

Global mobile Suppliers Association

GSA response to the  
RSPG Public Consultation on the

Draft RSPG Opinion  
“a Radio Spectrum Policy Programme  
(RSPP)”

March 2021

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GSA is grateful for the opportunity to provide comments on the draft RSPG Opinion on RSPP.

## 2. Strategic Spectrum issues

### 2.1. Spectrum Sharing

Please also see GSA's comments on the draft RSPG opinion on spectrum sharing.

- European Commission and Members States should
  - actively promote innovative spectrum sharing solutions to ensure greater spectrum efficiency, to enhance flexibility in spectrum access by following the “use-it-or-share-it” principle, and to support the development of spectrum pooling, while highlighting the need to consider the competition aspects in assessing any specific case at hand, multi-tiered spectrum access approaches, including those assisted by geolocation databases or other ICT-based solutions.

In relation to inter-service spectrum sharing (e.g. sharing of spectrum between IMT networks and incumbents), we note that where possible, bands considered for use by IMT networks should be cleared of existing users of spectrum, in order to avoid uncertainties within the interference environment, and to deliver the challenging IMT-2020 QoS requirements specified by the ITU-R. Where sharing of spectrum between IMT networks and incumbent users is the only option available, careful consideration should be given to the sharing objectives and requirements, and their impact on the operation of all parties, and should not deter the substantial long term investments needed for the roll out of IMT networks.

GSA considers that – where the clearance or frequency re-planning of the incumbents is not viable – sharing should be preferably considered first in bands where the geographic locations of existing incumbent users are known, are not ubiquitous, and do not vary with time in relation to the IMT networks. GSA also considers that two-tiered frameworks for the sharing of spectrum between IMT networks and existing users of spectrum should be considered in the first instance.

GSA does not consider that database assisted mechanisms – of the type often associated with licence exempt equipment – would be needed for IMT networks. This is because the operation of equipment in IMT networks is already effectively managed by a database (i.e., the mobile network itself) and any necessary restrictions on the operation of the equipment – as set out by the regulator – can be readily implemented by the network itself. This is especially pertinent with regards to our position above on the preference to avoid “dynamic/opportunistic” inter-service spectrum sharing in the context of IMT networks.

GSA is of the view that intra-service spectrum sharing (sharing between IMT networks) holds potential. However, it cannot replace the need for individually licensed mobile spectrum. The predictability of individual licensing will remain necessary for long-term network investment while sharing should be seen as a complement

If there is a proven need for the use of database solutions to implement inter-service or intra-service spectrum sharing, GSA would suggest to consider the development of the existing European harmonised frameworks specified at ETSI for such purposes (i.e., LSA and eLSA, respectively).

GSA would suggest that the RSPG considers a **recommendation to promote innovative intra-service spectrum sharing solutions while at the same time ensuring that enough spectrum is assigned to operators nationwide for the 2025/2030 timeframe**. 5G/6G services will suffer if any introduced sharing frameworks reduce the amount of spectrum available, or if the definition of such frameworks increase the spectrum price due to artificial scarcity, ultimately affecting society. The Commission has always struck for balanced spectrum allocations and we would expect the same approach going forward.

- European Commission and Members States should
  - engage in spectrum sharing including with a view to foster more dynamic spectrum sharing through research and the preparation of tests and trials, as well as by sharing experience.

GSA welcomes the RSPG efforts to looking at making the use of spectrum more efficient. We note that in Report RSPG21-016<sup>1</sup>, the term “dynamic” sometimes refer to mechanisms in which there is an opportunistic access to spectrum (e.g. CBRs GAA), while other solutions under this definition – such as network slicing – can provide higher spectrum efficiency, predictable QoS and greater incentives for long-term investments.

GSA considers that where certain parties are contented with deploying communications networks with *dynamic/opportunistic* access to spectrum, the use of bands that are subject to general authorisation (licence exemption) are recommended for this purpose. Such opportunistic access is, for example, offered by 5G NR-U (New Radio – Unlicensed) which is defined in 3GPP to be used in licence-exempt spectrum. Therefore, GSA does not see a need for additional spectrum sharing frameworks to cater for such dynamic/opportunistic use.

We acknowledge the interest of the RSPG in dynamic spectrum sharing and would suggest that the RSPG proposes to the European Commission to **identify the use cases that dynamic/opportunistic sharing is expected to foster and that cannot be addressed with existing spectrum sharing frameworks**. Indeed, use cases which require predictable QoS cannot rely on dynamic spectrum access whereby the availability of the radio channel may change in geography, frequency or time.

