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March 2012

Spectrum Management and Telecommunications

Consultation on the Licensing Framework for Fixed-Satellite Service (FSS) and Broadcasting-Satellite Service (BSS) in Canada

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Canada

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1. Introduction and Objective

Canada faces unique geographical challenges, with a widely dispersed population and many rural and remote communities. In this context, satellites play a vital role in Canada's telecommunications and broadcasting infrastructure in that they are currently the only means of reaching these communities, many of which are located in the North. Therefore, in licensing commercial satellites, Industry Canada's primary objective has been to help to ensure that Canadian satellite users (e.g. broadcasters, government institutions and telecommunications firms) have access to the satellite capacity that they need to carry out their respective functions, and to help to ensure that services are available throughout Canada, including the North.

Subsequent to the 1997 World Trade Organization Agreement on Basic Telecommunications Services, satellite operators are able to obtain licences from other countries and deliver services in Canada. As national coverage and the provision of sufficient capacity for Canadians are ensured through conditions of licence in Canada, if operators choose to be licensed by other countries, under what they may perceive to be a more attractive licensing regime, Industry Canada would lose a key instrument to influence the implementation of these capabilities. It is therefore essential that Canada develop an updated, attractive satellite licensing framework.

Over the last two decades, technological change has had a significant impact on the satellite industry, enabling the introduction of new products and services into the marketplace. This has fuelled an increase in demand for the commercial provisioning of satellite capacity and satellite-based services. In response, Industry Canada has been moving away from apparatus-based licensing for satellite services and, as a first step, implemented spectrum-based licensing for the use of spectrum to provide mobile satellite services. The Department has also committed to evaluating the use of spectrum licences as the means for authorizing the use of FSS in Canada in its RP-008, *Policy Framework for the Provision of Fixed Satellite Services*,¹ revised 2005.

Industry Canada is now proposing to implement spectrum licences and associated fees for the assignment of fixed- and broadcasting-satellite spectrum in specific satellite bands used by Canadian satellite operators in the commercial provisioning of capacity and services. (See Annex A for list of the bands relevant to this consultation.) The outcome of this consultation will be reflected in a new Radio Policy, with accompanying Client Procedures Circular(s). Spectrum licences will be issued immediately following the adoption of the new licence fee regime. The licensing framework for satellite earth stations will be the subject of a separate consultation.²

In this document, Industry Canada is seeking views on modifications to various elements of its satellite licensing framework. These include:

- the use of a first-come, first-served (FCFS) process to assign satellite spectrum at orbital positions for FSS and BSS;
- the fee regime applicable to assignments of fixed- and broadcasting-satellite spectrum; and

¹ Available at <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01693.html>.

² Until the earth station consultation is complete, the existing licensing and fee regime for earth stations will remain in place. Where there are existing exemptions in place for space station radio licences, the exemption will be carried over when spectrum licences for space stations are implemented.

- the obligations associated with satellite licences.

1.1 Mandate

The Minister of Industry, through the *Department of Industry Act*, the *Radiocommunication Act* and the *Radiocommunication Regulations*, with due regard to the objectives of the *Telecommunications Act*, is responsible for spectrum management in Canada. As such, the Minister is responsible for developing goals and national policies for spectrum resource use and ensuring effective management of the radio frequency spectrum resource.

1.2 Legislation

The Minister of Industry is provided the general powers for spectrum management in Canada pursuant to section 5 of the *Radiocommunication Act* and section 19 of the *Department of Industry Act*. The Governor in Council may make regulations with respect to spectrum management pursuant to section 6 of the *Radiocommunication Act*; these have been prescribed under the *Radiocommunication Regulations*.

2. Licensing Process

2.1 Context

As provided for in RP-Gen, *General Spectrum Policy Principles and Other Information Related to Spectrum Utilization and Radio System Policies* (1987),³ Industry Canada uses FCFS licensing processes in most cases, in particular where one licensing action does not preclude the licensing of other similar applications. Where licensing under FCFS would be pre-emptive, the Department uses a competitive process — either an auction or a comparative review.

With respect to satellite licensing, where the Department does not receive a competing notice of interest for the spectrum following a public Call for Interest, applications are currently considered on an FCFS basis. FCFS licensing is also used for mobile satellite services, earth exploration, science and other satellite licences. Competitive licensing, in the form of comparative review processes, has been used for licensing commercial satellites using FSS and BSS spectrum. These comparative processes have included licences for 12 GHz and 17 GHz BSS spectrum and licences for C, extended Ku, conventional Ku and Ka band FSS spectrum.

