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|  | **Document EG-DEC482-4/6** |
| **8 April 2025** |
| **English only** |
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| Contribution from Canada | |
| ELEMENTS FOR DISCUSSIONS AND PROPOSED MODIFICATIONS TO DECISION 482 ON THE SATELLITE COST RECOVERY | |
| **Purpose**  The purpose of this contribution from Canada is to provide views on the proposed modifications to Council Decision 482 relating to items *f)* and *g)* of the ToR of the EG-DEC482, as discussed at the February 2025 meeting of the EG-DEC482 and/or alternatives approaches to address these items.  **Action required**  The Expert Group on Decision 482 is invited to **consider** the proposals contained in this contribution. | |

Canada has reviewed various documents and, in particular, Document [EG-DEC482-3/3](https://www.itu.int/md/S25-EG3DEC482-C-0003/en), entitled *Comprehensive review and possible revisions to Decisions 482*, the additional information provided by the Bureau on items f) and g) in Document [EG-DEC482-3/DL/2](https://www.itu.int/md/S25-EG3DEC482-250210-DL-0002/en), as well as the output of the February 2025 meeting of the EG-DEC482 in   
Document [EG-DEC482-3/DT/3](https://www.itu.int/md/S25-EG3DEC482-250210-TD-0003/en).

As a result, Canada would like to share with the meeting some observations, comments and proposals specifically relating to items f) and g) of the ToR of the EG-DEC482.

Item f – ***The costs of processing non-GSO filings having more than 75 000 units or, alternatively, whether the formula to compute units for such non-GSO satellite systems should take into account the impact of the number of different orbital altitudes, number of satellites, number of earth stations, or other characteristics affecting workload associated with the processing of non-GSO systems***

At its February 2025 meeting, the EG-DEC482 discussed, among other things, the possibility of amending the formula used for the calculation of the number of units to include the number different sets of orbital planes, as well as the number of coordination provisions associated with each group. During the discussions, some concerns were raised including the fact that the current categorization of coordination requests under C1, C2 and C3 was already meant to reflect a difference in costs for filings as a function of the multiple types of coordination procedures applicable. it was understood that the proposed new formula may have some advantages:

– reflecting the number of different coordination procedures at the group level instead of the filing level, and

– taking into account in some instances, the different type of analysis (e.g.: frequency overlap analysis vs frequency overlap analysis + pfd/epfd calculations) required to identify the coordination requirements upon receipt of a coordination request.

In response to this concern, alternative options could be considered.

Option 1

Eliminate the current C1, C2 and C3 classification replacing it by a unique category for the processing of filings at the coordination stage with the implementation of the proposed new formula for the total number of units.

Total number of units per filing = the product of the # of frequency assignments, # of class of stations, # of emissions, # of different set of orbital planes and # of coordination provisions summed up for all groups in the filing (1)

Although, this option would have addressed the concern expressed with respect the suggestion by the Bureau, it may prove to be difficult to reflect in Decision 482 at this point in time, considering that there have been no discussions to define the fee structure for the unique category in terms of the start fee and flat fee per filing. As well, there is no agreement on the inclusion of the number of coordination provisions in the formula for units. We note also that the implementation of such an option —i.e., the suppression of the C1, C2 and C3 categories— will also lead to the suppression of the N1, N2 and N3 categories at the notification stage.

Conscious of the time allotted to the discussions at this meeting of the EG-DEC 482 and in an attempt to present Council 2015 with some concrete suggestions for modifications to Decision 482 in relation with item f), Canada is proposing option 2.

Option 2

– Maintain categories C1, C2, and C3 for the processing of filing at the coordination stage with **some modifications to the definition of categories C2 and C3 as well as the definition of the forms of coordination**.

– Modify the formula for the calculation of the total number of units as initially suggested by the Bureau and shown under (1) above.

a) Modifications to the description of C2 and C3 categories and the description of the forms of coordination

The proposed modifications are shown below, followed by a rationale.

