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| Working Group FM | | Doc. FM(18)113 | | |
| 91st Meeting | | | |  |
| Pratteln (near Basel) / Switzerland  14 – 18 May 2018 | | | |  |
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**1. Opening of the Meeting**

1. The WG FM Chairman, Mr Thomas Weilacher (D), opened the 91st meeting of WG FM and welcomed the participants to Pratteln, a community close to the beautiful city of Basel.
2. He thanked the Federal Office of Communications (OFCOM) of Switzerland for inviting WG FM.
3. In the name of Mr Philippe Horisberger(Head of Equipment and Radiocommunication Licences and Deputy Director of OFCOM Switzerland), Mr Konrad Vonlanthen (Head of Frequency Assignment of OFCOM Switzerland) welcomed the WG FM delegates to Switzerland.
4. He highlighted the variety of topics which are on the agenda of this WG FM meeting. New radio application show up on the market on a regular basis, which need appropriate spectrum, he mentioned. But there are also existing applications which require more spectrum, e.g. for railway communications or SRD. Hence Switzerland is proud of participating in such an important group dealing with spectrum regulation, he emphasized.
5. Finally Mr Vonlanthen wished the group a fruitful and successful meeting.
6. The meeting was attended by 94 delegates from 34 CEPT administrations and 16 company representatives, international organisations, including EC, ECO and ITU. The list of participants is given in **Annex 02**. The WG FM Chairman informed that, on request, individual invitations had been provided by him to Intelsat and OneWeb.
7. The list of input documents is in **Annex 03**. The list of abbreviations is in **Annex 04**.

**2. Adoption of the agenda, schedule of work**

1. The WG FM Chairman introduced the draft agenda and the schedule of the meeting, as provided in document FM(18)060R5. The references to the latest contributions were added, and then the agenda was adopted without further amendments and can be found in **Annex 01** of these Minutes.

**3. Report from ECC entities**

***3.1 Report from ECC Plenary***

1. The WG FM Chairman introduced the meeting report from the 47th ECC meeting, 27th February – 2nd March 2018, in Lisbon / Portugal (FM(18)066) and highlighted the most relevant aspects. The WG FM meeting took into account the relevant plenary decisions.

***3.2 Report from WG SE***

1. The WG FM Chairman referred to the meeting report of the 79th WG SE meeting, 23 - 27 April 2018, in London / United Kingdom (FM(18)108). The meeting report was not introduced in detail, because WG SE had provided liaison statements for the most relevant items. However, he indicated that the WG FM meeting would refer to specific sections in the meeting report when necessary. The liaison statements from WG SE were introduced and discussed under the relevant agenda items.

**4. Work Items in Progress within PTs, MGs and FGs**

***4.1 FM PT 22 (Monitoring)***

**4.1.1 Progress Report**

1. The Chairman of FM22, Mr Ralf Trautmann (D), presented doc. FM(18)081.
2. The meeting agreed on a new work item FM22\_35 “Revision of ECC Recommendation (12)03 on the determination of the radiated power through field strength measurements in the frequency range from 400 MHz to 6000 MHz” as proposed by ECO (**Annex 15**).

**4.1.2 HF monitoring campaign**

1. FM22 agreed to continue the campaign based on a new schedule for the period 2019 – 2022. The meeting agreed to extend the related work item FM22\_07 until the end of 2022.

**4.1.3 Radio interference statistics**

1. The FM22 Chairman introduced document FM(18)83, the FM22 summary of the annual interference statistics questionnaire for reported cases in 2017 including four annexes.
2. The results show an increase of interference into public mobile networks and a decrease of interference cases into broadcasting reception in 2017 compared to 2016. These two services are still subject to the largest amount of interference cases reported. More details regarding victims and sources may be found in document FM(18)83, Annexes 1 and 2.
3. Annex 3 of document FM(18)83 shows that the number of reported interference cases to meteorological radars caused by 5 GHz WAS/RLAN in 2017 is approximately the same per year compared with the cases reported for 2015 and 2016. However, significant differences between the countries should be noted. One country reported about more than 80 cases in 2017, three countries had about 30 cases and the others ranged from 0 to 20 instances.
4. WG FM decided to attach Annex 3 of document FM(18)83 to these WG FM Minutes as **Annex 12** and subsequently attach it to the WG FM progress report to ECC.
5. IARU-R1 asked whether FM22 would investigate the fact that smaller countries have sometimes higher cases of interference than bigger countries. The FM22 Chairman explained that earlier investigations of this phenomenon did not provide satisfactory explanations.
6. ECO noted that the fixed outdoor usage of WAS/RLAN at 5 GHz substantially differs from one country to another and that this may be one reason for the differences.
7. The summary of the interference statistics 2017 was agreed and is going to be published on the FM22 interference statistics website[[1]](#footnote-2). WG FM also tasked the ECO to inform ADCO/RED about the results of the interference statistics 2017.
8. The FM22 Chairman then introduced document FM(18)84, the draft questionnaire for interference cases in 2018.
9. The meeting approved the draft interference questionnaire for the year 2018 for submission to administrations by ECO in February 2019 (**Annex 13**).

**4.1.4 Interference to meteorological radars caused by 5 GHz RLANs**

1. WG FM noted section 9.8 (“Interference from 5 GHz RLAN to meteorological radars”) of document FM(18)066, the minutes of the 47th ECC plenary meeting.
2. The FM22 Chairman reported that he had informed FM22 at its last meeting about his liaison activities with the Chairman of ADCO/RED and the agreed reporting form to be filled by the field staff for each relevant interference case. He encouraged administrations to complete the form and to send the results to the national market surveillance authorities.
3. ECO informed the meeting that the first draft results of market surveillance campaign on 5 GHz WAS/RLAN will be on the agenda of the ADCO meeting in July 2018. Final adoption of the report of the campaign is scheduled in ADCO/RED for October 2018 (ADCO/RED is scheduled to take place after the ECC meeting in October 2018).

**4.1.5 Revision of ECC/REC/(05)01**

1. Mr Trautmann introduced document FM(18)85, the draft revision of ECC Recommendation(05)01 - Harmonisation of automatic measuring methods and data transfer for frequency band registrations. The comments resolution table shows that FM22 proposes the adoption of the first two proposals from the Russian Federation with minor editorial modifications. The third proposal however, had not been supported by any country participating in the last meeting of FM22. The Russian Federation asked for clarification why the proposal had been rejected by FM22. The FM22 Chairman explained that FM22 had concluded that there was no need for the binary format for stationary measurement campaigns and that its implementation would make the ECC Recommendation more complex. Germany, the Netherlands and Portugal supported the conclusions of FM22.
2. WG FM finally approved the revision of ECC Recommendation (05)01 for publication as proposed by FM22 (**Annex 14**).

**4.1.6 Work related to ITU-R**

1. None.

**4.1.7 Physical Cell Identifier (PCI)**

1. Mr Trautmann introduced document FM(18)82 on physical cell identifier. There are solutions for the original problem and it would not be reasonable to work on an ECC Recommendation for the measurement of one single LTE parameter (PCI).
2. Hence, WG FM decided to close WI-FM22\_25.

**4.1.8 Monitoring Vehicles**

1. The development of a draft new ECC Report on monitoring vehicles to provide guidance for the development of vehicle concepts will require more time.

**4.1.9 BEM measurements**

1. Mr Trautmann introduced document FM(18)086 on TRP measurements. FM22 did not see any feasibility to measure TRP of wanted or unwanted emissions in the field and WG FM and ECC PT1 may consider the radio monitoring and enforcement aspects, and discuss whether limits other than TRP may be applicable.
2. Sweden added that the draft ECC Report of ECC PT1 for the 3.4 - 3.8 GHz band is intended to define the regulatory framework for the introduction of 5G. Spectrum monitoring and enforcement aspects would not be in the scope of ECC PT1.
3. WG FM agreed to send a response LS to ECC PT1 (**Annex 23**). ECC will be informed accordingly via the progress report of the WG FM Chairman.

**4.1.10 Other Issues**

1. None.

***4.2 FM PT 44 (Satellite issues)***

**4.2.1 Progress Report**

1. Mr Amar Saidani (F), the FM44 Chairman, presented document FM(18)105.

**4.2.2 New draft ECC Report 280 on satellite solutions for 5G**

1. The FM44 Chairman presented an overview of the comments received during the public consultation from the administration of Finland, the ESOA, the GSA and the GSMA (doc. FM(18)073). He explained how the comments had been resolved during the dedicated meeting organized by FM44 on 24th of April and thanked the administration of Finland and the PT1 members for their constructive participation. He highlighted that all the received comments had been resolved except one comment from the GSA which objected to the use of the term "integration of satellites into 5G" arguing that the report should only study possibilities for satellite solutions for 5G according to the CEPT roadmap for 5G. This view had not been shared by administrations on the interpretation of the 5G roadmap and the wording had been retained.
2. The WG FM Chairman presented the draft ECC Report 280 (doc. FM(18)105 - Annex 4). No other comment was expressed and the draft ECC Report 280 was finally approved for publication (**Annex 05**).

**4.2.3 Ku-band, 11/12/14 GHz**

**4.2.3.1 Draft new ECC Report 279 on the use of earth stations in-motion operating with NGSO satellite systems**

1. The FM44 Chairman explained that no comment had been received during the public consultation (FM(18)074). The meeting finally approved the ECC Report 279 for publication (**Annex 06**).

**4.2.3.2 Draft new ECC Decision (18)05 for earth stations in-motion operating with NGSO satellite systems**

1. The FM44 Chairman presented the comments received from the administration of Spain and the proposed resolution prepared by FM44 (documents FM(18)075 and FM(18)105 - Annex 3)
2. The administration of Slovakia identified the need to correct longitudes of UK radio astronomy sites in the document.
3. WG FM adopted the draft ECC Decision (18)05 for submission to ECC for final approval (**Annex 07**).

**4.2.3.3 Draft new ECC Decision (18)04 for land-based earth stations in-motion (ESIM) operating with GSO satellite systems**

1. The FM44 Chairman presented the comments received from the administration of Spain and from the satellite operator Intelsat as well as the proposed resolution prepared by FM44 (documents FM(18)076 and FM(18)105 - Annex 5)
2. WG FM adopted the draft ECC Decision (18)04 for submission to ECC for final approval (**Annex 08**).

