



# THE END OF THAT '70s SHOW:
## Rethinking Canada's Communications Regulatory Institutions for the Twenty-first Century


IAN MUNRO

October 2009

## Atlantic Institute for Market Studies

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# About the Author

**Ian Munro** is an independent consultant based in Halifax. He has over fifteen years of experience in the communications sector, including lengthy stints with Industry Canada's spectrum management program and with CRA International, an economics consulting firm. More recently, Ian spent two years as the Director of Research at AIMS. He holds a B.A. in economics from Mount Allison University, an M.A. in public administration from Carleton University, and an M.A. in economics from Dalhousie University.

# EXECUTIVE SUMMARY

Three broad trends have dominated the communications industry over the past two decades: astonishing advances in technology, the convergence of the formerly separate and distinct businesses of telecommunications and broadcasting, and the opening of monopoly markets to competition and choice. Despite these fundamental shifts, the structure of Canada's communications regulatory institutions remains little changed from the 1970s and '80s and now works to the detriment of Canadian consumers and businesses. For example:

- Economic regulation of markets for communications services is subject to inefficient duplication and a mismatching of agency strengths with issues between the Canadian Radio-television and Telecommunications Commission (CRTC) and the Competition Bureau.
- Nationalistic cultural regulation continues even though the supposed need for and the efficacy of such regulation has been eroded by technological change.
- Decisions about support for the culture and entertainment sector that rightly should be made in the political arena remain largely in the bailiwick of the CRTC, an independent regulatory body.
- There are two regulators (the CRTC and Industry Canada) with completely different processes and policies for assigning and pricing wireless licences that are identical from a technical standpoint.

Institutional reform of communications regulation to meet Canadians' evolving needs must go beyond simply reassigning a few activities and responsibilities from one agency or department to another. Instead, a new institutional structure for communications regulation should be developed, with consideration of certain fundamental questions:

- Which issues should be dealt with in the political arena and which within the ambit of independent, arm's-length regulatory bodies?
- How can the existing strengths and expertise of the relevant government departments and agencies be used to their best advantage?
- How should licences be assigned and fees set?
- How much flexibility should departments and agencies have in discharging their mandates — that is, how tightly should they be constrained by legislation?
- Where is regulation still required, and where do competition and consumer choice achieve better results for Canadians?
- What tool — spending or regulatory, for example — is best suited to achieving key policy objectives?

To improve the effectiveness, efficiency, and accountability of communications regulation in Canada, the paper makes the following recommendations:

- All spectrum assignment functions should move to the CRTC, but the CRTC should discontinue its current approach to licensing and instead adopt the best practices of Industry Canada — namely, the use of auctions to award licences and set fees and the establishment of licence terms and conditions so that licences have strong property-right attributes.
- Competition issues should be handled exclusively by the Competition Bureau. The CRTC's economic regulation should be limited to price regulation in markets where the Bureau has determined there is a dominant firm.
- Social and technical regulation should remain with the CRTC, but it should coordinate with the Bureau where competition issues arise.
- Attempts at cultural regulation via the CRTC should cease. To the extent that market failures are perceived for certain cultural goods and services, the problem should be addressed through expenditures by the Department of Canadian Heritage, which should be held accountable for their efficacy.

# From Vinyl and VCRs To the Web and WiMAX

In many ways, 1990 — to pick a reference point — does not seem that long ago. For most people over age 30, events such as the reunification of Germany or Nelson Mandela's release from prison do not seem *that* far back in time.

Now move beyond the major happenings of that time and recall day-to-day life. How many of us, in 1990, envisioned such developments as the Internet and the World Wide Web, e-mail, Google, small and sleek wireless telephones that double as cameras and media players, high-definition television with hundreds of channels available and movies on demand, co-axial cable that provides telephone services and telephone lines that deliver television programming, the common siting of satellite receivers on household roofs and in cars, the downloading of television shows and movies to laptop computers, video iPods smaller than a deck of cards, and the ability of consumers to choose among competing service providers for local, wireless, and long-distance telephone services and television broadcasting services?

Few areas of our daily lives have seen such significant change over the past two decades as communications technology and services. Businesses have evolved radically in terms of the services they deliver and how they deliver them, and consumers have evolved just as dramatically as to how, when, and where they use communications technology.

In 1990, the retail consumer communications marketplace was generally uncomplicated and clearly defined. "Telecommunications" was what allowed one to make phone calls, whether local or long distance; "broadcasting" was what one saw on television or heard on the radio. In any given area, there was

- a regulated monopoly provider (such as Maritime Telephone and Telegraph in Nova Scotia or NBTel in New Brunswick) of local and long-distance telephone services;[1]
- a choice between two providers (the local telephone company or Rogers — then known as Cantel) of analogue cellular telephone services with limited coverage areas and heavy handsets with few features;
- a handful of over-the-air Canadian analogue television broadcasters plus (for those living sufficiently close to the border) U.S. stations whose signals could be picked up for free with rabbit-ear or roof-top antennae;

1 These firms are now known as incumbent local exchange carriers (ILECs).

- a number of AM and FM radio broadcasters, but with government control over how many stations of any particular variety (talk/news, country and western, rock, and so on) would be permitted in any one area; and,
- a regulated monopoly supplier of cable television services (such as Island Cablevision in Prince Edward Island) that provided perhaps 20 to 30 channels.

Since those simpler times, much has changed:

- Long-distance and local telephone markets were opened to competition in 1992 and 1997, respectively, and incumbent telephone companies were moved from rate-of-return regulation to price-cap regulation in 1998.[2] By mid-2008, the Canadian Radio-television and Telecommunications Commission (CRTC) had given up regulating the majority of residential and business lines in Canada.
- Local and long-distance telephone service is now available from traditional telephone companies (such as Aliant), traditional cable companies (such as Eastlink and Rogers), resellers that buy wholesale access to traditional telephone companies' networks and that also might have some network infrastructure of their own (such as Sprint and Primus), and Web-based Voice over Internet Protocol (VoIP) providers (such as Vonage). Consumers now can choose to have separate providers for local telephone service and long-distance service.
- Wireless (cellular) coverage has expanded greatly, advanced digital services (such as wireless e-mail and wireless Internet access) are now common, and consumers can choose from among a number of competitors, including both facilities-based service providers and service resellers. It also is noteworthy that a growing proportion of the population has gone "wireless only" and no longer has fixed-line telephone service in the home.
- Deregulation of the rates charged by major cable providers began in 1997. Digital broadcasting services[3] are now available not only from traditional cable companies but also from telephone companies, satellite-based direct-to-home (DTH) service providers (such as Star Choice), and, in some parts of Canada, from service providers using fixed wireless networks[4] (such as Look TV[5] in Ontario and Quebec).
- Most Canadians now have Internet access (and can choose from a variety of competing Internet Service Providers (ISPs), including their local telephone and cable companies); many have high-speed access at home and/or at work.

