

Telesat view on WRC-27 AI 1.5

TELESATTM

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AI 1.5 WRC-27

- ▲ The issue originally brought into the attention of WRC-23 is associated with reported challenges faced by some member states in relation to the unauthorized operation of some NGSO user terminals
- ▲ The issue of “unauthorized user terminals operation” is not new. It was studied also during the study cycle leading to WRC-19 **for all types of FSS earth stations** and the outcome was Resolution **22 (WRC-19)**
- ▲ Telesat has significant concerns towards some of the proposals
 - some proposals depart significantly from the provisions and the intent in Res **14 (WRC-23)**
 - technology-biased differentiation in relation to equivalent/same GSO earth station operation – risk to unduly penalize one specific technology

WRC-27 AI 1.5 - Res 14 (WRC-23)

Resolution **14 (WRC-23)**: Studies on development of regulatory measures, and implementability thereof, to limit the unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS) and associated issues related to the service area of non-GSO FSS and MSS satellite systems

:

Resolves 1

- **studies on regulatory measures to limit the unauthorized operations of non-GSO FSS and MSS earth stations in the Earth-to-space direction** in order to address and cease such operations, taking into account technical and operational aspects, as appropriate

Recognizing c)

- **that Member States may wish to exclude its territory from the service area of the non-GSO satellite system**

Resolves 2

- **studies on regulatory measures, taking into account *recognizing c)* with regard to non-GSO FSS and MSS satellite systems, and the implementability of such measures, without adversely affecting the provision of service in the rest of the service area of the non-GSO satellite system**

“Inclusion” vs “Exclusion” of the territory of a country

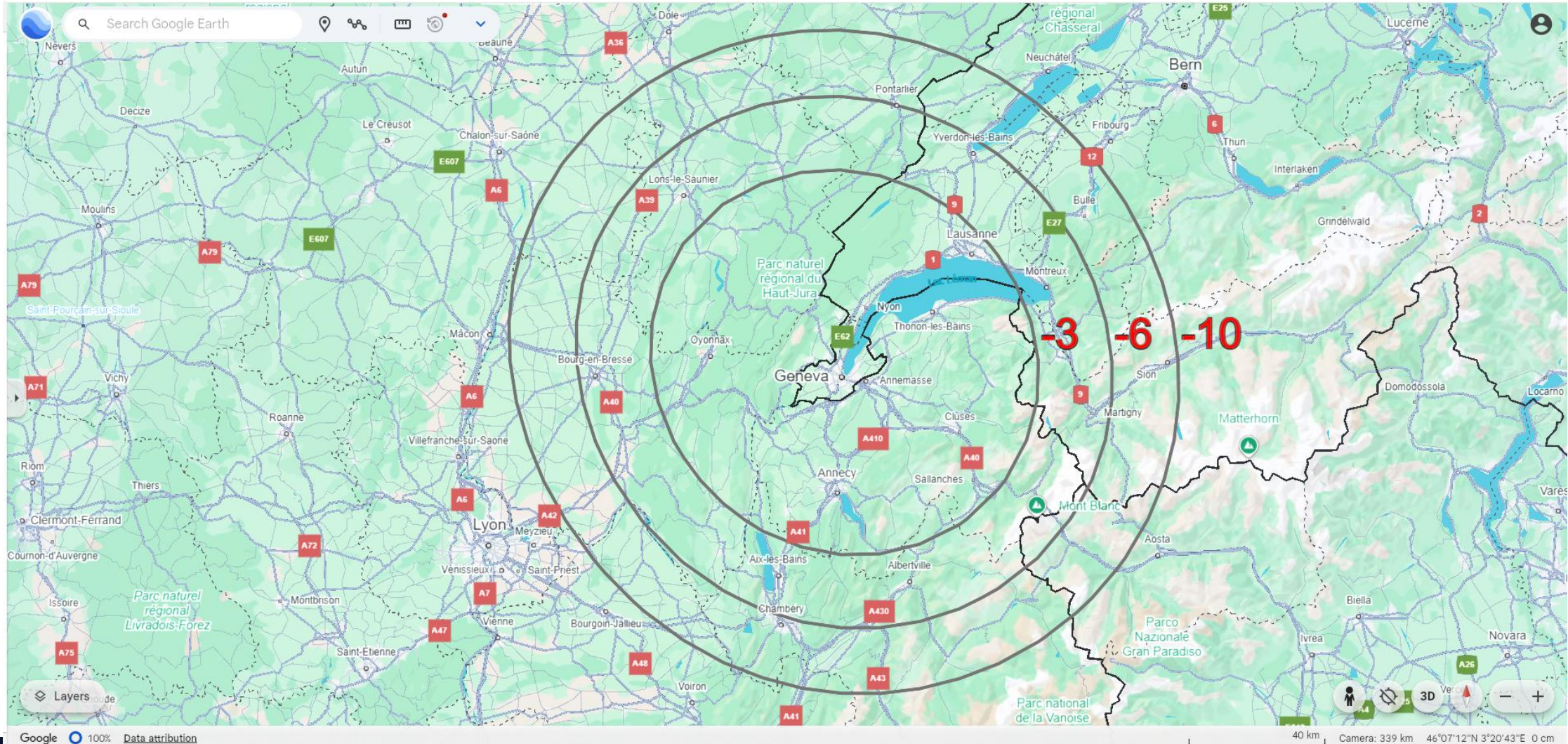
- ▲ Some of the current proposals refer to the requirement for each country to provide “explicit agreement” for their territory to be “included”
- ▲ Completely different from *Resolves 2/recognizing c) “ Member States may wish to exclude its territory”*
- ▲ The notifying administration of a NGSO system would need to undertake an extensive exercise requiring an action from presumably the majority of countries in the world, which do not have any issue with NGSO systems service provision in the first place:
 - outside the scope of Resolution **14 (WRC-23)**
 - will cause artificial delays and gaps in service provision