**4.2.4 M2M/IoT via satellite**

1. The FM44 Chairman informed the meeting that the draft new ECC Report on M2M/IoT via satellite will be presented at the next WG FM meeting and requested an extension of the work item (FM44\_33) target date to February 2019. WG FM agreed the extension.

**4.2.5 Airborne earth stations, 12.75 – 13.25 GHz**

1. The FM44 Chairman presented an LS from WG SE (FM(18)091) informing that the work item SE40\_29 is maintained open. No contribution had been provided to SE40 on the issue raised by the Russian Federation to take into account that the band is subject to Appendix 30B of the ITU Radio Regulations for the evaluation of the aeronautical earth station potential to cause harmful interference to existing services and other applications of FSS.
2. The FM44 Chairman presented the regulatory issues surrounding the potential use of the band by aircraft ESIM that FM44 had identified and a proposal for a new work item. The aim is to produce a new ECC Decision exempting earth stations installed on aircraft from individual licensing (document FM(18)105 - Annex 7).
3. Switzerland, UK, France and Hungary asked to better reflect in the work item the need for regulatory measures protecting current and future deployment of FS stations.
4. The UK administration said that some administrations currently issue specific individual licences for aircraft. The meeting agreed that FM44 shall cover this issue and the FM44 Chairman confirmed that it will be explicitly mentioned in a specific *considering*.
5. It was clarified that the work item does not include downlink bands because the concerned 10.7-11.7 GHz and 12.5-12.75 GHz downlinks are already subject to the ECC Decision (05)11 on aircraft earth stations (including also Appendix 30B downlink bands).
6. The Russian Federation asked to explicitly mention in the work item that regulatory measures for maintaining compatibility with Appendix 30B should be developed and, if necessary, corresponding technical issues should be identified. The FM44 Chairman clarified that the use of Appendix 30B frequency bands is not new in ECC Decisions on satellite services and six ECC Decisions are already including these bands.
7. The work item (FM44\_34) was adopted by WG FM (**Annex 09**).

**4.2.6 Other issues**

1. None.

***4.3 FM PT 51 (PMSE)***

**4.3.1 Progress Report**

1. The chairman of FM51, Mr Lindsay Cornell (UK), presented the progress report from the Project Team (doc. FM(18)098) which covered the 28th and 29th meetings of FM PT51 held at ANFR in Maisons-Alfort, 6 and 7 March 2018 and at Eurocontrol in Brussels, 3 and 4 May 2018, respectively.
2. Mr Cornell reported that FM51 has continued to progress on all the work items assigned to it in the work plan, with most time dedicated to work on the 960 MHz report to WG FM.
3. The next meeting of FM51 will be held on 13-14 September 2018 at a location to be confirmed, hosted by the Netherlands Administration.

**4.3.2 Spectrum for PMSE**

**4.3.2.1 Audio PMSE**

1. The FM PT51 Chairman reported that the discussion on this work item had continued to be intense and that it had dominated the work of FM51. He said that although significant progress had been made, it had not been possible to finalise the report in all details due to the number and extent of contributions made. Despite this, the executive summary was completed and agreed at FM51#29.
2. The FM PT51 chairman introduced the report to WG FM, document FM(18)098 - Annex 1. He stated that while it had been possible to agree some parts of the report, there remained extensive revision marking where contributions had been added but not discussed, or discussed but without agreement.
3. ICAO statement:

*Ms Utsunomiya (ICAO) expressed ICAO's strong concerns about the ongoing sharing study for potential introduction of PMSE in the 960- 1164 MHz band. ICAO emphasized the importance of States’ international obligations to the safety and efficiency of aviation, through the ICAO Convention and individual Memorandums of Understanding on Safety Oversight. Aeronautical safety systems are currently operated in the 960-1164 MHz band in accordance with the stringent operational and technical requirements defined in the Annexes to the ICAO Convention. As evident from ICAO’s Global Air Navigation Plan, all of the aeronautical systems currently operating in this band will continue to be essential to safe aeronautical operation far beyond the year 2030, and new aeronautical systems are planned to be operated in this band.*

*Furthermore, she explained that each State has obligations to develop new safety assessments or review the current safety assessments before introducing any new systems to the band (and take proper measurements to maintain same level of safety). In spite of one CEPT State now having been performing PMSE trials in the 960-1164 MHz band for some considerable time, the required safety assessments have still not been performed by the relevant affected aeronautical navigation service providers and civil aviation authorities in that State. It is understood that the radio regulator is currently in the process of developing a safety support case to facilitate these required safety assessments. However, she summarized that it is important to note for all States that a safety support case is not equivalent to a safety assessment. Based on this situation, ICAO feels that it is yet to be determined whether the introduction of PMSE is feasible or even possible, and how much it may affect the safety and efficiency of the air traffic system in that State.*

1. Sweden stated that although there is no final conclusion on feasibility in the report, more is known about the issue and it is clear that there are strong concerns about the studies by the aviation stakeholders and proposed that WG FM should ensure that there was still support to continue the study.
2. Switzerland supported Sweden's proposal and reiterated that Switzerland will not introduce any PMSE in the band and wants the work to be stopped.
3. Belarus stated that it supports ICAO's position and believes that no other service that may affect security of aviation should be introduced.
4. Mr Raffi Khatcherian (Eurocontrol) introduced document FM(18)109r1, representing the position of the European military, which advocates a very careful approach in any potential sharing investigation. The band in question is used to support fundamental safety-of-life and security related services for both civil and military aviation. The military acknowledge the risks associated with sharing this band with commercial and market-driven non-aviation services, which would require strict governance to safeguard the aviation use of the band. He reminded the meeting that the introduction of military aviation systems in the band took 15 years.
5. France stated that they have many concerns around this work item, that any decision would go beyond technical compatibility issues and that no prospect is seen for a European harmonisation on PMSE in the 960-1164 MHz band. Continuing technical studies represents a considerable burden and cost for SE7 with no perceived benefit. France invited administrations to express their clear views on continuing or not the technical studies. France is of the view that the work items in WG FM and WG SE should now be stopped.
6. Finland stated that from regulatory and technical points of view the band 960-1164 MHz is very challenging regarding any feasibility for PMSE. At SE7 level, information on aeronautical systems has only been gathered so far, and studies are not yet fully started and would be complicated.
7. The Russian Federation stated that they share the concerns previously expressed and think the band should be kept exclusively for aeronautical services.
8. Belgium supported the views of France and others.
9. Lithuania is of the position that the regulatory and legal requirements for coexistence of PMSE and aviation systems in the band 960-1164 MHz, mentioned in the draft report to WG FM (certification of both PMSE system and person responsible for operation as well as legal liability for operator of PMSE system) are hardly realizable. That is why the need for further activities on this issue, including technical studies, should be reconsidered.
10. For Austria it is important that the studies already started will be completed. Then the necessary information would be available to make any future decision. Spectrum is a finite resource and with ever increasing demands for spectrum access, sharing considerations were essential. Austria stated that ICAO and EUROCONTROL and others cannot close their eyes to this trend. Austria further stated that if no information was made available to national authorities about changed spectrum use in the band, there would be licensing issues; currently there were many issues including the introduction of drones and LDACS.
11. ICAO stated that they are working on the development of technical provisions for medium and large sized unmanned aircraft and LDACS, as indicated in the Global Air Navigation Plan published in 2016. ICAO considers this includes cross-border issues, which are being actively tackled through coordination between several ICAO panels.
12. Eurocontrol stated that the 960-1164 MHz band is globally harmonised and that allows ICAO agreements. They stated that aviation was not opposing sharing, but that safety of life issues mean that care is needed, that certification of equipment and operators is needed. Eurocontrol's view is that those willing to share a safety band have to share also the safety and regulatory requirements applicable for this band.
13. The WG FM Chairman said that spectrum is not owned and that licensing is a national issue.
14. The WG FM Chairman reminded the meeting of the decision made on this work item at the 89th WG FM meeting in Zagreb:

* the draft report is an internal WG FM document;
* FM51 shall bring the completed report to the May 2018 meeting of WG FM and that no extensions were envisaged;
* WG FM requires presentation of the issues, with balanced positions when there is no agreement;
* WG FM does not expect conclusions, but a short summary of the issues is appropriate;
* the work in FM51 on this work item will be paused at the May 2018 WG FM meeting and resumed again when the outcome of the WG SE studies is available;
* the final deliverable will be an ECC Report with a deadline of May 2020.