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2 In rate-of-return regulation, the regulator reviews the regulated firm's revenues and costs and establishes an allowable level of profit (for example, 10 percent). With price-cap regulation, the regulator sets maximum price levels, and if the regulated firm is able to reduce costs and improve efficiency and thereby increase its profits, these gains remain in its hands.

3 All over-the-air television broadcasting in Canada is scheduled to be converted from analogue to digital format by August 31, 2011.

4 Customers for these services have a small antenna mounted to their roof, similar to satellite-based DTH services, but the transmission comes from a terrestrial antenna rather than a satellite.

5 On May 14, 2009, the Ontario Superior Court of Justice approved a transaction in which Look Communication Inc.'s spectrum and broadcast licences would be sold to Inukshuk Wireless Partnership, a joint venture between Bell Canada and Rogers Communications. A separate sale process is under way for Look's subscribers and network assets.

- Audio and video programming and movies (from all over the world) now can be enjoyed when and where the consumer wants via computers, cellular telephones, portable media players, and personal video recorders. This applies in two directions. Not only do Canadian consumers now have vastly expanded access to offerings from around the globe (to the extent that their government does not deny them choice); Canadian producers also now have a global reach and their films, music, and so on can be downloaded in Helsinki, Hobart, or Hyderabad as easily as in Hamilton or Halifax.
- The transition to digital technology has led to the formerly distinct spheres of telecommunications and broadcasting converging to a single communications marketplace. Once music, films, human conversation, or any other form of communication can be transmitted as a series of zeros and ones, the medium of transmission — whether fibre optic line, copper wire, co-axial cable, or radio frequency — is no longer tied inextricably to the nature of the transmission.

Through all these changes, has the institutional structure of Canada's communications regulatory framework kept pace? Does this structure — built in the 1970s through the 1990s — still make sense as we approach the 2010s? If not, how should it be modified and improved for the future? These are the key questions I address in this paper.

In response to these questions, the core conclusion of the paper is that Canada's regulatory institutions have failed to adjust fully to the convergence among formerly distinct industries, services, and networks, or to the radically different competitive situation that this convergence has facilitated. In fairness, however, these institutions and the individuals who work in them are constrained by the roles and responsibilities set out for them in law. The ultimate failure rests with the successive federal governments that have failed to modernize the legislative and institutional frameworks of Canada's communications sector.

I begin with some background and context by briefly explaining who does what with regard to the regulation of communications services and networks in Canada. I then examine cases of institutional overlap and misalignment, with a particular focus on the split in spectrum-assignment responsibilities between Industry Canada and the CRTC, and, relying heavily on a paper by Iacobucci and Trebilcock (2007), I look at the roles played by the CRTC and the Competition Bureau in promoting competitive markets for communications services. The next-to-last section deals with the functions of the Department of Canadian Heritage and the CRTC with regard to cultural issues. I conclude with brief recommendations for a revised institutional structure for communications regulation in Canada.

# The Landscape of Canadian Communications Regulation

Many Canadians have a vague sense that the government has or had some degree of control over how telephone companies set their prices and that Ottawa can be thanked (or blamed) for ensuring that no radio listening day goes by without a healthy dose of Canadian content. Most, however, likely have little idea of the myriad ways that various departments and agencies affect their consumption of communications services. It is helpful, therefore, to understand the different types of regulation that occur and who does what in Canadian communications regulation.

## *Forms of Communications Regulation*

In 2005, the federal government established a Telecommunications Policy Review Panel (TPRP). The panel's final report (Canada 2006) usefully identifies three types of regulation: economic, technical, and social. Here, I expand this taxonomy by adding the term "cultural regulation" to capture certain government activities in the realm of traditional broadcasting, and by including the licensing and pricing functions of the CRTC and Industry Canada related to the assignment of radio spectrum resources. The TPRP's final report notes that its choice of categorization is imperfect and that no "bright lines" neatly distinguish among economic, technical, and social regulation. Similarly, my use of terms in this paper could differ slightly from definitions that might have been in the minds of the TPRP report's authors.

### Economic Regulation

In its most general sense, economic regulation of communications is concerned with maximizing the benefits that society derives from that sector. Most economic regulation has been imposed where communications markets are — or are perceived by regulators to be — insufficiently competitive.[6] More precisely, according to the TPRP, the three key justifications of such regulation are:

- the presence of firms with significant market power that might charge higher prices and produce less output than would be the case in a competitive market;
- the potential for such firms to abuse their dominant positions through, for example, predatory pricing designed to force competitors out of the market and prevent new ones from entering; and

6 Indeed, standard economic analysis says that benefits tend to be maximized naturally in markets that are competitive, and thus regulation is not required. This is why no regulatory agencies oversee markets for pencils, baseball gloves, dishwashers, or haircuts, except for the Competition Bureau, which enforces competition laws of general application.

- the possibility that incumbent firms would deny wholesale access to essential facilities that competitors need to serve customers cost effectively.

In the days of the monopoly provision of telecommunications services, regulation was imposed to keep consumer prices below unfettered monopoly levels for certain services, such as residential local telephone and cable television services. In order to subsidize residential local services, however, the same regulatory framework kept prices for business telephony and long-distance services artificially *higher* than they would have been in a competitive market.

As the communications monopolies began to recede, rate-of-return regulation gave way to less intrusive price-cap regulation — and eventually to forbearance from regulation or even deregulation for some services, as vigorous retail competition took hold. At the same time, new regulatory structures were imposed in telecommunications markets — but not in broadcast distribution markets — to govern the wholesale access of new competitors to the networks of incumbents, on the assumption that wholesale markets were not currently or foreseeably competitive and were thus subject to manipulation by the incumbents.

