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Innovation, Science and Economic Development Canada
Senior Director, Spectrum Planning and Engineering
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235 Queen Street, (6th Floor, East Tower)
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Subject: Consultation on Updates to the Licensing and Fee Framework for Earth Stations and Space Stations in Canada, Canadian Gazette, Part 1, Volume 155, No. SMSE-009-21 (published Aug. 14, 2021)

For your consideration,

The Global VSAT Forum (GVF) hereby submits its comments on the *Consultation on Updates to the Licensing and Fee Framework for Earth Stations and Space Stations in Canada* (Consultation) issued by Innovation, Science and Economic Development Canada (ISED) on August 14, on behalf of its members. The satellite operators who form part of the GVF are today providers of vital telecommunications services in Canada and the region, and continue to expand their service offerings.

The GVF is the only global non-profit association of the satellite industry. Founded in 1997 and headquartered in London, it brings together organizations from around the world representing the satellite ecosystem that are engaged in the development and delivery of satellite technologies and services for consumers, commercial and government organizations worldwide.¹

The GVF welcomes the opportunity to provide comments on this Public Consultation and remains at your disposal should you have any questions about this submission.

Respectfully submitted,

DSvra Meltzer
Secretary General
Global VSAT Forum

¹ For more information about the GVF, see <https://gvf.org/>.

In some bands, ISED spectrum policy provides for different licensing based on the geography and the frequencies used to provide the service. For example, in its May 2021 SLPB-002-21, Decision on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band, ISED limits existing FSS operations in the 3700-4200 MHz band to serve satellite-dependent areas. Additionally, ISED recently narrowed the locations in which FSS earth stations seeking to operate in the 27.0-28.35 GHz band can operate in areas outside the boundaries of Tier 4 service area 4-051 (Montreal), 4-077 (Toronto) or 4-152 (Vancouver); an LPC; or an MPC (see SAB-002-21, Moratorium on the Licensing of Earth Stations in the Frequency Bands 26.5-28.35 GHz and 37.5-40.0 GHz in Certain Areas; GL-10, Interim Guideline for Licensing of Earth Stations in the Fixed-Satellite, Earth Exploration-Satellite and Space Research Services in the Frequency Bands 26.5-28.35 GHz and 37.5-40.0 GHz). To reflect ISED's current policies, GVF recommends that ISED to allow earth station applicants to apply for a smaller Tier and pay a smaller annual license fee that would reflect the scope of the service area, especially in bands that are subject to spectrum policies that vary by geography.

Allowing applicants to apply for Tiers that match the scope and area of their service, and pay a lower, comparable annual fee, would encourage earth station deployment in Canada as a whole, and would encourage deployment in frequencies and service areas in which ISED policies emphasize earth station deployment.

3. *apply the general conditions of license that are listed in Annex A to earth station spectrum licenses.*

R1.3. The general conditions in Annex A apply for site-licensed earth stations as well as for generic earth station licensing process and should generally be streamlined for all stations. A more streamlined approach to generic licensing is needed that balances the compliance with the general guidelines of Section 7 of CPC 2-0-03, recognizing the minimal impact of smaller FSS user terminals, with the needs of satellite operators to quickly deploy generic earth stations to realize the benefits of connectivity that they provide. Such streamlined compliance might take the form of an attestation that generic earth stations will be deployed under a defined physical size limit and in compliance with relevant regulations. Such regulations could include Safety Code 6, local codes, and environment protection provisions (*e.g.*, not located in a wildlife preserve or disrupting migratory birds, not located on Federal Lands or First Nations Lands, etc.).

Q2

ISED is seeking comments on its proposals to:

1. *implement spectrum licenses that require site approvals for all earth stations described above operating in any frequency band*

R2.1.

GVF generally supports ISED's proposal, except for transportable earth stations. GVF encourages ISED to consider that some transportable earth stations should be subject to generic licensing rather than site approval. Rather than requiring site-specific analysis for all transportable earth stations, the licensing framework should be determined by whether the transportable earth station is seeking to operate in frequencies that are shared with terrestrial operators. If the transportable earth station is seeking to operate in FSS exclusive frequency bands, then a generic license should be sufficient. Conversely, if the proposed transportable earth station is seeking to operate in bands that are shared with terrestrial services, then site-specific analysis could be required. A more simplified generic spectrum licensing process will encourage earth station deployment in Canada, allowing operators to avoid expending as many resources as would be required for obtaining a site-approved license.

