



International  
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# Satellite Roundtable, Brussels, 11 March

Hosted by Squire Patton Boggs

## The new era of satellite communications

The meeting began with a speaker outlining how dramatically the satellite industry had evolved over recent decades, noting that its current market value of \$470 billion was likely to rise to \$1 trillion by 2030. Moreover 80 per cent of this would be derived from the private or commercial sector.

Next, the principal speaker began by addressing the importance of resilience, particularly in the context of space assets and services, citing its relevance to politicians and policymakers. He attributed the heightened focus on resilience to geopolitical factors such as the conflict in Ukraine, emphasising the critical role of space infrastructure in modern economies and public policies.

The discussion moved to the European perspective, noting the continent's evolving leadership in space endeavours amid increased competition, particularly from the private sector. The speaker highlighted the European Commission's Economic Security Strategy, adopted in July 2023, which outlines priorities including promoting competitiveness, protecting against economic security risks and fostering partnerships with like-minded countries. The speaker went on to discuss initiatives aimed at enhancing economic security, such as analysing critical technologies and strengthening foreign direct investment screening. He emphasised the significance of space technologies in this context, noting efforts to reduce dependencies and ensure security of supply. Strategies include boosting international partnerships, investing in production capacities within the EU, and supporting space research and innovation. The speaker pointed to the European space programme, including components like Galileo and Copernicus, and highlighted efforts to establish general security requirements to mitigate risks to space infrastructure and operations.

### Position, navigation and timing

The speaker went on to consider the critical role of positioning, navigation and timing (PNT) in daily life, emphasising its use in various sectors such as transportation, banking, and emergency services. He highlighted the increasing need for resilience in PNT systems due to rising cyber threats like spoofing and jamming. Future demands for PNT will come from technologies like autonomous vehicles and the growing need for precise location services in disaster management. Strategies for enhancing PNT resilience include improving satellite robustness, integrating non-GNSS (global navigation satellite system) sensors, and exploring complementary terrestrial systems.

The European Radio Navigation Plan is mentioned as a key document outlining current PNT systems, future developments, and resilience measures.<sup>1</sup> Concrete actions by the European Commission include investing in secure technologies, evolving service offerings and protecting PNT frequencies.

During the Q&A session, a participant emphasised the importance of making PNT more visible to the public and noted the vulnerability of PNT systems to both Earth-based and space-based threats. They advocate for diversifying technologies to enhance resilience, suggesting that relying solely on GPS may not be sufficient.

Regarding terrestrial infrastructure and the potential rollout of complementary systems like eLoran, a participant highlighted recent developments in the UK where Ofcom has issued a licence for eLoran using a specific frequency range. Are similar initiatives planned in Europe and what is the potential for spectrum harmonisation? The speaker suggested that the allocated spectrum for eLoran is already available globally for radio navigation, indicating that implementing such a system in Europe is feasible. He also acknowledged the need for receivers compatible with eLoran technology and the possibility of integrating eLoran into smartphones.

The forum considered space weather and the potential impact on satellites, particularly those in geostationary orbit (GEO). The speaker acknowledged the need to define future space weather services and mentions existing providers of such services. They also hinted at potential geopolitical concerns related to GEO satellites, indicating that even these satellites are not immune to certain forms of interference or manoeuvres.

### Space law

The discussion then transitioned to the topic of space law and its implications for satellite operators, particularly those in low earth orbit (LEO). The speaker mentioned efforts to ensure that space law applies uniformly to all operators providing services in the EU, regardless of their location. Additionally, the speaker emphasised the importance of starting regional regulatory initiatives such as the EU's efforts on space surveillance and tracking (SST), with the hope of eventually harmonising regulations globally. Existing regulatory frameworks in other sectors suggest that international harmonisation is not unattainable, he said.

The speaker underscored the need for regulations to ensure the resilience and sustainability of satellite constellations, particularly in low earth orbit where congestion and collision risks are high. There are ongoing efforts to establish minimum security requirements for satellite operators to mitigate potential threats

The next topic discussed was competition dynamics in the satellite sector, covering aspects such as mergers and acquisitions, regulatory changes and market innovations. Participants noted the potential for consolidation due to factors like spare industry capacity and disruptive market players. Examples were cited, including the Inmarsat/ViaSat merger,<sup>2</sup> highlighting the role of national and European authorities in overseeing such transactions. While concerns were raised about the scarcity of resources like spectrum and launch capacity, optimism prevailed regarding the influx of new entrants and technological innovations driving market growth. The dialogue emphasised the importance of regulatory anticipation and collaboration to foster competition, integrate satellite and terrestrial services and address emerging market demands. Overall, participants expressed a positive outlook for the industry's evolution and competitiveness.

### Regulatory frameworks

The speakers discussed the importance of engaging with industry stakeholders when considering regulatory frameworks to ensure balance and avoid overregulation. They highlighted the need for ongoing dialogue between regulators, industry players and operators to stay informed about industry developments and future trends. The conversation touched on changes in the satellite supply chain, including the emergence of new dominant players and the necessity for companies to collaborate horizontally to address market pressures. The concept of strategic autonomy was mentioned, emphasising the distinction between like-minded and non-like-minded countries in regulatory frameworks. Participants also raised concerns about the regulation of orbital debris and the challenges of spectrum allocation, with a focus on the slow pace of regulatory processes compared to the rapid pace of technological innovation.

### Satellite spectrum

The roundtable considered the implications of satellite-related agenda items at the World Radiocommunication Conference and the potential for satellite technologies to use terrestrial spectrum. Some participants expressed concerns about the time it takes to allocate spectrum, the challenges of coordinating spectrum use across different countries and the fragmentation of spectrum use due to varying regulations and technologies. One point of contention is the idea of spectrum auctions for satellite spectrum, with some participants expressing scepticism due to the shared nature of satellite spectrum usage. They argued that traditional auction models used for terrestrial spectrum may not be suitable for satellite spectrum, which is often shared among multiple operators. There was acknowledgment that the topic of auctions for satellite spectrum is gaining attention and requires further discussion to determine its viability and implications. Overall the discussion underscored the need for regulatory agility and collaboration to address evolving challenges and opportunities in the satellite sector.

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<sup>1</sup> [https://defence-industry-space.ec.europa.eu/european-commission-unveils-2023-european-radio-navigation-plan-ernp-2024-01-25\\_en](https://defence-industry-space.ec.europa.eu/european-commission-unveils-2023-european-radio-navigation-plan-ernp-2024-01-25_en)

<sup>2</sup> [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_23\\_2915](https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2915)