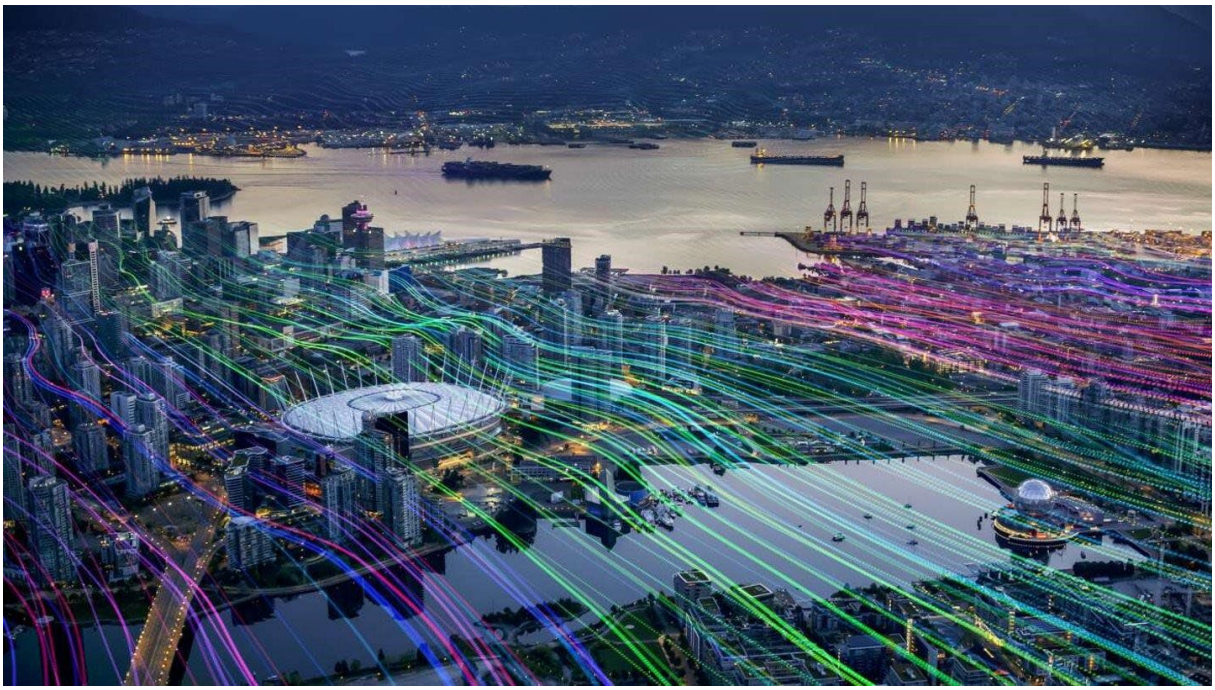
Ofcom Consultation

UK preparations for the World Radiocommunication Conference (WRC-23)



About Ericsson

Ericsson enables communications service providers to capture the full value of connectivity. The company's portfolio spans Networks, Digital Services, Managed Services, and Emerging Business and is designed to help customers go digital, increase efficiency and find new revenue streams. Ericsson's investments in innovation have delivered the benefits of telephony and mobile broadband to billions of people around the world. The Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York. www.ericsson.com

Ericsson welcomes the opportunity to respond to Ofcom's document 'UK preparations for the World Radiocommunication Conference 2023 (WRC-23), UK provisional views and positions for WRC-23– June 2022'

2022-09-28

Question 1: Do you agree with the prioritisation of the agenda items, as shown in Annex 5, and if not why?

Ericsson agrees with Ofcom on establishing High UK priority for AI 1.1, 1.2, 1.5.

Ericsson notes that AI1.3 is set to Medium. While we agree that Europe already has consensus on this agenda item and, according to the Ofcom definition of priorities, medium could be the appropriate selection. However, we also note that a secondary mobile allocation may impose a threat to the UK in terms of interference from other countries and as per Article 5.30 of the RR, stations of the secondary service "cannot claim protection from harmful interference from stations of a primary". To facilitate cross-border coordination issues, we would suggest setting AI1.3 as High priority.

