

To: RSPG Secretariat – CNECT-RSPG@ec.europa.eu

Single response document prepared by Sigma Wireless to Public Consultations on the Draft RSPG Opinions on Spectrum Sharing – Pioneer initiatives and bands (RSPG21-006), Additional spectrum needs and guidance on the fast rollout of future wireless broadband networks (RSPG21-008) and On a Radio Spectrum Policy Programme (RSPP) (RSPG21-014), all dated February 10th, 2021.

Sigma Wireless is a fully Irish owned systems integrator providing mission-critical communications since 1991. Although the majority of our customers are based in Ireland, we also provide products and services directly and indirectly to over 20 countries overseas.

Our customer base covers a full range of customers across practically all the vertical sectors from Government, public safety and utilities to healthcare, transport hubs, industries and enterprises. Whereas our traditional business was focused on professional mobile radio systems and all related aspects of communications systems design, integration and support, our company is increasingly focusing on the next generation of mission-critical and business-critical solutions, especially 3GPP-compliant technologies such as private LTE and in the future, private 5G.

It is in this context, and in this capacity, that we wish to provide a response to the above-mentioned RSPG public consultation documents, as we strive to serve our customers, who will require sufficient, appropriate, harmonised spectrum assets to fulfil their important role within Irish and European societies and economies.

Having carefully read the above documents, we submit the following high-level, selected comments for your consideration based on our experience and the interests of our wide range of mission-critical customers and look forward to engaging with the Commission, and RSPG in particular, in the future to clarify and build upon these initial appreciations.

RSPG21-006:

Regarding the draft RSPG Opinion on Spectrum Sharing, Sigma Wireless agrees that traditional and innovative spectrum is a potentially valuable tool for helping vertical industries access spectrum on a mutually beneficial basis. However, there will still be many cases where dedicated spectrum allocations will still be required for mission-critical and

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business-critical situations, particularly those where high availability, reliability, security and low latency is essential for safeguarding life, property and key assets.

Sigma Wireless also agrees that spectrum sharing should not be considered the answer to any shortage of frequencies, when addressing conflicting demands by various spectrum users or sectoral needs, for the same reasons as those mentioned in the above paragraph. We also do not agree that all spectrum bands should be candidates for spectrum sharing, especially in the case of mission-critical and business-critical systems, as also explained above.

Sigma Wireless agrees that more studies are required at EU level to assess different spectrum approaches. It is also important to encourage the development of high-performance transmitter and receiver specifications, as well as committing to necessary updates to more spectrally efficient systems within acceptable timeframes that fit into reasonable investment cycles.

We also agree that where sensible and possible and there is demand, Member States should be encouraged to issue temporary test-and-trial/innovation-and-trial licences to foster innovation.

Sigma Wireless is not opposed to the introduction of innovative spectrum sharing systems based on databases and artificial intelligence, as those being implemented or trialled in other nations and regions, but we do believe that these need to be evaluated carefully to make sure they provide maximum benefit to all existing and potential users, especially vertical sectors. There will clearly be circumstances where dedicated spectrum assignments are shown to be more beneficial to key customer sectors.

RSPG21-008:

Regarding the draft RSPG Opinion on additional spectrum needs, Sigma Wireless agrees that although several EU countries have now awarded dedicated mid-band spectrum to vertical industries for the implementation of private LTE and 5G networks, the non-harmonised approach to such awards is potentially stifling demand. Many vertical and industrial applications require more specialised devices, including industrial IoT devices, where total volumes can be several orders of magnitude lower than more traditional, mass-market smartphones, so it is crucial not to fragment the market more than absolutely necessary.

It is very positive that this Opinion document encourages research into the use of 3.8 – 4.2 GHz (3GPP NR band n77) for local vertical applications, as well as looking at options for addressing vertical needs in mmWave bands (although such high FR2 bands are unlikely to

witness significant demand in the short term). Sigma Wireless is observing increased interest and pent-up demand for private LTE networks among its customer base, as critical end-users move beyond a voice-centric communications environment towards a more data-rich, information-centric future. For current use, it is clear that more mid-band spectrum should be made available.

Sigma Wireless notes the highly positive response of vertical industries to the availability of 100 MHz of contiguous spectrum at 3.7-3.8 GHz in Germany, and prefers a similar model, perhaps in the lower part of 3.8-4.2 GHz band for future EU-wide private LTE/5G network deployments. We have been made aware of proposals by Dutch Government to award two separate blocks of 50 MHz at either end of 3.4-3.8 GHz range, which is likely to fragment the private network ecosystem in Netherlands.

RSPG21-014:

Regarding the draft RSPG Opinion on a Radio Spectrum Policy Programme (RSPP), and given the fact that mobile and wireless communications industry has undergone significant changes since 2012, Sigma Wireless agrees with the need for a new, forward-looking Radio Spectrum Policy Programme (RSPP) that promotes the efficient use of radio spectrum supporting EU policies while maximising societal value.

Whereas RSPG21-014 mentions the public safety/PPDR and transport – FRMCS/ITS – sectors explicitly, Sigma Wireless is surprised that there is no overt mention in this document of the obvious growing importance of other critical vertical industries and the need to identify, legislate for and release significant dedicated and harmonised spectrum for such sectors. We find this especially surprising given the highly positive comments in the introductory section of RSPG Opinion document RSPG21-008 mentioned above.

Sigma Wireless therefore considers it essential for European Commission, via this new Radio Spectrum Policy Programme to make an explicit commitment to supporting key vertical industries by providing them with sufficient appropriate, dedicated, harmonised spectrum to drive Industry 4.0, Green Deal and related digital economy initiatives.

Sigma Wireless would like to thank the European Commission and RSPG for the opportunity to submit a response to this current round of Public Consultations. We will continue to engage with our local regulator and local and international customers over coming months and years to identify, catalogue and present evidence for the increased demand for spectrum for private LTE/5G networks that we are witnessing, and we look forward to working together with all interested parties to promote the efficient use of spectrum across



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the European Union in order to contribute to the full recovery and future development of our societies and economies as we emerge from the current global health crisis.

Yours sincerely,

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