992, the National Computer Board detailed a new strategic statement, IT2000 - A Vision of an Intelligent Island. Under IT2000, it is now planned that all 750,000 households on the island will be connected to a comprehensive computer network by the year 2000 with the compulsory installment of broadband coaxial and optical fiber networks. Households, businesses, schools, libraries, government departments, and statutory authorities will be electronically inter-linked to facilitate shopping and other commercial and official transactions, as well as provide cable and interactive television services and Internet. A wireless communications network will also afford mobile computer access to information services throughout Singapore. So extensive is the plan that even public space is likely to be wired. It is proposed that television cameras be fitted at corridors, lifts, public parks, car parks and neighborhood centers for monitoring purposes. The plan was quickly acted on, with more than 100,000 households connected with wiring to support broadband applications before mid-1996.

The economic rationale behind IT2000 is grounded in a recognition that Singapore's traditional role as a broker facilitating commercial exchanges between regional economies and the rest of the world needs to undergo a transformation. According to Minister for Information and the Arts George Yeo:

Geography will matter less in the future. We must therefore think of new ways to retain our position as a hub. Over the next 20 to 30 years, we must make sure that we have the new infrastructure to remain a junction for goods, services, people, information and ideas. If we succeed, we will be one of a number of great cities in the Pacific Century. If we fail, other hubs will displace us and we will be relegated to a backwater.

Singapore is thus expected to maintain a position at the cross-roads of East and West, but in the new role, telecommunications and other electronic media are deployed to broker design, research, engineering, manufacturing, distribution, sales, and marketing to global sites.

Within this latest IT plan, the Internet has an important economic function. George Yeo maintains that: "By coordinating the entry of both the public and private sectors into Internet in a deliberate way, we can increase our overall effectiveness, influence and competitive advantage in the world." Yet when policy makers originally conceived of interconnecting all Singaporean households, businesses, government departments, and institutions with an interactive medium, it was not the Internet they had in mind. Rather, it was Teleview - the world's first interactive video-text system, which receives and reacts to instructions from a user through a phone line and sends
back text, graphics, or photographs through the phone or radio waves. This was commercially launched by Singapore Telecom in 1990, and at the time of the initial *IT2000* statement in 1992, it had about 10,000 subscribers. Most importantly, this was a nation-wide, not international, interactive information service.

The subsequent take-off around the world of the technically superior and international network, the Internet, forced authorities to rethink their plan. They decided to upgrade Teleview so that it provided access to the Internet. This made commercial sense, both by protecting the initial investment in Teleview of U.S.$35.48 million and by providing business in Singapore with the most advanced electronic infrastructure. But this decision involved a challenge to customary levels of political control over information flows. Before long, Singapore had three separate commercial Internet service providers. By March 1996, the Internet business services were already worth around U.S.$7.10 million in Singapore and there were more than twenty companies whose sole or major business was Internet services.

It is important to note, however, that while the Internet came to be embraced as a crucial element of the *IT2000* strategy, it was something that evolved rather than having been an integral element of the original conception. Also, in turning Singapore into an "intelligent island" providing a range of services that depend on creative intellectual capacities, innovation, and a free flow of information, Singapore's leaders have a good deal of prior experience in controlling the political spillover from various other industries not normally associated with restrictive political cultures.

**An Early Model of Profits and Censorship**

A decade ago, plans to make Singapore a publishing center were scoffed at in light of strict limits on critical journalism and well publicized clashes with the executives and journalists of publications such as *Far Eastern Economic Review* and *Asian Wall Street Journal*. Nonetheless, such major and reputable publishers as John Wiley, MacGraw Hill, Addison-Wesley, Simon & Schuster, Reed Elsevier, and the Thomson and Times Mirror group have adopted Singapore as their regional base. Evidently, combinations of infrastructure, production and distribution factors, advertising revenue, and other considerations outweighed apprehensions about the restrictive political climate in Singapore. Already we see a similar pattern shaping international investments in some of the electronic media.

Indeed, the attempt to make Singapore a regional broadcasting center for the Asia-Pacific area is proving remarkably successful. Prominent international television networks including the U.S. entertainment and video loan giant Home Box Office, the music channel MTV, sports network ESPN, and multi-media Walt Disney are now operating from Singapore. Ironically, while private satellite receivers are banned in Singapore, the island is used to beam services into the rest of Asia. Singapore's role as a regional broadcasting center will be further enhanced if the government realizes its plans to have a satellite in space by 1999 capable of redirecting television shows, telephone, telegraphic, and other communications to extensive areas across Asia, are realized.