We would like to note to RSPG that network sharing and network slicing are of key importance from environmental perspective

GSA considers that it should be a high priority for Member States and the European Commission to adopt policies which would encourage **and facilitate network slicing, market-led spectrum pooling among IMT network licensees (e.g., via MOCN technologies), spectrum leasing**.

- European Commission and Members States should
  - prevent obstacles to dynamic spectrum sharing by facilitating introduction of cognitive radio technologies (for example those relying on databases) through ETSI and CEPT deliverables, by building trust amongst industry and users through practical implementation of solutions, accompanied by an efficient market surveillance and spectrum monitoring framework.

GSA considers that where certain parties are contented with deploying communications networks with dynamic/opportunistic access to spectrum, the use of bands that are subject to

<sup>1</sup>Report RSPG21-016 includes the RSPG results on an investigation of more dynamic spectrum sharing options.

general authorisation (license exemption) are recommended for this purpose. Such opportunistic access is, for example, offered by 5G NR-U (New Radio – Unlicensed) which is defined in 3GPP to be used in license-exempt spectrum.

GSA would further suggest that the RSPG **identifies use cases that actually require dynamic/opportunistic spectrum sharing and which today cannot be served with existing regulatory frameworks.**

## 2.2. Licensing and Spectrum Awards

- In order to facilitate access to spectrum in ECS harmonised bands, the RSPG recognises that different types of authorisation methods and regimes facilitate innovation and development of different technologies, while noting the national competence to issue authorisations.
- In addition to nationwide licenses and in order to respond to demand for local licenses, the RSPG identifies the following licensing regimes for local networks:
  - There is a need to remain flexible and to enable different network solutions and topologies. Local networks could be provided by mobile operators, third-parties or directly by the local users themselves. The response to demand for local spectrum can be met through spectrum leasing (voluntary/mandatory), by dedicated spectrum allocations for local networks and/or by third party operated local networks.
  - Another option is the use of unlicensed spectrum where possible.

GSA considers that where there is a justified demand from industrial/business users to deploy private IMT networks (independently of public IMT networks) within limited geographic areas,

- market-led intra-service spectrum sharing should be preferably achieved through *leasing* of spectrum from the individual wide-area/national IMT network licensees. The Article 51 of the EEC provides for enhanced conditions that allow a robust secondary market and more flexible collaboration between the licensees and those who seek access to spectrum.
- intra-service spectrum sharing could be also achieved through local licensing of frequencies which are not used by wide-area/national IMT networks. Any local licences should be available to all interested parties, and should not in any way compromise the availability of nationwide licensed spectrum – with large contiguous blocks – for wide-area/national IMT networks<sup>2</sup>.

Licence exempt spectrum (in 2.4 GHz, 5 GHz and lower 6 GHz bands) can be used for dynamic/opportunistic access (i.e. best effort QoS).

- The solutions for local licenses depend on the national situation and on spectrum availability. Any legal framework must maintain the current flexibility for the Member States already established with the EEC.
- RSPG encourages Member States, based on national legislation, to engage in actions on digitalisation of processes such as automation of individual authorisation on first

<sup>2</sup> We note that Recital 25 of Commission Recommendation (EU) 2020/1307 of 18 September 2020 states: "To avoid spectrum scarcity that leads to higher bids in spectrum auctions, best practices may cover measures not to reserve spectrum in 5G pioneer frequency bands for the purposes of public security and defence, as far as possible or measures to reserve EU-harmonised radio spectrum for electronic communications services for private radio spectrum users, as regards both the amount of spectrum and the choice of a specific frequency band, only when duly justified."

come/first served licensing basis. A mutual sharing of experiences, solutions and lessons learned could be beneficial.

GSA is of the view that harmonization of spectrum should be done with nationwide licenses in mind since ecosystem is being built thanks to MNOs' large scale investments. We also agree with the RSPG that based on national circumstances, the spectrum may be considered for local usage, e.g. due to incumbents or other specific national needs.

GSA would like to highlight that when considering actions on digitalisation of processes such as automation of individual authorisation on first come/first served licensing basis for local demand (i.e. verticals), this should only relate to the automation of the regulators' own IT systems and to expedite the licensing process, and that this should still **ensure predictable spectrum availability and access in the specific location and should not imply a dynamic and time variable access to spectrum.**

- In terms of authorisations, Member States should consider authorisation methods and frameworks, which fully exploits flexibility from provisions of EECC by introducing elements of innovation in the process based on approaches and technologies described in the RSPG report on spectrum sharing.
- Given examples to provide authorisations in a dedicated spectrum band under a light licensing regime based on an automated platform, Member States may consider applying similar approaches to their respective authorisation processes to foster more dynamic spectrum sharing.