An efficient site approval process must have clear criteria, so that applicants know exactly which earth stations will require site approval. For TT&C earth stations planned for bands with policies in place for the protection of other services, such as the mobile service in the 27.0 – 28.35 GHz band, GVF recommends that ISED carve out exceptions where appropriate. As one example, while SAB-002-21 prohibits the establishment of services in Tier 4 and Large Population Centres (LPCs), the spectrum used by the TT&C earth station is sufficiently small that such operations would not create a risk of unacceptable interference for the mobile service in such areas.

To the extent the site approval requirement is unclear, it will be important that ISED's process provides for an expedited determination that avoids unnecessary delays or suspension of processing of an application.

2. collect and assess the technical information listed in annex B as part of the site approval process

R2.2. GVF recommends that ISED consider simplifying the technical information requested in annex B. The information collected could be limited to that to understand the interference potential or susceptibility of the earth station. Much of the information that was required in Annex B now seems of limited relevance given the advent of Adaptive Coding and Modulation. GVF proposes that the following information is not critical and should not be required:

For transmitter information:

- Where the transmit carrier is digitally modulated, the modulated bit rate in Mbit/s (data rate plus any bits added as a result of overhead, i.e. the addition of coding and error correction bits). Instead, ISED should require the symbol rate for the transmitter in baud.

3. require earth station licensees with site-approved spectrum licenses to hold licenses for entire spectrum blocks, as per relevant SRSPs

R2.3. The licensing of co-primary satellite services in shared bands need not be pegged to the channelization plan of other services in such bands. This can lead to earth station licensees paying for more spectrum than they actually plan to use, e.g., in the case of TT&C or beaconing operations, or simply because a transponder falls across two terrestrial spectrum blocks. At the very least, if forced to obtain a license for more spectrum than it intends to use, the earth station licensee should only have to pay for the maximum bandwidth within the spectrum blocks that will be used (see, e.g., the similar fee proposal for MSS earth stations in Q18).

While GVF generally supports initiatives to simplify the satellite licensing structure, it is unclear that ISED's proposal is adequate for satellite services. The use of spectrum for satellite services will not necessarily adapt to other services' channelization (e.g., SRSP -325.25 includes a band segmentation for point-to-point FDD systems in the band 27.5-28.35 GHz, which would not be applicable for FSS systems operating in such band). Further, TT&C and beaconing applications, as well as certain service carriers, may require only a fraction of a larger defined band. ISED proposal should be modified to take these situations into account.

Q3

ISED is seeking comments on any additional technical information that should be required for site-approved earth stations. In providing comments, respondents are requested to include supporting arguments and a rationale.

R3. GVF considers that no additional information should be required.

Q4

ISED is seeking comments on what other types of earth stations, in addition to those identified, could be subject to spectrum licenses that require site approvals.

R4. Other types of stations should not be subject to site approval. In addition, ISED should clarify that, notwithstanding the categories above, earth stations that are specifically allowed to be generic-licensed in bands that are shared with other services (e.g., 10.7-10.95 GHz) also need not be site-approved.

Q5

ISED is seeking comments on its proposal to adopt generic spectrum licenses in order to authorize systems of identical fixed earth stations and ESIMs.

R5. GVF generally supports ISED's proposal. Generic licensing will greatly simplify authorization of ubiquitously deployed earth stations and will reduce regulatory burden.

However, GVF encourages ISED to extend the ability to license generic (identical) earth stations beyond the categories proposed in the consultation. This will greatly simplify authorization of ubiquitously deployed earth stations and will reduce regulatory burden. As detailed below, such operations on a non-interference, non-protection basis would impose no constraints on the fixed service. This will also provide certainty as this will become a permanent regulation, replacing the interim approach currently in place.

GVF suggest that an update of the requirements in SRSP-101 is warranted. The requirements appear to be specifically geared to GSO earth stations but should also reference NGSO stations. The requirements in SRSP-101 should also specify their applicability to ESIMS and identical fixed earth stations.

In addition, some clarification is required on the meaning of "identical" earth stations and ESIMs. While GVF agrees that earth stations authorized under a single generic spectrum licence should share the same frequency bands and communicate with the same satellites, the technical parameters do not need to be "identical". Rather, it should be sufficient that the earth stations have similar operational and technical characteristics. This concept of a "family" of "similar" terminals has been adopted for instance in the European framework where blanket authorization of user terminals is based on the compliance with general technical and operational characteristics (e.g. ECC/DEC(13)01 with ETSI EN 303 978 and ECC/DEC(15)04 with ETSI EN 303 979). GVF recommends that subscriber earth stations operating within the envelope of technical and operational characteristics identified in the generic earth station spectrum license would qualify as "similar" or "identical" provided they communicate with the satellites identified on the licence and using the licensed frequencies.