The exceptions the government makes for private-sector access to satellite
television within Singapore is explained by George Yeo in terms of the commercial imperative of up-to-date information. However, he also insists that the preservation and transmission of what he refers to as "cultural values" is a separate question too important to be entrusted to the market. With this in mind, the government has launched a comprehensive cable system to meet the domestic demand for foreign broadcasts while retaining its ability to screen out "objectionable" material. Cable TV in Singapore is run by a conglomerate called Singapore Cable Vision (SCV). This is comprised of the state companies Singapore International Media (31 percent), Singapore Technologies Ventures (24 percent) and Singapore Press Holdings (20 percent), and Continental Cablevision (25 percent) which is the third-largest cable operator in the United States. In June 1995, SCV initially offered twenty-five channels with a line up including MTV, ESPN, Discovery, Prime Sports, TVBI (HK), CNN, and Star TV's Channel V. When the infrastructure is completed, SCV will be able to offer up to sixty-four channels to all Singaporean households.

To date, the self-censorship among international companies eager to secure a position in the Singapore market has obviated the need for authorities to exercise much direct control over content. CNN has even gone so far as to alert SCV of potentially sensitive material, as it did before screening coverage of the case involving U.S. teenager Michael Fay, who was found guilty of vandalizing cars in Singapore. More generally, cable service providers have offered material that is either apolitical, such as music and sport, or that is family oriented and that reinforces the sort of conservative values championed in government rhetoric. These companies are demonstrating that there are profits to be made from accommodating rather than challenging authoritarian leaders in Asia. The government's goal of content control is also aided by the policy of wiring residences on a mandatory, rather than subscription basis.

The Internet's Technical Challenge

The question is whether the quite different electronic technology of the Internet will be less compatible with such structures. The Internet involves access to information through a variety of means, including newsgroups, world wide web (WWW), email, gopher, Telnet, file transfer protocol, and Internet relay chat. The first three are by far the most common currently in use. Newsgroups provide a format for discussion that has enabled individuals to exchange views and information across the globe. There are thousands of specialized newsgroups, most of which are unmoderated. World Wide Web sites (or home pages), of which there are currently about 30 million, provide individuals, organizations and corporations the opportunity to transmit and receive information in text and graphical format. Email is an electronic mail system that is one of the oldest and still most popular uses of the Internet.

In the debates over whether or not the Internet can actually be subjected to effective censorship, the prevailing view seems to be that control-minded authorities have met their match. By its nature, the Internet provides the possibility of obtaining and disseminating information via multiple electronic routes, thereby making it
extremely difficult, if not impossible, to impose restrictions on sufficiently determined and technologically literate individuals. For example, access to any newsgroup can be cut-off to customers either as a result of pressure from authorities on an Internet Service Provider (ISP) or at the discretion of a given ISP. However, a user could find a publicly accessible news server that carries the censored newsgroup. This might be done, for example, via a WWW page. Email could be used to the same effect. A second option would be for the user to take out an account with an ISP in a different country. A third option would be for a user to take out an account with a professional search service for WWW and newsgroups, giving access to articles via their news server. This is done through access to such a company's web site. In yet another option, users could employ third parties to pass on contributions to newsgroups, as well as receive them from third parties.

Similarly, the authorities could simply block access to the WWW by preventing access to a particular server. The problem with this technique is that it has the potential to inadvertently block a range of other services available on a banned server. It is also cumbersome, costly, and likely to increase significantly the time a server takes to process general requests. It also assumes that authorities are fully aware of the content of web pages available. Ways around this form of blocking include the use of a proxy server, which allows the user to retrieve information from a prohibited server indirectly. Another way would be to email a message to a server dedicated to allowing email access to the WWW. These servers are known as "email to WWW gateways."

Software is also widely available designed to block general access to specified material. Surf Watch, Cyber Patrol and Cyber Sentry are examples of such software. Some of these search for key words and filter out material generated by searches for them. However, this can inadvertently filter out material not targeted. The ISP American Online, for example, had this problem when its filter process was unable to differentiate between pornographic material using the word 'breast' and a serious discussion of breast cancer.

A number of points need to be stressed in connection with this ongoing struggle between regulators and advocates of an uncensored Internet. First, the technology is still in its infancy, making it impossible to declare a victor. Second, the difficulty of blocking information needs to be assessed in terms of the political will of authorities and the consequent resources made available for the exercise. Third, the question of political control and the Internet is broader than whether or not information can be blocked. It is also a question of whether the Internet can be monitored.