As indicated under Section 2.1, GSA is of the view that existing regulatory license exempt frameworks already support dynamic/opportunistic access to spectrum.

We do not consider that dynamic/opportunistic access to spectrum is a desirable framework for predictable QoS applications. In particular, IMT networks can support intra-service spectrum sharing via network slicing, MOCN spectrum pooling, spectrum leasing, and local licensing, and can also support 'static' inter-service spectrum sharing with incumbents such as FS and FSS. We consider that these are more than sufficient to meet the demands for spectrum sharing.

GSA would suggest that the RSPG **identifies use cases that actually require dynamic/opportunistic spectrum sharing and which today cannot be served with existing regulatory frameworks.**

While we are fully committed to technology and end-to-end products innovation, we do not think that innovation in the authorisation models is necessarily a goal to be set in the RSPP. One of the key goals of the authorisation schemes should remain to foster technology and products innovation to maximize benefits for citizens.

### 3. Spectrum needs and supporting EU vision/policies

Please also see GSA's comments on the draft RSPG opinion on spectrum needs.

- In order to respond to European policy initiatives such as the Green Deal, Gigabit Society, Shaping Europe's digital future (5G and beyond, 6G, resilient & secure communications), transport communications, Audio-visual Media, Member States shall, in cooperation with the Commission, aim at ensuring there is sufficient spectrum available for those policy areas based on spectrum needs.

GSA agrees with the RSPG's proposed goal on ensuring there is sufficient spectrum available for European policy areas<sup>3</sup> based on spectrum needs.

- The RSPG considered a policy target of making available at least 12 GHz of spectrum below 100 GHz (including already EU-harmonised spectrum) to promote innovative wireless services, including next generation mobile and wireless access systems (such as Wi-Fi). With initiatives well underway, there is in fact already more than 12 GHz of harmonised spectrum available for wireless services and no need to define any quantitative target in RSPP to respond to EU policies:
  - RSPG confirms the need for inclusion of policy objectives supporting the development of innovative wireless services based on generic description rather than quantitative.
  - In addition, as has been done recently for 5G, the RSPG can develop long-term spectrum availability plans including needs for harmonisation initiatives for key EU policy areas upon request.

GSA notes the RSPG acknowledgment on the availability of 12GHz of harmonized spectrum below 100 GHz to promote innovative wireless services, including 5G and RLAN. We also note that the RSPG does not suggest any quantitative target in RSPP and instead follow a generic description. While we understand that a quantitative assessment is a difficult activity, we believe that clear and measurable targets are essential for the success of RSPP.

**GSA therefore suggests that RSPG includes a recommendation to the Commission and to the Member States to use spectrum needs assessments as a basis for their policy decisions with respect to future availability of new spectrum for 5G and its evolution.**

**Spectrum needs should be assessed separately for:**

- **Licensed and licence-exempt spectrum;**
- **Low-bands, mid-bands and high-bands (considering their complementarity in terms of coverage vs. capacity).**

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<sup>3</sup> Green Deal, Gigabit Society, Shaping Europe's digital future (5G and beyond, 6G, resilient & secure communications), transport communications, Audio-visual Media



### Mid-bands

Concrete actions should be planned for the future availability and harmonization of additional mid-bands spectrum: Countries in Europe (and globally) are assessing the options for additional upper mid-bands (above 3 GHz) spectrum (namely the 3.8-4.2 GHz and upper 6 GHz bands). Given the limited options for additional upper mid bands spectrum, it is crucial that any resulting decisions in Europe do not hinder the realization of the ITU-R IMT-2020 vision. GSA supports studies for the upper 6 GHz band towards an IMT identification at WRC-23. As for the 3.8-4.2 GHz band, GSA recommends that the European Commission further considers the possible harmonization of the band 3.8-4.2 GHz (or part thereof) for MFCN targeting nationwide applications and taking into account incumbents' use. This can be realized by means of an EC mandate to CEPT to trigger the work.

GSA also supports making the 2.3-2.4 GHz band available in countries that have not already done so, based on the CEPT harmonized technical conditions.

### Low bands

The availability of more sub-1 GHz is also of key importance to fulfill some of the EU 2025 objectives, in particular to connect people in wide areas and to deliver deeper indoor coverage in urban environments as well as connect people and objects in transport paths (rail and road).