Recently, Industry Canada's updated *Framework for Spectrum Auctions in Canada* (2011)⁴ recognized that where satellite systems are global in nature, it would not be practical for an individual country to use an auction as the assignment mechanism. It recognized, however, that the Minister may determine that an auction is appropriate (for example, when the spectrum is pre-assigned to Canada as part of an International Telecommunication Union (ITU) Plan or when Canada has priority access to the spectrum internationally). The revised framework noted that the Department would review the satellite licensing policy framework, including other possible licensing processes to deal with competitive applications.

³ Available at <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01056.html>.

⁴ Available at <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01626.html>.

As part of this review, Industry Canada contracted Nordicity Group Ltd. (Nordicity) to undertake two studies. The first, entitled *Study on the Global Practices for Assigning Satellite Licences and Other Elements*,⁵ examined the licensing regimes and the national regulatory practices of eight countries (the United States, the United Kingdom, Australia, New Zealand, Brazil, Mexico, Luxembourg and France). It assesses the merits and drawbacks of three types of licensing processes: FCFS, auctions and comparative processes.

The study indicates that while any of these three processes could address competing applications for licences, FCFS provides the solution with the most manageable drawbacks. It considers FCFS as being the most timely, objective and predictable process. The study also indicates that the FCFS process would be administratively simple, but would require process safeguards to discourage potential abuse, mainly from frivolous applications. Any fees would need to be set independently of the process, as done with comparative processes. The study concludes that an FCFS process would be consistent with most other international regulators.

As stated earlier, given the global nature of the satellite industry, and the fact that Canadian operators can seek licences from other jurisdictions and still deliver service in Canada, the Department's objective for this review is to establish a licensing framework that is attractive when compared with other jurisdictions. In developing the proposed licensing framework, Industry Canada therefore considered the following factors:

- the economic and social benefits for Canadians;
- timeliness;
- administrative simplicity;
- objectivity;
- predictability of outcome; and
- a process that encourages only *bona fide* applications.

2.2 Approach

Although the lead time to launch and begin operating a satellite takes place over several years, the technology industry is fast-paced. Business and investment decisions need to be made quickly. Furthermore, because access to orbital positions is time-limited, the licensing process should maximize the time that operators have between licence approval and the deadline to bring the positions into use. Comparative processes have typically taken a long time to administer. For example, in the 2006 satellite licensing initiative, final licence approvals were not issued until 2008, a full two years after the initiative was launched. Comparative processes have also been criticized as involving a higher degree of subjectivity in the selection of successful applications.

Industry Canada does not rule out the possible future use of auctions to assign satellite spectrum. Auctions are transparent and allow market forces to determine both access to spectrum and the value that bidders place on the licences. However, they may not always be practical given the global nature of satellite systems, and in instances where there is enough spectrum to meet demand, they are not necessary. Furthermore, the time that can be required to set the rules for an auction could present a disadvantage for Canadian satellite operators, who have a limited time to bring an orbital position into use before losing it, according to the ITU process.

⁵ Available at http://www.nordicity.com/reports/Final_Nordicity_Satellite_Licensing_Process_report.pdf

An FCFS process is timelier, administratively simpler and arguably more objective than comparative processes because applications are not rated against each other. The outcome is more predictable for applicants than comparative processes in that applicants know that if they submit an application that meets the criteria, Industry Canada will likely approve it.⁶ For these reasons, the Department is proposing to implement an FCFS process.

2-1 Industry Canada is seeking comments on the proposal to extend the use of an FCFS process to assign FSS and BSS spectrum licences.

2.3 Key Elements of an FCFS Process

2.3.1 Departmental Use of FCFS Processes

Industry Canada currently uses FCFS processes to award licences for both terrestrial and satellite spectrum, where there is no competing interest. The proposed FCFS process addressed in this consultation, however, will only be applied to satellite licences. Additionally, it should be noted that the FCFS procedures (as outlined in Section 2.3.3) that will be implemented following this consultation will be applied to all satellite licensing, which may represent some changes from current FCFS procedures for mobile satellite services and scientific satellites. The new procedures will be published in updated Client Procedures Circulars.