Monitoring is a less crude mechanism of political control, especially since it is not necessarily apparent that it is occurring. It is also comparatively easy to undertake when it is focused and involves the cooperation of domestic ISPs, other local telecommunications providers, and/or administrators of computing services within organizations such as a university. Monitoring of particular individuals' use of the Internet is technically easier the closer information is intercepted from the point of departure or receipt, as opposed to being intercepted midstream. This could be as simple as tapping a phone line linking a user to an ISP, or inspecting the messages to
or from particular individuals as they pass through an ISP. On this point, the editor of *Australian PC World* responded to a letter in the July 1996 edition that expressed concern (based on a personal experience) about the private information that could be obtained about an individual user on the Internet:

> if anyone wants to go to the trouble, it's possible to trace all your activities on the Internet, and discover everything you've looked at, how long you looked at it on-line, and what you've down-loaded to look at off-line. Your boss can easily monitor all your activities if you're connected via your local network, and if not your ISP can monitor all your activities in great detail, if they can be bothered. Administrators and anyone with any technical skill can easily read your e-mail. Far from preserving our anonymity, the Web makes us far more exposed. There's no getting around it. The more we use machines like telephones and computers for communicating, the more we're susceptible to surveillance. If you want to remain anonymous, you have to go low-tech.

The monitoring potential on the Internet gives rise to ambiguous positions by governments on technologies designed to safeguard privacy, known as encryption. While governments understand the commercial importance of privacy on the Internet, they are also worried about the criminal and security implications of a fullproof system. Thus, although encryption technology exists to render intercepted messages unreadable, the U.S. government has been forcing software companies producing Netscape Navigator and Microsoft Internet Explorer and exporting from the U.S. to use weak enough encryption to enable interception by governments and their agencies. Similarly, while the Organization for Economic Cooperation and Development (OECD) has called on countries to avoid creating unjustified obstacles to trade in the name of cryptography policy, a recent report by the 29-group country group did not rule out the idea of governments having access to keys to unlock encrypted material.

The potential to exploit what mechanisms there are for monitoring or blocking information on the Internet is the mediating role of social and political structures. When extensive networks of political surveillance are already in place and a culture of fear about such practices exists, the impact of monitoring is likely to be strong. Indeed, in certain social and political settings, the Internet has the potential to assist authorities in identifying government critics. Here the mere use of encryption can serve to arouse the suspicion of authorities, however costly or technically difficult, this technology may be for authorities to read messages.

The political effects of the Internet thus appear to be uneven: facilitating some new avenues for individual political expression, but also availing authorities of new information about individuals that can be used in refining political control strategies. Moreover, the single-most important feature of political control in Singapore involves the obstruction of organizational bases for alternative social and political views to those of the ruling party. It is this criterion, rather than individual expressions alone, against which the democratic possibilities of the Internet must be judged.

**The Government's Dual Strategy on the Internet**

By mid-1996, there were around 200,000 users of the Internet in Singapore. In
addition to the 100,000 subscribers, this includes access from the various cyber cafes that have recently sprung up. The government had also set up ten Internet clubs at state-run community centers. With regular use of the Internet involving 5-10 percent, Singapore has a participation rate rivaling the U.S. and ahead of Australia. But while this is in line with the IT2000 strategy, it nevertheless causes the government some anxiety. The Internet is a web comprising more than 70,000 computer networks connecting an estimated 50 million users in around 130 countries. More than 9,000 newsgroups containing discussions or picture data bases are accessible through the Internet, including sexually and politically explicit material. Yet, in a reference to the flow of ideas, images, and information on the Internet, Senior Minister Lee Kuan Yew contends: "The top 3 to 5 percent of a society can handle this free-for-all, this clash of ideas." For the bulk of the population, however, exposure to this is likely to have destabilizing social and political effects according to the senior minister.

Out of concern about some of this access, Singapore's authorities have gone to extraordinary lengths to demonstrate their technical capacity to monitor usage of the Internet. In 1994, a scan of public Internet accounts held with local ISP TechNet was conducted in search of files with the extension "GIF" (Graphical Interchange Format). This produced a total of 80,000 files, of which five were considered by authorities to be pornographic. While the government has indicated it does not intend any further unannounced searches, its demonstrated capability to search files on this vast a scale may in itself and by design have a suitably chilling effect. There is also a reported case of officials at the National University of Singapore discontinuing the employment of an academic scholar after confronting him with text copies of email messages critical of an administrator that the academic had sent over the Internet.