Q6

ISED is seeking comments on its proposals to allow generic spectrum licensing systems of identical fixed earth stations and ESIMs in the frequency bands discussed above.

R6.

4000-4200 MHz (space-to-Earth): GVF supports the proposal to authorize aeronautical and maritime ESIMs through generic spectrum licenses in this band. However, GVF urges ISED to consider issuing generic spectrum licenses for fixed satellite earth stations and land ESIM terminals on a non-protected basis in light of ISED's decision to stop licensing any new Fixed Service links in the band.

5925-6425 MHz (Earth-to-space): GVF supports ISED's proposal to allow generic spectrum licensing for aeronautical and maritime ESIMs. GVF has no objections to requiring site-approved licenses for fixed

FSS terminals in this band due to the need to protect co-primary Fixed Services. However, GVF objects to ISED's rationale for rejecting generic licensing of fixed FSS earth stations due to the expected widespread deployment of newly introduced license-exempt RLANs in the same band. Under a license-exempt regime, RLAN devices cannot claim protection from, or constrain the deployment of primary services in the band, and therefore the presence of RLAN devices cannot be a valid reason for limiting the availability of generic licensing of fixed FSS earth stations.

10.7-10.95 GHz and 11.2-11.45 GHz (space-to-Earth): GVF supports ISED proposal to allow generic licensing for both fixed earth stations and aeronautical and maritime ESIMs on a no-protection, no-interference basis. Furthermore, ISED should consider extending generic licensing to fixed FSS terminals, land ESIMs, and transportable earth stations as well, on a no-protection, no-interference basis, as these would equally have no impact on other co-primary services.

10.95-11.2 GHz and 11.45-11.70 GHz (space-to-Earth): GVF supports ISED proposal to allow generic licensing for both fixed earth stations, transportable earth stations, and all three types of ESIMs. GVF also supports an indefinite extension of the current moratorium on the licensing of fixed service systems in the 11.075-11.2 GHz and 11.575-11.7 GHz portions of the band. Such an extension would expand the amount of much-needed unencumbered spectrum available for NGSO FSS reception thereby increasing the space-to-Earth capacity of both GSO and non-GSO systems operating in Canada. At the same time, there is no indication that FS demand cannot be met in other portions of the 10/11 GHz bands.

11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space): GVF supports ISED proposal to allow generic licensing for both fixed earth stations, transportable earth stations, and all three types of ESIMs.

12.2-12.7 GHz (space-to-Earth) GVF supports the ISED proposal to allow generic licensing for both fixed earth stations, transportable earth stations, and all three types of ESIMs communicating with NGSO systems based on footnote 5.487A, which recognizes that the band may be used by NGSO systems.

However, considering footnote 5.492 of RR where this frequency range may also be used for transmissions in the fixed satellite service (space-to-Earth), provided that such transmissions do not cause more interference, or require more protection from interference, than the broadcasting-satellite service transmissions operating in conformity with the Plan or the List, as appropriate, GVF would urge ISED to consider generic licensing for fixed earth stations, transportable earth stations and all three types of ESIMs communicating with GSO as well.

GVF notes that this band may be subject to future consultation. As this band is heavily utilized by GSO BSS and is expected to be heavily utilized for NGSO FSS systems in the space-to-Earth direction, it is imperative that any future consultation not consider expanding the use of the band to any terrestrially based uses.

13.75-14.0 GHz (Earth-to-space): GVF supports ISED proposal to allow generic licensing for both fixed earth stations, transportable earth stations, and all three types of ESIMs.

17.7-18.3 GHz (space-to-Earth and Earth-to-space): GVF supports generic licensing of fixed earth stations, transportable earth stations and all types of ESIMs in this band in the space-to-Earth direction. Notwithstanding FS priority over FSS in this band, ubiquitous deployment of FSS fixed stations in this downlink band is feasible on a non-interference, non-protected basis while observing the PFD limits established in Article 21 of the RR. In this regard, the generic licensing of downlinks in this band is no different from ISED's proposed generic licensing of downlinks in other shared downlink bands (*e.g.* 10.7-10.95 GHz where there is heavy FS deployment) on a non-protected, non-interference basis.