1. The Netherlands stated that when the work item was started, it was known to be sensitive, but WG FM agreed the steps to be taken. The interim report is now available, but the compatibility issue is still in progress, so we need to wait for the study results in order to complete the work. The Netherlands reminded the meeting that Ultra-Wide Band has been using the band already for many years.
2. Italy stated that they have always been against this work item and request that the work should be stopped.
3. The United Kingdom stated, as the only administration to have made the band available for low power audio PMSE, that they took extensive steps before making the sharing decision which was jointly made with the UK CAA and supported by the UK Ministry of Defence. All operational systems had been taken into account; agreement was reached with the civil and military users about the testing programme to be undertaken; there had been an open public consultation. The UK stated that the report's Executive Summary captured the important issues. The UK reminded the meeting that although the view had been expressed by others that aeronautical bands should be used exclusively by aeronautical systems, the meeting had approved the draft ECC Report on sharing the 2.7-2.9 GHz band with video PMSE. The UK supports the completion of the technical studies and the FM51 work item, and believes that stopping studies would set a difficult precedent: there are no rules of procedure for such action.
4. France expressed that the case of the possible use of frequency band 2.7-2.9 GHz by video PMSE does not provide a valid argument concerning the feasibility of introducing wireless microphones in frequency band 960-1164 MHz as suggested by UK. The 960-1164 MHz band is used worldwide by several critical systems installed in aircrafts on which pilots rely for safe navigation and is shared with military applications, in contrast with the 2.7 GHz band where only primary radars are operated to support aeronautical surveillance. France underlined that a detailed presentation has been made in FM51 on difference between PMSE sharing in 960 MHz band and the 2.7 GHz band (see FM51(17)Info74).
5. Hungary stated that they understood both sides, but considering the preliminary investigations on regulatory and legal issues, did not support going on with the studies.
6. Germany stated that they hold a similar view to the Netherlands: at WG FM #89 a plan of work was agreed and the plan should be followed. Germany said that WG FM is far from being in a position to agree feasibility or other action, but that is not within the scope of the work item: the interim report from FM51 to WG FM provides background information only.
7. APWPT stated that it is committed to supporting the ongoing studies in SE7 for final consideration in FM51, once the studies have been concluded.
8. The WG FM Chairman concluded that FM51 has completed its current tasks in work item FM51\_10: the scope and initiation of technical studies is done and the interim report on legal and regulatory issues had been delivered to WG FM. Therefore FM51 can pause its work on this work item.
9. Sweden stated that there was a reason to question the continuation of studies because they were difficult and time consuming, but in any case the work item should be closed.
10. The FM PT51 Chairman said that the work item had a target date of 2020 and that the decision of the 89th WG FM meeting was to produce an ECC Report that includes the study results from WG SE: this was the basis of the planned work in FM PT51.
11. Norway stated that the interim report is heavy with revision marks and so the work item cannot be closed before finishing the work.
12. Germany stated that the final ECC Report would allow full consideration of all issues through the public consultation process.
13. France stated that they believe that any further activity in FM51 needs approval in WG FM and it is therefore consistent to close the WI as well as the one in WG SE. France questioned whether WG FM should be asking SE PT7 to dedicate time to this activity, and that is was always possible to find conditions for sharing, but that this did not mean harmonisation.
14. The WG FM Chairman stated that WG FM had already initiated the sharing studies in WG SE and that there was no work item concerned with harmonisation. It was clear that FM51 will pause their work on FM51\_10 until the SE studies are received and WG FM restarts the FM51 activity.
15. Switzerland proposed that ECC should be asked how to proceed.
16. Several administrations supported that idea.
17. The WG FM chairman said that he would of course be reporting the work in WG FM to the ECC meeting. The work will therefore be discussed at ECC.
18. Statement from Belarus, Belgium, Finland, France, Hungary, Italy, Lithuania, Russian Federation, Sweden and Switzerland:

*Belarus, Belgium, Finland, France, Hungary, Italy, Lithuania, Russian Federation, Sweden and Switzerland are of the view that the two work items FM51\_10 and SE07\_28 related to the introduction of low-power audio PMSE in the band 960-1164 MHz should be now closed and ask for decision to be made at the next ECC meeting.*

*The initial feedback from involved parties in WG SE is that these studies are to be very extensive and complicated. Very strong concerns have been raised from national level (aeronautical and military stakeholders) on the large costs and resources required in order to carry through these studies. Furthermore, the studies will add to the already very high work load in SE7, and we see a large risk that these studies will have a negative effect on time schedule as well as quality on various other important work items in SE7.*

*Given the very limited support among administrations, we are of the firm view that there is no potential for any harmonised introduction of PMSE in this band. Moreover, based on the preliminary findings in FM51, the feasibility can be seriously questioned, and it is made clear that the feasibility cannot be derived only from technical coexistence studies.*

*The debates in WG FM plenary highlighted that support for the current work items FM51\_10 and SE07\_28 has dropped with only four administrations still supporting them and ten asking to stop further activities on this topic. Finland and Italy do not support anymore these two work items.*

*The 960-1164 MHz band supports fundamental safety-of-life services for both civil and military aviation; it is used worldwide by several critical systems installed on-board aircrafts (DME, TACAN, Secondary radar...) on which pilots rely for safe navigation. The band is also shared with military application Link16 which are used for aircraft interception that might pose a terrorist threat under ‘Renegade’ procedure.*

**4.3.2.2 Body effect of handheld and body worn audio PMSE equipment**

1. The FM PT51 Chairman reported that the PT had completed the draft ECC Report and introduced it to the meeting.
2. France said that before publication, it would be beneficial to receive the view from WG SE and asked for clarification on the liaison with WG SE.
3. The FM51 chairman outlined the history of the work item and that it aimed to be a parallel to ECC Report 218 for video PMSE.
4. The WG FM Chairman stated that through ECC there is good coordination of issues between FM and SE.
5. The meeting approved the draft ECC Report for public consultation (**Annex 17**).
6. Given the concerns expressed by France, the PC phase will be extended to run until end August 2018. The WG FM Chairman urged all interested parties to respond within the timeframe and confirmed that WG SE would be informed of this PC via the normal process of meeting minutes.

**4.3.2.3 Best practices for video PMSE in the 2.7-2.9 GHz band**

1. The FM PT51 Chairman reported that the PT had completed the draft ECC Report and introduced it to the meeting.
2. The meeting approved the draft ECC Report for public consultation (**Annex 16**). The PC phase will also run until end August 2018.

**4.3.3 Work related to ITU-R**

1. The FM PT51 Chairman reported that due to pressure of other work items, there was nothing to report.

**4.3.4 Other issues**

1. The FM PT51 Chairman reminded the meeting that PMSE information was now held in EFIS and that it was very helpful to FM51's work that administrations checked that their national information was correct and updated it regularly.

***4.4 FM PT 54 (PMR, PAMR)***

**4.4.1 Progress Report**

1. The FM54 Chairman, Mr Kuha Sithamparanathan (UK), presented doc. FM(18)099rev1.

**4.4.2 Draft ECC Report on current use, future opportunities and guidance to administrations for the 400 PMR/PAMR frequencies**

1. The latest draft is in Annex 1 of the FM54 progress report.

**4.4.3 Draft new ECC Decision on land mobile systems, replacing ECC Decisions (04)06 and (06)06**

1. WG FM noted the ongoing development of the draft new ECC Decision and the need to consider draft ECC Report 283 of WG SE in detail. The latest draft of the new ECC Decision is in Annex 2 of the FM54 progress report.
2. WG FM tasked Project Team FM54 (new Work Item FM54\_05, **Annex 21**) to analyse and derive the technical requirements for LTE based BB-PPDR in the frequency range 410-430 MHz from draft ECC Report 283. This work has been requested by Hungary, Croatia, Czech Republic, Lithuania, Slovenia, Bosnia and Herzegovina, and Ireland. See also **section 6.8**.
3. Standardisation work will need to be triggered for the range 410-430 MHz.
4. IARU-R1 referred to amateur use in the adjacent band and requested consideration of it, as the draft ECC Report and Decision were under development.

**4.4.4 Revision of Recommendation T/R 25-08**

1. WG FM approved the draft revised Recommendation T/R 25-08 on ‘Planning criteria and coordination of frequencies for land mobile systems in the range 29.7-470 MHz’ for public consultation (**Annex 19**). The draft revision includes new recommendations for the cross-border coordination of land mobile systems having different channel bandwidth on both sides of the border for the 400 MHz ranges.
2. In addition, WG FM agreed to send a response liaison statement to WG SE and SE7 in relation to 400 MHz cross-border co-ordination issues (**Annex 20**).

**4.4.5 Work related to ITU-R**

**4.4.5.1 Revision of Recommendation ITU-R SM.2351-2**

1. WG FM approved a CEPT contribution to ITU-R WP1A for the revision of ITU-R Report SM.2351-2 on smart grid utility management to include PMR/PAMR technologies already in use (**Annex 18**). This will be submitted as a CEPT contribution for the June 2018 WP1A SG1 meeting. The UK has agreed to submit this on behalf of WG FM/CEPT. It was noted that the list of abbreviations needed to be amendment.

**4.4.6 FM54 Chairmanship**

1. WG FM re-appointed Mr Kuha Sithamparanathan (UK) as chairman of FM54 by acclamation.

**4.4.7 Other issues**

1. As per the progress report, awareness/concern was noted in relation to MetSat seeking co-primary status in 460 - 470 MHz.
2. An update of the French BB-PMR initiative in 2.6 GHz was also noted.

***4.5 FM PT 56 (RMR)***

**4.5.1 Progress Report**

1. The FM56 Chairman, Mr Vincent Durepaire (F), presented documents FM(18)103 and 104.

**4.5.2 Draft ECC “Report A” on spectrum needs for future railway communication**

1. The latest draft ECC Report #A was presented to WG FM. Main changes are related to sharing with MFCN. It was not possible to complete the draft ECC Report #A in order to send it to public consultation at this WG FM meeting. It is now planned for public consultation approval in September 2018.
2. In this perspective, WG FM agreed to send an LS to ETSI and UIC (**Annex 24**) to encourage them to contribute to the draft ECC Report #A within the timeline above.

**4.5.3 Studies on RMR**

1. WG FM noted the two LS from WG SE and PT1 on the technical studies triggered on RMR.
2. The FM56 Chairman proposed WG FM to consider two new additional bands to be investigated for RMR, other than the 900 MHz range and the 1900-1920 MHz band: the 2.7-2.9 GHz and the 2290-2400 MHz tuning ranges.
3. Based on the views from the administrations, WG FM concluded that the 2290-2400 MHz tuning range would be investigated as an option for FRMCS while the 2.7-2.9 GHz tuning range was rejected.
4. UK opposed investigating the 2300 - 2400 MHz and 2290 - 2300 MHz bands.
5. With regard to the 2290-2400 MHz tuning range, feedback from some administrations showed a tendency in favour of the 2290-2300 MHz band. FM56 is tasked to identify the key elements to be studied by WG SE; FM56 will also consider and confirm the size of the tuning range, so that WG FM at its 92nd meeting can provide all relevant input to WG SE to start the studies.
6. WG FM agreed a LS to inform WG SE (**Annex 25**) about the decision to investigate the 2290-2400 MHz tuning range for LTE/5G-based RMR and that technical studies may be triggered in September 2018.

**4.5.4 Work related to ITU-R (WRC-19)**

1. None.

**4.5.4 Other issues**

1. None.

***4.6 FM PT 57 (WAS/RLAN at 6 GHz)***

**4.6.1 Progress Report**

1. It was noted that FM57 had held one (the second) meeting since the last WG FM. This was preceded by a meeting of SE45. The progress report was noted.
2. Additionally the FM57 Chairman noted the discussions on the regulatory status of WAS/RLAN in the 5925 – 6425 MHz. This was in regard to the appropriate interference margin. It was further noted that ERC Report 25 (ECA Table) would be updated at this WG FM meeting to reflect ‘mobile’ as a co-primary allocation in 5925 – 6435 MHz (see **section 4.9.3**).
3. Finally, the FM57 Chairman noted the intention to hold web meetings between now and the next WG FM meeting in September 2018 to address the Interim CEPT Report and review the CEPT questionnaire results (see **section 4.6.2** below).