“Service area” vs “Coverage area” and space-to-Earth transmission

- ▲ The “service area” typically refers to the ITU filing, while the “coverage area” can allude to the satellite beam coverage, i.e., the area physically “illuminated” by the satellites
- ▲ Any reference to the “coverage area”:
 - is outside the scope of Resolution **14 (WRC-23)**
 - can imply limitations in the space-to-Earth transmission which are not technically feasible
- ▲ It’s impossible to exclude the territory of a country in terms of space-to-Earth transmission, without inevitably affecting the service provision in neighboring countries, contradicting the provisions of Resolution **14 (WRC-23)**

Impact on service provision to other countries in border areas

▲ EIRP contours at nadir with roll off at -3, -6 and -10dB



Exclusion of a territory from the service area

- ▲ “Non-GSO service provision” encompasses a variety of services, beside broadband provision to end users on land, e.g.:
 - multi-Gbps backhaul connectivity for terrestrial telecom operators,
 - maritime and aeronautical service provision, which is global in nature
- ▲ While it is within the sovereign right of all member states to authorize services provided in their territories, a full exclusion of a territory from the service area of an NGSO system
 - would render all services unauthorized, thereby also creating gaps in the provision of aeronautical and maritime services
 - could have implications on the protection rights (e.g. if an administration at a later stage would want to be included in the service area, this would likely lead to new coordination requirements for the notifying administration of the satellite system)
- ▲ Similar discussion for GSO networks under AI 7

Discrimination vs earth stations communicating with GSO networks

- ▲ Additional requirements for NGSO systems will lead to a differentiation from GSO networks for provisions of nearly identical telecommunication services to similar or even the same earth stations
- ▲ Given the ongoing commercial and technical synergies between GSO networks and NGSO systems, reflected also in recent mergers/acquisitions/agreements:
 - there is no longer a physical distinction between “GSO” and “NGSO” FSS user terminals in **multi-orbit operations**
 - **user terminals are being designed with the capability of switching between the two types of GSO/NGSO orbits** (e.g. [ThinKom Introduces Ka-Band COTM Phased-Array Satellite Antenna](#))
- ▲ Paradoxical situations in which the same earth station would be subject to more restrictive regulations when transmitting to a NGSO satellite, but relieved from such restrictions when transmitting to a GSO satellite in the same frequencies and from the same location

Conclusions

- ▲ Different proposals from what was discussed and agreed at WRC-23
- ▲ Unprecedented measures targeting a specific type of satellite system
 - technology-biased Agenda Item
- ▲ Need to strike a balance between the concerns of some Administrations and a fair treatment of all satellite systems/networks to avoid unwarranted discriminations
- ▲ ITU regulations should not hinder the deployment/development of new technologies
- ▲ Possible additional measures should not adversely affect NGSO service provision, taking into account also global services, such as maritime and aeronautical connectivity
- ▲ Important to analyse potential negative impacts of such measures, including technical feasibility, increased costs and complexity for existing and future satellite systems

Conclusions (continued)

▲ Overall, Telesat opposes

- any departures from WRC-23 agreed provisions
- any reference to the coverage area
- concept of explicit agreement for inclusion
- exclusion from the service area
- undue differentiation with respect to the same/similar GSO operation

▲ Telesat supports viable and effective measures (e.g. earth stations geolocation and NCMC capabilities as in the Indian input to the WP4A meeting in May)

Thank you!