In addition, generic licensing of ESIMs in this downlink band should be allowed for both GSO and NGSO systems. ESIMs have operated successfully with both GSO and NGSO systems in this band for many years, and both the United States and the European Union allow ESIMs to communicate with both

kinds of systems. ITU studies underway are expected to affirm successful operations for NGSO ESIMs as well (see WRC-23 Agenda Item 1.16). This will greatly simplify authorization of ubiquitously deployed earth stations and will reduce regulatory burden.

18.3-18.8 GHz (space-to-Earth) and 18.8-19.3 GHz (space-to-Earth): GVF supports ISED's proposal to issue generic spectrum licenses for both fixed earth stations and all ESIMs communicating with both GSO and NGSO systems.

19.7-20.2 GHz (space-to-Earth) and 29.5-30 GHz (Earth-to-space); 28.35-28.6 GHz (Earth-to-space):

GVF supports ISED proposal to allow generic licensing for both fixed earth stations, transportable earth stations, and all three types of ESIMs.

28.6-29.1 GHz (Earth-to-space); and 29.25-29.5 GHz (Earth-to-space): GVF supports ISED proposal to issue generic spectrum licenses for both fixed earth stations and all ESIMs communicating with both, GSO and NGSO systems, as appropriate.

27.5-28.35 GHz band (Earth-to-space): GVF supports ISED proposal to issue generic spectrum licenses to aeronautical and maritime ESIMs communicating with GSO satellites in this band. GVF also supports allowing generic licensing of aeronautical and maritime ESIMs in the Earth-to-space direction communicating with NGSO satellites. As noted above, ESIMs have operated successfully with both GSO and NGSO systems in the Ka-band for many years, (*see, e.g.,* under ECC Decision (15)04). Accordingly, ISED should extend generic licensing to NGSO aero and maritime ESIMs as well.

Q7

ISED is also seeking comments on any other bands that should be considered for generic spectrum licensing for fixed earth stations and ESIMs, including for systems of identical receive-only earth stations in the 4000-4200 MHz band. In providing comments, respondents are requested to include supporting arguments and a rationale.

R7. Regarding generic licensing in the 4000-4200 MHz band, please see response to Q6 above. In addition, ISED will have to consider how the generic licensing regime will operate together with the interim authorization regime adopted by ISED as part of the 3800 MHz decision. For example, the interim authorization regime in 4000-4200 MHz affords interference protection against flexible use services in the adjacent 3700-3980 MHz band. The generic licensing regime introduced by ISED should afford at least the same adjacent band protections.

GVF also considers that, based on the HDFSS identification of the bands 40-42 GHz (space-to-Earth) and 48.2-50.2 GHz (Earth-to-space) in No. 5.516B of the Radio Regulations, ISED should implement generic spectrum licensing for fixed earth stations. These bands or portions of them, are being planned for the ubiquitous deployment of user terminals in the FSS including in Mexico and the United States, where multiple satellite systems are licensed already in this band.

Additionally, for the bands 12.7-12.75 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space), GVF proposes that ISED to allow generic licensing for all three types of ESIMs in these bands a non-protection/non-interference basis, which is allocated to FSS uplink (and Fixed and Mobile). While these bands are indeed under discussion as part of agenda item 1.15 leading up to WRC-23, the principles of operating ESIMs in these bands are identical to those in the rest of the Ku-band.

Q8

ISED is seeking comments on its proposals to:

1. *issue generic spectrum licenses for ESIMs on a no-interference, no-protection basis*

R8.1. GVF supports ISED's proposal.

2. require ESIM licensees to provide a contact that would be available to respond to interference issues 24 hours a day, 7 days a week, as per the license conditions in Annex A.

R8.2. No comment.

Q9

ISED is seeking comments on whether an RSS should be developed for earth stations intended for self-installation by consumers.

R9 GVF supports ISED's proposal to develop Radio Standards Specifications (RSS) for self-installation earth stations. Clear guidance would be needed in the RSS, given the built-in level of automation in the earth station set-up, whether professional installation would have any impact on the overall outcome of the installation. Standards would need to be developed to which an earth station may need to be compliant, if self-installation is to be permitted. Satellite operators ensure that their earth stations are professionally installed not only to satisfy customer expectations, but also to ensure that no harmful interference resulting from faulty installation is caused to other operators. Now with earth stations that can be acquired and installed directly by consumers and other end-users, it is important that measures are put in place to ensure that these installations are compliant to a certain standard.

