

Inmarsat response to the ITU 2015 Global Symposium for Regulators Consultation

Inmarsat is honoured to submit a contribution to the GSR 2015 consultation, in particular with reference to the following aspects raised in the consultation letter BDT/IEE/RME/DM/026 of 26 March 2015¹:

Quote from ITU-BDT consultation letter:

This consultation focuses on facilitating the uptake and widespread use of mobile applications and services through targeted regulation. Telecom/ICT regulators are invited to identify pro-active policy and innovative regulatory measures in the following areas:

...

Facilitating use, availability and access: Identifying policy, regulatory and industry-led measures to lift regulatory and technical barriers and foster access, development and take-up of apps and m-services;

Unquote

The case for ESOMPs

The global demand for broadband communications continues and is not location specific. Such demand includes requirements of connectivity also for users on vessels, aircraft and vehicles. In other words the demand is for user terminals that operate at both fixed locations and while in motion, often in very remote parts of the globe.

Today it is almost unthinkable that our need to communicate could be satisfied without using e-mails, multimedia messages, social networks or free chat services over IP. However, for instance, for passengers and crew involved in aviation or maritime transportation, the lack of broadband connectivity options is obvious. This is beyond the requirement for portable/mobile broadband in locations on land not covered by terrestrial networks.

State-of-the-art 20/30 GHz Geostationary Fixed-Satellite Service (GSO FSS) networks that employ advanced technology are already available and are capable of meeting the connectivity requirements of mobile broadband users, including high-throughput applications.

Advances in satellite and earth station technology include satellites with multiple spot beam spacecraft antennas as well as earth stations with very accurate pointing towards the wanted satellite even when in motion.

In particular, Earth Stations On Mobile Platforms ('ESOMPs') operating in new state-of-the-art Ka-band GSO FSS networks (up-link: 29.5-30.0 GHz and down-link: 19.7-20.2 GHz) are already operational today.

Regulatory framework for ESOMPs use

In order to facilitate use, availability and access to ESOMPs on a national, regional and global basis, it is necessary to identify suitable policy and measures to lift regulatory barriers and foster access, development and take-up of these important services and applications.

Ideally, the national/regional regulatory framework should contemplate the harmonised use and free circulation of ESOMPs. Exemption from individual licensing, or a light licensing regime, would also be extremely beneficial for users and regulators, as it would greatly simplify the procedural burden. The regulatory framework should also consider requirements

¹ http://www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2015/GSR15_DM_026_Consultation_En.pdf

for visiting ships and aircraft, for example through mutual recognition of licences. One example of such effective regulatory environment is provided in Europe/CEPT by Decision ECC/DEC/(13)01². The intention of the Decision, with reference to the frequency bands 19.7-20.2 GHz and 29.5-30 GHz, is also to provide technical and operational conditions necessary to ensure suitable sharing with stations of the FSS operating in the same frequency band.

The international framework

Currently, in accordance with the ITU Radio Regulations (RR), a satellite network which is both in the FSS and in the MSS can include links between the FSS portion of the network and earth stations at unspecified points or while in motion using frequencies in the bands 19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space) in Region 2 and in the bands 20.1-20.2 GHz (space-to-Earth) and 29.9-30.0 GHz (Earth-to-space) in Regions 1 and 3. Thus, the demand for broadband mobile-satellite communications can be met in 500 MHz in Region 2 but only 100 MHz in Regions 1 and 3. Furthermore, the requirement for the network to be both FSS and MSS is no longer justified with today's technology (e.g. high directivity and high pointing accuracy of the antenna of the user terminal).

Given that the demand from many users of these satellite services, e.g. airlines/shipping companies, is truly global and cannot be met in only 100 MHz of spectrum, proposals to the forthcoming ITU 2015 World Radiocommunication Conference (WRC-15) should complement the corresponding provision of the RR (e.g. No. **5.526**) by making clear that earth stations while in motion may communicate with GSO FSS networks on the same basis as conventional earth stations using the FSS allocation in all three regions in the 29.5-30 GHz and 19.7-20.2 GHz bands³.

Conclusion

Given the high importance of fostering deployment of broadband services and applications using Earth Stations On Mobile Platforms ('ESOMPs') operating in Ka-band GSO FSS networks (up-link: 29.5-30.0 GHz and down-link: 19.7-20.2 GHz), there is a need for regulators to apply best practices and establish national/regional frameworks on a timely basis, including the harmonised use and free circulation of ESOMPs (e.g. mutual recognition of licenses/authorisation issued by other countries/regulators). Furthermore, exemption from individual licensing, along the existing European/CEPT example, would greatly simplify the procedure for users and regulators. In fact, for such mobile and ubiquitous user terminals, a "blanket" licensing or "light" licensing regime would be far more suitable.

Regulators should also consider the need for providing the appropriate international regulations applicable to ESOMPs operating in Ka-band GSO FSS networks. This includes consideration to be given to removing the limitations imposed on ESOMPs in the Radio Regulations (e.g., No. **5.526**) by allowing the flexibility for ESOMPs to operate in existing FSS allocations in the 19.7-20.2/29.5-30.0 GHz portion of the Ka-band.

In such a manner, the deployment of new broadband technologies will be highly facilitated, while ensuring efficient use of frequency spectrum and protection of existing radio services.

²<http://www.erodocdb.dk/Docs/doc98/official/pdf/ECCDEC1301.PDF>

³ For additional information see p.178, Chapter 5 of CPM Report to WRC-15
<http://www.itu.int/md/R12-CPM15.02-R-0001/en>