AI10 has been set as Low priority by Ofcom. According to the definition this means that this AI is either relatively unimportant for the UK or sufficiently straightforward and uncontroversial. In our experience at each WRC, AI10 is highly controversial due to different interests and therefore agreed on within the last hours of the conference. We believe that this issue is also of high importance for the UK, to continue leading innovation towards 6G and to secure sufficient spectrum for 6G/IMT-2030. Ericsson suggests that this topic be set as High priority. This is noting the recent decision by the UK government to invest £25M for future open networks research which includes 6G, and the recent Ofcom consultations on meeting the demand for mobile data and the future approach to mobile markets.

Question 2: What are your views on the continued need to protect global aeronautical and maritime services, in the 4.8 – 4.99 GHz band, under this agenda item?

Ericsson is of the view that any protection of AMS/MMS in international airspace and waters within 4800-4990 MHz band should be subject to the agreement between the concerned administrations, i.e., a Coastal State and other states which have interest in ensuring protection of AMS/MMS applications authorised by them and operating in international airspace/waters close to the coastal state in question.

Question 3a: Do you agree that the UK interest in the bands 3600-3800 MHz and 3300-3400 MHz in Region 2 (North & South Americas) should be limited to any impacts on UK operational use in those areas?

3300-3400 MHz in Region 2: Ericsson agrees on the UK position 'not to oppose any plans Region 2 countries might make for IMT identification in the band' as per Ofcom assessment on the impact on UK interests.

3600-3800 MHz in Region 2: we agree with Ofcom that IMT in Region 2 will not impact services within the UK territory. However, an IMT identification will help to further develop the already existing ecosystem of the main 5G mid-band (3400-3800 MHz). Ericsson would suggest that the UK supports an IMT identification in Region 2

to help develop the ecosystem and economies of scale of one of the main UK 5G bands.

Question 3b: Do you agree that the UK should maintain its objections to changes to the regulatory environment for the band 3300-3400 MHz (in Region 1, Europe, Africa, Middle East), noting UK has interests in use of radar for both ground and airborne operations?

Ericsson supports additions of 3300 – 3400 MHz to the Region 1 footnote countries, to the relevant footnotes to the extent that compatibility with existing services is resolved. Considering the UK usage of radar in this band, we respect the position proposed by Ofcom.

Question 3c: What is your view on the use of 6425-7025 & 7025-7125 MHz, and what evidence do you have to support this view? How does that inform your views on a IMT identification in these bands?

The band 6425-7125 MHz is required for IMT-2020 (5G).

GSMA estimates that an average of 2 GHz of spectrum is needed in the 2025-2030 timeframe[1]. This is required to meet the IMT-2020 requirements (100 Mbps DL and 50 Mbps UL) across cities enabling use cases such as Metaverse and smart sustainable cities. Outside the cities, the spectrum will help address fixed connectivity through Fixed Wireless Access (FWA). It will deliver the increased capacity needed on busy transport routes and will enable industry 4.0 capabilities. This calculation includes a large degree of densification both with macro and small cells (indoor and outdoor) as well as the deployment of mmWave.

Figure 1: Total (incl. base line) mid-band spectrum needs (MHz) from the GSMA report "Estimating the mid-band spectrum needs in the 2025-2030 time frame"[2]