**4.6.2 Responses to the questionnaire on 6 GHz**

1. ECO introduced document FM(18)078R1, which was the response to the ECC questionnaire; “Current and Future Trends for the Fixed Services and Status of the Other Incumbent Uses in Europe in the Frequency Band 5925-6425 MHz”. The ECO Summary of the responses was endorsed by WG FM and will be published in the EFIS database. The relevant Project Teams FM57, SE45 and SE19 will be informed about the final summary document by the ECO.
2. ECO reflected the very diverse results amongst the 37 administrations that responded. As an example, some administrations had limited FS deployments, but these could have link lengths up to about 100 km, however the typical link lengths were between 20 - 50 km. In response to question 8, ECO noted that France and Denmark had stated the use of CBTC/Urban rail in the lower portion of the band. ECO stated that this variation of results did not appear to provide any indication as to whether links could be reordered to provide options in the band.
3. France noted the need for FM57 to review the results of this questionnaire and determine what could be drawn from the data submitted and report to the next WG FM meeting (ECO Report 04 was reflected as providing details on FS implementation in CEPT). They added that with the planned use of the 1427-1518 MHz for IMT, the 6 GHz FS range was the lowest frequency band available for the FS in CEPT and that (for those countries planning to remove FS usage in the 1.4/1.5 GHz) the use of narrow channels in the 6 GHz FS band could provide a re-farming option.
4. The UK clarified that they did not have 300 - 400 physical satellite earth stations in the band and that the number was approximately 90.

**4.6.3 Other issues**

1. ETSI informed the meeting that SRdoc TR 103 524 V0.0.11 (2018-02), WAS/RLANs in the band 5925 MHz to 6725 MHz, had already been submitted to the relevant project teams SE45 and FM57. ETSI added that what remained to be discussed by WG FM was the frequency range (6425 to 6725 MHz) as contained in this SRdoc.
2. ETSI also highlighted the comments from ETSI members included in clause 4.1 of this SRdoc.
3. C2C-CC reminded the WG FM that during the preparation of this SRdoc they requested a 20 MHz guard band to be introduced at 5925 MHz, instead of the 10 MHz shown in figure 1 of the SRdoc.
4. In response to the question from the WG FM Chairman on the additional frequency range request made in the SRdoc, France responded that the current frequency range of the ECC work items should remain unchanged as this is also the frequency band within the EC Mandate. This was supported by the Russian Federation, Austria, Switzerland and Norway.
5. WG FM decided not to change the work item.

***4.7 Short Range Devices / Maintenance Group (SRD/MG)***

**4.7.1 Progress Report**

1. Mr Thomas Weber (ECO) presented document FM(18)080. WG FM endorsed the actions of the SRD/MG on the items reported under section 4.7 of the present report.

**4.7.2 ECC/ERC Decisions**

1. For the new draft ECC Decision (18)03 on the withdrawal of ERC/DEC/(01)08 (2.4 GHz movement detectors), see **section 5.2.3**.
2. SRD/MG will work on the revision of ECC/DEC/(06)04, ECC/DEC/(07)01 and an update of ECC/DEC/(12)03; a possible start of a public consultation is planned for September 2018.

**4.7.3 Status of ERC/REC 70-03**

1. WG FM considered the comments received from the Russian Federation during public consultation. The Russian Federation stressed the necessity to use the individual licensing for ALS in 1656.5 - 1660.5 MHz band. This proposal was not supported by the meeting. After discussion, WG FM approved the revision of Annex 10 (Radio microphone applications including assistive listening, device (ALD), wireless audio and multimedia streaming systems) for publication (**Annex 41**). This includes a new entry for Assistive Listening Systems (ALS) in the frequency range 1656.5 - 1660.5 MHz. In addition, WG FM agreed to send a liaison statement to ETSI to request that the technical requirements contained in ECC Report 270 (incl. its Annex 4) and ERC/REC 70-03 - Annex 10 for ALS are included along with suitable test methods in the next revision of EN 300 422-4 and to inform WG FM and SRD/MG of the timescale involved (**Annex 42**).
2. WG FM approved a new Annex in ERC Recommendation 70-03 (new Annex 13) for medical data acquisition applications for public consultation (**Annex 43**). The first entries in this new Annex are for the Ultra-Low Power Wireless Medical Capsule Endoscopy (ULP-WMCE) application and for Medical Body Area Network Systems (MBANS) which are moved out of Annex 2 of ERC Recommendation 70-03.
3. WG FM approved a draft revision of the Annex 2 (Tracking, Tracing and Data Acquisition) for public consultation. It includes a clarification for SRD in data networks in the frequency ranges within 865-868 MHz as well as a new entry for person detection and collision avoidance application operating at 442.2-450 kHz (**Annex 44**).
4. WG FM approved a draft revision of the Annex 3 (Wideband Data Transmission Systems) for public consultation. The changes in this revised version of Annex 3 are for alignment with the EC Decision for SRD (**Annex 45**).
5. The progress of work towards the revision of Annex 1 of ERC Recommendation was noted together with document FM(18)062 containing a liaison statement from ETSI asking the SRD/MG to provide guidance on how harmonised standards should deal with situations where the radio spectrum requirements in the EC Decision for SRDs are not fully aligned with those in ERC/REC 70-03.

**4.7.4 EC related activities**

**4.7.4.1 Permanent Mandate on SRDs**

1. Work progressed on subjects for the CEPT Report in response to the permanent Mandate on SRD (7th update). In particular some decisions for changes, simplifications and clarifications in the UHF range had been decided in SRD/MG to be included in the draft CEPT Report (FM(18)80 - Annex 20). Several input documents were noted from ETSI, WG SE and ASECAP.
2. Document FM(18)067 contains a liaison statement from ETSI in response to a request from WG FM regarding the future usage of the WLAM (Wideband Low Activity Mode) frequency band 24.25 GHz to 24.50 GHz. ETSI informed that the frequency band 24.25 to 24.50 GHz for WLAM mode is no longer necessary in the future and therefore the EC and ECC regulatory framework could be updated as proposed. ACEA/CLEPA is expected to provide a final position later on in the process.

**4.7.4.2 Permanent Mandate on UWB**

1. WG FM approved draft CEPT Report 69 in response to the permanent Mandate on UWB from the European Commission to CEPT, in view of a potential update of Commission Decision 2007/131/EC, for submission to the ECC for public consultation approval and to send it to the European Commission (**Annex 29**). In addition, WG FM agreed to inform ETSI about the time schedule and content of this draft CEPT Report, so that ETSI can consider this information for possible revisions of the related ETSI Harmonised Standards (**Annex 30**).

**4.7.4.3 Mandate on ITS**

1. WG FM discussed the work on the Mandate to CEPT to study the extension of the Intelligent Transport Systems (ITS) safety-related band at 5875-5925 MHz. This includes work on a new ECC Report on sharing of the spectrum by Road-ITS and Urban Rail CBTC applications as well as the development of a draft CEPT Report in response to the Mandate.
2. It seems to be likely that no easy solution could be found for the sharing of ITS-G5 (IEEE technology) and LTE-V2X. WG FM confirmed that the existing principles set out in the interim CEPT Report to the European Commission represent the preferred solution. However, it was agreed to investigate options in the draft CEPT Report, but without indicating any recommendations. Options may include considerations about interim solutions, the possibility to see independent National Road ITS infrastructure decisions in the future and to investigate for Urban Rail (CBTC) ITS an option to use frequencies up to 5935 MHz. Concerning the last point, WG FM agreed a liaison statement to WG SE and SE45 to request studying this aspect in time for having results in line with the schedule of the EC Mandate on ITS (**Annex 40**).
3. During the discussion it was emphasised by some administrations that Urban Rail (CBTC) needs a stable regulatory framework from the beginning which fulfils the bandwidth requirements.
4. Several input documents were noted from ETSI, WG SE and ASECAP. The ASECAP information (FM(18)106) is seen as relevant for the intended revision of ECC/REC/(08)01 and ECC/DEC/(08)01, both on ITS. Document FM(18)065 contains a response liaison statement to the ECC regarding the cooperation between ETSI and ECC on the EC Mandate regarding the extension of the 5.9 GHz band for safety-related ITS. In this LS, ETSI informed WG FM that a joint task force RTJTFIR was created to work on the topic. It will be supported by ERM TG37 and by a STF which had been established. The liaison statement also includes a time line when certain outcome is to be expected.

**4.7.5 Coexistence of RLANs in vehicles**

1. The information from WG SE was noted about the publication of ECC Report 277 as well as the information from ADCO/RED about the need for clarifications for 5 GHz RLAN in vehicles.
2. WG FM approved a revision of the explanatory paper related to RLAN equipment using the 5 GHz bands in vehicles, including the usage under the non-specific SRD regulation (**Annex 47**). This follows the conclusion of WG FM #90 that RLAN use inside cars (passenger cars, lorries, buses) in the band 5150-5250 MHz is allowed at a maximum e.i.r.p. of 25 mW as this power restriction seems to satisfy the demand and results in at least an equivalent attenuation as foreseen for RLAN operation inside buildings and therefore the necessary attenuation to facilitate sharing is provided.
3. In order to prevent that RLAN inside cars operating within these frequency ranges use higher emissions than a maximum e.i.r.p. of 25 mW, ETSI is proposed in a liaison statement from WG FM to consider a “in vehicle mode” is taken into account during the next revision of the EN 301 893 (**Annex 48**).
4. The revised explanatory paper for RLAN usage in cars will be referenced in the introduction of ERC Recommendation 70-03 as well as under ‘frequency issues’ in Annex 13 in relation to the entries for ECC Decision (04)08 (**Annex 49**). WG FM agreed that a public consultation of Recommendation 70-03 - Annex 13 was not necessary.

