

RSPG European MSS frequency consultation

Response from Vodafone Group – December 2023



Vodafone Group is pleased to respond to the RSPG's "Public consultation on the Draft RSPG Opinion on assessment of different possible scenarios for the use of the frequency bands 1980-2010 MHz and 2170-2200 MHz by the Mobile Satellite Services beyond 2027".

The expiry of the current licences in 2027 provides a rare opportunity to consider how the 2GHz MSS spectrum band can be used to advance a number of strategic objectives for Europe. We would suggest these include:

- Accelerating digital inclusion
- Ensuring resilience and security
- Supporting the need for Law Enforcement Assistance
- Compliance with electronic communications networks services regulations
- Optimising digital service levels for European customers
- Ensuring a pro-investment environment for Europe's mobile communications sector.

Vodafone recommends the spectrum is made available specifically for mobile broadband use as up to three licences (depending on demand), on a pan-European basis, selected through a fair and competitive process with suitable criteria to achieve Europe's strategic objectives for mobile connectivity and a successful and connected 5G economy. **Hybrid satellite / terrestrial mobile use of the MSS band is an essential dimension**, in our view, to maximise the chances of mass-market adoption, commercial success and achieving efficient use of the spectrum band.

Hybrid use is made possible by the latest technology developments that support shared use within mobile and satellite commercial partnerships and minimise the risk of interference, as well as aligning well with the objectives of the WRC-27 Agenda item 1.13 considering complementary satellite / mobile use of spectrum. Securing support from device manufacturers for this band to be included as standard in everyday cellular devices is not a trivial matter, and licensing that encourages European mobile operator backing will be essential to success.

Accelerating digital inclusion

Historically, satellite has been complementary to terrestrial networks, serving a subset of the telecom market's needs, and always requiring proprietary terminals. In most cases, this has been a major barrier to mass-market adoption (with the exception probably being direct-to-home television, where receiver dishes were effectively standardised and Europe was able to benefit from very low cost multi-channel TV reception). Without economies of scale, devices and service pricing can remain high, and the virtuous circle that builds mass-market take-up of new solutions can fail to materialise.

Advances in satellite technology today mean that satellites can be designed to fully integrate with terrestrial services, offering the prospect of widespread adoption by a market that already has suitable devices. This is the prospect that is emerging today with players such as AST launching satellites that can provide mobile services that seamlessly expand coverage and offer resilience for Europe's terrestrial 4G and 5G networks and will enhance the experience of mobile phone users across Europe.

Without harnessing this established base of devices, the introduction of new satellite services risks failing to achieve the rapid adoption necessary for mass-market success – while, **with the correct licensing approach that aligns closely with terrestrial mobile networks, MSS can**

provide a direct-to-device solution so that Europe can benefit from both pan-European seamless coverage and mass-market adoption by every existing mobile phone user.

In this context, retaining the historical restriction on the band to be used for satellite-only services is an unnecessary and counterproductive limitation, that may compromise the benefits that can be realised from the latest hybrid terrestrial / satellite solutions. In fact, one of the current uses of the band is to support services to aircraft from both satellite and terrestrial ground stations, so there is already a precedent for encouraging complementary use and maximising spectral efficiency. In the interests of maximising the chances of success of this technology in the European market, **we therefore would strongly advocate the band is licensed for both satellite and terrestrial mobile broadband use.**

Ensuring resilience and security

Reliable and secure communications is taken for granted today in Europe, and yet disruptions to networks and services are still commonplace, whether as a result of technology failure, natural disasters or deliberate sabotage. Taking steps to build in resilience is important but can also be expensive. Having to act retrospectively to unanticipated vulnerabilities in network architectures or solutions can be even more challenging.

Satellite direct-to-device services can provide an alternative means of connection that can complement terrestrial networks when additional resilience is needed. Optimising service resilience and minimising service outages is a complex task already undertaken by Europe's mobile phone companies, and **the most reliable overall service will be achieved where each provider is able to take responsibility for overall network supervision and management across both mobile terrestrial and satellite direct-to-mobile components of the service.**

Supporting the need for Law Enforcement Assistance

Europe's governments are increasingly aware of the growing role that digital communication plays in supporting the prevention and detection of criminal activities and/or national security threats, and the need for robust measures including, where relevant and appropriate, the lawful intercept of communications.

While some global digital providers support communications platforms which implement law enforcement regulation based on the country of origin of the provider, in addition to the growing use of encryption, it is important that Europe supports communications solutions and licensing arrangements that accommodate law enforcement needs equitably, notwithstanding how the communications services are provided or where the digital provider is based.

Given this objective, and the potential use in some systems of inter-satellite links to interconnect traffic via third party jurisdictions, or technologies such as end-to-end encryption, **it will be important that Europe's licensing of the MSS band is done in a way that ensures equitable treatment and full compliance with national security requirements in line with European and national laws.**

Compliance with electronic communications networks services regulations

With the MSS band providing the opportunity to build on Europe's terrestrial telecoms networks capability and enhance the services available to European communications customers, **it will be important that the provision of such services is fully compliant with European regulations covering electronic communications network services, and which needs to be upheld as a condition of licensing.**

Optimising digital service levels for European customers

Vodafone shares the European Commission's ambitions, expressed through initiatives such as the Digital Decade targets, to ensure that telecom networks in Europe provide the best possible levels of service and quality to customers.

While satellite technology has made great advances over the last decade, and in particular the ability for satellite signals to be able to reach standard mobile cellular devices, terrestrial networks will still remain the benchmark by which customers' expectations are set, in terms of speed, capacity and quality, **it will be important that, if MSS solutions are to provide an additional element of direct-to-device services for customers, it is licensed in a way that ensures it is complementary to terrestrial mobile broadband services and through appropriate service level targets enhances rather than diminishes the overall level of service quality delivered to the market.**

Ensuring a pro-investment environment for Europe's mobile communications sector

With the Digital Decade targets very much in mind, and given the slow-down in investor appetite to close Europe's digital infrastructure investment gap, it is important that the licensing of MSS spectrum is done in a way that **reinforces rather than undermines the investment case for terrestrial network expansion and upgrade.** Setting overarching criteria for the assignment process that align with Europe's strategic objectives for mobile communications will be critical, as well as avoiding a repeat of exceptional conditions such as set-asides for particular uses or applicants, that we have seen in some recent spectrum awards in Europe and which have undermined the investment case for nationwide terrestrial infrastructure deployment.

This is consistent with our assessment that the value of MSS to European customers is maximised when it would be licensed and harnessed to deliver a direct-to-device mobile broadband service that complements and is fully integrated with terrestrial mobile networks in Europe.

In this arrangement, the solution has the greatest chances of mass-market adoption with ubiquitous affordable devices; that benefit from the investments already made in keeping European communications resilient and secure; that fully meet the needs of national security, compliance and regulatory standards; and that deliver an enhanced overall experience for Europe's customers.