WRC-23 Agenda Item 1.5 (470-694 MHz for Region 1) is of high importance, noting the need for flexibility in Europe when releasing spectrum in this range depending on a reduction of broadcasting usage. Such flexibility would be provided by a co-primary allocation of the band to the mobile service and the broadcasting service in Region 1 as a result of WRC-23.

GSA would suggest the RSPG to request that the European Commission and Member States **anchor the spectrum policy decisions to higher level objectives defined for the Union. Spectrum should not become a bottleneck** for the European Gigabit Society and, in particular, for the proposed EU 2030 target<sup>4</sup> to have all European households covered by a Gigabit network, with all populated areas covered by 5G; the European Green Deal, New industrial strategy for Europe and Shaping Europe's digital future.

- The RSPG recommends that the Commission, the Council and the European Parliament also take note of specific strategic EU policies regarding services other than electronic communication services (ECS), for which spectrum needs should be addressed. To this end, RSPG can develop strategic recommendations on spectrum needs and/or requirements of the internal market.
- The RSPG recommends that the European Commission consults the RSPG before developing specific sectoral policies using spectrum.
- Based on RSPG recommendation, a mandate to CEPT should be developed in accordance with the Radio Spectrum Decision when there is a need to adopt harmonised technical conditions. In parallel, when appropriate, a standardisation request should be sent to ETSI.

No comments.

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<sup>4</sup> 2030 Digital Compass: the European way for the Digital Decade

### 3.1. Innovative wireless services

- RSPG should encourage and incentivise more efficient spectrum use, avoiding fragmented use as much as possible

GSA agrees with the RSPG proposal to avoid fragmented usage as much as possible since fragmentation is not optimal from a cost and environmental perspective. We also support the flexible use of harmonized spectrum, as suggested by RSPG.

- European Commission and Member States should actively support 6G research and development and, when needed, ensure that available EU harmonised spectrum is able to support the development of 6G and other technologies beyond 5G.

GSA welcomes the RSPG support on 6G research and development. All GSA members are and will be deeply involved in these activities.

- There are opportunities to meet demand for fixed wireless access within ECS harmonised spectrum. Flexible use is already possible within the current regulatory framework. In consequence, European Commission and Member States should support the flexible usage of ECS EU harmonised spectrum in order to support fixed wireless access and wireless backhauling.

GSA is also of the view that the current ECS harmonized spectrum supports flexible use of spectrum for either mobile or fixed services and this should be followed by Member States.

- RSPG recommends that spectrum related options should be developed for addressing vertical needs in the mm-Wave-bands.

GSA notes the RSPG recommendation for options for verticals in the mmWave bands.

GSA would like to request **RSPG to strike for a recommendation for the mmWave in which users could cooperate, making the usage of spectrum more efficient.**

**We recommend that Member States and the European Commission adopt policies which:**

1. **ensure that MNOs will be able to address their non-industrial use cases;**
2. **ensure that MNOs can address the connectivity needs of 5G industrial/business users (through network slicing and – where necessary – through spectrum leasing);**
3. **depending on local conditions, consider local licensing. This should be available to all interested parties and should not compromise the availability of nationwide licensed spectrum in large contiguous blocks.**

- Wireless backhauling supports the development of ECS and is an important component of ECS networks. The RSPG acknowledges that role. However, no need for spectrum policy initiatives has been identified to respond to a growing demand, which will continue to be addressed at national level.



In addition to the more traditional frequency bands allocated to the fixed services below 42 GHz and the harmonized E-Band (71-76 – 81-86 GHz), the following bands are expected to play a key role for addressing backhaul traffic for 5G and beyond:

- W-band: within the 92 – 114.25 GHz range
- D-band: within the 130 – 174.8 GHz range

There are discussions ongoing in the research community (e.g. EU projects such as HEXA-X) whether these bands should also be considered for mobile use / 6G.

- European Commission and Member States should contribute to improving broadband connectivity by ensuring availability of spectrum for WAS/RLAN applications and by using shared spectrum including with innovative solutions (such as automated shared spectrum solutions to improve access to spectrum).

No comments.

- While respecting the international regulatory framework, the European Commission and Member States should support the further development of High Altitude Platform Stations (HAPS) responding to Public Protection and Disaster Relief (PPDR), defence and temporary and permanent connectivity needs. Member States may make available relevant identified spectrum responding to national needs. The development of HAPS may also trigger the use of HAPS as IMT Base Station ("HIBS") which will be studied at WRC-23 and are envisaged as a future connectivity platform for mobile coverage).