2.3.2 ITU Filing Under an FCFS Process

An FCFS process is inherently reactive in that it is the satellite operators that identify what spectrum at which orbital positions is valuable, through their applications to Industry Canada. As such, with the implementation of the proposed FCFS process for all satellite licensing, the Department will no longer proactively file to the ITU for orbital positions that are then made available to operators.

2-2 Industry Canada is seeking comments on the issue of proactive filing to the ITU and on whether there are compelling arguments to continue this practice, to a limited extent, under the FCFS process.

2.3.3 Application Processing

Under the proposed new FCFS process, Industry Canada will publish a notice when an application is received and will consider applications in the order in which they are received. The Department will require all applications to be submitted electronically and will use the system time-stamp to determine the order of receipt.

⁶ It is important to note that even with an FCFS process, the decision to issue a licence is subject to the Minister's discretion, as provided for in Section 5 of the *Radiocommunication Act*.

Applications will be assessed against a published set of criteria. If an application meets the criteria, a licence will be issued, subject to the Minister's discretion. If the application is found to be incomplete, or does not meet the criteria, it will be declined. The applicant may then make modifications and submit it as a new application.

If, however, another application is already on hand from a second applicant for the same spectrum, the Department will immediately consider the second application. Once a licence is awarded, any other applications in the queue for that spectrum will be dismissed.

In the unlikely event that more than one application is received simultaneously, Industry Canada will consider those applications as being received contemporaneously. In that instance, Industry Canada will assess both applications. If both meet the criteria, both will be awarded licences, and the spectrum will be divided equally.

2-3 Industry Canada is seeking comments on the following proposed rules for an FCFS satellite licensing process:

- **applicants will be required to submit applications electronically, and Industry Canada will establish the time of receipt through the electronic submission;**
- **if Industry Canada deems an application incomplete or inadequate (according to defined criteria), the application will be declined and no longer considered until submitted as a new application;**
- **if an application is on hand from a second applicant for the same spectrum when the first is declined, Industry Canada will immediately consider the second application;**
- **once a licence has been issued, any applications on hand for the same spectrum will be automatically dismissed; and**
- **two successful applications, received simultaneously, will result in both applications being approved, with the requested spectrum divided equally.**

2.3.4 Application Assessment

In issuing licences for spectrum, Industry Canada must undertake due diligence in assessing applications to ensure, to the extent possible, that satellite(s) will be operationalized and services will result.

Industry Canada currently uses certain criteria to determine whether a commercial FSS or BSS satellite application is acceptable. Similar criteria will be established and published for use in a new FCFS process. Industry Canada proposes that applications be assessed against these criteria, which will include:

1. Applicant is eligible to hold a licence under the *Radiocommunication Regulations*:
 - is a Canadian entity

2. Project is in compliance with regulatory requirements and spectrum policies, namely:
 - compliance with ITU's *Radio Regulations*;
 - compliance with Canadian spectrum allocations and spectrum utilization policies; and
 - spacecraft under Canadian direction and control.
3. Viable Implementation Plan:
 - technical plan describing the technical aspects of the proposed satellite system and clearly demonstrating that the proposed deployment and operation of the satellite, and the identified benefits to Canadians, are technically feasible; and
 - information describing the applicant's operation as a Canadian satellite operator with licences in good standing, or the applicant's well-developed plan for becoming a satellite operator.
4. Financial Plan must include sufficient information demonstrating the applicant's ability to finance the implementation and operation of its proposed satellites.
5. Benefits to Canadians:
 - Sufficient information to demonstrate how the implementation of the project will provide benefits to Canadians, such as capacity and services to serve Canada or securing access to orbital positions for the future provision of service in Canada.

2-4 Industry Canada is seeking comments on the assessment criteria to be used in an FCFS process. In their comments, respondents are encouraged to elaborate on these or any other criteria they deem suitable.

2.3.5 Process Safeguards

According to the Nordicity study, because of the nature of the satellite industry, particularly the long lead times involved in developing and launching a satellite and the scarcity of orbital positions, it is not uncommon for operators to seek licences without firm plans for implementation in order to have the flexibility to pursue future business opportunities. It is understandable that, where there is competing demand for licences, there is the potential for applicants to abuse the process by seeking an excessive number of licences for speculative or obstructive reasons.

