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| Working Group FM | Doc. FM(18)059 |
| 90th Meeting |  |
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**1. Opening of the Meeting**

1. The WG FM Chairman, Mr Thomas Weilacher (D), opened the 90th meeting of WG FM and welcomed the participants to the venue, the IET Birmingham Austin Court conference centre.
2. He thanked the UK’s communications regulator Ofcom for inviting WG FM to the second largest city of the United Kingdom.
3. Mr Chris Woolford, Director of International Spectrum Policy at Ofcom, welcomed the WG FM delegates to Birmingham.
4. He highlighted that it is a pleasure for him to open a meeting that covers such a huge variety of topics regarding spectrum management.
5. Further he delivered quite interesting facts about Birmingham: more canals than Venice, a paradise for shoppers, birthplace of heavy metal music, first X-ray performed worldwide in 1896, and many more.
6. Finally Mr Woolford wished the group a successful meeting and proposed to also enjoy local bars and restaurants if time permits.
7. The meeting was attended by 90 delegates from 31 CEPT administrations and 17 company representatives, international organisations, including EC, ECO and ITU. The list of participants is given in **Annex 02**. The WG FM Chairman informed the meeting that Liechtenstein had given a proxy to Switzerland and that individual invitations had been provided by him to Intelsat and OneWeb. He also welcomed the representative of RAIN RFID, a new ECC LoU partner.
8. The list of 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)001R3. The references to the latest contributions were added, 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 46th ECC meeting, 14th - 17th November 2017, in Bucharest / Romania (FM(18)008) and highlighted the most relevant aspects. The WG FM meeting took into account the relevant plenary decisions. Annex 3 of the report shows the latest amendments of the ECC Working Methods as agreed by ECC#46. The other Annexes of doc. FM(18)008 were introduced under the relevant agenda items.

***3.2 Report from WG SE***

1. The WG FM Chairman referred to the meeting report of the 78th WG SE meeting, 22 - 26 January 2018, in Rome / Italy (FM(18)057). 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 if necessary. The liaison statements from WG SE were introduced and discussed under the relevant agenda items.

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

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

**4.1.1 Progress Report**

1. The Chairman of FM22, Mr Ralf Trautmann (D), presented doc. FM(18)023, the annual report of the Project Team.
2. The next meeting of FM22 will be held from 17 to 20 April 2018 at ECO.

**4.1.2 HF monitoring campaign**

1. The automatic observation of the HF frequency range from several monitoring stations is ongoing.

**4.1.3 Radio interference statistics**

1. The annual questionnaire on interference statistics regarding the interference cases in 2017 had already been distributed by ECO. The Chairman of WG FM encouraged administrations to respond to this questionnaire.

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

1. The Chairman of WG FM presented documents FM(18)007 and FM(18)008 - Annexes 4 and 5 - to introduce the topic. These documents are liaison statements from ADCO/RED to WG FM and vice versa as well as the ECC#46 action plan on 5 GHz interferences.
2. The FM22 Chairman had liaised with the Chairman of ADCO/RED and they agreed on a reporting form to be filled by the field staff for each relevant interference case. The filled forms should be sent to the national market surveillance authorities and form the basis for a later market surveillance campaign. Mr Trautmann introduced doc. FM(18)019 which had been sent to the FM22 email reflector. This document calls administrations to participate in the campaign and to report each individual interference case by using the reporting form in Annex 1 to doc. FM(18)019.
3. The results will be discussed at the next FM22 meeting and Mr Trautmann will report to the next WG FM meeting.

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

1. Mr Trautmann reported the outcome of the public consultation regarding the draft revision of ECC/REC/(05)01 on the harmonisation of automatic measuring methods and data transfer for frequency band registrations. The Russian Federation had provided proposals which require further discussion during the next FM22 meeting.
2. Mr Trautmann will provide the FM22 outcome at the next meeting of WG FM.

**4.1.6 Work related to ITU-R**

1. None.

**4.1.7 Physical Cell Identifier (PCI)**

1. The French administration awaits statements of equipment manufacturers regarding the display of false LTE Cell IDs even at minor frequency mismatches.
2. The meeting agreed to extend the deadline of WI FM22\_32 by one meeting cycle. If no contributions are received at the next FM22 meeting, the proposal will be to close the work item.