DL and UL total (including baseline) mid-bands spectrum need [MHz]														
	World Bank Income	Activity factor 10%			Activity factor 15%			Activity factor 20%			Activity factor 25%			City Aver.
		High bands offload			High bands offload			High bands offload			High bands offload			
City	Group	30%	20%	10%	35%	25%	15%	40%	30%	20%	45%	35%	25%	need
Tehran	Upper Middle	730	810	890	910	1020	1140	1040	1200	1350	1140	1330	1530	1110
Amsterdam	High	940	970	1010	1010	1130	1260	1150	1320	1480	1260	1460	1660	1230
Munich	High	870	940	1030	1050	1180	1300	1200	1370	1540	1300	1520	1730	1280
Marseille	High	950	990	1040	1060	1200	1330	1220	1390	1570	1330	1540	1760	1300
Hamburg	High	890	970	1060	1080	1220	1350	1240	1420	1600	1350	1580	1800	1320
Minsk	Upper Middle	920	1010	1100	1120	1260	1400	1290	1470	1650	1400	1630	1860	1370
Baku	Upper Middle	920	1010	1110	1130	1270	1410	1290	1480	1670	1410	1640	1880	1380
Makkah	High	1150	1190	1230	1240	1360	1510	1390	1580	1780	1510	1750	2000	1470
Milan	High	980	1030	1130	1150	1300	1450	1330	1520	1720	1450	1690	1940	1410
Lyon	High	990	1060	1160	1190	1340	1500	1370	1570	1780	1500	1750	2010	1460
Rome	High	1000	1090	1190	1220	1380	1540	1400	1610	1830	1540	1800	2060	1500
Berlin	High	1030	1150	1260	1290	1460	1630	1490	1720	1950	1630	1920	2210	1590
Amman	Upper Middle	1130	1230	1350	1380	1550	1720	1580	1810	2040	1720	2010	2300	1680
Tashkent	Lower middle	1180	1320	1450	1490	1690	1900	1720	2000	2270	1900	2240	2580	1850
Johannesburg	Upper Middle	1160	1300	1440	1480	1690	1900	1730	2010	2300	1900	2260	2610	1850
Bangkok	Upper Middle	1240	1380	1530	1560	1780	1990	1810	2100	2380	1990	2340	2700	1940
Riyadh	High	1290	1430	1580	1610	1830	2050	1870	2160	2450	2050	2410	2770	2000
Barcelona	High	1250	1400	1550	1590	1810	2040	1850	2150	2450	2040	2410	2790	1980
Madrid	High	1260	1410	1560	1600	1830	2060	1870	2170	2480	2060	2440	2820	2000
Bogotá	Upper Middle	1290	1450	1600	1640	1880	2110	1920	2230	2550	2110	2510	2900	2060
Mexico City	Upper Middle	1380	1540	1700	1740	1980	2220	2020	2340	2660	2220	2620	3030	2160
Istanbul	Upper Middle	1420	1590	1760	1800	2050	2300	2090	2430	2760	2300	2720	3140	2240
Jakarta	Upper Middle	1370	1540	1710	1750	2000	2260	2040	2380	2720	2260	2680	3100	2190
Beijing	Upper Middle	1470	1640	1820	1860	2130	2390	2170	2520	2880	2390	2830	3270	2330
Paris	High	1410	1590	1770	1810	2080	2350	2120	2480	2830	2350	2790	3230	2280
Nairobi	Lower middle	1370	1560	1740	1780	2050	2330	2100	2460	2820	2330	2780	3230	2260
Cairo	Lower middle	1400	1580	1760	1810	2080	2360	2130	2500	2860	2360	2820	3270	2290
Tokyo	High	1450	1620	1810	1850	2130	2420	2180	2560	2930	2420	2890	3360	2350
Ho Chi Minh City	Lower middle	1520	1720	1910	1960	2250	2540	2300	2690	3080	2540	3030	3510	2470
New York	High	1530	1730	1930	1980	2280	2580	2330	2730	3130	2580	3080	3590	2510
Moscow	Upper Middle	1580	1780	1990	2040	2340	2640	2390	2800	3200	2640	3150	3660	2570
Sao Paulo	Upper Middle	1620	1830	2040	2090	2410	2720	2460	2870	3290	2720	3240	3760	2640
Mumbai	Lower middle	1610	1850	2090	2150	2510	2870	2570	3050	3530	2870	3470	4070	2780
Hong Kong	High	1730	1980	2220	2280	2650	3020	2710	3200	3690	3020	3630	4240	2930
Yangon	Lower middle	1900	2140	2390	2450	2810	3180	2870	3360	3850	3180	3790	4410	3090
Lagos	Lower middle	2140	2440	2740	2810	3260	3710	3340	3940	4540	3710	4460	5210	3600