Such exercises in monitoring are aided by structural characteristics of the domestic telecommunications industry and corporatist political relationships that are typical of Singapore. Initially, Singapore Telecom monopolized public access to the Internet through Singnet, which began operating in mid-1994. In September 1995, this monopoly was broken with the entry of Pacific Internet, a joint venture involving the government-linked conglomerate Sembawang Corp. unit, Sembawang Media, and ST Computer Systems & Services, a unit of the government-owned Singapore Technologies. A third ISP entered the public market in March 1996 when Cyberway was launched. Cyberway is a joint venture between the domestic press monopoly Singapore Press Holdings Ltd. (another government-linked company) and the government-owned Singapore Technologies Pte. Ltd. Providing Singapore's Internet service is thus wholly in the hands of government-owned and government-linked companies.

The potential of authorities to monitor the Internet traffic was assisted by the agreement in May 1996, among the three local ISPs to establish a Singapore Internet Backbone. With this, traffic between local ISPs no longer needs to be routed via the U.S., a process that incurred extra costs and time. The new link means faster connections within Singapore, but also a more self-contained system that enhances the capacity of authorities to follow the passage of information. Added to this is the fact that, owing to the monopoly enjoyed by Singapore Telecom over phone lines in
Singapore, there is only one way in or out of the country when travelling on the
time and the country is going to be losing the country. A further consideration in all of this is the fact that all
Singaporeans have a numbered identification card that has to be produced to take out
a domestic account for the Internet.

The belief that the Singapore government regularly monitors individuals on the
Internet is widespread. One contributor to soc.culture.singapore cited a personal
experience and posted a message via a remail service in the U.S. in order to insure
anonymity. This person claimed to be a civil servant who had posted articles
"questioning the wisdom of some government policies" and had reason to believe
his/her phone was subsequently bugged. A friend had also revealed someone had been
"asking him questions about me, my character, who did I associate with etc." The
intimidating aspect of this experience was evident, as the individual expressed fears of
losing his / her job and warned: "I know for sure that all messages on soc
[soc.culture.singapore] are closely monitored by MITA [Ministry of Information and
the Arts]. There are information officers whose job is to read messages on soc and
feed the important ones back to the high ups."

Authenticating these and similar claims is of course difficult. What matters,
however, is the impact these messages have on other users. It is even possible that
some claims are fabricated by or on behalf of authorities with the aim of creating
apprehension and promoting self-censorship.

Research written up in 1995 by Hwa Ang Peng and Berlinda Nadarajan revealed
that broad censorship of the Internet was already present in Singapore, with access to
newsgroups through local ISPs affected by the way local telecommunications provider,
the state monopoly Singapore Telecom, operated its lines. According to them, for
example: "The Unix shell used by Singapore Telecom has been deliberately crippled
to remove some functions. Subscribers have to use a menu to get access to Internet
services. Internet service providers in Singapore censor Usenet groups by filtering out
those with suggestive names. The system administrators can also set conditions for
usage, revoke certain services from users' accounts, or deny log-in access totally.
These rules tend to be haphazard and crisis-oriented."

Despite these practices, access to a wide range of political materials was still
available through the Internet. For example, U.S. Department of State reports on
human rights as well as similarly critical material on Singapore from Amnesty
International were readily available on newsgroups and WWW. The discussion group
soc.culture.singapore is of most concern to the Singapore government. Over 10,000
messages were posted on it from mid-1994 to mid-1995, so it was proving a popular
forum. It does not generally contain radical critiques of the PAP. Nonetheless,
soc.culture.singapore is an unmoderated discussion group whose agendas, in stark
contrast with most other media in Singapore, cannot be controlled by the PAP. It has
given expression to perspectives and information sufficiently critical of the PAP for
the party to adopt the strategy of direct political engagement with its detractors on the
Internet. Significantly, this was the preferred option over instructing local ISPs to
block access to this newsgroup.

In early 1995, amid criticism of Singapore on the Internet for falling short on
democracy and human rights, MITA Minister George Yeo foreshadowed the party's entry into cyberspace. "We must have our battalions there all ready to engage in that debate," he told *The Straits Times*. The party organ *Petir* subsequently elaborated: "Presently, there are quite a few individuals who spread falsehoods about Singapore and the PAP. Other destructive behavior includes impersonating our President and PAP leaders. We need to respond decisively, convincingly and stylishly. We have a duty to combat misinformation and make a stand for the PAP." The task, it was emphasized, was urgent: "If we delay, the opposition parties and more irresponsible users will beat us to it." Accordingly, the party youth organization, Young PAP, began regularly commenting on *soc.culture.singapore*.

This PAP presence becomes especially evident during certain debates, such as that which transpired in 1995 over the appropriateness or otherwise of Prime Minister Goh being awarded an honorary degree from Williams College in the U.S. Protesters argued that the curbs on free speech and critical inquiry in Singapore under Goh rendered any award from an American university offensive. In the various exchanges on *soc.culture.singapore*, the stance by Young PAP was bolstered by the appearance of a spokesperson on behalf of the Ministry of Information and the Arts, who attacked government critics and played a custodial role for the PAP's position.