**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)17, a liaison statement from PT1 on the use of TRP limits for 5G in 3400 - 3800 MHz. Annex 1 of this document contains a draft ECC Report on analysis of the suitability of the regulatory technical conditions for 5G MFCN operation in the 3400 - 3800 MHz band.
2. Mr Trautmann explained that it is still unclear how to measure TRP in the field.

**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 the progress report of the group as in document FM(18)036R1.

**4.2.2 Review of ECC Report 66 (ECC Report 272)**

1. The PT Chairman presented the LS from WG SE informing on the final adoption of the ECC Report 272 (doc. FM(18)053) superseding ECC Report 66. These technical results were originally requested by WG FM in accordance with WI FM44\_27.

**4.2.2.1 Review of related ECC Decisions**

1. It was noted that the last ECC meeting agreed in allowing FM44 to revise the concerned ECC Decisions on satellite earth stations based on ECC Report 272 (doc. FM(18)008 - Sec. 8.13).
2. WG FM tasked FM44 to present the list of concerned ECC Decisions and the expected amendments at the next WG FM meeting.
3. The PT Chairman informed the meeting that FM44 will also work with administrations wishing to elaborate guidance for the management of national coordinated earth stations exceeding EIRP levels of ECC Report 272. In this scope, FM44 could have further cooperation with the European Aviation Safety Agency.

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

1. FM44 had sent the draft new ECC Report 280 to ECC PT1 for comments in November 2017. ECC PT1 had not sufficient time to provide a detailed response to FM44 and high level comments were therefore provided directly to WG FM so that those comments could be addressed before deciding whether to send the draft ECC Report 280 for public consultation (see doc. FM(18)037).
2. Luxembourg, the Netherlands and Germany provided to the meeting proposals to handle ECC PT1 comments and how to implement them in the draft ECC Report 280 (see doc. FM(18)040).
3. A drafting group was organised to examine those proposals with Finland, France, Germany, Luxembourg, the Netherlands, Portugal, Russian Federation, Sweden, United Kingdom, Intelsat and the GSMA.

Sweden and Finland made statements concerning a preferred way in order to move forward with the draft ECC Report 280, e.g. pointing to the importance of ECC to made aware of the details of this deliverable as part of the CEPT Roadmap on 5G. From their point of view and given the late response from ECC PT1 on the draft ECC Report 280, WG FM would not be the right entity to approve the document for PC at this point in time. They added, in their view, that ECC PT1 should have an opportunity to react to the latest version of the draft ECC Report 280.

1. Luxembourg, the Netherlands, Germany and France were of the view that ECC is well informed about this work item, because it had been considered at ECC level with regard to the 5G Roadmap. They proposed to approve the draft ECC Report 280 for PC. This would provide an opportunity to receive comments from stakeholders.
2. WG FM decided to send the draft ECC Report 280 on satellite solutions for 5G to the ECC (**Annex 24**). ECC is requested to approve the draft ECC Report 280 for public consultation. WG FM #91 in May 2018 will consider the final approval of the draft ECC Report 280 for publication, after comment resolution in FM44. FM44 will schedule a dedicated extraordinary meeting to conduct the comment resolution and bring this to the attention of ECC PT1.

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

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

1. The PT Chairman presented the draft new ECC Report 279 (doc. FM(18)036R1 - Annex1R1) and ECO mentioned some editorial upgrades. As there were no other comments on the document, the WG FM agreed to approve it for public consultation (**Annex 05**).