**4.7.6 SRDs in UHF**

1. Following the information from SRD/MG to WG SE and SE24 directly after the SRD/MG#73 meeting, WG FM #91 discussed the subjects with the aim to confirm the course of action. Some modifications were included at WG FM #91, taking into account doc. FM(18)110 from the United Kingdom, and the approved request is included in a liaison statement in (**Annex 52,** cover letter) and **Annex 37**.
2. Studies could start immediately and some provisional results may be available soon, however it is expected that neither results of WI SE24\_61 nor the results of the proposed new studies would be part of the ongoing 7th update of the EC Decision on SRD.
3. In addition, SRD/MG may look into additional opportunities for SRD in data networks for the bands 865-868 MHz and/or 915-919.4 MHz outside of the RFID interrogator channels. This can be communicated to WG SE / SE24 in September 2018 at the earliest.
4. WG FM considered that it is up to WG SE and SE24 to finally decide how the work for the different frequency bands is organised in their work items (i.e. potentially revised work item SE24\_61 and work item on new studies).
5. The following statements were provided during the WG FM meeting:
6. Switzerland is opposed to new investigations in the band 865 - 868 MHz because the band is heavily used by LORA which operates with 25 mW.
7. France and Switzerland expressed that they are opposed to new studies for additional channels for SRD in data networks within the band 865-868 MHz as they contradicts the conclusions in ECC Report 261. France considered that the balance reached between 25 mW SRDs and 500 mW SRD channel shall remain unchanged within the frequency band 863-870 MHz.
8. Germany and Switzerland did not support any studies for the band 915 - 921 MHz because this band is nationally heavily used by military radio applications and railway applications.
9. Italy stressed that the band 915 - 921 MHz is nationally heavily used by military radio applications.
10. The UK and Sweden supported studies for the bands 915 - 921 MHz and 865 - 868 MHz to facilitate the use of all types of SRD technologies in a technology neutral manner.

**4.7.7 Wireless Power Transmission (WPT)**

1. WG FM considered the work progress in SRD/MG towards a new Annex in ERC Recommendation 70-03 for non-beam Wireless Power Transmission (WPT) applications and endorsed the SRD/MG view that the complete frequency domain information for non-beam WPT applications (in-band emissions, out-of-band emissions and specific aspects for the spurious emission domain) should be visible in this new Annex of ERC Recommendation 70-03. This new Annex for non-beam WPT will only include entries for applications for which study results in WG SE will have been established in the future.
2. WG FM noted that the information from CPG PTD and WG SE and it had been taken into account when drafting the scope of the new Annex in SRD/MG.

**4.7.8 Wideband Data Transmission Systems in 57 - 66 GHz**

1. WG FM agreed on a response liaison statement to WG SE and SE19 (with copy to CPG, CPG PTD, ECC PT1) addressing the current status of activities undertaken under WI SE19\_39 (**Annex 51**).
2. It is the understanding in WG FM that preliminary results confirm that no substantive technical obstacle exists for a general authorisation framework which is seen as the best solution for the band 57-66 GHz.
3. WG FM also allowed SRD/MG to look into the band 66-71 GHz in addition to the band 57‑66 GHz. This can avoid boundary problems at 66 GHz. This proposed change for SRD/MG is not sought to impact the ongoing studies in SE19.
4. See also section 6.2 below.

**4.7.9 SRDs operating below 9 kHz**

1. Following the results of the WG FM questionnaire (document FM(18)070rev1) to CEPT administrations on the need for regulation for license-exempt use of frequencies below 9 kHz, WG FM approved proposals for SRD applications operating below 9 kHz. The proposals include the definition and associated limits for generic inductive applications and inductive loop audio applications in Annexes 9 and 10 of ERC Recommendation 70-03. The proposal was agreed to be sent to ETSI to clarify some questions about the lower frequency limit for practical reasons, the sufficiency of the limits for existing applications and with the question whether ETSI does support the ideas about the proposed way forward (**Annex 46**).
2. The UK supported the SRD/MG view that compatibility studies for the range below 9 kHz are not needed.

**4.7.10 ITU-R contributions**

1. None. SRD/MG currently only follows the developments in relation to WPT (non-beam) and UWB within ITU-R SG1 (WPs 1A and 1B).

**4.7.11 SRD/MG Chairmanship**

1. Mr Weber explained that he will leave the Office at the end of the year 2018. In this regard, CEPT administrations are encouraged to provide a candidate for the SRD/MG chairmanship as soon as possible. After a successor for the SRD/MG chairmanship is identified, practical arrangements for the transition can be discussed later in light of the on-going heavy workload with especially the draft CEPT Reports for the 7th update and for ITS to be approved for publication in autumn 2018, in order to ensure a good and seamless transition.

**4.7.12 Other issues**

1. Document FM(18)068 contains a liaison statement from ETSI in which ETSI ERM TG SRR is seeking guidance from the WG FM on whether or not the term ‘vehicular use’ in the existing regulation for automotive short range radar would also include the usage of radar systems inside the vehicle cabin, e.g. for gesture detection, presence detection or driver health monitoring.
2. WG FM agreed to send a response liaison statement to ETSI on usage of sensors inside vehicles in 76-81 GHz (**Annex 50**).

***4.8 ECC PT1 (MFCN)***

**4.8.1 Progress report**

1. The WG FM Chairman noted that FM had sent a liaison statement to PT1 after its February meeting on the item concerning RMR. He noted the heavy workload of PT1 (i.e. 5G issues, Response to EC Mandates and preparations for WRC-19), and that this might impact the timescales.

**4.8.2 Revision of ERC/ECC Decisions and Recommendations**

**4.8.2.1 Review of ECC Recommendation (08)02 (cross-border coord. in 900 MHz, 1800 MHz; GSM, UMTS, LTE, WiMAX)**

1. The WG FM Chairman noted that a draft revised ECC/REC/(08)02 was expected to be submitted to the next WG FM Meeting for the approval process.

**4.8.2.2 Other cross-border coordination issues**

1. None.

**4.8.3 Other issues**

1. None.

***4.9 EFIS Maintenance Group (EFIS/MG)***

**4.9.1 Progress Report**

1. Mr Stefan Mayer-Bidmon (D), Chairman of the EFIS/MG, presented document FM(18)090, incl. Annexes 1 to 7.

**4.9.2 Review of ECC/DEC/(01)03 on EFIS**

1. Some modifications in Annex 2 (application terminology) of the ECC Decision were made.
2. Annex 2 of the ECC Decision (01)03 (application terminology) was approved for administration consultation (**Annex 33**). It is planned to publish the new Annex 2 after the next ECC meeting.

**4.9.3 Update of ERC Report 25 (ECA Table)**

1. A draft revised ERC Report 25 (ECA Table) was provided to WG FM for PC approval.
2. WG FM decided to keep the information about the amateur and radiolocation use in 3400-3410 MHz but to delete the band 3400-3410 MHz from footnote ECA17 (and the reference to it in the ECA Table). CEPT Report 67 and the draft revised ECC/DEC/(11)06 are noted for MFCN (incl. 5G). This will be further investigated. CEPT administrations are encouraged to provide feedback during the public consultation or directly to WG FM on this subject.
3. Statement of IARU-R1:

*IARU expressed concern with changes to the ECA for the secondary amateur service allocation at 3400 – 3410 MHz proposed after discussions in the EFIS Management Group. These had resulted from work in ECC PT1, which had developed initial structures for the draft CEPT Report in response to the EC Mandate on 5G and the ECC Report on defragmentation guidance. The argument was that taking account of the 5G roadmap and the need to avoid defragmentation there was no place for a secondary allocation to the amateur service in 3400 – 3410 MHz. IARU reminded delegates that 17 administrations (Albania, Andorra, Austria, Bosnia, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, Germany, Montenegro, the Netherlands, Norway, Romania, Slovak Republic and United Kingdom) had notified CEPT of a national amateur allocation in the band 3400 – 3410 MHz, in EFIS.*

*Furthermore, to IARU’s knowledge no compatibility studies had been undertaken to determine whether it was practicable for secondary amateur usage to share with primary IMT-2020 mobile networks for example on a geographical basis or for particular applications such as Earth-moon-Earth communications.*

*IARU furthermore suggested that any spectrum refarming process initiated by CEPT should address co-existence with existing services operating in conformity with the ECA. In addition although there were clear rules on how to enter a new allocation in the ECA no such rules existed for deleting an allocation from the ECA, which should be considered.*

1. WG FM also decided not to delete the addition ‘except aeronautical mobile’ for the mobile service allocation in the frequency band 790 - 862 MHz.
2. The revised list of amendments of ERC Report 25 (ECA Table) is set out in **Annex 31** (this will be published together with the draft revised ECA Table).
3. WG FM approved the draft revised ERC Report 25 (ECA Table) for public consultation (**Annex 32**). The public consultation period is scheduled to end on 31st August 2018.

**4.9.4 RIS Models**

1. WG FM reminded all Project Teams that they should create a RIS Model when revising an existing or preparing a new ECC Decision which relates to an application term. FM44 is requested to provide RIS Models for their new ECC Decisions.
2. A liaison statement was sent to ECC PT1 by WG FM to ask for RIS Models to be sent to the EFIS/MG (**Annex 34**).

**4.9.5 EFIS software developments**

1. Work was done to patch some errors and implement further improvements of EFIS by the ECO to ensure that the system works more correctly and efficiently (Annex 3 to document FM(18)090).

**4.9.6 ECO Report 05**

1. The revised ECO Report 05 was endorsed by WG FM and will be published by ECO **(Annex 35)**.

**4.9.7 ECC Report 180**

1. No action.

**4.9.8 Action points for the administrations**

1. The updated list of the action points is included in the EFIS/MG progress report.
2. The WG FM reminds all administrations to take care of these action points.