Nordicity adds that because the outcomes of an FCFS process are predictable (i.e. an applicant that submits an application that meets the criteria is generally awarded the licence), FCFS processes may be subject to greater abuse than comparative processes. Rules and safeguards are therefore necessary to help to deter abuse. The proposed assessment criteria outlined in Section 2.3.3 will serve, to some extent, to encourage only *bona fide* applications, but there are additional safeguard measures that could be implemented. Many of these measures could also help to encourage the timely use of assigned spectrum.

In this context, Industry Canada is considering two categories of safeguards, namely financial and administrative measures.

Proposed Financial Measures

Submission of Fees with Application — Application fees (paid when an operator submits an application to the Department for consideration) are possible. They would be separate from licence fees and would not be refunded in the event that an application is denied. As an alternative to an application fee, Industry Canada may require the first year's licence fees in advance, to be submitted with the application and held in the applicant's licensing account. If the application is successful, the payment will be drawn upon to pay the applicable fees. If the application is unsuccessful, the payment will be returned to the applicant. Industry Canada is seeking views on the submission of the first year's fees with an application.

Charging Fees on Approval — Under current practice, several years may elapse from the time an approval is granted to the time a licence is issued and fees become due. Consistent with the new practice of spectrum licensing, fees will be collected immediately following approval. (Industry Canada's intention to charge fees on approval is further described in Section 3.1.) This change may provide an incentive to bring satellite spectrum into use sooner and could minimize frivolous applications.

Other — Measures that exist in other jurisdictions are also being considered. These measures, including performance bonds and fines (administrative monetary penalties or AMPs), would require changes to the *Radiocommunication Act*. With regard to performance bonds, licensees could be required to post a bond, payable to the federal government, which could become payable upon missing a milestone without adequate justification. Fines could be another means of enforcing licence conditions and/or used in the instance of a breach of the radio regulations. In place of submitting the first year's licence fees, applicants could be required to submit a letter of credit for an amount that reflects the value of the first year's fees. Industry Canada is seeking views on these measures and on whether legislative amendments should be made to enable them.

Proposed Administrative Measures

Pending Application Limits — Limits on the number of pending applications from any one operator could be used instead of, or in conjunction with, financial measures to help to deter spurious applications. Setting such a limit could take into account the legitimate needs of satellite operators to pursue various business plans and also ensure that any one operator is not reserving unused spectrum to the detriment of other operators. Industry Canada is seeking views on what would constitute an appropriate limit.

Application Limits in Certain Circumstances — Under this measure, applicants that have established a pattern of missing milestones, requesting reductions in obligations or surrendering licences before milestones expire, will not be permitted to file another application for a specified period of time, or will be subject to a lower limit on the number of pending applications. Industry Canada is seeking views on what would constitute an appropriate benchmark to define a pattern and on how long an applicant should be prohibited from filing new applications.

Strictly Enforced Milestones — Milestones are intended to ensure that licensees progress towards implementation and provide services to the public in a timely manner. Industry Canada establishes milestones as conditions of licence, taking into account ITU filings and their "bringing into use" (BIU) dates. These milestones also take into account applicants' plans and strategies for securing access to the orbital resources and for construction and launch of their satellites. Milestones will be strictly enforced

in accordance with the conditions of licence, and missing them will result in the revocation of a licence. Reclaimed spectrum would then be reassigned.

2-5 Industry Canada is seeking comments on these and any additional measures to minimize the potential for abuse of an FCFS process.

2.3.6 Service Standards

Because this consultation includes new fee proposals, as described in Section 3, the *User Fees Act* will apply. The Act requires that Industry Canada establish service standards associated with any new fee initiative. Service standards will also be important in that, under an FCFS process, the Department will be required to consider applications in the order in which they are received, and the queue may contain time-sensitive applications. Industry Canada proposes to establish a service standard of 45 business days for the issuance of satellite licences under an FCFS licensing process. The standard will apply from the date that the application is received and/or reaches the head of the queue to the date the licence is issued or the date the application is denied. If an application is incomplete or does not meet the criteria, it will be rejected and a new 45-business-day period will begin upon submission of the new application.

Industry Canada will strive to meet this service standard in the majority of cases. In some instances (e.g. for applications requiring a review of existing policy, for spectrum for which no policy exists, or for an unusually complex network), the Department will not be able to meet that same standard. Applicants will be notified of an appropriate time frame for consideration of the application.

2-6 Industry Canada is seeking comments on the establishment of a 45-business-day service standard to issue a satellite spectrum licence.

