

Press release

New report calls on the UK to help write the rules for lunar spectrum

[London, UK] 15 July 2026 – The UK Spectrum Policy Forum (UK SPF) has today published a new independent study on the spectrum landscape for lunar communications, warning that the next few years will determine who sets the rules for radio use on and around the Moon for a generation to come.

The report, 'Independent study on Spectrum landscape for lunar communications', conducted by independent consultancy Real Wireless, argues that over the next decade, crewed landings, permanent surface infrastructure, dedicated relay and navigation constellations, and far-side observatories will turn the lunar radio environment from a handful of agency missions into a crowded, multi-operator economy. However, the rules that should govern that shift are only partly written.

The report argues that WRC-27 Agenda Item 1.15 is the international community's formal opening to address this, and that the UK is well placed to lead the response. Agenda Item 1.15 will address whether lunar Space Research Service (SRS) systems can share spectrum with terrestrial and Earth-orbiting services without causing or receiving harmful interference. The ITU-R Working Party 7B sharing studies are examining exactly that, and the results so far are generally positive across most candidate bands.

The engineering evidence is encouraging. Studies show that lunar SRS systems can coexist with terrestrial and Earth-orbiting incumbents across most candidate bands, with comfortable margins in the majority of cases. Ka-band is emerging as the centre of gravity for medium and high-rate traffic, with X-band retained as a resilient fallback for safety-critical links and S-band moving to proximity use. Optical communications, now proven operationally on Artemis II, NASA's 10-day lunar flyby which took place in April 2026, will take on more high-rate trunk traffic over time, but radio remains the backbone for surface, mobility and contingency links.

The harder problem: the far side of the Moon

The report is more cautious about the lunar surface, and the far side in particular. Surface systems are being built on terrestrial 5G, Wi-Fi and Bluetooth technology, arriving without any surface spectrum management function to coordinate them. The far side is the quietest radio environment in the inner solar system and the only practical home for the most sensitive low-frequency astronomy anywhere in reach. The risk to it is not deliberate transmission but unintended emissions from lawful, well-run spacecraft, echoing the experience of large low Earth orbit constellations on Earth.

The Shielded Zone provisions in Article 22 of the ITU Radio Regulations may be broad enough to cover this, but they lack agreed thresholds and verification methods to make

them work in practice. Because lunar missions run for decades, spacecraft built to today's standards will still be flying when the first far-side observatories start collecting data. That makes now the moment to act, not later.

The report is clear about the regulatory gap. The current system of ITU allocations, voluntary coordination and informal domestic arrangements has worked while the operator community was small and aligned. It will not scale to a commercial, multi-operator environment involving more countries. Licensing for cislunar operations is underdeveloped, jurisdiction near the Moon remains unresolved, coordination is voluntary rather than binding, and Earth-style enforcement has no lunar equivalent. WRC-27 Agenda Item 1.15 is a first step, not a finished settlement, and the line between research and commercial use will need to be drawn in later cycles.

The role of the UK

The report identifies the UK as an honest broker on this issue: it has a credible lunar communications industry through missions such as Lunar Pathfinder and Moonlight, genuine equity in the radio astronomy that the Shielded Zone protects, and none of the structural conflict of interest that constrains larger spacefaring nations. That position lets the UK lead through domestic licensing conditions that go beyond the international baseline, and sponsor the studies that any new coordination framework will need.

Through this report, the UK Spectrum Policy Forum recommends to:

- Back the consensus WRC-27 (AI 1.15) SRS spectrum allocations as the necessary first step
- Push for an enhanced Shielded Zone EMI recommendation within the supporting resolutions
- Establish a coordination procedure based on exclusion zones, coordination arcs and time-sharing under Article 22.25
- Stand up a strengthened coordination forum with binding commercial membership to operationalise it
- Beyond WRC-27, lead the SFCG and ITU-R follow-on work, backed by domestic licence conditions that exceed the international baseline

As the report puts it, the decisions taken at WRC-27, and in the few years around it, will set the operating norms for the lunar environment for a generation, well before any binding treaty catches up. The UK can either help write those norms now or inherit them later.

Tales Gaspar, Senior Programme Manager, Spectrum and Satellite, techUK said:

"This is one of the first studies to set out, in practical detail, what a functioning regulatory framework for lunar communications would actually need to look like. Space policy conversations about the Moon have tended to focus on missions and hardware; this report focuses on the invisible infrastructure, spectrum, coordination, licensing, that all of it depends on.

"The window for shaping how spectrum is used on and around the Moon is open now, but it will not stay open for long. WRC-27 is the moment the international community formally takes this on, and the decisions made there, and in the few years around it, will set the operating norms for a generation. If the UK wants a say in those norms rather than simply inheriting them, it needs to arrive at that conference with a clear, evidence-based position and the willingness to lead. This report gives it exactly that."

Dr. Abhaya Sumanasena, Head of Policy and Regulation at Real Wireless, said:

"Real Wireless was pleased to conduct this first-of-its-kind study examining the regulatory challenges associated with the emerging lunar communications landscape, and the leadership role the UK can play in shaping future regulatory frameworks.

"With its long-standing strengths in communications, radio astronomy, and space research, the UK is uniquely positioned to act as an honest broker, bringing together stakeholders and fostering international alignment on key regulatory principles. By helping to establish a common international baseline, the UK can support global collaboration and the sustainable development of lunar communications.

"The report sets out practical recommendations and clear next steps for UK policymakers, industry, and international partners to advance this agenda."

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Notes to Editors

The report will be available at [this link](#).

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Set up at the request of Government the purpose of the Spectrum Policy Forum is to be a pro-active industry-led 'sounding board' to UK Government and Ofcom on future policy and approaches on spectrum and a cross-industry 'agent' for promoting the role of spectrum in society and the maximisation of its economic and social value to the UK. We do this by exchanging news and views on developments in using spectrum, drawing on our industry expertise from around the world.

The Forum is open to the full range of UK spectrum users. Our members currently include over 240 companies and organisations with an interest in using spectrum for a diverse range of applications. In this context the term 'spectrum users' is to be interpreted in the widest sense - including all industry sectors which use (or will use) wireless techniques and organisations involved in the entire value chain in these activities.

The Steering Board ensure that the work of the Forum is properly framed, work items expedited in the correct manner and suitably resourced, and monitor progress on the delivery of the agreed work packages. The current members of the Steering Board are: Department for Science, Innovation and Technology (DSIT), FarrPoint, Ofcom, Nokia, Ministry of Defence (MoD), Qualcomm, Everyone TV, Real Wireless, BBC, Samsung, BT Group, VM02, Digital UK, Vodafone, Three, HPE, StrathSDR.

About techUK

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With over 1,100 members (the majority of which are SMEs) across the UK, techUK creates a network for innovation and collaboration across business, government and stakeholders to provide a better future for people, society, the economy and the planet.

By providing expertise and insight, we support members, partners and stakeholders as they prepare the UK for what comes next in a constantly changing world.