Another form of economic regulation is measures that focus on business productivity at a more macro level, rather than on access by consumers to affordable services or new competitors to incumbents' networks. A prime example is Industry Canada's practice of attaching a condition to the licences of wireless service providers requiring them to spend minimum amounts on research and development (R&D).[7]

## Technical Regulation

Technical regulation focuses on such diverse matters as:

- communication service providers' access to utility poles (which often are shared with electricity distribution companies), conduits, ducts, municipal rights-of-way, antenna towers, rooftops, and the inside wiring of multi-unit apartment and office buildings;
- the allocation of telephone numbers;
- interconnection and interoperability among competing communication networks (for example, ensuring that a TELOS wireless customer in Edmonton can complete a call with an Eastlink home phone subscriber in Halifax); and,
- the prevention of harmful radio interference through such means as transmission power limits and equipment standards.

The TPRP's final report includes spectrum management — the allocation and assignment of radio frequencies and the regulation of their use — as a whole, within the category of technical regulation. However, since the function of setting engineering criteria — such as antenna height and

7 The implicit assumption being that the government knows better than business owners and managers the extent to which a firm's capital should be allocated to R&D rather than to other priorities.

maximum transmission power levels in order to prevent one communication network from interfering with a neighbouring one — differs significantly from that of determining which competing parties receive access to scarce radio frequencies and at what price, I discuss the latter function separately below.

### Social Regulation

Social regulation is meant to achieve certain societal objectives that might not be met through market forces or economic regulation. Some social regulation is directed toward certain specific groups. For example, in the communications sector, an obligation to serve might be imposed on carriers to ensure that the poor and those living in remote or rural areas have access to some basic level of service, or regulations might require specialized services be available to the visually or hearing impaired. Other forms of social regulation in the sector are more broadly based, and related to safety (requirements to provide 911 service), security (requirements to provide police the means to conduct lawful wiretaps), and privacy (requirements that carriers respect an individual's choice not to receive marketing calls).

### Cultural Regulation

In addition to the TPRP's economic, technical, and social regulation, a fourth type — cultural regulation — is not just prominent but perhaps paramount in Canadian broadcasting policy. I use the term to encompass measures — such as Canadian-content requirements — that limit consumers' choices in the consumption of audio and video content. Proponents of such policies, however, often mask their restrictive nature through the use of euphemisms: "safeguarding the cultural fabric of Canada" or "enhancing our national identity."

### Licensing and Fee Setting

The last major regulatory activity I address here is the awarding of licences and the collection of fees for the use of radio frequencies. Many Canadians might not realize that, generally, competitive processes are used to determine who receives the right to establish a radio or television station and to provide cellular telephone and other wireless communication services. Indeed, designing and implementing the process through which scarce and sometimes highly valuable licences to access the radio spectrum are awarded is a core activity of Canada's communications regulatory bodies, and licence fees for spectrum authorizations are the federal government's largest non-tax source of revenue.

## *Roles of Departments and Agencies*

### Industry Canada

Industry Canada was created in 1993, during the short-lived Progressive Conservative government of Kim Campbell, out of portions of the Department of Industry, Science and Technology, the

Department of Consumer and Corporate Affairs, and Investment Canada, and the telecommunications and radiocommunications components of the Department of Communications. The Minister of Industry is responsible for telecommunications and radiocommunications (spectrum management) policy and for legislative initiatives under the *Telecommunications Act* and the *Radiocommunication Act*. The Minister also is the cabinet lead with regard to policy directions to the CRTC and variances of CRTC decisions on telecommunications matters.[8]

Industry Canada's more specific regulatory functions apply mainly to the management of the radio frequency spectrum. At the highest level, management of spectrum resources takes place through the International Telecommunication Union (ITU), a United Nations agency that provides a forum for nation states to coordinate their use of radio frequencies. Industry Canada leads Canada's representations to the ITU.

Below the ITU level, national governments manage spectrum in two broad ways. First, they *allocate* certain spectrum bands to specific *uses* — for example, in Canada, the bands 825-850 MHz and 870-895 MHz are allocated to cellular telephone service and the band 87.5–108.0 MHz is allocated to FM radio broadcasting. Second, they *assign* frequencies to *users* — for example, Rogers Wireless has a national licence for half the assigned cellular frequencies, while "Kool FM," a classic hits radio station, is licensed to broadcast at 96.5 MHz in Halifax.

In Canada, these two roles are split between Industry Canada and the CRTC. Industry Canada is responsible for allocating the spectrum to uses: cellular communications, radio and television broadcasting, marine and aircraft communications, satellite communications, terrestrial military communications, and so on. The CRTC is responsible for assigning frequencies to broadcasters — that is, it decides who receives licences to operate radio and television stations[9] — but it is Industry Canada that assigns the non-broadcasting spectrum and licence fees for cellular and paging operations, radio systems in taxis and delivery trucks, police and fire radiocommunication systems, and so on.

Furthermore, when assigning non-broadcasting spectrum authorizations, Industry Canada engages in technical and social regulation through the *Radiocommunication Regulations* and other policies and standards, as well as through more specific conditions that might be attached to individual licences. Industry Canada also carries out some forms of economic regulation — for example, requiring some licensees to offer resale to third parties. Economic regulation in terms of the authority to regulate retail prices for wireless services, however, falls within the purview of the CRTC.

8 Throughout the CRTC's history, policy directions from and variances of its decisions by the cabinet have been very much the exception. In 2006 and 2007, however, under the tenure of Minister Maxime Bernier, the cabinet issued a significant policy direction and variances on two major files (VoIP regulation and forbearance of local phone service regulation).

9 For every broadcasting licence the CRTC issues, however, Industry Canada issues a related technical authorization to ensure that the broadcasting transmitter allowed by the licence does not create harmful interference.