3. Fee Structure

3.1 Context

As noted in Section 1, Industry Canada proposes to implement spectrum licences as the means for authorizing the use of the commercial FSS and BSS spectrum listed in Annex A. Spectrum licences have some advantages over radio licences. Spectrum licence fees are based on the amount of spectrum assigned, independent of usage. Because the fee is therefore a fixed cost, it is in the operators' best commercial interests to maximize the use of that spectrum. Furthermore, a spectrum licence regime is less cumbersome for both operators and the Department to administer. Detailed traffic reports are not required, as fees are based on the amount of spectrum assigned and are therefore predictable.

In addition to reviewing the licensing process for satellite services, Industry Canada is also considering changes to the fee regime applicable to the new spectrum licences. In keeping with the practice for terrestrial spectrum licences, the Department proposes that the annual fees be payable upon authorization of the individual geostationary satellite orbit (GSO) satellite or non-GSO (NGSO) system

rather than at commencement of services. This recognizes that once spectrum has been assigned, it is no longer available for use by others. This practice better reflects the value of the spectrum and will help to encourage spectrum efficiency and timely use.

Industry Canada’s objective is to establish a fee regime that strives to maximize economic and social benefits for Canadians. To evaluate the global licensing context, the second Nordicity study included an international analysis of existing fee structures and policy objectives. Nordicity was also asked to make recommendations on an appropriate fee structure for Canada in this study.

In its second study entitled, *Study on the Market Value of Fixed and Broadcasting Satellite Spectrum in Canada*,⁷ Nordicity determined that no two administrations use the same licensing approach or share the same legal frameworks or policy objectives. As a result, there was no clear best practice for Canada to follow with respect to establishing fees.

In terms of fee structures, the comparison table below illustrates licence fees in the various administrations, along with other regulatory costs imposed on licensees.

Table 1: International Comparison of Fees

Country	Licence	Band	Bandwidth	Annual fee (\$Cdn)	Equivalent \$Cdn/MHz/year
Canada ^a	Satellite	C/Ku	2,000 MHz	\$666,667	\$333
		C	1,000 MHz	\$291,667	\$292
		Ku	1,000 MHz	\$375,000	\$375
U.K.	Satellite	n/a	2,000 MHz	\$148,367 ^b	\$74
U.S.	GSO Satellite	n/a	2,000 MHz	\$242,693 ^c	\$121
	NGSO Satellite	n/a	2,000 MHz	\$301,491	\$151
Mexico	Orbital Slot	n/a	1,000 MHz	\$850,680 ^d	\$850
Brazil	Brazil Satellite	n/a	1,820 MHz	\$135,228 ^e	\$74
	Foreign Satellite	n/a	2,000 MHz	\$73,061	\$37

Source: Table 3 – Satellite Licence Fees, Nordicity’s *Study on the Market Value of Fixed and Broadcasting Satellite Spectrum in Canada*.

- ^a Represents current Canadian fees.
- ^b Represents estimated annual cost of required £100M liability insurance.
- ^c U.S. regulatory costs (annual licence fees, one-time application fee plus estimated cost of performance bond).
- ^d Based on latest auction results.
- ^e Awarded to Telesat Brazil, reserve price winner (ext Ku).

⁷ Available at www.nordicity.com/reports/Satellite_Spectrum_Valuation_Final_Feb.pdf

Another purpose of Nordicity's second study was to estimate the current market value of the satellite spectrum in Canada. Nordicity's estimate is that the current value of existing Canadian licensed (operational) satellite spectrum and orbital positions is \$50 million per year.⁸ It recommended that Canadian fees be set at a level that is equivalent to 50% of that value. For currently licensed Canadian satellites, this would represent a fourfold increase in fees.

3.2 Approach

In setting new fees, Industry Canada is guided by the policy objective stated in the *Spectrum Policy Framework for Canada*⁹ (2007): "to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource." Within this framework, the Department seeks to set fees that reflect a level of market value that encourages spectrum efficiency, provides some incentive to use the spectrum in a timely manner and fairly compensates the Canadian public for the use of the resource. In this context, the following factors will be considered in establishing new fees:

- fees should reflect a level of market value;
- the fee schedule should be simple to administer;
- fees should be predictable; and
- fees should be technology-neutral.