Source: Coleago

Looking at the Metaverse in particular, we expect a real uptake from 2025 with connectivity requirements of up to 60 Mbps DL and 30 Mbps UL and 10ms latency per device. By 2027-2030 when it is expected that "all day AR" is available, the requirements may increase to 100 Mbps DL and 50 Mbps UL and 10ms latency (one-way RAN+CORE) per device. There are numerous high-quality mobility Metaverse use cases that will benefit both consumers and enterprises across multiple sectors. It is anticipated that the UK will benefit from enabling use cases such as the Metaverse on the move across the city, which will not be possible without the addition of the upper 6GHz spectrum band. Metaverse

[1] Estimating the mid-band spectrum needs in the 2025-2030 time frame

[2] GSMA Estimating the mid-band spectrum needs in the 2025-2030 time frame - Exhibit 17

will not only require 5G because of mobility but also will demand very low latency. Thus, even indoors, we expect both WiFi and IMT technologies to be used for AR/VR/XR depending on the requirements.

Licenced Spectrum for Mobile networks is fundamental to build a robust foundation for industry and consumers through smart cities, smart homes, and connected transport. Smart cities, underpinned by smart infrastructure across energy, traffic, transport, water, waste, social, and buildings, provide a way to address the increased density and demand in growing cities. It is important to look at spectrum needs in the long-term based on future capacity, quality, latency, and coverage demands to ensure they are safe, resilient and have the quality of service to enable such use cases.

We recommend that the UK analyse the socioeconomic benefits of the different allocations under study (IMT or RLAN) before taking any decision. In 2030, 5G is expected to generate $960 billion in GDP globally, with most benefits driven by mid-band spectrum (65 % or $610 billion). This could decrease from $960 billion to $600 billion (i.e., by 40%) if additional mid-bands are not made available[3].

Turning to the upper 6 GHz spectrum band, comparing the different alternatives for spectrum allocation (IMT/licensed or RLAN) in the UK, a decision on IMT and licensed usage of the band will drive the highest economic benefit for Europe, as concluded by the GSMA intelligence[4].

Ericsson appreciates that Ofcom keeps an open mind as to whether to support an IMT identification of the band 6425-7125 MHz and requests the UK to carefully assess the last available mid-band spectrum that can expand the wide area capacity of mobile operator's networks, as it may be easier to find frequencies that can be used for short range/low power (RLAN) communications.

The UK has recently allocated an additional 500 MHz of spectrum for RLAN, doubling the available resources and could consider allocating high bands 57-71 GHz for extreme capacity low-range RLAN communication (such as between the AR/VR glasses and the mobile phone).

Ericsson would also like to remark in relation to the following statements by Ofcom:

- Ofcom's view is that "based on current technologies, it seems unlikely that IMT services, at relatively high power, could operate in the band with incumbent satellite services. In addition, there are several other terrestrial uses in this band, where the protection from IMT would predominantly need to be addressed at a national level"

  Ericsson would like to remark that most technical sharing studies submitted by both administrations and industry to WP 5D indicate that compatibility of IMT-2020 (including macro-BS) and satellite uplink is feasible. We invite Ofcom to review the studies and we are open to any discussions that may be needed.

- Ofcom states that "At this stage we believe that a limited number of Region 2 and Region 3 countries might request to be added to any IMT identification in Region 1 if such an identification were agreed"

  Ericsson notes that most countries in Region 2 and Region 3 are following the WRC-23 process and will not decide on the usage of this band until the Conference. While countries will assess if they request to be added to IMT in Region 1, it is clear that all these countries will consider the usage of the band after WRC-23, and many will allocate this spectrum for IMT. Very few countries have taken an early decision on RLAN in this band.

- Ofcom "notes that discussions have already commenced within 3GPP on some technical considerations for use in this band, however the band itself has not yet been added to the formally recognised 3GPP bands."

[3] GSMA 'The socio-economic benefits of mid-band 5G services'

[4] GSMA Intelligence 'The socioeconomic benefits of the 6 GHz band (gsmaintelligence.com)'.

Ericsson would like to inform Ofcom that discussions in 3GPP regarding the definition of a band plan and technical requirements for the band 6425-7125 MHz were finalised at the RAN meeting in June. The band is now included in the relevant 3GPP specifications and has been denoted 3GPP n104.