## The Department of Canadian Heritage

The Department of Canadian Heritage was formed — as part of the same government reorganization that created Industry Canada in 1993 — out of portions of the Department of Multiculturalism and Citizenship, the Department of the Environment, and the Department of the Secretary of State, plus the cultural programs of the Department of Communications. The Minister of Canadian Heritage is also responsible for policy and legislative initiatives involving the *Broadcasting Act*.

## The CRTC

As its name implies, the Canadian Radio-television and Telecommunications Commission regulates both radio and television broadcasting and telecommunications services in Canada. The CRTC was established by Parliament in 1968 as the Canadian Radio-television Commission. In 1976, its mandate was expanded (as was its name) to include regulation of the telecommunications industry.

The CRTC can have up to thirteen full-time and six part-time commissioners, all of whom are appointed by the federal cabinet. Among the commissioners are a chairperson (currently Konrad von Finckenstein), a vice-chairperson of broadcasting (currently Michel Arpin), and a vice-chairperson of telecommunications (currently Leonard Katz). Of the remaining commissioners, six are appointed specifically as regional commissioners for the Atlantic provinces, Quebec, Ontario, Manitoba/Saskatchewan, Alberta/Northwest Territories, and British Columbia/Yukon (no commissioner appears to have specific responsibility for Nunavut). The Commission is supported by a staff of more than 400 and has an annual budget of more than $45 million. It reports to Parliament through the Minister of Canadian Heritage.

In carrying out its work, the CRTC is guided by the objectives set out in the *Broadcasting Act* and the *Telecommunications Act*. The Commission itself offers the following broad description of its roles in broadcasting and telecommunications:

> In broadcasting, the CRTC ensures that all Canadians have access to a wide variety of high-quality Canadian programming as well as access to employment opportunities in the broadcasting system. Programming in the Canadian broadcasting system should reflect Canadian creativity and talent, our bilingual nature, our multicultural diversity and the special place of aboriginal peoples in our society.
>
> In telecommunications, the CRTC ensures that Canadians receive reliable telephone and other telecommunications services, at affordable prices.…[The] CRTC allows competition, not regulations, to drive the market. The CRTC regulates only where the market doesn't meet the objectives of the *Telecommunications Act*.[10]

The Commission has primary responsibility for economic regulation in the telecommunications sector, for technical and social regulation in wireline telecommunications (that is, traditional

10 CRTC, "About the CRTC," from Web site: <http://www.crtc.gc.ca/eng/backgrnd/brochures/b29903.htm>.

telephone services), and for social and cultural regulation in the broadcasting sector. Examples of the Commission's activities include:

- deciding who will be awarded licences for new radio and television stations and under what conditions;
- reviewing mergers and acquisitions in the broadcasting industry;
- approving rates and tariffs in the telecommunications industry
- determining how much Canadian content radio and television broadcasters must provide;
- having the authority to regulate consumer prices for telephone and cable television services — although, in light of competition from new entrants, it has declined to exercise this authority across much of the country;
- designing and administering the mechanisms that subsidize the provision of telecommunications services to high-cost rural and remote areas; and,
- establishing regulations to improve access to telecommunications and broadcasting services for the disabled.

## The Competition Bureau

The Competition Bureau is an independent agency within Industry Canada that reports to Parliament through the Minister of Industry. The Bureau describes its mission (in part) as to protect and promote competitive markets in Canada by administering and enforcing the *Competition Act*, Canada's general competition law. In addition to investigating alleged anticompetitive behaviour in particular markets, the Bureau reviews corporate mergers and deals with consumer issues such as misleading advertising and deceptive marketing practices. As fully regulated communications marketplaces have made the transition to competition, confusion sometimes has arisen about where the boundaries lie between the CRTC's jurisdiction and that of the Competition Bureau, an issue I examine more closely later in this paper.

# SPECTRUM ASSIGNMENT: INDUSTRY CANADA AND THE CRTC

As noted above, it is Industry Canada that allocates radio frequencies to different uses (cellular telephony, FM radio, television, fixed microwave links, aeronautical communication, and so on), while the assigning radio frequencies to specific users in specific places is split between Industry Canada and the CRTC, with the latter responsible for assigning frequencies in the broadcasting spectrum and the former for assigning frequencies in the non-broadcasting spectrum. In the past, when the broadcasting and non-broadcasting realms were clearly demarcated and understood, this arrangement functioned reasonably well. In a converged world, however, this separation of spectrum assignment responsibilities reduces economic efficiency and increases administrative costs.

In this section, I describe the different approaches Industry Canada and the CRTC use in assigning frequencies, in particular with respect to the nature of the licensing process, the nature of the licences that are assigned, and the licence fees that are charged.

## *Spectrum Assignment Processes*

Industry Canada uses three different processes to assign licences for the use of radio frequencies.[11] The bulk of spectrum authorizations are issued on a first-come-first-served basis where there is sufficient spectrum available to satisfy all users. Where the demand for frequencies exceeds, or is expected to exceed, the available supply, Industry Canada uses a competitive process: an auction or a "comparative review process" — known informally to some as the "beauty contest" approach. Over the past decade, a slim majority of Industry Canada's competitive licensing processes appear to have been auctions.[12]

For most spectrum auctions, the licences and all associated terms and conditions are clearly pre-defined, applicants must meet certain objective criteria to become qualified bidders, and licences are awarded solely on the basis of the highest bid offered. The criteria to become a qualified bidder

11 Licences are not required for some spectrum bands, such as those allocated to such devices as garage door openers or baby monitors.

12 Industry Canada's Web site does not provide a handy listing of all auctions and comparative review processes, but since the first auction in late 1999 there seem to have been seven of the former and six of the latter, including one earlier in 2009 for the licensing of two orbital positions for satellite-based services. See the Web site: <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09163.html>.

generally are few in number and include the submission of a financial deposit, a statement that the bidder complies, or will comply, with applicable Canadian-ownership requirements, and information on corporate ownership to ensure the independence of bidders.

In a comparative review process, applicants must show that they meet certain objective criteria and will go farthest toward achieving subjective goals. The choice of criteria and goals and their relative weighting are at the discretion of the Minister of Industry and have included applicants' proposed contribution to competition, degree of innovation, commitment to R&D, generation of economic benefits, geographic coverage, financial strength, quality of business plan, technical competency, and ability to meet the needs of the "learning community." Applications are reviewed by departmental officials who pass recommendations on to the Minister, who makes the final decision. The process is entirely internal, with no hearings or oral arguments of any type.