GSA members actively participate on the ITU preparations towards Agenda Item 1.4 on "HIBS" and welcomes CEPT involvement and efforts to extend the coverage of the terrestrial IMT spectrum to cover areas difficult to reach with High Altitude Platforms in the already available national licenses in line with the principle of efficient spectrum usage, while protecting terrestrial IMT services.

### 3.2. Space

No comments.

### 3.3. Transport

No comments.

### 3.4. Broadcasting and PMSE

- The RSPG is of the view that the future of broadcasting and PMSE in regard of the UHF Band 470-694 MHz shall not be subject of a new RSPP (see also section 6.6)
- The UHF 470-960 MHz band is on the agenda for the upcoming WRC23 conference and RSPG intends to provide a recommendation to the EC on an EU position accordingly in its opinion towards WRC23. The current Council and European Parliament Decision<sup>6</sup> is providing legal certainty until 2030 to terrestrial broadcasting<sup>7</sup> including conditioned national flexibility<sup>8</sup>.

GSA notes and welcomes the RSPG's intention to provide a recommendation to the EC on an EU position accordingly in its opinion towards WRC23. We would like to indicate to the RSPG

that a **co-primary allocation of the mobile and broadcasting in Region 1 as a result of WR-23 would provide flexibility for member states** to allocate spectrum to either service depending on their needs.

### 3.5. UAS/drones

No comments.

### 3.6. Sector spectrum needs in response to combat climate change

- The European Commission should reaffirm that it is best practice that the ITU process be used for sectors where the sectoral need for spectrum is mainly worldwide (including Galileo, GMES, scientific services, EESS).
- For sectors such as the transport, health, industry and energy sectors not only relying on the Radio Regulations but also requiring additional assessments to respond to their needs, the current ETSI-CEPT cooperation is recommended. This cooperation in practice also includes the possibility for the EC to issue mandates to CEPT and ETSI.

GSA agrees with the RSPG that it is important to understand the needs for the different transport, health, industry and energy sectors. 5G has indeed been specified not only with eMBB in mind but also all the named sectors. Thus, while seeking a more sustainable Europe, GSA would suggest **to consider the needs for all the sectors under the 5G umbrella and incentive network slicing and/or leasing as the solution.**

- Based on the results of assessments (for both ECS and non ECS) in accordance with the methodologies to be developed and other sector specific developments, the European Commission in cooperation with Member States should ensure that adequate spectrum is made available under harmonised conditions to support EU initiatives to combat climate change and improve energy saving.
- Member States should ensure the availability of spectrum for public transport purposes, as appropriate.

5G is indeed a pillar for addressing climate change. The following figure represents a case study for Switzerland which demonstrates the expected carbon footprint reduction in Switzerland in 2030 by use case and scenario if served by 5G mobile networks as estimated by a researchers from the University of Zurich, EMPA and Swisscom<sup>5</sup>.

<sup>5</sup> Next generation mobile networks problem or opportunity for climate protection? Bieser, Jan; Salieri, Beatrice; Hirschier, Roland; Hilty, Lorenz (2020).

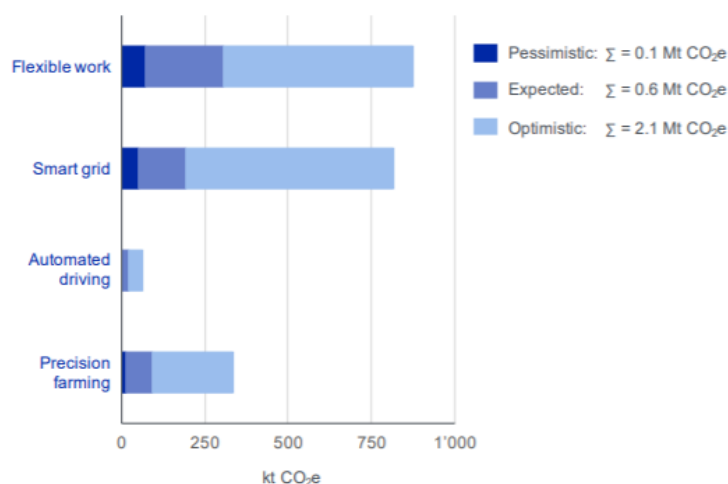


Figure 1: GHG abatement potential in Switzerland 2030 by use case and scenario<sup>6</sup>.

GSA supports the RSPG proposal to ensure that adequate spectrum is made available under harmonized conditions to support EU initiatives to combat climate change and improve energy saving.