Such engagement with critical voices on the Internet is consistent with the approach taken with the international press, where authorities devote considerable energy to "correcting" published views and information. Threats of legal actions, removal of a correspondent, or cuts in circulation rights in Singapore have long been supplemented by extensive official statements through the media in response to criticism or unwelcome observations. This engagement is not so much an indication of tolerance as resignation. Even though Singapore's authorities have intimidated much of the international media, they have not been able to instill among them quite the same degree of uniform timidity as that characterizing the domestic media. This will be even less achievable through the Internet. Official political engagement on the Internet to "combat misinformation" means that individuals critical of the Singapore government can quickly find themselves in direct conflict with the well-resourced PAP state machinery.

As an adjunct to this combative entry into cyberspace, the PAP government also embarked on a creative and polished information offensive. To promote positive images of business and government in Singapore it has established its own Web site (http://www.sg/infomap/). InfoMap includes the republic's yearbook and other official publications. At the launch of InfoMap, George Yeo commented: "We should operate in cyberspace the way we operate in the international political, economic and cultural arenas. Where and when it is advantageous to move collectively under the Singapore banner, we should do so." InfoMap requests for May 1996 numbered a high 511,268, suggesting this service is proving attractive to users of the Internet. An interagency group with representatives from both the public and private sectors has also been formed to encourage the representation of Singapore in cyberspace.

**Tightening Regulations**
However, in this two-pronged strategy, the PAP government remains determined not to concede any more media control than is absolutely necessary. As George Yeo emphasized, "Censorship can no longer be 100 percent effective, but even if it is only 20 percent effective, we should not stop censoring." Perseverance with this line led to the introduction in 1996 of a tough new regimen covering the Internet, suggesting authorities might be aiming higher than 20 percent. Described by Yeo as "an anti-pollution measure in cyberspace," regulation of the Internet was to transfer from the Telecommunication Authority of Singapore (TAS) to the Singapore Broadcasting Authority (SBA). The latter was to "concentrate on areas which may undermine public morals, political stability or religious harmony in Singapore." Yeo distinguished between private electronic communication or "narrowcasting" and the "broadcasting" of information to millions of users at one time. He emphasized that "our interest is in the broadcasting end of the spectrum", with the focus of attention on Web sites. The SBA would monitor Web sites by sampling incoming material.

The following are the main features of the 1996 regulations. First, local Internet service operators and content providers will have to be licensed and subject to SBA-imposed conditions. Second, all political parties and religious organizations, and other organizations and individuals with Web pages discussing religion or politics must register with the SBA. Third, service providers must take action to prevent the availability of "objectionable content," content which threatens public security and national defense, racial and religious harmony and public morals. This includes "contents which tend to bring the Government into hatred or contempt, or which excite disaffection against the Government" and "contents which undermine the public confidence in the administration of justice." The SBA will supply information on blacklisted sites, but service providers will need to also exercise judgment in the provision of subscription services. The use of proxy servers is required of commercial Internet access service providers, while public providers such as schools, cyber cafes, libraries, and community centers are required to connect with the proxy server and install software, such as Surfwatch and NetNanny, to restrict access to objectionable content. Fourth, licensees are required to provide details on readers targeted by their service; the names of editors, publishers, and organizations involved in the service; and keep detailed records on subscribers and their Internet use to assist with investigations. Licensees are also required to accept responsibility for content. Finally, electronic newspapers targeting subscriptions in Singapore must be registered and subject to local media laws under the Newspaper and Printing Presses Act.

The transfer of regulatory responsibility to SBA signifies that the government makes no legal distinction between the Internet and other media. As an SBA statement read: "By licensing Internet content powers, SBA also reinforces the message that the laws of Singapore such as the Penal Code, Defamation Act, Sedition Act and Maintenance of Religious Harmony Act apply as much as to communications on the Internet as they do to the traditional print and broadcasting media." However, service operators and content providers have made the point that their positions are not analogous to that of a newspaper editor. As one operator asked: "If someone uses a fax machine at a post office to send a libelous letter, should the post office be held
responsible?" Yet, under the Newspaper and Printing Presses Act, not only can author and editor be prosecuted for defamatory or libelous material, but the distributor and printer as well. The idea is to exert as much pressure as possible to foster self-censorship and caution in trying to avoid objectionable content.