Both auctions and comparative review processes typically are preceded by a public consultation process in which input is sought on such matters as the definition of licences, licence conditions, fees or reserve prices, and the rules and details of the licensing mechanism. Where there are multiple licences — for example, in the case of multiple blocks and/or licensing areas — available in a particular band, Industry Canada generally will hold a single, simultaneous process for all the licences in the band.

According to Industry Canada, an auction will be used as the spectrum assignment mechanism when (i) demand for spectrum exceeds the available supply; (ii) government policy objectives can be met fully through the various means available; and (iii) reliance on market forces to select licensees is deemed to be in the public interest. It should follow logically that a comparative review process is used when demand exceeds (or is expected to exceed) the available supply and when one or both of the second and third conditions cannot be met (in the Minister's judgment).

As for the CRTC, section 18.(1)(a) of the *Broadcasting Act* requires it to "hold a public hearing in connection with the issue of a licence, while section 16 gives it the powers, rights, and privileges of a superior court in respect of such hearings."[13] The licensing process is highly formalized, with a significant level of detail regarding such issues as the format of written applications, required advertisement of the public hearing, and the conduct of the hearing, all of which are specified in both the *Broadcasting Act* and the *CRTC Rules of Procedure*. Contrary to the Industry Canada practice of generally assigning similar licences through a single, simultaneous process, the CRTC typically has separate and unique processes for different geographical locations.

The Commission generally determines the acceptability of an application for a broadcasting licence, or chooses the winner among multiple competing applications, based on its opinion of the degree to which certain objectives of the *Broadcasting Act* will be met, including

13 The Commission need not hold a public hearing in connection with the amendment or renewal of a licence if it is satisfied that such a hearing is not required in the public interest.

- the promotion of Canadian ownership and control;
- the safeguarding, enrichment, and strengthening of the political, economic, and social fabric of Canada;
- the encouragement of the development of Canadian expression by providing a wide range of programming; attention to the needs of various groups (such as men, women, children, linguistic groups, cultural and ethnic groups, aboriginal peoples);
- contribution to the creation and presentation of Canadian programming;
- maximization of the use of Canadian creative resources; and,
- production of programming of a high standard.

Regarding its interpretation and application of these objectives, the CRTC has stated (CRTC 2000) that among the factors relevant in its evaluation of competitive radio licence applications are:

- the quality of the application (including the business plan, the proposed station format, how it reflects the diversity and distinctiveness of the local community, its contribution to Canadian talent development, and, depending on the circumstances, Canadian-content and French-language commitments);
- the diversity of news voices in the market;
- its market impact — that is, the financial effect that a new station could have on existing stations; and,
- the competitive state of the market — that is, the possibility of a "competitive imbalance" when one owner has multiple stations in a market.

The Commission also notes that "the relative importance of these factors will vary in each case depending on the specific circumstances of the market concerned" (CRTC 1999). Essentially, the CRTC uses its own form of "beauty contest" for all the competitive licensing situations it encounters.

## *Licence Definitions*

Industry Canada issues two types of licences: "radio licences," the traditional form of authorization, specific to a radio apparatus such as an antenna tower; and "spectrum licences," authorization to use specified radio frequencies within a defined geographic area.

There is wide variation in the terms and conditions that are attached to various licences, even as far as basic definitional aspects are concerned, let alone obligations in support of government policy goals. For example, spectrum licences awarded by auction have a ten-year term with an explicit "high expectation of renewal"; most authorizations awarded through a comparative review process also have ten-year terms but come with only an implicit, not explicit, expectation of renewal. In the past, some licences were awarded with only five-year terms; most radio licences are valid for one year, but also have at least some degree of implicit expectation of renewal. As well, spectrum licences awarded by auction are subject to a highly liberalized regime for transfers to third parties. Some licences awarded through a comparative review process are subject to a somewhat similar

transferability regime, but most may be transferred only after a "full review" by and with the approval of the Minister of Industry — indeed, in some cases, specific prohibitions on transfer for a certain number of years were attached to authorizations when initially awarded.

CRTC broadcast licences are awarded for an area, such as "Toronto," that has no precise geographic boundary, but the Industry Canada spectrum licences that must accompany every CRTC licence come with technical parameters regarding geographic boundaries and maximum signal strength. For example, a condition attached to a multipoint distribution service (MDS) licence to serve major centres in British Columbia states "the 'licensed area' shall be the market area served by each of the licensee's transmitters, as set out in the approved application." Although most radio and television licences will be localized to a city or town, licences for larger regional or provincial areas can be awarded for services such as MDS.

Section 9.(1)(b) of the *Broadcasting Act* sets the maximum term of a broadcasting licence at seven years.

CRTC licences are not subject to the same liberalized transfer regime as are auctioned Industry Canada spectrum licences. Instead, section 4.(4) of the *Broadcasting Distribution Regulations*, section 14.(4) of the *Television Broadcasting Regulations*, and section 11.(4) of the *Radio Regulations* require that the CRTC grant prior approval of any transaction that would result in a change in effective control, an increase in a person's holdings to 30 percent or more of the voting interests, or an increase in a person's holdings to more than 50 percent of the common shares. Furthermore, the CRTC's policy frameworks generally require that a financial contribution of 10 percent (in the case of television) and 6 percent (for radio) of the value of the transaction be committed to "tangible benefits" — for example, a fund to market and promote Canadian music. The Commission argues this policy ensures that the public interest is served when it receives a request for a transfer of control or ownership, given that it does not call for competing applications.

Under section 9.(1)(*b*)(i) of the *Broadcasting Act*, the Commission may establish licence conditions "as [it] deems appropriate for the implementation of … broadcasting policy [as set out earlier in the Act]." The commitments to achieve objectives of the Act that a party makes in its application may become conditions of its licence.