Q10

ISED is seeking comments on its proposals to:

- a. introduce spectrum licensing for space stations in all satellite services, with licenses authorizing the radio service, the frequency band(s), the orbital location and a coverage area
- b. set the license term on a case-by-case basis for satellites that are not FSS, BSS or MSS
- c. apply the existing conditions of license for space stations, published as N2 – Space station licenses, to the new spectrum licenses

R10. GVF supports ISED's proposals.

Q11

ISED is seeking comments on its proposal to introduce spectrum licensing to authorize FSS feeder link and/or TT&C spectrum used by space stations to support MSS, with licenses issued immediately after a favourable licensing decision and fees applicable once satellites are in operation.

R11. GVF supports ISED's proposal.

Q12

ISED is seeking comments on whether to require MSS satellite operators to comply with the rules regarding minimum holdings for FSS feeder link spectrum, as defined in RP-008. In providing comments, respondents are requested to include supporting arguments and a rationale.

R12. GVF supports ISED's proposal.

Q13

ISED is seeking comments on its proposals to:

- a. issue spectrum licenses instead of approvals in principle for MSS satellites, with fees remaining payable only once satellites are launched and operational
- b. issue spectrum licenses for MSS satellites with a 20-year term
- c. issue separate spectrum licenses for MSS satellites and MSS earth stations, with each license assigned a fee

R13. GVF supports ISED's proposal to issue spectrum licenses for MSS satellites. GVF agrees that a consistent licensing mechanism for FSS, BSS, and MSS satellite systems will simplify the licensing process.

Q14

ISED is seeking comments on its proposals to:

1. *issue the three types of satellite-related spectrum licenses separately and assign a separate fee for each*

R14.1. GVF supports ISED's proposal. We consider this is a better approach to authorize a satellite-based operation in all its segments, which is also according to international practices.

2. *allow communication with multiple GSO satellites on a single earth station license*

R14.2. GVF supports ISED's proposal. GVF urges ISED to establish an expedited procedure for adding any additional satellite networks to an existing earth station licence to avoid unnecessary processing delays.

3. *require separate earth station licenses for NGSO systems*

R14.3. GVF supports ISED's proposal to issue three types of satellite-related spectrum licenses, and to allow communication with multiple GSO satellites a single earth station license.

Q15

ISED is seeking comments on its proposal to assign a consumption-based fee to earth station spectrum licenses, where site and station approvals are required, as follows:

- *below or equal to 1 GHz: \$2000/MHz*
- *above 1 GHz and below or equal to 3.4 GHz: \$100/MHz*
- *above 3.4 GHz and below or equal to 7.075 GHz: \$20/MHz*
- *above 7.075 GHz and below or equal to 17.3 GHz: \$10/MHz*
- *above 17.3 GHz and below or equal to 51.4 GHz: \$5/MHz*
- *above 51.4 GHz: \$1/MHz*

R15.

GVF agrees with ISED's proposal to abandon the current capacity-based license fee model, which is measured by telephone voice channels or the equivalent. Under 58(c) of the Radiocommunication Regulations, the number of telephone channels equivalent to the digitally modulated channel is calculated

by dividing the modulation bit rate by 64 kbps. In effect, the more data transmitted over a given amount of bandwidth, the higher the license fee to be paid by the operator. Such an approach penalizes the efficient use of spectrum.

Now, ISED has proposed a consumption-based fee model to replace the current capacity-based approach. While GVF appreciates ISED's efforts to reverse the effects and implement a fee system that will reward spectral efficiency and provide fee predictability at reduced rates is most welcome. ISED should note that Canada's earth station licensing fees are still higher than the licensing fees of some of Canada's international peers that do not take a per-MHz approach to pricing. For example, in the U.S., the annual license fee for an earth station is set at a fixed rate of \$595 U.S. dollars per earth station license, which could include an authorization for multiple earth stations. New Zealand charges \$150 per individual earth station license, regardless of the amount of spectrum used.

Unlike terrestrial spectrum licenses, the same FSS spectrum can be issued to multiple space station operators and to multiple earth station operators. Given that the same piece of satellite spectrum may be licensed many times over, ISED should consider reducing the proposed per-MHz fees, further, say by at least a factor of 5 for each of the frequency ranges mentioned.

In addition, GVF requests that FSS earth station licensees be afforded the same flexibility as MSS earth station licensees in being able to flexibly license an entire band (say, 14.0-14.5 GHz or 29.5-30.0 GHz), but then only paying for the maximum amount of spectrum that can be used within that range (say, 100 MHz within that range) (*see* Q18). Modern FSS systems are very flexible and can switch the frequencies used to serve a particular end user rapidly in real-time, without necessarily increasing the amount of spectrum usage. Even on existing FSS systems, manual "regrooming" of transponders – whereby existing services are moved from one transponder to another without any other change in parameters – takes place routinely. Having a licensing option that calculates the fee based on a maximum amount of spectrum use within a broader range would provide FSS operators and their customers with much needed convenience and spectrum flexibility without the need to pay for spectrum that they would not in fact be using.