Unlike in the case of terrestrial spectrum, Canadian satellite operators can be licensed in other jurisdictions and offer service in Canada. If operators choose to seek licences in other jurisdictions, Industry Canada would lose the ability to include the conditions of licence that currently help to ensure the availability of services in all areas of Canada. As a result, in determining an appropriate fee proposal for satellite spectrum, Industry Canada has also taken into consideration licensing-related costs faced by operators in other jurisdictions, particularly those that have an FCFS process, such as the United States and the United Kingdom.

3.3 Fee Proposal

Industry Canada is proposing to set the fees for commercial FSS and BSS spectrum at specific orbital positions at the levels outlined below. The fee structure will be applied on a per-megahertz basis and will be established to reflect both the different commercial value of the bands and the priority given to satellite services within those bands. The Department proposes to base the fee structure on the following bands: C, extended Ku, Ku, BSS, extended Ka, Ka, other Ka and X. The bands are defined in Annex A. Fees for multiband satellites will be calculated based on the total fees payable for the spectrum authorized in each of the authorized bands in place on the satellite.

⁸ Nordicity used an income approach, supported by a market comparables approach to determine this value. The full methodology can be found in Nordicity's *Study on the Market Value of Fixed and Broadcasting Satellite Spectrum in Canada*. (Available at www.nordicity.com/reports/Satellite_Spectrum_Valuation_Final_Feb.pdf)

⁹ Available at <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08776.html>.

The Department is proposing the following annual fee levels:

Level A (\$112 per MHz)

- C band
- extended Ku band
- X band
- other Ka (18.8-19.3 GHz/28.6-29.1 GHz)
- NGSO satellite systems (lower priority than GSO satellites)

Level B (\$152 per MHz)

- Ku band not shared with terrestrial services
- extended Ka band
- BSS bands

Level C (\$176 per MHz)

- Ka band not shared with terrestrial services

Industry Canada is also considering the use of spectrum licences for assignment of emerging bands (such as V band). As there is currently no established market value for emerging bands, the Department is seeking comments on an appropriate fee level for current and future emerging bands.

3-1 Industry Canada is seeking comments on the proposal to issue spectrum licences immediately following approval, and to apply fees upon issuance based on the amount of spectrum authorized.

3-2 Industry Canada is seeking comments on the proposal to set annual fees on a per-megahertz basis for licensed spectrum.

3-3 Industry Canada is seeking comments on the following rates for each applicable band, as described in Annex A:

Level A — \$112 per MHz for C band, extended Ku band, X band, other Ka band and NGSO satellite systems.

Level B — \$152 per MHz for Ku band not shared with terrestrial service, extended Ka band and BSS bands.

Level C — \$176 per MHz for Ka band spectrum not shared with terrestrial services.

3-4 Industry Canada is seeking comments on using spectrum licences for the assignment of emerging bands and on what an appropriate fee level would be for those bands.

3.4 Implementation

Although Industry Canada is able to determine when to implement changes to the licensing process itself, the new fee structure cannot be implemented until the process defined by the *User Fees Act* has been concluded.¹⁰ The Department will transition to the new fees immediately following the approval of the fee order. The transition will be undertaken in the following manner:

Existing Licences — The proposed fees will be applied in full to existing licences for spectrum that is in use. Existing radio licences that are in good standing will be converted to spectrum licences, in consultation with the licensees.

Existing Approvals — Because charging for assigned, unused spectrum represents a new and, in some instances, significant cost, Industry Canada proposes to introduce this aspect of the fees over a three-year period. The fee will be introduced in 25% increments immediately after approval of the fee order and will ramp up to the full amount at the end of the three-year period. This will allow existing spectrum authorization holders to revisit their business plans for this spectrum and return any authorizations in excess of their needs.

New Licences — The new fees will be applied in full for all new licences awarded.

3-5 Industry Canada is seeking comments on the proposal to make the new fees for existing licences for in-use spectrum effective immediately upon approval of the fee order.

3-6 Industry Canada is seeking comments on the proposal to introduce the fee for existing approvals for assigned, unused spectrum in 25% increments over a three-year period after the approval of the new fee order.

3-7 Industry Canada is seeking comments on the proposal to introduce the fee for all new licences immediately upon approval of the fee order.

3.5 Licence Terms

Industry Canada proposes a 20-year licence term for satellite spectrum licences. This reflects a typical 15-year life expectancy of the satellites, as well as the time between the spectrum authorization and the launch of the satellite.