## *Licence Fees*

The nature of and basis for Industry Canada licence fees also vary by licence type. Auctioned licences are exempt from all other radio licence fees, so payments for them are determined purely by the outcome of a (generally) competitive, market-based process. Non-auctioned licences, however, are subject to annual licence fees as prescribed in the *Radiocommunication Regulations* or, in some cases, to specific fees for certain bands that the Minister of Industry fixes pursuant to section 19 of the *Department of Industry Act*. Federal, provincial, and municipal government users of spectrum,

such as the Department of National Defence, provincial police forces, and municipal fire departments, pay licence fees, just as commercial users do.

For some bands and services, Industry Canada has attempted to link fees with some estimate of "economic value." In cases where new services are being introduced to compete with highly similar existing services, achieving parity in fee levels across the two services generally is a key goal. For the majority of licences, fee levels are largely a function of somewhat arbitrary historical decisions. Industry Canada has understood for several years the need for improvement in the existing licence fee regime and has proposed a more rational system, with little progress to date.

Broadcasting licensees pay fees to the CRTC as prescribed in the *Broadcasting Licence Fee Regulations*.[14] Part I fees are designed to recover, in aggregate, the CRTC's administrative costs related to broadcasting regulation, and are apportioned across broadcast licensees as a function of their revenues. Part II fees are also set as a function of broadcast licensees' revenues and are meant to cover: i) Industry Canada spectrum management costs for broadcasting spectrum; ii) the privilege of using the broadcasting spectrum; and iii) the privilege of holding a broadcasting licence for commercial benefit. Broadcasters also make significant payments toward the production of Canadian programming and the development of Canadian musical talent as conditions of their broadcasting licences.

## *Implications of Spectrum-Assignment Discrepancies*

The processes that Industry Canada and the CRTC use to assign spectrum differ markedly in terms of their selection criteria, award process, and fee determination. As the distinction between broadcasting and telecommunications continues to blur, these differences become potentially more problematic and damaging.[15] Two particular spectrum bands provide useful examples here.

A number of years ago, the 2500 MHz band was divided into two parts in Canada. One part, for MDS, was allocated to the broadcasting service and so the CRTC became responsible for its licensing. The other part, for multipoint communications systems (MCS), was allocated to the fixed service and so its licensing fell to Industry Canada. Even though the MDS and MCS spectra are technically identical and substitutable, they were assigned by two different organizations, along different time lines and processes, with separate sets of selection criteria and on the basis of different fee regimes.

A second example involves Local Multipoint Communications Services (LMCS) in the 28 GHz range. When the Industry Canada licensing process was initiated in early 1996, LMCS was billed as the

14 The Canadian Broadcasting Corporation and provincial Crown corporation broadcasters, such as TV Ontario, are exempt from broadcasting licence fees.

15 Even *within* Industry Canada's area of jurisdiction, there is inconsistency across different spectrum bands in terms of the licensing approach, the degree to which licences resemble property rights, and the fees that are charged.

"third way" that would compete with telephone companies in the delivery of voice and data services, and with cable companies in the delivery of broadcasting services. As the call for applications made clear, though, the award of an LMCS licence by Industry Canada would not in any way have guaranteed the issuance of a broadcasting licence by the CRTC (Canada 1996, 3).[16] Thus, it was possible that a licensee, after expending great efforts in the Industry Canada assignment process, could then have been required to go through one or more CRTC processes — perhaps a great many more, as the original Industry Canada licences were awarded over 66 geographic areas. Furthermore, the CRTC could deny the applications in one or more cases if it decided that the objectives of the *Broadcasting Act* would not be adequately realized. In this case, the licensee would end up holding some spectrum that neither it nor anyone else could use (at least for the delivery of broadcasting services), and the basis upon which, in part, it won its Industry Canada licence — the promise to provide additional competition in the broadcasting distribution marketplace — would be rendered a sham. One can argue that an evaluation of the likelihood of obtaining a CRTC broadcasting licence should be part of the due diligence of applicants who wished to use LMCS frequencies for broadcasting. Still, the potential for such a perverse outcome via sequential, independent processes is still worrisome, and had such a situation actually arisen, the public rightly would have wondered why two branches of a single government were acting at cross purposes.

These inconsistencies and disconnects can adversely affect administrative and procedural efficiency both for the government (and ultimately the taxpayer) and for the applicants/bidders. Where the CRTC and Industry Canada are assigning similar spectrum in separate processes, as in the example of MDS and MCS licences, more government resources are required than if licensing of all the related spectrum was done by a single government body, and applicants also must expend considerable time and resources in each of the processes.

There also are costs in terms of economic efficiency. The split responsibilities between Industry Canada and the CRTC result in the assignment of interrelated spectrum and authorizations in separate, unrelated, sequential processes. This limits opportunities for bidders/applicants to arbitrage across the two processes to acquire substitutable spectrum at the lowest cost, and makes it difficult for them to aggregate complementary spectrum efficiently across the two processes. Bidders/applicants also risk budget constraints in having to commit to expenditures in the first process without knowing what costs might arise in the second. Furthermore, separate processes also present opportunities for non-productive strategic gaming. As an example, suppose that a firm views two licences, one available in the earlier of two processes and the other available in the later process, as being highly complementary. Also suppose that other bidders know this is the case. After it wins the first licence, the firm's competitors might bid aggressively on the second licence solely to raise the firm's costs or to damage it by preventing it from winning its desired pair.

16 In hindsight, we now know that the Industry Canada licence winners quickly changed their business model to one that did not include the provision of broadcasting services to households. Unfortunately for them, their revised business models were not successful, either, and the spectrum is now back in the hands of Industry Canada, while the former licensees have gone into receivership.

## *Improving Spectrum Assignment*

Many of the inconsistencies and economic inefficiencies of the current system of spectrum assignment could be overcome if all functions were made the responsibility of a single agency: the CRTC. Then, closely related spectrum bands could be awarded in the same process, reducing administrative and procedural costs for all parties and maximizing the likelihood of an economically efficient outcome. Such gains would be fully realized, however, only if the agency makes optimal choices in terms of the licensing process it uses, the nature of the licences it assigns, and the fees it charges.