We note that network slicing helps to address the digitalisation of industrial/business users, to optimise their operations, to optimise the overall energy consumption, and bring other benefits in the context of the environment.

We would like to propose the RSPG to consider **to propose the European Commission and Member states to incentivize solutions that bring environmental benefits, e.g. network slicing of mobile networks.**

<sup>6</sup> Next generation mobile networks problem or opportunity for climate protection? Bieser, Jan; Salieri, Beatrice; Hischier, Roland; Hilty, Lorenz (2020).

## 4. Spectrum governance

### 4.1. EC-CEPT cooperation

- The RSPG re-affirms that the existing cooperation between CEPT and EC is a main pillar process for strategic spectrum harmonisation under the Radio Spectrum Decision. This process is key to support EU policies and internal market objectives.
- In relation to response(s) to EC mandate(s), the RSPG notes that CEPT as of today could inform the European Commission of the assumptions about the authorisation regime considered when developing technical conditions and provide advice on the timing for the implementation of the harmonisation measures<sup>9</sup>.
- The RSPG confirms that there is currently no need to set dates in RSPP for coordinated timing of spectrum awards. Relevant procedures are already included in EEC (see Article 53) when implementing harmonisation measures for wireless broadband networks and services developed under Radio Spectrum Decision. Nevertheless there may be cases where a coordinated timing between Member States could be needed. In such exceptional cases the RSPG should take a leading role.

GSA acknowledges and appreciates the efforts by CEPT and EC in spectrum harmonization.

### 4.2. National coordination/European Coordination

- Based on the “RSPG Decision”<sup>10</sup>, the RSPG will support the implementation of future strategic objectives and provide recommendations to European Commission accordingly.
- Where appropriate, on the basis of the “RSPG Decision”, coordination and cooperation between the Member States could already trigger initiatives from RSPG in order to learn from each other or to implement more rapidly EU measures.

GSA appreciates the RSPG’s support to European Commission as well as the dialogue with industry stakeholders

### 4.3. Civilian/Military coordination

- The RSPG recommends that a new RSPP continually observes the sovereignty of Member States, individually or collectively, to organise and use their spectrum for public order, security and defence purposes<sup>11</sup>.
- The RSPG recommends that the European Commission recognises initiatives from Member States to increase efficiency in use of spectrum when using spectrum for public order, security and defence purposes.
- The RSPG recommends that the European Commission recognises confidentiality aspects relative to spectrum usage for public order, security and defence purposes.

No comments.

- The RSPG recommends that Member States continue to investigate sharing opportunities between spectrum usage for public order, security and defence purposes, and other spectrum use whenever feasible.

GSA welcomes the possibilities to investigate sharing opportunities between spectrum usage for public order, security and defence purposes, and other spectrum use whenever feasible.

- The RSPG recommends that Member States and the European Commission consider Common Security and Defence Policy<sup>12</sup> issues using spectrum when developing harmonisation measures supporting EU Public Policies using spectrum.
- The RSPG confirms the need to maintain in new RSPP references to public order, security and defence as a national competence as mentioned in Radio Spectrum Decision (art.1), the current RSPP (Decision 243/2012/EU) (art1) and noted by EECC<sup>13</sup>.

No comments.

#### 4.4. Standardisation and spectrum governance

- The RSPG confirms that reference to the key pillars of European harmonisation: cooperation between CEPT and ETSI and CENELEC shall be recalled in the RSPP.

GSA agrees that cooperation between CEPT and ETSI and CENELEC are key pillars for European harmonization.

Through our deep involvement in specifying standards for 3GPP networks, we have always promoted high-performance receiver performance and for that reason the harmonised standards defined by the Task Force for European Standards for IMT (TFES) have included these requirements since 3G.

- The RSPG appreciates that recital (111) EECC highlights the need that the Commission co-ordinates closely the content and timing of mandates to CEPT under the Radio Spectrum Decision and standardisation requests to ETSI.

GSA also appreciates the highlight on the close coordination between CEPT and ETSI in recital (111) EECC.

- The RSPG recommends efforts to shorten the time gap until ETSI harmonised standards consistent with EC Decisions are published in order to facilitate radio spectrum sharing opportunities and ensure efficient radio spectrum management.

GSA agrees with this proposal.

- The RSPG supports the promotion of adequate receiver performance and recognises that specifying relevant radio receiver parameters becomes increasingly necessary to facilitate the introduction of future systems, to extend sharing opportunities and to ensure efficient spectrum management.
- The RSPG recommends Member States to contribute to the development of harmonised standards under the Directive 2014/53/EU by the European standardisation bodies (i.e. ETSI) in order to ensure that adequate values for radio receiver parameters are specified and to ensure consistency of those standards with the EU radio regulatory framework.