¹⁰ A description of the process under the *User Fees Act* can be found on the [Treasury Board of Canada Secretariat's website](http://www.tbs-sct.gc.ca) at www.tbs-sct.gc.ca.

Industry Canada is also considering the introduction of a short-term satellite spectrum licence to address specific cases where a licence is required only temporarily. The Department will determine an appropriate term for this licence, as well as whether a flat fee should apply or whether the fee should be calculated based on the length of the term.

Industry Canada expects to review its licence fees a minimum of once every 10 years. However, fees may be amended at any time within that period should unforeseen circumstances require an adjustment, and as permitted by law. A public consultation would be undertaken before any changes are enacted.

3-8 Industry Canada is seeking comments on the proposal to set the licence term at 20 years, based on the estimated life expectancy of 15 years for a satellite plus development time.

3-9 Industry Canada is seeking comments on the introduction of a new short-term satellite spectrum licence, on what would be an appropriate term, and on whether a flat fee or calculated fee should be applied.

4. Public Benefit Condition of Licence

4.1 Context

As with all licences issued under the *Radiocommunication Act*, Canadian satellite licences include certain obligations. Many of these are technical in nature (such as the obligations to abide by the ITU's *Radio Regulations*, the *Canadian Table of Frequency Allocations* and existing satellite coordination agreements). Additional obligations, expressed as conditions of licence, can also be included to meet important policy objectives.

As described in Section 1 of this document, the primary policy objective of Industry Canada in licensing commercial satellites is to ensure that Canadian satellite users, such as broadcasters, government institutions, and telecommunications firms, have access to the satellite capacity that they need to carry out their respective functions and to ensure that services are available throughout Canada, including the North.

The global nature of telecommunications and the opening of Canada to foreign satellite operators under the World Trade Organization's General Agreement on Basic Telecommunications have changed the nature of the Canadian market for satellite services. Some of the traditional conditions of licence imposed by Industry Canada must be examined in this context to determine whether they are still valid and whether they place Canadian operators at an unreasonable disadvantage in relation to their foreign competitors.

In 2000, Industry Canada introduced a new condition of licence for some satellite licences in response to the growing requirements of public institutions for telecommunications capacity in remote areas. This "public benefit" obligation was to direct a small percentage of revenues (2%), or an equivalent amount in satellite capacity, towards special initiatives to improve connectivity in underserved areas of Canada.

The benefits were to be available for the operational lifetime of a satellite, typically 15 years. When imposed, the public benefit obligation was in lieu of the research and development (R&D) obligation, an obligation that is still applied to some satellite licences. It should be noted that the Department has concluded a consultation regarding the continued need for this R&D obligation; however, a decision has not yet been made.

Since 2002, the public benefit condition of licence has been included in most FSS and BSS licences. The expectation is that the licensees will develop special initiatives with Industry Canada and implement them after the issuance of licences. To date, the only public benefit initiative that has been implemented consists of two transponders providing service to public institutions in northern and remote communities. A public benefit condition of licence is attached to three other operational satellites, and discussions are under way to develop initiatives. There are an additional 15 approvals that include such a condition of licence.

In preparation for this consultation, the Nordicity study examined types of service obligations in place in each of the studied jurisdictions. It identified seven types of service obligations: economic benefit; efficient spectrum use; social benefits; national coverage; public safety/security; public service broadcast capacity/access; and state use. State use, which can take the form of either free capacity for public sector use or a percentage of profits to be used for special initiatives developed with the government, is the most relevant for the purposes of comparison with Industry Canada's public benefit obligation.

According to the study, only Mexico requires satellite operators to reserve a portion of their capacity for use by the state without charge, exclusively for networks for national security or for services of a social character.

4.2 Future Requirements

In rural and remote areas of Canada, the economic incentives remain lower for private sector deployment of telecommunication services, which, in some cases, has required government intervention (e.g. establishing high-cost serving areas and targeted funding programs) to stimulate market forces. Consequently, the policy objective of enhancing connectivity in underserved areas of Canada remains valid. However, Industry Canada must balance this objective against other considerations, including minimizing the regulatory and administrative burden on licensees and ensuring a level playing field in the global context.