One step should be to jettison both the CRTC's public hearing approach and Industry Canada's comparative review process, which are cumbersome and time consuming, prone to inefficiencies, and open to the perception of manipulation due to their reliance on subjective selection criteria and decision-making that takes place at least partly out of public view. In their place, a first-come-first-served process would be appropriate where there is demonstrably more supply than demand. Otherwise, an objective and transparent auction process should be used.[17]

Another reform would be to give licences strong property-right characteristics. Licence attributes should include very long or perpetual terms (subject to the federal government's exercise of eminent domain — with compensation — in the event of an overriding public need), full transferability and divisibility in the secondary market, and the maximum degree of flexibility in terms of service and technology choices that is consistent with the constraints required to minimize potential harmful interference to other spectrum users.

Finally, fees should be determined via the auction process and no additional fee should be levied when licences are transferred in the secondary market. Where there is insufficient competition for spectrum to require an auction, the fees for licences assigned on a first-come-first-served basis should be set to recover the relevant spectrum management costs.

17 For a more in-depth discussion of the merits of auctions versus other approaches and of how an auction should be structured for optimal results, see Munro (2008).

# Economic Regulation: The CRTC and the Competition Bureau

As communications markets have moved from heavy regulation to open competition, concerns have increased about the lack of clarity regarding the jurisdictional boundary between the Competition Bureau and the CRTC, and calls have been made for a restructuring of institutional arrangements.

In a recent key study, Iacobucci and Trebilcock (2007) concur with the TPRP final report's conclusion that the historic regulatory focus on protecting consumers from monopoly pricing must change to a presumption of deregulation and to a reliance on competition to discipline firms' behaviour. However, they reject the panel's recommendation to create a new, hybrid Telecommunications Competition Tribunal with staff and resources seconded from both the CRTC and the Competition Bureau. Instead, they offer an alternative institutional solution. They begin by noting four main types of CRTC economic regulation:

> First, CRTC economic regulation is aimed at protecting retail customers from being charged prices that are too high by suppliers with market power, initially through rate-of-return regulation and since 1998 through price cap regulation. Second, economic regulation seeks to deter anticompetitive practices by suppliers with market power. To address concern over predatory pricing, for example, the CRTC has in the past established price floors and placed restrictions on certain marketing practices for ILECs (e.g., contacting and trying to win back customers switching to a competitor, and promotions). The CRTC has also required ILECs to provide competitors with access to what it classifies as "essential"' and "near essential" facilities and services, such as local loops priced at incremental cost plus a CRTC-approved markup. Third, economic regulation attempts to eliminate undue price discrimination by requiring that tariff services be available to all persons wanting these services, and that price discounts and differentials have reasonable justification. The fourth aim is to ensure widespread availability of services by requiring ILECs to provide their regulated services to any potential customer on demand, and by regulating rates in such a way as to ensure that basic telephone services are affordable in all regions, including high-cost areas.[18] The CRTC has established a central fund that collects contributions from Canadian telecommunications service providers in the form of a percentage of revenue, which it uses to subsidize the cost of providing basic service to high-cost areas. (Iacobucci and Trebilcock 2007, 130)

Iacobucci and Trebilcock find that the CRTC lacks expertise in competition policy, and they highlight examples of CRTC statements and decisions that are very much at odds with the thinking of

18 In this paper, I include this aim in the category of social regulation, rather than economic regulation.

mainstream competition economics experts. They also note that general competition principles are well suited to identifying uncompetitive markets and to remedying practices such as predation, price discrimination, or other abuses of a dominant market position, but the Competition Bureau's typical approaches and practices are not well placed to provide ongoing price regulation in retail markets or wholesale access markets that are found to be insufficiently competitive.

To take better advantage of the strengths and expertise of the Bureau (competition policy) and the Commission (wholesale and retail price regulation) and to eliminate the inefficiencies and uncertainty caused by duplication and overlap between the two agencies, Iacobucci and Trebilcock recommend that all competition policy matters — such as allegations of price fixing, predatory pricing, price discrimination, anticompetitive mergers, and unlawful exclusionary practices — be within the exclusive purview of the Competition Bureau. The CRTC would engage in economic regulation (such as the establishment of price caps) of a retail or wholesale market only *after* a finding by the Bureau that there is a dominant firm in that market that might be able to set supra-competitive prices. Iacobucci and Trebilcock would leave technical and social regulation of communications services in the hands of the CRTC, but suggest that a member of the Competition Tribunal sit on any CRTC panel that was considering a social or technical regulatory issue with competitive implications. Equally, the CRTC would have a representative on any Competition Tribunal panel that was addressing a competition question involving the communications industry.

The solution offered by Iacobucci and Trebilcock has merit for several reasons. First, it would remove the false mystique that communications markets are so complex that only telecom specialists at the CRTC are able to analyze the competition issues that arise in them. Second, as the sector moves to greater reliance on competition and the gradual end of economic regulation, the TPRP's proposal for a new Telecommunications Competition Tribunal seems more a step back than a step forward; Iacobucci and Trebilcock see no need for the establishment of such an agency or the creation of even more bureaucracy. Third, their recommendation incorporates the common-sense approach of using existing strengths and capacities of both Bureau staff and CRTC staff to their best advantage.

# Cultural Regulation: The CRTC and the Department of Canadian Heritage

The third and final case of institutional misalignment involves the CRTC and the Department of Canadian Heritage and their roles in what I term "cultural regulation."[19]

For many years, the CRTC, in the name of promoting Canadian culture and identity, has limited Canadians' choices in radio and television programming by imposing Canadian-content quotas. More recently, the Commission has deliberated as to whether similar limits should be applied to "new media" such as audio and video programming via computers, iPods, cellular telephones, and personal video recorders. One could argue, however, that the Commission would have made better use of its time and resources by recognizing that new technology and convergence have shattered old paradigms and by beginning to dismantle its outdated regulatory structure.

Television and radio broadcasting has been regulated since its infancy because government licensing of frequency bands was accepted worldwide as the solution to the potential "tragedy of the commons" problem that arises with radio spectrum. Once bureaucrats and politicians could determine the technical rules to manage potential interference among radio transmissions, it was no great leap to regulate the information that would be carried over those transmissions. (In contrast, no common resource problems are inherent in the production and sale of written works — and, indeed, there are no Canadian-content rules for local book or magazine stores.) The binding technical scarcity of the spectrum resource has been the cornerstone of arguments for Canadian-content regulations. Since the number of radio and television signals in any given market is limited by the laws of physics, the argument goes, the broadcasting schedule would fill with U.S. programming if no space is maintained for Canadian content.