GSA acknowledges that high-performance transmitter adjacent channel leakage ratio and receiver adjacent channel selectivity can allow spectrum users to be better neighbours and

can facilitate adjacent channel coexistence. As such, the ETSI Task Force for European Standards for IMT (TFES) harmonised standards has addresses these requirements since 3G. GSA supports measures that can increase the efficiency of spectrum use, such as the development of high-performance transmitter and receiver specifications.

All receivers belonging to different services should be addressed in this respect. Technical feasibility and cost implications should be assessed carefully in setting receiver parameter limits and such limits should be least restrictive.

## **5. External relations**

No comments.



## 6. Other policy areas with spectrum dimension

### 6.1. Migrating regulatory service obligations to the latest technologies

The RSPG recommends

- the European Commission, when deviating from the principle of technology neutrality, to promote a particular wireless technology supporting services responding to EU public policies (i.e. e-call), to analyse the possible impact and respond to arising challenges. Such an analysis has to take note of the different stages of development of wireless technologies in Member States including the reasoning behind, like their support of national policies (i.e. 4G coverage, 5G coverage).
- European Commission and Member States should anticipate any impact of possible future phasing out of some legacy systems (2G, 3G, and 4G) in the next decade.

GSA is of the view that the European Commission and Member States should anticipate any impact of possible future phasing out of some legacy systems (2G, 3G, and 4G) in the next decade, including the anticipated potentially positive impact of this on advancing towards halving of carbon emissions and subsequent net-zero emission through the use of the more energy efficient 5G NR and its evolution, as well as the impact on the enhanced energy efficient operation of other industrial sectors (including manufacturing, transport, etc.). Future phase out of 2G/3G is an integral part of the decarbonisation trajectories of ITU L.1470.

### 6.2. Green New Deal / Climate change

- The RSPG supports the policy objectives to reduce the Union's carbon footprint, goal of zero emissions of EU economy, digitalisation/automation economy sectors by enhancing the technical efficiency and energy efficiency of wireless communication networks and equipment. RSPG is of the view that the following recommendations may support those objectives.

The members of GSA are committed to contributing to the decarbonisation EU goals.

GSA notes that with reference to decarbonising mobile networks, a critical measure is to transition the overall energy supply to renewables. Establishing policies that makes power purchase agreements and similar approaches accessible throughout Europe are key to allow for halving carbon emissions by 2030 and a transition to net-zero networks.

There are also additional measures that could be taken towards increased energy efficiency as for example following the ITU L.1470 trajectory and preferring low-carbon devices in public procurement. GSA would suggest the RSPG **to support positive incentivises for operators to adopt ambitious energy efficiency targets**

- The RSPG invites Member States to initiate national climate and environmental strategies within the ICT sector including wireless. The European Commission should monitor these national strategies and, if appropriate, should, in the course of time, put forward an EU wide strategy based on the national strategies.

GSA welcomes the RSPG's invitation to Member States. In addition, we would suggest an invitation **to initiate national climate and environmental strategies within the ICT sector**

**including wireless which should acknowledge both the reduction of the sector's own carbon footprint but also its ability to help other sectors decarbonize.**

The RSPG is of the view that

- Member States should recognize that monitoring of climate change, collecting data for weather forecasting or gathering climate-related data are important tools to combat climate change. In consequence, Member States and the European Commission should ensure long-term spectrum availability and protection for radio systems supporting them, where appropriate. Member States should cooperate as necessary in order to assess and solve radio interference into these services.
- The European Commission in cooperation with Member States should support technologies contributing to climate change monitoring / climate protection aspects, where appropriate.

GSA agrees on the importance to monitoring climate change and notes the potential for certain systems to benefit from using new generations of mobile networks.

The RSPG welcomes

- self-regulation and other voluntary initiatives of the wireless ECS sector to reduce its carbon footprint and incentivise the increase of the share of electricity consumption from renewable energy sources.
- wireless ECS sector cooperation and coordination to develop energy efficient standards and to design services and equipment based on such standards.
- to climate change monitoring / climate protection aspects, where appropriate.

GSA would like to note that voluntary initiatives exist today; as an example the ITU trajectory for decarbonisation of the sector in L.1470 sets a minimum ambition level for carbon footprint reduction within the sector: 50% reduction during 2020-2030 overall, and 45% as average reduction for network operators worldwide.