Canadian operators have accepted the public benefit condition of licence when they submitted an application and received an approval from Industry Canada, and there are existing beneficiaries of these obligations. Thus, those obligations that currently have beneficiaries, or where there are operational satellites, will remain. However, the current condition of licence is very broad and provides no direction to operators as to how or when the condition must be met. The Department may make the condition more specific. Changes could include specifying a time period for when the obligation must be discharged (e.g. annually over the life of the satellite or every five years); including examples of acceptable initiatives; establishing a requirement for operators to consult with underserved communities in the development of proposed initiatives; and establishing a requirement for operators to submit proposed initiatives to Industry Canada for approval. These changes would be aimed at increasing the effectiveness of the condition of licence in meeting the objective of improving connectivity in underserved areas of Canada.

Industry Canada recognizes that the inclusion of a public benefit obligation on Canadian operators is an additional factor affecting the international competitiveness of Canada's licensing regime. The Department is therefore seeking views on its continued implementation for existing and new approvals.

- 4-1 Industry Canada is seeking comments on possible changes to the existing public benefit conditions of licence to improve their effectiveness, as well as any new ways in which the obligation could be implemented.**
- 4-2 Industry Canada is seeking comments on whether to maintain the public benefit condition of licence for new satellite spectrum approvals.**

5. Canadian Coverage

5.1 Context

The requirement for Canadian licensed satellites to cover the entire country to the extent possible from the specific orbital position has been an objective in Industry Canada's consideration of licence applications for commercial FSS and BSS. To date, licensed operators are required to make reasonable efforts to fulfil all commitments to make the new satellite capacity available to Canadian clients in all parts of the country prior to launch.

Although there is currently an issue with the availability of satellite capacity for the North, this issue is related to the existing ground infrastructure, not to the availability of space segment capacity. There is adequate Canadian C-band and Ka-band space segment capacity to meet the current and projected level of demand in the North for the near future. Furthermore, several new proposed satellites will be launched that could provide additional capacity. It should be noted, however, that there is a physical limit to satellite coverage of the North imposed by the location of the geostationary orbit over the equator. Service beyond about 80° latitude is not possible from geostationary satellites.

Industry Canada's current policy is outlined in RP-008, *Policy Framework for the Provision of Fixed Satellite Services* (revised 2005).¹¹ Canadian satellite stations operating in Canadian orbital positions are required to provide service in all regions of Canada, including the North. Foreign satellites are not subject to this requirement.

A national coverage requirement is one of the most common requirements imposed by other regulatory administrations because satellites continue to be the only telecommunications access technology into many remote areas. Not all jurisdictions examined in the Nordicity study, however, have this requirement (e.g. the United Kingdom and the United States do not require this for FSS). Furthermore, how the requirement is implemented and enforced varies by jurisdiction.

¹¹ Available at <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01693.html>.

5.2 Future Requirement

Because satellites will remain the only technology able to reach remote areas of Canada for the foreseeable future, Industry Canada remains committed to maintaining this obligation. However, the condition may be implemented in a way that allows greater flexibility for the operators in meeting the obligation. For example, the Department could establish minimum coverage requirements and allow satellite operators the flexibility to meet those requirements across their fleet, rather than on each satellite.

Alternatively, Industry Canada could maintain national coverage as a standard condition of licence, unless an operator can demonstrate to the Department, through the application process, that there is already sufficient capacity available, from any operator, for the types of services that the satellite will offer.

5-1 Industry Canada is seeking comments on how best to implement a requirement for minimum Canadian coverage.

Annex A

Table 1 – Spectrum included in this consultation

Bands		Space to Earth	Earth to Space
FSS	C	3700-4200 MHz	5925-6425 MHz
	Ext. Ka	17.8-18.3 GHz	27.5-28.35 GHz
		18.3-18.8 GHz	28.35-28.6 GHz /29.25-29.5 GHz
	Ka	19.7-20.2 GHz	29.5-30.0 GHz
	Ku	11.7-12.2 GHz	14.0-14.5 GHz
	Ext. Ku	10.95-11.2 GHz/11.45-11.7 GHz	13.75-14.0 GHz
		10.7-10.95 GHz/11.2-11.45 GHz	12.75-13.25 GHz
Other Ka	18.8-19.3 MHz	28.6-29.1 MHz	
X	7250-7750 MHz	7900-8400 MHz	
BSS	Ku	12.2-12.7 GHz	17.3-17.8 GHz
	Ka	17.3-17.8 GHz	24.75-25.25 GHz