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

1. The PT Chairman presented the draft new ECC Decision (18)EE (doc. FM(18)036R1 - Annex2R1)
2. The Russian Federation stated that ESIM shall operate on a non-protected basis with regard to the fixed service stations in the whole frequency band 10.7-12.75 GHz, covered by the draft ECC Decision, not only in the band 10.7-11.7 GHz.
3. Mr Azzarelli (OneWeb) and the PT Chairman explained that this draft ECC Decision refers to the ERC Decision (00)08 which describes the sharing between FS and uncoordinated FSS earth stations in those bands. Therefore the draft new ECC Decision is coherent with the current CEPT regulatory framework.
4. It was also clarified that the ECC Decision (17)04 on fixed earth stations operating in the NGSO FSS, in the bands 10.7-12.75 GHz and 14.0-14.5 GHz, contains such a requirement only for the band 10.7-11.7 GHz. The Russian Federation informed that it will analyse the national usage of the band 11.7-12.5 GHz by fixed stations and provide comments during the public consultation, if necessary.
5. Sweden, the Netherlands, Germany, Russian Federation and the ECO also asked for some other amendments of the document. A drafting group prepared an updated version of the draft new ECC Decision. WG FM approved the draft ECC Decision (18)EE for in-motion earth stations operating with NGSO satellite systems for public consultation (**Annex 06**).
6. The WG FM noted document FM(18)025, containing a liaison statement and a System Reference document TR 103 399 on fixed and in-motion earth stations communicating with satellites in non-geostationary orbits in the 11 GHz to 14 GHz frequency band.
7. This SRdoc explains that satellite systems in non-geostationary orbits in the 11 GHz to 14 GHz frequency band and in low Earth orbit (LEO) plan to provide high-quality, broadband internet access to small low-cost user terminals located anywhere on the Earth. The user terminals will be either a fixed earth station, or earth stations in motion (ESIM).
8. It was confirmed that the information contained in this SRdoc had already been taken into account by FM44 when developing the draft ECC Decision (18)EE, with one exception concerning the frequency range 12.75-13.25 GHz.

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

1. The PT Chairman presented the draft new ECC Decision (18)DD (doc. FM(18)036R1 - Annex4R1)
2. The Russian Federation provided similar comments with respect to the FS in the band 10.7‑12.75 GHz as for the draft ECC Decision (18)EE. The draft was aligned with the draft new ECC Decision (18)EE on NGSO in-motion earth stations. The PT Chairman informed the meeting that some wording may need to be aligned after the public consultation in several other ECC Decisions dealing with earth stations where the licensee for the earth stations’ use in different CEPT countries is sometimes named “operator”, “network operator”, or “service provider”.
3. WG FM approved the draft new ECC decision (18)DD for land-based GSO ESIM for public consultation (**Annex 07**).

**4.2.5 M2M/IoT via satellite**

1. The PT Chairman informed the meeting that the work is still on-going. A draft new ECC Report on this topic will be presented at a future meeting.

**4.2.6 Other issues**

**4.2.6.1 Aircraft earth stations, 12.75 – 13.25 GHz**

1. The PT Chairman presented the liaison statement from WG SE (doc. FM(18)055). It was noted that WG SE had identified a PFD mask that would ensure the protection of the fixed service from the aggregated interference from aircraft ESIM operating with GSO and NGSO FSS systems. The FM44 Chairman explained that this study indicated that land and maritime earth stations cannot provide the required protection to the fixed service.
2. The WG FM Chairman proposed that this LS should be further discussed within FM44 with a view to identifying regulatory issues surrounding the potential use of the band by aircraft ESIM. He also requested the results of such discussions at FM44 to be presented to the next WG FM meeting. The United Kingdom supported this proposal.
3. The Russian Federation raised the issue of compliance between ITU RR Appendix 30B requirements and aircraft ESIM and asked for such studies to be undertaken at WG FM and WG SE. It was agreed to wait until the results of FM44 studies dealing with Appendix 30B and aircraft ESIM. Especially as the last WG SE meeting indicated that there was no contribution on this topic for the last two years and the SE40 work item is about to be closed. The Russian Federation stated that even WG SE had no contribution on the technical aspects on ESIM and Appendix 30B, WG FM needs clear conclusion from WG SE on this matter to consider regulatory options for ESIM in that band.
4. Administrations are invited to contribute on this matter.
5. WG FM agreed a liaison statement to WG SE (cc SE40) regarding aircraft earth stations in-motion (ESIM) operating with GSO FSS networks and NGSO FSS systems in the frequency band 12.75 - 13.25 GHz. Because of possible follow-up activities, also for WG SE, WG FM invited WG SE not to close its relevant work item SE40\_29 (**Annex 08**).