The attempt to render the Internet subject to comparable legal requirements and responsibilities to other media is of course not peculiar to Singapore, nor of special political significance. Service providers such as Prodigy and CompuServe have already been sued in the United States for having allegedly libelous statements distributed across their networks. In February 1996, an anonymous posting in Singapore from the CyberHeart cafe on soc.culture.singapore about three local lawyers immediately resulted in an apology from the cafe's owners and a disassociation from the content of the posting. Several cyber cafes subsequently reconfigured their newreaders so that patrons could only browse material and not post material on newsgroups. This seeming over-reaction reflects a broader sense of vulnerability of service operators in Singapore born out of government sensitivity to criticism and an act which emphasizes the need to assure political stability and the avoidance of objectionable content.

The requirement for Web sites of political parties and religious organizations to be registered and licensed is also aimed at producing uniformity. The regulations will impose the spirit of the Societies Act, which limits public political comment. Even before these regulations were announced, one of Singapore's few organizations registered as a nonparty political discussion group ran into difficulties with its Web page when it tried to sponsor on-line political dialogue. The Socratic Circle, a small and politically moderate group of professionals, briefly held some lively political discussions in 1995 before it was informed by the Registrar of Societies that it would have to cease all activities other than recruitment and the dissemination of club information on its Web site. Public Internet discussions of politics were deemed illegal because they would involve nonmembers. It is a specific condition of the Socratic Society's registration under the Societies Act that its discussions only involve members.

While the regulations may at one level simply be a logical extension of existing curbs on other media and civil society in general, there is at least one respect in which they depart from previous legislation. Local journalist Koh Buck Song has made the important observation that SBA regulations have a much more explicit party-political component in calling for protecting the security and stability of the "government," as opposed to the "nation." Barring content that "tends to bring the Government into hatred or contempt, or excites disaffection against it," warns Koh, could "grant unchecked - possibly uncheckable - power to the ruling body to deny any criticism of it on the Internet."

SBA guidelines barring "contents which undermine the public confidence in the administration of justice" are also significant. Should somebody document a case of maladministration of justice, for example, would this invite prosecution of the whistleblower?

Among regular Internet users, the new regulations came in for public criticism.
Members at one Web site based at Stanford University and set up by Singaporeans studying overseas, the Singapore Internet Community (http://www-leland.stanford.edu/~chongkee/singapore.html/), protested the new regulations: its site displayed a black ribbon, mimicking the blue badge of U.S. sites objecting to federal regulations to curb Net content. One active newsgroup participant on soc.culture.singapore, Benedict Chong, submitted a detailed petition to the SBA from users on that discussion group. The petition opposed "any attempt to limit or control political, religious or other debate on the Internet" and expressed concern that licensing and registration requirements would lead to over-cautiousness on the part of content providers and Web page designers. Moreover, the petition stated: "We do not believe that any SBA or IASP [Internet Access Service Provider] functionary has the moral authority to be the judge and jury on what constitutes 'objectionable content' especially with regards to political or social commentary." Extending on this position, one contributor to Sintercom, Gerard Lim argued: "The vagueness and carte-blanche nature of these criteria run counter to the clarity, fairness and transparency that the rule of law is supposed to provide."

There was no doubt among opposition parties about the aims and implications of the licensing and registration scheme. Singapore Democratic party's secretary-general, Chee Soon Juan, welcomed the SBA's declared intentions to curb pornography, hate literature, and criminal activities. However, he asked "what does the regulation and licensing of political parties, think-tanks, Islamic, Christian and Buddhist associations have to do with sex, hate, and crime?" The real agenda, he emphasized, was political control to "help buttress the PAP's total domination of Singapore's politics for a few more years." He expressed concern that under the guise of "exciting disaffection against the government," authorities could stop all manner of political debate, including criticisms his party had recently leveled at the government over cost of living increases. This point was echoed by National Solidarity Party (NSP) Assistant Secretary-General Steve Chia Kiah Hong, who contended: "We are a political party. If we are successful in voicing what the PAP has not done, and people begin to dislike the PAP, is that 'objectionable content'?" NSP Secretary-General Yip Yew Weng simply described the regulations as a "violation of democracy." Nominated Member of parliament (NMP) and NUS law professor, Walter Woon, made the point that, since the proposed laws can only be effective in Singapore, "the only people who will comment on Singapore politics will be foreigners and Singaporeans living in exile, and that's not healthy."

Despite the SBA's announcements, the NSP subsequently proceeded with its plan to set up a Web page, making it the first opposition party to do so (http://www.nsp-singapore.com/). The NSP Web page provides detail about the party, copies of its press releases, and other information on the NSP. It also contains a political discussion board and guest book for comments to be posted both of which appear to be well patronized. Interestingly, the introduction to the discussion board contains the following italicized caveat: "Please note that all comments are strictly the views of the authors. The National Solidarity Party shall be in no way responsible for the views, comments and actions of the users of this www political
discussion board." Contrary to this disclaimer, the regulations do in fact render the NSP responsible for content on this site.