- Ofcom states that it "anticipates that existing mobile spectrum holdings and spectrum already planned for release are likely to be broadly sufficient to meet future demand to 2030, if MNOs pursue a number of strategies including network densification."

  Ericsson disagrees with this view. It is our view that mid band 3.5GHz will start to be exhausted beyond 2025 and upper 6GHz band will be needed to add 5G capacity. Densification on 3.5GHz will not satisfy the forecasted demand in cities and there is the additional challenge with the unrealistic likelihood of new sites, due to planning constraints, economical cost, and energy consumption. Without additional mid band spectrum, there will be congestion in the cities where many of the new use cases will be required. MmWave will be valuable for certain applications/areas but not to add wide-area capacity.

- Ofcom states that "we also note that the agenda item for the band 6425-7025 MHz is for Region 1 only, thereby limiting potential economies of scale, and are aware that a number of countries around the world have made the band available for WAS/RLANs."

  Ericsson emphasises that while this is true for both WAS/RLAN as well as IMT, we expect a very large and healthy ecosystem should IMT identification happen. Ericsson expects most countries in Region 2 and 3 to join the licensing of this spectrum.

  We invite Ofcom to read more about the importance of this band for mobile networks in the following White Paper, 6 GHz opportunity: licensed spectrum for mobile networks[5]

Question 4: Do you agree that, where no additional technical limitations are placed on mobile services, the UK can support an upgrading of the mobile allocation, in 3600 – 3800 MHz, from secondary to primary?

Ericsson agrees with the Ofcom proposal and would like to remind the importance of a primary allocation considering that according to Article 5.30 of the RR, stations of the secondary service "cannot claim protection from harmful interference from stations of a primary". It is of key strategical importance to support the upgrade to mobile, while ensuring that current mobile deployments can continue its operation without additional technical limitations.

Question 5: What are your views on the development of regulatory conditions to facilitate deployment of high altitude IMT base stations in IMT identified bands below 2.7 GHz?

High altitude platform IMT base stations in bands identified for IMT will complement terrestrial networks whenever the latter are not feasible, expanding the overall IMT coverage, providing both uplink and downlink coverage to ground-based user equipment (UE). The frequency bands for high altitude IMT platforms considered at WRC-23 are already today identified for IMT and thus it is key that the ground component of IMT is protected. These bands are also allocated to other primary terrestrial services that need protection.

As of today, many compatibility studies between HIBS and the ground component of IMT as well as with other incumbent services have been presented to ITU WP 5D for all bands. While these are progressing, no conclusion has been reached. Compatibility studies indicate that HIBS coexistence seems feasible in most cases, although mitigation techniques are still under discussion for some scenarios (e.g. pfd or physical separation). These should be reflected in the RR as deemed necessary.

Question 6: Do you agree that a formal modification to the Radio Regulations is not needed for fixed service applications that use IMT technologies?

Ericsson agrees with Ofcom's views in this matter. A modification of the RR is not necessary to identify bands for FS that can use IMT technology. In fact, it is possible to deploy a 3GPP technology (i.e. FWA) under FS allocation

according to the RR. As Ofcom indicated, this modification can also be "potentially limiting". As also suggested by Ofcom, Recommendations/Reports/Handbooks including for example several bands could be helpful, although this would be the responsibility of ITU WP 5A, not the WRC.

[5] 6GHz opportunity licenced spectrum for mobile networks - white paper 2022.

Question 7: What are you views on the proposed approach for 470-694 MHz, recognising the national decisions already in place and taken for DTT multiplex licensing in the band, and the additional and supplementary spectrum made available for UK PMSE usage?

Ericsson recognises that the UK Government decided to allow five national multiplex licences on the DTT platform that are due to expire in 2022 and 2026 to be renewed for a further period until 2034 and that this band is also of importance for PMSE. We also understand that Ofcom would like to understand better the spectrum needs for sub 1GHz.

However, a No Change option as proposed by Ofcom will imply a decision already today not to use the band for mobile beyond 2034, while supporting a primary mobile allocation would simply allow the UK to consider what is the best usage of this spectrum beyond 2034 (DTT or mobile) considering both the DTT trends and the needs of mobile networks. The potential of No Change with a possible agenda item for WRC-27 or WRC-31 has also been discussed within CEPT, however Ericsson does not see any gain of this alternative. Instead, the UK could support primary mobile allocation while aiming to wait until DTT expiration date gets closer before any further considerations of this spectrum.