Technology, however, is rendering this argument obsolete. Consumers are no longer limited to a handful of viewing and listening options in each hour of the day. Radio and television from all over the world — and, of course, from all over Canada — can be accessed via the Internet. And rather than being bound to broadcasters' schedules, consumers can enjoy their programming choices at their own convenience by downloading files to desktop computers, laptops, cellular phones, or iPods, or by recording programs to personal video recorders. This increase in access works in the opposite

19 This section draws on a submission by the Atlantic Institute for Market Studies to the CRTC with respect to "Broadcasting Notice of Public Hearing 2008-11," December 2008, on the subject of Canadian broadcasting in new media.

direction as well. Canadian-content producers can now use the Internet to make their products available worldwide much more easily, quickly, and cheaply. Also, technological advances (like the development of new media) are eroding the CRTC's ability to apply and enforce Canadian-content rules. For example, as more and more Canadians choose to listen to radio stations via the Internet, the size of the Canadian listening audience whose musical consumption conforms to the Commission's edicts for Canadian content diminishes.[20]

These fundamental changes to the broadcasting landscape provide new reasons to question the wisdom of continuing with Canadian-content policies that restrict consumer choice. However, there remain additional, longstanding reasons for ending such policies, nicely summarized by William Stanbury (1998, 7), who, in a single paragraph, presents a damning list of indictments:

> The present Canadian content regulations have almost no redeeming social value. They are based on citizenship, not on the substantive content of TV programs or musical recordings. They alter the set of choices available to TV viewers and radio listeners by limiting the availability of foreign programs and musical recordings. After several decades, there is no evidence of any link between CanCon regulations, national identity, and cultural sovereignty — the key stated objectives in the Broadcasting Act. These regulations have raised broadcasters' costs and cable TV rates. They also amount to a regressive tax and so harm the poor proportionately more than the rich. CanCon as an industrial policy amounts to neomercantilism, an idea discredited long ago. The emphasis on supporting the export of Canadian cultural products turns Canada into what cultural nationalists loathe about the US, a "cultural imperialist." Most importantly, Canadian content regulations are arguably a violation of the constitutional right to freedom of expression. It is hard to overemphasize the importance of freedom of expression in a democracy.

To summarize, technological advance as exemplified by the growth of new media has rendered the existing paradigm of broadcasting regulation obsolete. Canadian consumers now have access to once-unimaginable levels of choice and diversity in broadcasting content — except to the extent that their government denies them this choice.

In addition to Stanbury's incisive critiques of a decade ago, there are two new reasons to argue for jettisoning the current regulatory model: new technology has massively expanded the "shelf space" available for Canadian broadcasting content and is slowly undermining the CRTC's technical ability to enforce Canadian-content rules. Rather than asking whether new media's exemption from the existing regulatory structure should be lifted, the Commission should be asking whether there remain valid reasons to maintain much of the broadcasting regulatory edifice that now stands.

To the extent that market failure can be demonstrated for certain types of "Canadian" programming that would be widely supported as socially beneficial (perhaps educational or historical programming), the government should designate funds for this purpose. More specifically, the Department of Canadian Heritage, not the CRTC, should be responsible for such spending and held accountable for

20 "Geo-blocking" theoretically prevents Canadians from accessing certain foreign television programming over the Internet, but IP addresses can be spoofed to circumvent geo-blocking protection.

its results. Regulatory agencies like the CRTC are independent and at arm's length for a reason: they can enact regulations and adjudicate disputes without the potential for real or perceived favouritism that might exist in government department headed by a minister who also is a politician. Conversely, broad policy decisions and choices about how to spend taxpayers' dollars are properly made by ministers who can be held accountable by Parliament and, ultimately, by voters. Pushing such functions onto a regulatory agency allows ministers to hide behind the agency's supposed independence and diminish their own accountability.

# Conclusion and Recommendations

Technological change and the convergence of the formerly distinct telecommunications and broadcasting sectors have created misalignment, disconnects, and inefficient duplication across government agencies and departments with responsibilities for different aspects of regulating Canada's communications sector. To be fair to individual regulatory agencies such as the CRTC, they are bound to adhere to the law as it exists. It is Parliament that ultimately is responsible for allowing an outdated regulatory framework to remain in place.

In this paper, I have examined three specific examples: the split in spectrum assignment responsibilities between the CRTC and Industry Canada, the dual roles in economic regulation of the CRTC and the Competition Bureau, and the division of responsibilities for cultural regulation between the CRTC and the Department of Canadian Heritage. In order to improve the effectiveness, efficiency, and accountability of telecommunications regulation in Canada, a number of institutional changes are required:

- The CRTC should assume all spectrum assignment functions and completely revamp its licensing process. Licences should be made to resemble property rights as much as possible, and where demand exceeds supply they should be awarded (and fees set) via a well-structured auction process.
- The CRTC should relinquish its economic regulation role except where retail or wholesale price regulation is required as a result of a Competition Bureau finding that a market is insufficiently competitive. The requirement for the CRTC to undertake such actions should diminish over time as competition takes hold throughout the entire communications marketplace.
- The CRTC also should relinquish its role in cultural regulation; the era of "Canadian-content" requirements should come to an end.
- The CRTC should retain its roles in technical and social regulation, but coordinate with the Competition Bureau when competition issues come into play.
- The Competition Bureau should become the sole agency responsible for competition policy in communications marketplaces.
- Industry Canada should retreat to a role of setting broad economic policy for the communications sector.
- The Department of Canadian Heritage should retain its role in setting broad cultural policy. Concomitant with the recommendation that the CRTC end its cultural regulation, the problem of market failure with respect to cultural goods and services should be addressed by financing out of general tax revenues rather than by specific levies on communications service providers and/or

customers. The Department of Canadian Heritage should be held accountable for this spending and for the results it generates.

Above and beyond the direct benefits Canadians enjoy from consuming communications services, the sector is of critical importance to Canada's economic health as a productivity enhancer across all sectors and industries. Revamping a regulatory structure that is now decades out of date must become a priority.

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