Commercial Internet content and service providers have expressed apprehension about their responsibility under the regulations for assisting the SBA in censorship. Pacific Internet's chief executive, Nicholas Lee, rather ominously explained his predicament thus: "The boundaries are still kind of gray. We have to test each case to find out where the boundaries are. The gray areas will lead to self-censorship." Installation and operation of the necessary infrastructure to block content as required by the SBA has also been a significant increased cost for companies. Nevertheless, providers have fallen quickly in line with the new regulations. While subscribers of the recently established Cyberway are already on proxy-serviced lines, Pacific Internet and Singnet promptly took steps to ensure all their subscribers were connected to a proxy server. Whatever executives and managers of such commercial organizations think of the tight political controls imposed through the regulations, as with other commercial media organizations operating in Singapore, these sentiments are tempered by business considerations in a rapidly expanding market.

Amid widespread criticism and concern about the regulations, the government announced the establishment of a National Internet Advisory Committee (NIAC) comprising some nineteen members. Its job was to advise the SBA on Internet regulation and promotion. Significantly, the NIAC's composition of academics, government officials, and industry representatives reflects a technical conception by the government of the issues involved and the expertise appropriate to their address. In its deliberations, the NIAC has access to the otherwise secret SBA list of blocked sites under the 1996 regulations.

**Moderation and Discipline**

Minister for Information and the Arts George Yeo claims authorities are concentrating on a few dozen web sites of mass appeal and these are predominantly about pornography. The aim, claims Yeo, is to ensure that the open areas in cyberspace are "relatively pristine and wholesome." However, the government's refusal to publicly identify proscribed Web sites necessarily fosters continued caution. Where self-censorship fails, the government has been prepared to apply legal sanctions.

One of the first developments in the wake of the regulations being enacted was the establishment of a moderated version of the newsgroup *soc.culture.singapore*. The ostensible rationale for this was to "relieve the congestion in scs, raise the signal-to-noise ratio and serve as a distinct subset of scs for a more in-depth and focused discussion of highly relevant issues pertaining to Singapore and Singaporeans." Certainly the popularity of *soc.culture.singapore*, which stood at about 400 postings per day by this time, did mean that comprehensively wading through postings was laborious. However, it was also the case that the newsgroup attracted messages that parodied Singapore politicians, included racial observations, as well as offering sexual services and even the occasional pornographic pictures. Netters themselves voted overwhelmingly to form the separate newsgroup. This was not an
attempt to impose political censorship, since items considered inconsistent with the new newsgroup's charter could still be posted on soc.culture.singapore. It was an implicit display of responsibility and sensitivity to the new regulations nonetheless.

The first incident arising in the wake of the regulations involved the closure by Singapore Telecom of a seventeen year-old student's Internet homepage that had been used to disseminate racist jokes about Malays. There was little fanfare surrounding this decision, and the SBA did not need to direct the ISP involved. Instead, it acted on the basis of complaints from subscribers and, no doubt, in the knowledge of the 1996 regulations.

A more controversial and significant case involved the prosecution of Singaporean Lai Chee Chuen, who faced seventy-seven charges of possessing obscene films, including material downloaded through the Internet. Lai was fined U.S.$43,929. In the face of public concern about random inspections of individuals' use of the Internet, authorities emphasized that the arrest of Lai followed a tip-off from Interpol which had been probing child pornography rings using the Internet to exchange information and images. However, police would not reveal how Lai's activities were monitored once Interpol had passed on information. Local computer experts suggested that "the police could have enlisted the local Internet service providers to assist in the operation."

The climate of concern was reinforced by articles appearing in The Straits Times, which outlined the various ways web users are vulnerable to surveillance. One such article, entitled "You Are Never Alone Out There on the Net," discussed how the technology permits: a record of which sites a user is consulting, and the frequency of such visits; how incoming e-mail messages usually remain on a hard disk cache for a long time, even after deletion, and are thus recoverable by others; and how access can be obtained to password-protected computer files through the use of password-recovery programs. It states at one point: "The features in network management programs also make reading e-mail a cinch. Your boss, should he so choose, can scrutinize your office e-mail. So try not to curse him, not on e-mail at least." For many readers, "boss" would be a metaphor for government.