As Ofcom indicates in the consultation, should mobile allocation and even an IMT identification in the 470-694 MHz band be made at WRC-23, the UK can continue DTT in the band and still be in full compliance with the RR. A primary mobile allocation creates choices for the future while it does not put any requirement on mobile use in any country.

Question 8: What are your views on the need to establish an international regulatory environment that provides adequate protection of UK fixed links from earth stations in motion, in the band 12.75 – 13.25 GHz, which is also practicable from an enforcement/implementation perspective?

Ericsson's view is that as long as the regulatory environment is the same as in CEPT the fixed links should have adequate protection.

Question 9: Do you agree that the UK continues to support the maritime distance figure for ESIMs that work to non-geostationary satellites and to test the other conditions agreed at WRC-19 for ESIMs working to geostationary satellites to ascertain whether these remain appropriate for non-geostationary satellites?

We agree with Ofcom that conditions agreed at WRC-19 for ESIM working with GSO do not necessarily apply for ESIM working with NGSO and there is a need to analyse the appropriate protection for terrestrial services in these bands.

Question 10: What are your views on whether an allocation to inter satellite links is necessary for existing satellite allocated bands and whether this would provide benefits internationally?

Ericsson does not have a view on the allocation to Inter-Satellite links as long as terrestrial services (mobile and FS) are protected from interference.

Question 11: What are your views on the need for additional satellite allocations in support of narrowband IoT "M2M" type applications, noting that there remains the continued use of PMSE for wireless cameras in the band 2010 – 2025 MHz?

Ericsson agrees with Ofcom's principle to only "take a view on the proposals in another region for this Agenda Item where it can be shown it would have a material impact on UK operations or interests."

Question 32: What changes to the Radio Regulations have you identified that would benefit from action at a WRC and why? Do you have any proposals regarding UK positions for future WRC agenda items or suggestions for other agenda items, needing changes to the Radio Regulations, that you would wish to see addressed by a future WRC?

IMT identification has been proven to be an efficient tool to ensure global or regional harmonisation. Despite not creating any binding requirement to ITU Member States it is a clear signal for us, vendors, to create an ecosystem from which everyone in society can benefit.

Global (or regional) harmonisation is a fundamental requirement to ensure economies of scale and the development of the device ecosystem. WRC provides an opportunity to align on specific bands in different regions and brings the unique opportunity of not only harmonising the spectrum ranges but also the technical conditions (being both of equally importance for an ecosystem). Additionally, it brings the world together to decide on compatibility with global services, such as satellite.

Looking at the IMT technologies, we see an evolution every 10th year. IMT-2030 is thus around the corner after IMT-2020. Research is under way, and we expect that the 3GPP specification of 6G will be finalised by 2028, and the ITU IMT-2030 standardisation by 2030, thus sufficient spectrum should become available accordingly.

6G use cases demand capacity and this requires large spectrum bandwidth, which typically is easier to find in higher frequencies. On the other hand, the higher the frequency, the lower the coverage will be. As a result, like previous generations, different spectrum ranges become necessary, with addition of new spectrum and continued use of existing spectrum (i.e., spectrum available today and to be made available up to 2030, e.g., 6 GHz). Ericsson believes that for 6G, additional spectrum in the essential centimetric range 7-15 GHz is needed and will be complemented by the sub-THz (above 92 GHz) range for niche use cases. We have identified the following bands for initial focus, noting that further discussions with both industry and administrations are needed:

- From within the centimetric range: 7.125-8.5 GHz; 10.7-13.25 GHz and 14-14.8 GHz; and
- From within the subTHz range: W (92-120 GHz) and D band (120-182 GHz). Additionally, D band is a potential for innovation and new use cases for FS and thus, Dband is still pending on co-existence with FS.

Ericsson strongly suggests that the UK supports an Agenda Item for WRC-27 on IMT identification and invites Ofcom to further consider candidate frequency ranges.