Indeed, 3GPP standards, which GSA members support, include energy efficiency measures. GSA believes that solutions should also be allowed to go beyond those driven by the market forces or other positive incentives.

The RSPG is of the view that

- The flexibility given by EECC framework under a general interest objective should be maintained in order to address climate protection.
- Member States should share best practices on the implementation of the strategic objectives of the current RSPP in order to reduce the carbon footprint related to wireless communication networks and equipment in the European Union.
- The RSPG will consider further work based on assessing the benefits of these best practices and assess any possible follow up actions.

No comments.

The RSPG invites

- the European Commission to take energy efficiency and other climate related aspects into account when funding research within the wireless sector.
- the European Commission with Member States to promote the development of methodologies to assess the impact of ECS wireless technologies on climate change

(i.e. Energy Efficiency, Circular Economy, etc.) with involvement of ECS stakeholders and all interested parties (including citizens) and, where appropriate, with the support of ETSI including if needed CEN and CENELEC. Those methodologies should include a focus on ECS radio component (base stations, terminal) including impact of frequency bands.

GSA notes that while it is important to consider reducing the carbon emissions and energy usage of mobile networks, it is also key to consider the benefits that mobile networks can bring to help other sectors address their carbon footprint emission. Indeed, digitalization of different sectors is where the mobile networks could have a substantial impact on reducing carbon emissions.

GSA would like to highlight the considerable standardisation effort undertaken by the mobile sector, sometimes in close collaboration with the European Commission in the framework of ITU and ETSI (ITU L-14xx methodologies and ETSI EE standards).

The European Commission and Member States should assess whether and how ECS network operators could report on their emissions and contributions to the Union's environmental targets. The RSPG will contribute to any such assessments within its field of knowledge and expertise.

No comments.

### 6.3. Electromagnetic fields, EMF

- The RSPG recommends continuing and increasing collaboration, sharing of information and learning from each other on a European level. This collaboration should include different policy areas involved in EMF issues.
- In addition, Member States are invited to take into consideration citizens' concerns and exchange information and best practices in order to contribute to a better understanding by the public of these issues and to promote transparency with regard to 5G technology.

We welcome the RSPG invitation to Member states to contribute to a better understanding by the public of these issues and to promote transparency with regard to 5G technology.

The RSPP should take into account the latest measurements which show that EMF levels are significantly below the ICNIRP limits in practice, and the fact that Member States are starting to apply IEC standards for EMF evaluation of 5G Massive MIMO.

We would recommend that the **European Commission updates EU Council Recommendation 1999/519/EC in order to take into account the revision of the ICNIRP guidelines and evaluate the opportunity to upgrade the EMF Recommendation to a Decision; in addition GSA recommends RSPG to encourage Member States to conform with standards from CENELEC and IEC.**

### 6.4. National security, Network security and Cyber security

- It is the view of the RSPG that National security, Network security and Cyber security are not issues that are per se related to the parts of radio spectrum that are intended for general, commercial or industrial use. However, it is of paramount importance that

the allocation and use of radio spectrum is effective, transparent, trusted and secure. As a result of the digitalisation of society our dependencies on networks, applications and digital solutions are creating increased general vulnerabilities.

- The RSPG supports the work performed under the 5G security toolbox and follow up related initiatives. Any EU initiatives should be coordinated with relevant work undertaken by ENISA, BEREC and other relevant European cooperative fora.

No comments.

## 6.5. Pandemic response

The RSPG recommends that

- Lessons learned and experiences gained have to be acknowledged and included in a new RSPG to promote the role of wireless connectivity for the functioning of our economy and society during all sorts of crisis, in particular during a pandemic period and subsequent recovery.
- Innovative methods to enable faster spectrum award procedures should be investigated.
- a quick reaction in granting temporary rights of use and amending conditions when required from relevant authorities.
- Making available all harmonised spectrum in due time in such circumstance should be a priority in all Member States, taking into account market demand and legal predictability.
- Analysing effects of changing consumption patterns and drawing conclusions regarding spectrum policy is necessary.

GSA agrees with the RSPG in relation to making available all harmonised spectrum in due time in such circumstance a priority in all Member States, taking into account market demand and legal predictability.

The analysis of changing consumption patterns is, as expressed by the RSPG, a necessity. GSA also invites the RSPG **to consider the new consumption needs, as example the increased reliability needed to working from home** (i.e. video conferencing experience can be enhanced with 5G networks).

## 6.6. Audio-visual Media Policy

No comments.

## 6.7. Spectrum Inventory

No comments.