In an ironic further illustration of the technological susceptibility of users of the Internet to intrusion, in late 1996 the Singapore government's Web site was modified without authorization after a hacker managed to break into the network. For some Singaporeans this was both amusing and discomforting at the same time. After all, if the authorities are unable to insulate themselves from such invasions, what chance does the average Net user have?

Although opposition political parties viewed the 1996 regulations as a deliberate attempt to stifle political debate, they nevertheless attempted to harness the Internet. Following the NSP's lead, the Singapore Democratic Party (SDP) set up three Web sites. Two of these were attached to town councils under the jurisdiction of the party and the other was a dedicated SDP site. However, following candidate nomination day for the general election of January 1997, the SDP and the NSP Web sites ran into difficulties. The SBA instructed both parties to remove biodata and posters of its candidates. It was deemed that the parties were in contravention of the Parliamentary
Elections Act, because the rules pursuant to the act do not provide for campaigning on the Internet (although they do not proscribe them either). The SDP's Jufrie Mahmood told an election rally crowd: "We put our biodata on the Internet. This was to inform everyone. But we were told to remove biodata. They want you to have the impression that we are a bunch of clowns. Even simple information, they hide from people." Hopes these parties had of circumventing stereotypes about opposition candidates in the government-controlled media through the Internet were thus short-lived.

The curbs on the use of the Internet by opposition parties were part of a broader obstruction of the exploitation of new media for political discussion or propaganda purposes. In mid-1996, the SDP had been rejected a license to sell a party political videotape on the grounds that such a medium: could sensationalize political issues; would not allow for effective rebuttals; and threatened to turn political debate into a contest between advertising agencies "vying for maximum effect by evoking emotive reaction."

**Conclusion**

The Singapore government's model of Internet control has been influential among authoritarian states in Asia. In September 1996, the Association of Southeast Asian Nations (ASEAN) committee on culture and information met in Singapore and agreed to collaborate on finding ways to control activities on the Internet. Although the agreement did not include the adoption of a common regulatory framework, only the representative of the Philippines rejected the idea of political control.

Even before this, several Vietnamese delegations had visited Singapore to learn about Internet policing practices, and China sent senior information official Zeng Jianhui to the city-state for the same purpose. In both Vietnam and China, the intention is to steer electronic information flows through officially controlled channels to enhance monitoring and censorship. After a brief period of blocking access to 137 sites in September 1996, Chinese officials followed the Singapore example of more selective restriction and a greater reliance on the threat posed by the possibility of monitoring. In China the technique for this is more blunt, with subscribers to the Internet having to register with local security bureaus, enabling officials to ascertain who is visiting which web sites. In Indonesia there had been a comparatively tolerant and unregulated climate for the Internet, but this changed following the Jakarta riots of July 1996. Authorities banned a mailing list and arrested and interrogated a local university lecturer for messages sent to Holland about the riots. The Indonesian Armed Forces also subsequently established its own web page to counter critical perspectives on the regime. In Malaysia, where there is an ambitious program to attract the world's leading multimedia companies, Minister of Information Mohamed Rahmat has proposed that Internet users be licensed for "better control on the materials that appear in the Net."

Whatever inspiration the Singapore experience may provide for other authoritarian regimes, we should be clear about the distinguishing features of the model. A central feature of the Singapore strategy on Internet control is the attempt to bring this medium under the same tight regimen as other electronic and non-electronic
media. Penalties are applied at various levels of information provision and authorship—be it book sales, distribution, or publishing, for example, or Internet service provision or newsgroup hosting. These combine with legislation, open to wide interpretation, outlawing "interference in domestic politics" (as in the case of the international press) or content which "brings the Government into hatred or contempt" (as in the Internet). When the political will to obstruct certain information and views is coupled with such variables as an efficient and technically competent bureaucracy, an established regime of political intimidation and surveillance, and embedded corporatist structures facilitating cooperation between state officials and administrators across the public and private sectors, you have a formidable mix. While this mix cannot be reproduced easily, if at all, it may nevertheless be instructive for admirers of the Singapore model.

The Singapore model does not constitute a foolproof means of halting the advance of information. Moreover, the battle between control-minded authoritarians and those seeking to exploit the Internet for liberal and liberating purposes will continue as technologies and political contexts change. There cannot be a final solution in this dynamic—in Singapore or anywhere else. However, against liberal expectations of the Internet as a force for the erosion of authoritarian states and the empowerment of individuals and civil society, this study suggests a very different proposition must be taken seriously: such technology can also be harnessed by some states to consolidate a climate of fear and intimidation and create new opportunities to disseminate propaganda and information in their favor. The possibility of the Internet becoming another medium dominated by the powerful is real and has implications beyond Asia.

Source: http://www.sfdonline.org