Ericsson notes the statement from Ofcom "Firstly, we expect one proposal to be for ranges above 100 GHz and secondly for ranges between approximately 7 GHz and 20 to 24 GHz." We would like to suggest Ofcom, to instead consider the centimetric range 7-15 GHz as the essential range for 6G, to be complemented by spectrum above 92 GHz, and to consider W (92-120 GHz) and D band (120-182 GHz), with the latter taking FS into consideration. As mentioned above, the sub-THz range will be targeting niche use cases, hence should not be seen as the main 6G frequency range. Furthermore, Ericsson suggests the UK to initially analyse the opportunities in the ranges: 7.125-8.5 GHz; 10.7-13.25 GHz and 14-14.8 GHz. The spectrum needs for 6G are outlined in the Ericsson blog article "Realizing the 6G vision - Why is spectrum fundamental?"[5]

Question 33: What are your views on the use of IMT stations that use antennas that consists of an array of active elements, in bands shared with satellite services?

Ericsson agrees with Ofcom that this matter is not entirely well-defined, and that on a global level there are widely differing views on how to proceed which are unlikely to be resolved in the near future.

Regarding the matter of notification, the complicating aspect is its connection with the interference limit expressed in No. 21.5. It would have been possible to separate notification and interference control; a solution for the notification procedure would probably then have been, as Ofcom describes it, "a relatively routine … activity." However, since this is not the case, the Ericsson response is focused on the *interference* aspects of No. 21.5.

[5] Ericsson blog - Realizing the 6G vision - Why is spectrum fundamental?

It has been well established that the assumptions underlying this provision are of considerable age and cannot be assumed relevant for the systems currently in use. Not only does it fail to consider the characteristics of terrestrial mobile base stations with AAS, but also relies on other assumptions that may not be accurate for modern equipment. Ericsson can thus not support the proposal that No. 21.5 will become a relevant interference protection mechanism by simply converting the metric used therein to TRP. This concern has been clearly expressed in industry contributions to CEPT and ITU-R[6]. Given the history of No. 21.5 there is no reason to assume that it would properly express protection of the satellite uplink by simply introducing TRP instead of the current metric. In addition, the shortcomings of TRP as an interference metric have been verified by studies carried out by the UK and France[7] showing that interference may vary whereas TRP stays the same or vice versa. Complexity is further added by the variations in base station implementation that are possible and have not yet been reflected in any studies. Ericsson notes that the UK reflects on the need for further studies in addition to mentioning that perhaps it is not possible to finish this in the context of WRC-23, noting section 9.6.8 in the consultation document, and agrees that a more thorough study based on directives with improved clarity could enable ITU-R to be more successful in its efforts to reflect AAS technology in the Radio Regulations.

Ericsson is however fully aware of the current position in the CEPT Brief on article 21.5 and would thus like to comment on the way forward, should that position remain despite evidence against TRP as a viable metric for satellite UL interference. In that case (i.e., the TRP being retained) it is critical to select the appropriate reference bandwidth. Ericsson notes that Ofcom has observed this need and agrees that a selection of 200 MHz would limit the implementation of AAS not only for the mobile service, but the fixed service as well, and that it would further be inconsistent with the assumptions for deriving the details of article 21.5. Ericsson's view is thus aligned with the document ECC PT1(22)147 from GSMA, where it is noted that a reference bandwidth should be based on the systems commonly available at the time of developing article 21.5 and thus used in the coexistence analysis, i.e., a few tens of MHz. Ericsson's investigations point to the same conclusion as those of Ofcom, i.e., that the bandwidths commonly in use in the days article 21.5 was first derived was 28 MHz and when revised 56 MHz.

Regarding Issue C, it would be very unfortunate to expand the set of frequency ranges beyond the 26 GHz band. The discussion would be well served by restricting discussions to one frequency band until further clarity has been brought on this matter. Such an expansion would also go beyond what is stated in the ITU-R document, WRC-19 Doc 550, describing the task assigned to ITU-R WP5D.

[6] See 5D/844, 5D/1049, 5D/1143,

[7] See ECC PT1(21)218, ECC PT1(22)051