Q16

ISED is seeking comments on its proposal to assign a consumption-based fee to generic earth station spectrum licenses for fixed earth stations and ESIMs at the rate of \$5/MHz.

R16.

As discussed above, to maintain competitive fee rates as compared to Canada's international peers, GVF recommends that ISED set the generic spectrum license fees so that they are comparable to those of administrations that set fees based on recovering administrative costs. GVF recommends reducing the per-MHz fees significantly to reflect the fact that the same piece of FSS spectrum can and often will be licensed multiple times to multiple parties in Canada. If anything, the total cost for all generic licenses using the same spectrum should cost no more than the cheapest site-approved license, since no site analysis is required for the grant of such licenses.

Moreover, in bands where a generic licence authorizes only non-protected, non-interference operations, the spectrum fee should be even lower to reflect the lesser status (and therefore value) of such licensed spectrum. In such cases, only the minimum fee should be payable.

Q17

ISED is seeking comments on its proposal to modify the existing consumption-based fee for spectrum licenses for MSS earth stations operating in bands allocated to MSS as follows:

- *at or below 3 GHz: \$1500/MHz*
- *above 3 GHz: \$5/MHz*

R17. GVF supports ISED's proposal for frequencies above 3 GHz. This rate is aligned with that for ESIM.

Q18

ISED is seeking comments on its proposal to assign the spectrum license fee for MSS earth stations based on the maximum amount of spectrum a system is capable of using, within a range of possible operation. This amount would be the assigned spectrum used in the fee calculation.

R18. GVF supports ISED's proposal and requests that the same flexibility be extended to FSS earth stations (*see Q15 above*).

Q19

ISED is seeking comments on its proposals to:

1. modify the MSS satellite spectrum licence fee to \$124.84/MHz
2. assign a consumption-based fee for new spectrum licences for all other satellites (that are not FSS, BSS or MSS) at \$124.84/MHz

R19. GVF supports ISED's proposals.

Q21

ISED is seeking comments on its proposals to introduce a minimum annual spectrum license fee of \$160 for earth stations and \$300 for space stations, and to apply these fees whenever the application of the consumption-based fee model would result in a fee lower than those amounts.

R21. GVF supports ISED's proposal.

Q22

ISED is seeking comments on its proposal to apply a minimum annual spectrum license earth station fee of \$160 to radioastronomy sites.

R22. No comment.

Q23

ISED is seeking comments on its proposals to introduce developmental spectrum license fees for earth stations and space stations at a flat rate of \$160 and \$300, respectively.

R23. GVF supports ISED's proposal on the understanding that such developmental licenses are limited to non-commercial operations and would be on a no-protection, no-interference basis.

Q24

ISED is also seeking comments on limits to eligibility requirements for developmental spectrum licenses, limits on frequency bands where developmental licenses could be issued, and conditions of license that could be applied. In providing comments, respondents are requested to include supporting arguments and a rationale.

R24. No comment on the understanding that such development licenses are issued only on a no-protection, no-interference basis for non-commercial operations.

Q25

ISED is seeking comments on its proposal to apply a prorated fee, of 1/12th of the relevant annual fee for each month until March 31 of the fiscal year, for licenses issued part-way through a licensing year.

R25. GVF supports ISED's proposal.

Q26

ISED is seeking comments on its proposals to:

- a. issue short-duration licences for periods of less than one year*
- b. assign a prorated fee of 1/12th of the total annual fee per month, with the lowest fee possible being \$160 for earth stations and \$300 for space stations*

R26. No comment.

Q27

ISED is seeking comments on its proposals to set service standards for the issuance of licensing decisions for satellite-related spectrum licenses as follows:

- space stations: 126 days*
- generic earth stations: 126 days*
- site-approved earth stations: 126 days*
- additional sites under an existing site-approved earth station license: 49 days*

R27. GVF supports ISED's proposal. This implies a reduction in the processing times for all types of applications. However, in the case of a TT&C earth station, an expedited process would be more appropriate. In the case of a gateway earth station where many other earth stations in the network would rely on that earth station, it would be appropriate to provide a more expedited issuance of license than for a single site specific or generic earth station in that satellite network.