Extract of Decision 482:

**\* Definition of category for coordination (C) and notification (N)**

The category for coordination (C1, C2, C3) and for notification (N1, N2, N3) is related to the number of forms of coordination applicable to a particular satellite network coordination request or notification submission, as follows:

• C1 and N1 correspond to a satellite network filing referring to only one cost-recovery form of coordination (A, B, C, D, E or F). Both categories also include cases for which no form of coordination applies as a result of unfavourable finding under No. **11.31** of the Radio Regulations for all frequency assignments of the submitted filing, or cases including frequency assignments published for information only.

• C2 and N2 correspond to a satellite network filing referring to any two cost‑recovery forms of coordination amongst A, B, C, D, E or F.

• C3 and N3 correspond to a satellite network filing referring to any three or more cost‑recovery forms of coordination amongst A, B, C, D, E or F.

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| Cost-recovery form of coordination | Individual Radio Regulations forms of coordination |
| A | No. **9.7**, No. **9.21A** *(for GSO only)* |
| B | Appendix **30** 7.1, Appendix **30A** 7.1 |
| C | Nos. **9.11**, **9.14**, Resolution **539** |
| D | Nos. **9.12**, **9.12A**, **9.13** No. **9.21A** (for non-GSO only), No. **9.21B** |
| E | No. **9.7A**[[1]](#footnote-1)**, 9.7B** |
| F | No. **9.21** only when No. **9.21C** applies |

**Rationale:** The proposed modifications are meant to better reflect the different activities associated with the identification of the coordination requirements by the Bureau. Canada is of the view that:

1 The forms of coordination should be established on the basis of the associated activities/analysis that are involved. On this specific point, we note that the identification of coordination requirements under RR Nos. **9.12**, **9.12A**, **9.13**, **9.21A** (for non-GSO systems)and **9.21B** are based on frequency overlap analysis with respect to other space systems while RR Nos. **9.14**, **9.11** and **9.21C** require a frequency overlap analysis with respect to terrestrial systems, an analysis with respect to the visibility of the territory from the satellites and, in some instances, pfd calculations. Finally, RR No. **9.7B** requires a frequency overlap analysis and epfd calculations. In each case, we can reasonably assume that different software tools are to be used for the identification of the coordination requirements and as such, the analysis represents different activities that contribute to the workload associated with the processing of filings at the coordination stage.

In fact, it is worth noting that the identification of coordination requirements under RR Nos **9.12**, **9.12A**, **9.21A** and **9.21B** requires access to the space databases while the identification of coordination requirements under RR Nos. **9.11**, **9.14** or **9.21C** requires access to the terrestrial databases, among other things. This represents two separate activities that require the use of different tools, resulting in a greater workload. Therefore, it is important to keep the above in mind when trying to assess both the workload and the resulting cost for processing space filings at the coordination stage.

With respect to RR No. **9.21C**, it is worth noting that while its application in a band allocated to a space service in the space-to-Earth direction is very similar to RR Nos. **9.11**/**9.14** in terms of the type of analysis required to identify coordination requirements, its application in a band allocated in the Earth-to-space direction does not have any equivalent with any other existing provisions currently listed in the Table in Decision 482 as, in this context, the analysis for the identification of coordination requirements will be more like the one use in the case of RR No. **9.17**. For this reason coordination F with some amendments should be retained.

2 To effectively reflect the workload/ different nature of activities associated with the identification of coordination requirements and, in addition to the reclassification of the forms of coordination, it would be important to amend the definition of the C2 and C3 category of filings. Such an amendment would ensure that the cost associated with a filing containing the forms of coordination D and E is not identical to the cost of other filings with the same number of units but which contain coordination C, D and E, as it is the case under the current version of Decision 482 both being considered as filings of a C2 category.

b) Modification to the formula for the calculation of the total number of units for non-GSO filings

The Administration of Canada proposes the following formula for calculation of the total number of units for non-GSO filings:

Total number of units per filing = the product of the # frequency assignments, # of class of stations, # of emissions and # of different sets of orbital planes summed up for all groups in the filing (2)

The Administration of Canada is of the view that the submission of constellations consisting of multiple shelves adds to the complexity of the processing of non-GSO filings. We can reasonably assume that each shell might require a separate assessment with respect to the compliance with some specific provisions of the Radio Regulations. As an example, a group, part of a transmitting beam associated with multiple shelves, or multiple pfd calculations may be required to confirm the compliance with pfd limits under RR Article **21**, or to determine the coordination requirements in case of coordination with terrestrial systems.