**4.9.9 ECO workshop on EFIS**

1. See **section 4.9.10** below.

**4.9.10 Questionnaire on usage of EFIS**

1. EFIS/MG prepared a draft questionnaire on usage of EFIS as agreed at the WG FM #89 meeting (based on the outcome of the ECO workshop on EFIS).
2. WG FM approved the questionnaire to users of the EFIS for distribution (**Annex** **36**).
3. Link to the questionnaire (deadline 7. September 2018):

<https://www.cept.org/ecc/start-page/questionnaire/?id=196>

**4.9.11 Other issues**

1. None.

***4.10 Maritime Forum Group (MAR/FG)***

**4.10.1 Progress report**

1. The progress report of the MAR/FG (FM(18)090) was introduced by Mr Thomas Weber (ECO) on behalf of Mr Jaap Steenge (acting chairman of the Forum Group).
2. Based on the proposal from the Forum Group, WG FM approved a liaison statement to the International Chamber of Shipping (ICS), the International Association of Classification Societies (IACS), the Comité International Radio-Maritime (CIRM) and the International Federation of Shipmasters’ Associations (IFSMA) on the analogue/digital usage of some Appendix 18 (Radio Regulations) channels in the light of the decision making by WRC-15 and the IMO regarding the implementation of VHF channels on board ships before 1st January 2014 (**Annex 54**).
3. Also based on a proposal from the Forum Group, WG FM approved a liaison statement to the Group of Notified Bodies under the Marine Equipment Directive (MED) on “the requirements for Marine Equipment making use of radio frequencies outside the spectrum specified in the MED and SOLAS Convention” (**Annex 55**).
4. WG FM looked favourably on a multiple country proposal for upgrading the Maritime Forum Group to a WG FM Project Team, which was introduced by Romania (FM(18)095). The final decision will depend on the nomination of a candidate for the chairmanship of a future Project Team. Administrations are invited to submit nominations to the WG FM chairman until the next meeting.

***4.11 Radio Amateur Forum Group (RA/FG)***

**4.11.1 Progress Report**

1. Mr Weber presented a short progress report in doc. FM(18)087.

**4.11.2 New entry level licence**

1. A proposal from IARU-R1 has been discussed in the RA FG but IARU-R1 has withdrawn the proposal for the time being. Instead, IARU-R1 indicated to discuss the matter further with individual administrations in hope of gaining support and acceptance for the idea for an Entry Level Amateur Licence (ELL).
2. A short discussion took place. IARU-R1 invited administrations to consider the idea for an Entry Level Amateur Licence (ELL).
3. Belgium informed WG FM that they had introduced a national ELL but were not in favour of free circulation in other CEPT countries with this level of licence. The Netherlands indicated to not support the ELL proposal. Mr Weber reported that Germany stated in RA FG to not support the ELL proposal.

**4.11.3 RA/FG Chairmanship**

1. No administration has provided a candidate for the RA FG chairmanship so far. WG FM decided that Mr Thomas Weber, ECO, would continue as acting chairman of RA FG. WG FM noted that Mr Weber will only be available until the end of 2018.

**4.11.4 Other issues**

1. No changes had been made in the ECC/ERC Recommendations related to the radio amateur service since WG FM #90.
2. As reported at WG FM #90, Brazil (Anatel) has contacted the Office in order to sign a mutual agreement for the operation of radio-amateurs in Europe and Brazil. This is expected to use the format which was included in T/R 61-01 for non-CEPT countries (statement of conformity). The Office has provided Anatel with the necessary information and is waiting for an official reply. IARU-R1 has contacted IARU-R2 and Brazilian colleagues from LABRE (Liga de Amadores Brasileiros de Rádio Emissão) have agreed to support the process with Anatel. In this context, it is also noted that OAS/CITEL is currently working on a revision of their International Amateur Radio Permit.

**5. Work Items in progress within WG FM**

***5.1 Civil-Military meeting***

1. As the next Civil-Military Meeting will only take place after WRC-19, there was nothing to report at this WG FM meeting.

***5.2 General review of ECC/ERC/ECTRA deliverables***

1. The general review of ECC/ERC Deliverables was considered (document FM(18)066 - Annex 1). The WG FM Chairman noted the responses to the public consultation on three withdrawal ECC Decisions in document FM(18)071 - Annex 1.
2. Based on the conclusions during the WG FM meeting, a revised version of the list of ECC/ERC/ECTRA Decisions was agreed which will be submitted to the ECC (**Annex 53**).

**5.2.1 Withdrawal of ECC/DEC/(15)02 on Broadband DA2GC in 1900 – 1920 MHz**

1. The new draft ECC Decision (18)01 for the withdrawal of ECC Decision (15)02 on Broadband Direct-Air-to-Ground in 1900-1920 MHz was adopted for submission to the ECC for final approval for publication (**Annex 26**). There were no comments.

**5.2.2 Withdrawal of ECC/DEC/(07)02 on BWA in 3.4 – 3.8 GHz**

1. The new draft ECC Decision (18)02 for the withdrawal of ECC Decision (07)02 on Broadband Wireless Access systems in 3.4 - 3.8 GHz was adopted for submission to the ECC for final approval for publication (**Annex 27**). There were no comments.

**5.2.3 Withdrawal of ERC/DEC/(01)08 on SRD (movement detection and alert in 2.4 GHz)**

1. The new draft ECC Decision (18)03 for the withdrawal of ERC/DEC/(01)08 (2.4 GHz movement detectors) was adopted for submission to the ECC for final approval for publication (**Annex 28**). It was made clear in discussions that the application (movement detection and alert in 2.4 GHz) is captured within ERC/REC 70-03 and the EC Decision for SRD.

**5.2.4 Withdrawal of ECC/DEC/(11)04 on PMR/PAMR/PPDR terminals**

1. This item will be further considered at the September meeting of WG FM.
2. ETSI kindly provided feedback in relation to the proposal to withdraw ECC Decision (11)04 on PMR/PAMR/PPDR terminals (see doc. FM(18)111). However, the FM54 Chairman reminded all that the request to ‘maintain’ exemption status of DMO use was never included in ECC Decision (11)04 in the first place. This only related to TMO use under network control. FM54 will await further feedback from PSCE, PSRG and aim to provide a draft withdrawal decision at the next WG FM in September 2018.

**5.2.5 Review of ECC Decisions based on ECC Report 272**

1. The FM44 Chairman presented the list of ECC decisions related to exemption of individual licence for earth stations that needed to be updated, with the details (conclusions) contained in ECC Report 272 (document FM(18)105 - Annex 1). He explained that FM44 had identified revisions, required to ECC Decision (13)01, and proposed that the ECC Decision should be submitted for public consultation in order to obtain feedback before reviewing other ECC Decisions that also have content related to ECC Report 272. The meeting agreed, along with the proposal to revise all relevant ECC Decisions at the same time. The WG FM Chairman will inform the ECC Plenary on this planned way forward.
2. The FM PT44 Chairman explained that the main objective here was to remove constraints no longer considered necessary. Draft amendments to ECC/DEC (13)01 were presented to illustrate the proposed solution (document FM(18)105 - Annex 2).
3. The Russian Federation proposed to explicitly mention the earth stations concerned in bullet 8.c of the Annex 1 to draft revised ECC/DEC(13)01. The meeting agreed this. The FM44 Chairman clarified that item 8.d of Annex 1, dealing with TDMA networks, applies to all types of earth stations mentioned in items; 8.a, 8.b and 8.c of Annex 1 of said ECC Decision.
4. WG FM approved the draft amended ECC Decision (13)01 for public consultation (**Annex 11**).
5. WG FM will provide a list of relevant ECC Decisions to be reviewed to the ECC (**Annex 10**).
6. The FM44 Chairman presented a proposal for a new ECC Recommendation “Guidance and method of calculating HIRF level from high e.i.r.p. fixed earth station located outside of the wedge shaped area of an airport or helipad”. He clarified that this new ECC Recommendation will assist administrations in assessing whether large earth stations, typically gateways with high e.i.r.p., comply with HIRF protection levels of aircraft when installed around airports. The ECC Recommendation may help administrations when applying the results of the ECC Report 272 for licenced earth stations at known fixed locations (this case is not covered by the previous discussed ECC Decisions).
7. The meeting approved a new work item for FM44 to develop a new ECC Recommendation on “Guidance and method of calculating HIRF level from high e.i.r.p. fixed earth station located outside of the wedge shaped area of an airport or helipad”.

**5.2.6 Review of ECC/ERC Recommendations**

1. The FM44 Chairman presented the FM44 review of ECC Recommendations, applicable to the satellite sector, as requested by a previous WG FM meeting (document FM(18)105 - Annex 6)
2. Based on FM44 proposals, it was agreed by WG FM that Recommendations ECTRA/REC/(01)02, ECTRA/REC/(99)02, ERC/REC 11-01, T/R 75-04 (all in the satellite service domain) could be withdrawn at the next WG FM meeting. Administrations are invited to provide their views for the next FM44 meeting.
3. The FM44 Chairman mentioned that ECC/REC/(11)08 on indoor pseudolites is proposed to be retained for the time being but this may be reconsidered. Administrations are invited to provide their views. It was also agreed to consider statistics collected by FM22 on relevant interference cases, as a basis to discuss whether to revise this ECC Recommendation.
4. ECO noted that for ECC/REC/(11)08 on indoor pseudolites, and for ECC/REC/(10)02 on GNSS repeaters, no Harmonised Standards exist under the RE-D.

***5.3 Fixed Service (FS) related items***

1. WG FM agreed an LS to ETSI requesting information about FS related standardisation activities on Harmonised Standards (relevant for the ECA Table and ECO Report 04). See **Annex 22**.

**5.3.1 ECO Report 04**

1. A new version of the ECO Report 04 on implementation status of fixed service in Europe was prepared by the ECO, updated 3 May 2018.
2. WG FM endorsed the updated ECO Report 04 for publication. The document is available in **Annex 38** and also on the EFIS webpage (<http://www.efis.dk/reports/ReportDownloader?reportid=5>).

***5.4 Roadmap on 5G***

1. The WG FM Chairman introduced the latest version of the CEPT Roadmap on 5G as agreed by ECC #47 in March 2018 (FM(18)066 - Annex 2). After some discussion and by taking into account the relevant outcome achieved during the WG FM meeting, the meeting agreed to propose amendments as provided in **Annex 39** to the forthcoming ECC plenary meeting.

***5.5 Spectrum regulation for drones***

1. The CG Chairman Mr Florian Cziczatka (AUT) gave an update of the activity of the CG. The main task since the official announcement of the CEPT Workshop on drones (see 5.5.2 below) was organising the speakers and presentations.