The specific proposals made under a) and b) above are meant to address issues related to the suitability of the existing approaches implemented in Decision 482 to reflect the cost associated with the processing of filings taking into account their growing complexity that may not have been anticipated at any previous review of Decision 482. As it will be shown in the Excel spreadsheet provided at the end of this contribution, the above proposals do not affect all the filings and as such do not necessarily address the appropriateness to continue to charge the same price per unit after more than twenty years.

On this specific point, the Canadian Administration is of the view that consideration should be given to increasing the price associated with C1, C2 and C3 submissions up to a maximum of 20%. Again, it should be noted that these costs have not changed for the last twenty years and have not kept pace with inflation. The Canadian Administration also believes that a mechanism should be put in place by the Council to consider the implementation of an indexation mechanism in Decision 482 and suggest that this be brought to the attention of Council 2025.

In the annex to this contribution, we provided an assessment of the impact of these measures using as a benchmark a number of CR/C published and billed between 2020 and the end of 2024[[2]](#footnote-2). This is provided for information only as a means to contextualize the above proposed modifications to Decision 482.

Extract of Decision 482 with the proposed modifications

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| 2 | Coordination (C) | C1\* | Coordination request for a satellite network in accordance with No. **9.6** along with one or more of Nos. **9.7**, **9.7A**, **9.7B**, **9.11**, **9.11A**, **9.12**, **9.12A**, **9.13**, **9.14** and **9.21** of Section II of Article **9**, § 7.1 of Article 7 of Appendix **30**, § 7.1 of Article 7 of Appendix **30A** and Resolution **539 (Rev.WRC-19)**.  Note: Coordination also includes the application of Nos. **9.1A**, **9.53A** (CR/D special section) and **9.41**/**9.42** and will not be separately charged.  Note: For coordination requests of a non-geostationary satellite network where the notifying administration has indicated that the different sub-sets of orbital characteristics would be mutually exclusive, the processing charges are separately computed for each of the sub-sets and thereafter added to produce the processing charge of the satellite network. | 20 560 | 5 560 | 150 | Product of the number of different sets of orbital planes, number of frequency assignments, number of classes of station and the number of emissions, summed up for all frequency assignment groups |
| C2\* | 24 620 | 9620 |
| C3\* | 33 467 | 18467 |

e) For non-geostationary satellite networks, the flat fee for categories C1, C2, C3, N1, N2 and N3 is applicable from 100 units to 25 000 units. From 25 000 units to 500 000 units, there is an additional fee per additional unit, equal to the flat fee divided by 50 000. Above 500 000 units, there is no additional fee per additional unit.

Item G – ***consider the introduction of units in categories A1 and N4, with a different fee being charged for more complex or larger systems, depending on the number of units***

The Administration of Canada would like to indicate its support to the suggestion by the Bureau to introduce the concept of units in categories A1 and N4.

With respect to category A1 in particular, the Administration of Canada would like to add the following two elements to the initial suggestion by the Bureau:

i) insert a note similar to the one for the processing of coordination request to indicate that each subset of a non-GSO filing consisting of multiple mutually exclusive configurations will be charged separately;

ii) insert a note to address the extra cost associated with filing with a total number of units between 25 000 and 500 000 units.

Furthermore, to take into account the difference in the workload associated with filings not subject to Section II of RR Article **9**, it is proposed that for non-GSO filings only subject to RR No. **9.21**, the cost be determined as percentages of N1 depending on whether the associated coordination filing was a C1 or C2 category, taking into account the proposed modifications discussed above under item f).

For non-GSO satellite system subject to RR No. **9.21** only, the Administration of Canada proposes a fee corresponding to 47% of the fee for N1 if the associated filing at the coordination stage is a C1 category or 58% if the associated filing at the coordination stage is a C2 category.

The proposed modifications are shown below, followed by a rationale.

Extract of Decision 482:

| Type | | Category | | Flat fee per filing (in CHF) ( 100 units,  if applicable)e) | Start fee per filing (in CHF) (< 100 units) | Fee per unit (in CHF) (< 100 units) | Cost-recovery unit |
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| 1 | Advance publication (A) | A1(1) | Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article **9**; Advance publication of inter-satellite links of a geostationary-satellite space station communicating with a non-geostationary space station provisionally not subject to coordination under Section II of Article **9** in accordance with the Rule of Procedure on No. **11.32**, § 6 (MOD RRB04/35).  Note: Advance publication also includes the application of No. **9.5** (API/B special section) and will not be separately charged.  Note: For advance publication information of a non-geostationary satellite network where the notifying administration has indicated that the different sub-sets of orbital characteristics would be mutually exclusive, the processing charges are separately computed for each of the sub-sets and thereafter added to produce the processing charge of the satellite network. | 5700 | 300 | 54 | Product of the number of different sets of orbital planes(2), number of frequency ranges, number of class of stations, number of emissions, summed up for all groups. |

(1) For non-geostationary satellite networks the flat fee for category A1 is applicable from 100 units to 25 000 units. From 25 000 units to 500 000 units, there is an additional fee per additional unit, equal to the flat fee divided by 50 000. Above 500 000 units, there is no additional fee per additional units.

(2) All the orbital planes with the same angle of inclination, altitude of the Perigee, altitude of the Apogee and argument of the Perigee are considered to be part of the same set of orbital planes. Note that for filing where the altitude of the Perigee is equal to the altitude of the apogee are equal, the value of the argument of the Perigee is irrelevant. Finally for GSO orbit and non-GSO system not orbiting the Earth, the number of different set of orbital planes is set to 1.

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| 3 | Notification (N)a) | N1\*d) | Notification for recording in the MIFR of frequency assignments to a satellite network subject to coordination under Section II of Article **9** (with the exception of non-geostationary-satellite network subject to No. **9.21** only).  Note: Notification also includes the application of Resolutions **4** and **49**, Nos. **11.32A** (see footnote *a)*), **11.41**, **11.47**, **11.49**, Sub‑section IID of Article **9**, Sections 1 and 2 of Article **13**, Article **14** and will not be separately charged.  Note: for non-geostationary satellite system subject to No. 9.21 only, the fee to be charged corresponds to 47% and 58% of the fee for N1 when associated respectively to a C1 or a C2 filing at the coordination stage. | 37 092 | 18 467 | 180 | Product of the number of different sets of orbital planes, number of frequency assignments, number of classes of station and the number of emissions, summed up for all frequency assignment groups |
| 69 504 | 51 504 |
| N2\* |
| 69 504 | 51 504 |
| N3\* |
|  |  | N4 | Notification for recording in the MIFR of frequency assignments to a satellite network not subject to coordination under Section II of Article **9**. | 12 300 | 9000 | 60 |

*[Editor’s note: It is not necessary to have two formulae, one for GSO another one for non-GSO systems. The difference between GSO and non-GSO is that for GSO, the number of different sets of orbital planes is by definition 1.]*



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1. Cost recovery for category C1 only. See also *decides* 11. [↑](#footnote-ref-1)
2. In performing the analysis, we didn’t have access to Version 10 of some of the IFIC databases namely IFIC 2931, 2946, 2958, 2977, 2981 and 2982. It is also worth noting that there were some instances where there was no coordination request in specific IFICs. [↑](#footnote-ref-2)