**5.5.1 Frequency options**

1. Concerning the frequency options, there has been no further action since the last WG FM meeting. Further valuable information on this issue will be provided in the course of the workshop.
2. Therefore, a web meeting is scheduled after the workshop on drones.
3. The meeting also endorsed the request of the CG to have an additional face-to-face meeting, further developing the frequency options as well as incorporating the results of the workshop.

**5.5.2 CEPT Workshop on drones (29 - 30 May 2018, Copenhagen)**

1. The programme as well as the speakers’ list is available on the webpage of the workshop (<https://cept.org/ecc/tools-and-services/cept-workshop-on-spectrum-for-drones-uas>).
2. For interested parties the registration link for the workshop is open under: <https://cept.org/ecc/groups/ecc/client/meeting-calendar/event-registration/?meetingid=2182>.

**5.5.3 Other issues**

1. None.

***5.6 Information on LSA implementation***

1. No new information received since last WG FM meeting. CEPT administrations are invited to provide information to the ECO about national LSA implementations.

***5.7 Maintaining the WI95revCO07 and MA02revCo07 plans***

1. No change requests/new information since the last WG FM meeting.

**6. New work items**

***6.1 Audio PMSE within 25 MHz – 3 GHz***

1. ETSI TR 102 546 System Reference Document (SRdoc) on technical characteristics for Audio PMSE systems in the frequency range 25 MHz to 3 GHz under preparation. No frequency request is foreseen from this revision.

***6.2 Multiple Gigabit Wireless Systems (MGWS) within 57 – 71 GHz***

1. System Reference Document TR 103 583 on “Technical characteristics of multiple gigabit wireless systems (MGWS) in radio spectrum between 57GHz and 71GHz”:
2. A move of the allocation for ITS towards 63.72-65.88 MHz to only overlap with one Wigig channel is under discussion in ETSI. It is expected that ETSI ERM will provide the SRdoc under preparation in June 2018. It should be directly delivered to SRD/MG because of the timeframe of the ITS Mandate. See also the amended SRD/MG work item 44.

***6.3 Frequency band 1900 – 1920 MHz (DECT)***

1. SRdoc ETSI TR 103 149 under preparation. It will include updated information on DECT and DECT ULE. Further, the revision will inform about the running activities at ETSI towards DECT evolution and DECT-2020 targeting to serve new application domains like Wireless Automation, Industry 4.0 and Creative and Culture Industry including PMSE.

***6.4 High-Definition Ground Based Synthetic Aperture Radars***

1. Draft TR 103 594 System Reference Document on “Technical characteristics and spectrum requirements for High-Definition Ground Based Synthetic Aperture Radars (HD-GBSAR) operating in a 1 GHz channel within 74 GHz to 81 GHz tuning range” is approaching the approval procedure.

***6.5 Level Probing Radars***

1. Preliminary information indicates that the current regulation should be reviewed in the light of half sphere concept and the needs from the market. The expected SRdoc will for example request a more flexible approach for the current requirement of a strict downwards pointing directional antenna. TR 103 595 - SRdoc on LPR within 75 GHz to 85 GHz is under preparation in ETSI. Proposals for LPR are also included in the Systems Reference Document on radiodetermination applications in 120-260 GHz, see **section 6.7**.

***6.6 SRD equipment using Nuclear Magnetic Resonance (NMR) technology in the frequency range 1 - 50 MHz***

1. WG FM was informed that the draft SRdoc had been completed and is approaching the approval procedure.

***6.7 UWB radiodetermination in the range 120 - 260 GHz***

1. The ETSI Liaison Officer introduced document FM(18)079 containing a liaison statement and a Systems Reference Document on UWB radiodetermination in 120-260 GHz. The document explains the need for additional spectrum allocations for UWB radiodetermination devices in order to cover measurement tasks which cannot be conducted adequately at the moment due to the limited bandwidth in the existing frequency bands 122-123 GHz and 244-246 GHz, although the UWB technology is already available to do so.
2. The IARU-R1 pointed out that a bullet point is missing in the list in clause 7.2.1.2 (section on ‘other radio users’). The bands 134 to 136 GHz and 248 to 250 GHz are allocated to the Amateur service on a primary basis.
3. The SRD/MG was tasked to analyse the proposal from ETSI and to report their findings at the next WG FM meeting so an appropriate decision can be taken at that meeting. For type A sensors (outdoor usage), it should be discussed, whether the scope should be widened to include all types of sensor applications, e.g. also in the automotive sector.

***6.8 Frequency band 410 – 430 MHz***

1. Hungary introduced a multi-country proposal (FM(18)097) for a new work item on the revision of ECC/DEC/(16)02 concerning the inclusion of spectrum within the range 410-430 MHz, based on the outcome of the technical studies in WG SE (draft ECC Report 283).
2. See also **section 4.4**, FM54 (new Work Item FM54\_05, **Annex 21**).

**7. European Telecom Policy and Follow-up**

***7.1 EC recent activity***

1. The latest EC activity was presented by the EC counsellor Mr Giuseppe Rizzo.

**7.1.1 RSC#63 meeting (14 – 15 March 2018)**

1. The EC Counsellor Mr Rizzo informed the meeting that the 63rd RSC meeting of 14 March 2018 approved the text of a Commission Implementing Decision on the extension of the 1.5 GHz download-only band (now becoming 1427-1517 MHz). The Decision ((EU) 2018/661) was published on 26 April.
2. Following a positive RSC vote, a Decision was adopted concerning new technical conditions in the 900 and 1800 MHz bands in support of cellular IoT applications ((EU) 2018/637 of 20 April).
3. Discussions on IoT in unlicensed spectrum in the 874-876 MHz and 915-921 MHz bands resulted in a stable text. The Commission will submit that text for opinion (in view of its adoption) at the next RSC meeting of 11-12 July.
4. The RSC also discussed the draft text of a Commission Mandate to the CEPT on spectrum for railways. Having subsequently received written comments from some Member States, the Commission will submit the updated text of the Mandate to the next RSC meeting for adoption.

**7.1.2 RSPG#45 meeting (30 January 2018)**

1. There were no RSPG meetings since the previous WG FM. Info doc 002 (RSPG#45 of 30 January 2018) was provided for information as it was not yet available at the previous meeting.

***7.2. ETSI recent activity***

**7.2.1 Overview on ETSI SRdocs**

1. The meeting was informed about the document under [https://portal.etsi.org/Portals/0/TBpages/ERM/Docs/ERM SRdoc overview.doc](https://portal.etsi.org/Portals/0/TBpages/ERM/Docs/ERM%20SRdoc%20overview.doc) which provides an up-to-date list and status of all SRdocs currently in the pipeline within ETSI.

**7.2.2 Directive 2014/53/EU (RE-D) of 16 April 2014**

1. The meeting was also reminded on the RED section on the ETSI portal (<http://www.etsi.org/red>) where ETSI maintains information about the RED including the list of standards already published by ETSI. As informed earlier, being published by ETSI doesn’t mean these standards are published also in the OJEU. The EC is doing a detailed review of standards before they are listed in the OJEU and quite a number of standards have been refused because of issues with the measurement uncertainty, missing receiver requirements or issues with the applicable performance criteria which often can be declared by the manufacturer. So there are still a number of harmonised standards that are not yet published in the OJEU.
2. The EC is now executing the action plan that they announced in their TCAM meeting by the end of 2017. So they got engaged with Ernst & Young who is in the process of hiring a number of consultants that can take active part in ETSI during the development of a standard and raise comments prior to the completion of the work.
3. During the last ETSI GA meeting, changes were approved to the ETSI Rules of Procedures, in particular the section on ENAP. The objective was to clarify and rationalize the EN Approval Process (ENAP) and to address the issues raised during the implementation of the RED. This review has been driven by three main objectives:

- ensuring that the ENAP complies with the EC regulation, the NSOs and the TBs requirements;

- clarifying the categorization of comments received during the Public Enquiry session;

- highlighting the role of the EC during the whole process.

**7.2.3 Other issues**

1. None.

**7.2.4 Overview on ECC deliverables**

1. In accordance with the cooperation process between ECC and ETSI, WG FM informs ETSI as appropriate about the following ECC deliverables:

**a) Deliverables (CEPT Reports / ECC Decisions) adopted for submission to the ECC for final approval for publication or for approval for Public Consultation**

1. Draft CEPT Report on 69 UWB (**Annex 29**), for PC;
2. Draft ECC Decision (18)05 on ESIM operating with NGSO FSS satellite systems in the Ku band (**Annex 07**), for publication;
3. Draft ECC Decision (18)04 on land based ESIM with GSO FSS satellite systems in the Ku band (**Annex 08**), for publication;
4. Draft ECC Decision (18)01 on the withdrawal of ECC Decision (15)02 on DA2GC in 1900-1920 MHz (**Annex 26**), for publication;
5. Draft ECC Decision (18)02 on the withdrawal of ECC Decision (07)02 on BWA in 3.4 – 3.8 GHz (**Annex 27**), for publication;
6. Draft ECC Decision (18)03 on the withdrawal of ERC Decision (01)08 on SRDs used for Movement Detection and Alert operating in 2400 - 2483.5 MHz (**Annex 28**), for publication;

**b) Other deliverables adopted for submission to the ECC**

1. List of ECC Decisions that need revision with the help of ECC Report 272 results; for ECC information (**Annex 10**);
2. Draft amended 5G Roadmap for endorsement by ECC (**Annex 39**);
3. Updated list of review of ECC/ERC/ECTRA Decisions for endorsement by ECC (**Annex 53**);

**c)** **Deliverables finally approved for publication (ECC Recommendations / ECC Reports)**

1. Revised ECC Recommendation (05)01 on “Harmonisation of automatic measuring methods and data transfer for frequency band registrations” (**Annex 14**);
2. Draft revised Annex 10 of ERC Recommendation 70-03 on SRDs (**Annex 41**);
3. Informative “Annex A” to ERC Recommendation 70-03 on SRDs, on applications operating under general authorisation (Annex 49);
4. New ECC Report 280 on Satellite solutions on 5G (**Annex 05**);
5. New ECC Report 279 on ESIM operating to NGSO satellite systems in the Ku band (**Annex 06**);
6. Updated ECO Report 05 (List of CEPT, ECC and EC deliverables) (**Annex 35**);
7. Updated ECO Report 04 on the implementation status of the FS in Europe (**Annex 38**);

**d) Deliverables approved for Public Consultation - ECC Decisions / ECC Recommendations / ECC Reports**

1. Draft revised ECC Decision (13)01 on ESOMPs within the Ka band (**Annex 11**);
2. Draft revised Recommendation T/R 25-08 on planning criteria and coordination of frequencies for land mobile systems in the range 29.7-470 MHz (**Annex 19**);
3. Draft revised Annexes 2, 3 and 13 of ERC Recommendation 70-03 on SRDs (**Annexes 44, 45 and 43**);
4. Draft new ECC Report 285 on best practices for video PMSE in the 2.7-2.9 GHz band (**Annex 16**);
5. Draft new ECC Report 286 on body effect of handheld and body worn audio  
   PMSE equipment (**Annex 17**);
6. Draft revised ERC Report 25 (ECA Table) (**Annex 32**). Appendant a list of the amendments of the ECA Table in **Annex 31**;
7. Modified Annex 2 of ECC Decision (01)03, approved for Administration Consultation (**Annex 33)**;

**e)** **Other deliverables**

1. CEPT contribution on Report ITU-R SM.2351-2 on “Smart grid utility management systems” (**Annex 18**);
2. LS to ETSI on FS issues (**Annex 22**);
3. LS to ETSI and UIC on FM 56’s “ECC Report A” timeline (**Annex 24**);
4. LS to WG SE on the range 2290 - 2400 MHz for FRMCS (**Annex 25**);
5. LS to ETSI on an amendment of the EC DEC on UWB (**Annex 30**);
6. LS to ECC PT1 on RIS Models/Templates (**Annex 34**);
7. LS to WG SE /PT SE 24 on “Proposed conclusions and clarifications about request SRD UHF studies in WG SE / PT SE24” (**Annex 52**), together with an attachment (**Annex 37**);
8. LS to WG SE on CBTC vs RLAN (**Annex 40**);
9. LS to ETSI on ALS at 1600 MHz to be included in EN 300 422-4 (**Annex 42**);
10. LS to ETSI on SRD applications operating below 9 kHz (**Annex 46**);
11. LS to ETSI on a revised explanatory paper related to RLAN equipment using the 5 GHz bands in vehicles (**Annex 48**). The revised explanatory paper is attached to the LS (**Annex 47**);
12. LS to ICS, IACS, CIRM and IFSMA on “Implementation of VHF channels on board ships” (**Annex 54**);
13. LS (response) to WG SE on x-border coordination in 400 MHz (**Annex 20**);
14. LS (response) to PT1 on TRP measurements (**Annex 23**);
15. LS (response) to ETSI on radar sensors in 76-81 GHz inside vehicles (**Annex 50**);
16. LS (response) to WG SE on 60 GHz (**Annex 51**);
17. LS (response) to MarED on spectrum for radio equipment in the marine environment (**Annex 55**);
18. List of number of interferences at meteorological radars caused by 5 GHz RLANs in 2017 (**Annex 12**);
19. WG FM questionnaire to CEPT administrations on interference cases in 2018 (**Annex 13**);
20. EFIS questionnaire to users of EFIS (**Annex 36**);
21. New Work Item FM44\_34 on ESIM installed on aircrafts in 12.75 -13.25 GHz (**Annex 09**);
22. New Work Item FM22\_35 on the revision of ECC Recommendation (12)03 (**Annex 15**);
23. New Work Item FM54\_05 on the revision of ECC Decision (16)02 on BB PPDR (**Annex 21**);
24. Further information is available on the WG FM website:

<https://cept.org/ecc/groups/ecc/wg-fm/news/results-of-the-wgfm91-in-pratteln-switzerland-14-18-may-2018/>

**8. Any Other Business**

***8.1 ECO Bulletin and assistance to WG FM***

1. Mr Thomas Weber (ECO) presented doc. FM(18)089 on the ECO assistance to WG FM including the ECO Bulletin presented at the last ECC meeting (doc FM(18)064). In relation to item 2 in the ECO Bulletin, Mr Weber (ECO) reported that, in a similar action, he was informed by a number of CEPT administrations about interest expressed by Globalstar to use frequencies in the band 2483.5 – 2500 MHz for LTE technology as part of terrestrial land mobile services in the whole territory of these countries.
2. Mr Thomas Weber explained that it is possible to subscribe to a monthly update alert service in the new documentation database under: <https://www.ecodocdb.dk/document/updateHistory>.
3. Administrations are requested to inform their FS experts to provide or update the national implementation information in the Fixed Service section of the EFIS database under: <https://www.efis.dk/views2/fixedservicerecommendations.jsp>.
4. Administrations are invited to check and update their national contact points under: <https://cept.org/ecc/national-administration-and-contact-points>.

**9. Report to next ECC plenary meeting**

1. It was agreed that the WG FM Chairman would prepare a report based on the conclusions of this meeting and present it to the next ECC Plenary meeting.

**10. WG FM Work Programme, Meeting Schedule, Working Methods**

***10.1 Work Programme***

1. The WG FM Chairman reminded that Chairmen of PTs, MGs, CGs and FGs in cooperation with Mr Thomas Weber (ECO) should incorporate or update information on work items in the ECC work programme database (http://eccwp.cept.org). This will need to be carried out within one week after the WG FM meeting.
2. Also the WG FM delegates are invited to report about any mistakes or missing information with respect to the work items (WI) of WG FM to Mr Thomas Weber (ECO).

***10.2 Meeting Schedule***

1. The WG FM Chairman invited the participants to note the Schedule of Meetings in 2018 and consider possible venues for the first WG FM meeting in 2019 and for all WG FM meetings in 2020.
2. The schedule for future WG FM and Project Team meetings with indicating ECC, ECC PT1 meetings is as follows:

| **Meeting** | **Date** | **Place** |
| --- | --- | --- |
| **ECC CEPT Workshop on Spectrum for Drones/UAS** | **29 – 30 May 2018** | **Copenhagen, Denmark Workshop** |
| FM54 #19 | 04 – 05 June 2018 | Helsinki, Finland |
| FM56 #6 | 06 – 07 June 2018 | Helsinki, Finland |
| SRD/MG on ITS | 11 June 2018 | Web-meeting |
| SRD/MG on ITS | 14 June 2018 | Web-meeting |
| FM CG Drones | 19 June 2018 | Web-meeting |
| FM Maritime FG Ad-hoc group meeting | 19 June 2018 | Copenhagen, Denmark |
| FM Maritime FG #32 | 20 – 22 June 2018 | ECO, Copenhagen |
| **ECC #48** | **03 – 06 July 2018** | **Rome, Italy** |
| FM57 #3 | 13 July 2018 | Web-meeting |
| FM CG Drones | 29 – 30 August 2018 | Prague, Czech Republic |
| FM44 #49 | 04 – 06 September 2018 | TBD |
| SRD/MG #74 | 05 – 07 September 2018 | Mainz, Germany |
| FM54 #20 | 10 – 11 September 2018 | Vienna, Austria |
| FM22 #50 | 11 – 14 September 2018 | ECO, Copenhagen |
| FM56 #7 | 12 – 14 September 2018 | Vienna, Austria |
| EFIS/MG #42 | 19 – 20 September 2018 | Madrid, Spain |
| SRD/MG x/o meeting on ITS | 17 – 18 September 2018 | ECO, Copenhagen |
| ***WG FM #92*** | ***24 – 28 September 2018*** | ***Vilnius, Lithuania*** |
| FM57 #3 | 04 October 2018 | Maisons Alfort, France |
| **ECC #49** | **23 – 26 October 2018** | **France** |
| FM56 #8 | 04 – 05 December 2018 | Lille, France |
| FM54 #21 | 06 – 07 December 2018 | London, United Kingdom |
| FM57 #4 | 13 December 2018 | TBD |
| FM44 #50 | 17 – 19 December 2018 | TBD |
| SRD/MG #75 | 19 – 21 December 2018 | ECO, Copenhagen |
| ***WG FM #93*** | ***04 – 08 February 2019*** | ***TBD*** |
| **ECC #50** | **05 – 08 March 2019** | **TBD** |
| ***WG FM #94*** | ***03 – 07 June 2019*** | ***[city t.b.d], Estonia*** |
| **ECC #51** | **02 – 05 July 2019** | **TBD** |
| … | … | … |

1. Further information is available on the ECO website: <http://www.cept.org/ecc/meeting-calendar>.

**11. Minutes of the Meeting**

1. WG FM approved the Minutes of the meeting. It was agreed that the WG FM Chairman and the Secretariat could improve the text and correct mistakes as necessary following the meeting.

**12. Closure of the Meeting**

1. The WG FM Chairman thanked the Federal Office of Communications (OFCOM) of Switzerland for hosting the meeting. He especially addressed his thanks to Ms Tania Molinari and Mr Ivan Franic from OFCOM and their colleagues in the background for the excellent organisation of the meeting. Then he thanked the staff of the hotel “Courtyard by Marriott Basel” for the support on site.
2. Once again the WG FM Chairman thanked Mr Konrad Vonlanthen, Head of Frequency Assignment, for the kind opening speech and Mr Philippe Horisberger, Deputy Director of OFCOM Switzerland, for his kind words at the social event.
3. In addition he thanked for the social event on Wednesday evening. The participants of the meeting joined a very interesting guided tour through the historic Feldschlösschen castle-style brewery building complex in Rheinfelden, close to Pratteln. This tour was followed by a rustic and delicious BBQ and participants enjoyed various fine beer types.
4. The WG FM Chairman thanked the WG FM delegates, the Project Team / MG / FG / CG chairmen, the ECO (Mr Thomas Weber) and his Vice Chairmen Mr Stephen Talbot (UK) and Mr Vincent Durepaire (F) for their support.
5. He also thanked his WG FM administrative secretary Mr Ali Daheur (D) and his technical secretary Mr Silvio Schwarz (D) for their active assistance.
6. Finally he closed the meeting and wished all the delegates a safe journey home.

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1. https://cept.org/ecc/groups/ecc/wg-fm/fm-22/page/annual-radio-interference-statistics-and-special-interference-cases/ [↑](#footnote-ref-2)