**4.2.6.2 Information on Sat MoU and update on RAS protection from OoB emissions of the Iridium constellation**

1. The PT Chairman informed the meeting that FM44 received updates on SE40 activities and the first measurement campaign from the Leeheim monitoring station. Administrations which need to renew Iridium licences should take into account that the measurements results are not yet final. A second measurement campaign is expected for the end of Q4 2018 by when the full Iridium Next constellation will have been launched. Final results from WG SE will then be expected.
2. The PT Chairman recalled the continuous efforts of WG FM on this interference issue. He reminded the administrations about the usefulness of the CEPT SatMoU group as a tool for common actions. The SatMoU website (<https://cept.org/eco/groups/eco/sat-mou/client/introduction>) was presented and it was noted that only a small number of administrations having radioastronomy stations actually participate to it. He encouraged them to join it as WG FM will have to consider the interference situation next year.

***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)047) which covered the 26th and 27th meetings of FM51 held at the ECO in Copenhagen, 22 and 23 November 2017 and at the BBC in London, 15 and 16 January 2018, respectively.
2. Mr Cornell reported that FM51 had continued to progress all the work items assigned to it in the work plan, with most time dedicated to work on the ‘960 MHz report’.
3. The next meetings of FM51 will be held on 6 - 7 March 2018, at ANFR, Maisons-Alfort and on 3 - 4 May 2018 at Eurocontrol, Brussels.

**4.3.2 Spectrum for PMSE**

**4.3.2.1 Low power audio PMSE in the band 960 – 1164 MHz**

1. The WG FM Chairman reiterated the agreed work programme for this work item.
2. The FM PT51 Chairman reported that the discussion on this work item was intense, but that progress was being made.
3. He further reported that FM PT51 had discussed the principle of providing guard bands to protect radar and other aeronautical systems that operate at 1030 MHz and 1090 MHz, and that such guard bands might reduce the scope of the technical studies in SE PT7 by permitting only adjacent channel compatibility for systems operating at these specific frequencies. He further noted that WG FM had provided a detailed scope for the technical studies to WG SE and that in his view it was appropriate for WG SE to decide how the study should be performed.
4. Ms Utsunomiya (ICAO) agreed that firstly SE PT7 should consider the appropriate way to fulfil the study request from WG FM and that further instruction should not be sent now.
5. The WG FM Chairman concluded that WG FM should not change the scope of the study before feedback had been received from WG SE.
6. Switzerland confirmed once more that they do not support the work item and that it should be stopped.

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

1. The FM PT51 Chairman reported that the work to collect and summarise data related to body effect for handheld and body-worn audio PMSE devices had been completed, but further work is required to describe the model to be used in future sharing studies. It is expected that the draft ECC Report on this topic will be presented to the May 2018 meeting of WG FM.

**4.3.2.3 Best practises for video PMSE in the 2.7 – 2.9 GHz band**

1. The FM PT51 Chairman reported that the work to develop a new ECC Report on best practice for the use of Video PMSE in the 2.7 - 2.9 GHz band is progressing, the drafting work being performed during dedicated web meetings.
2. In response to a question from ECO, the FM PT51 Chairman stated that the draft ECC Report should be available for approval for public consultation at the May 2018 meeting.

**4.3.3 Wireless Multichannel Audio Systems (WMAS)**

1. FM PT51 had investigated the regulatory situation within CEPT (relevant deliverables) and with administrations, in order to determine if there are provisions which would prevent the introduction of WMAS. ERC/REC 25-10 does not itself impose any restrictions, but the country data, now input via EFIS, show that some restrictions (e.g. bandwidth restrictions) are in place for some frequency bands for some national administrations.
2. Administrations are encouraged to check the information provided in doc FM(18)047 - Annex 1 and inform ECO of any required changes.
3. WG FM closed the WMAS topic.

**4.3.4 Work related to ITU-R**

1. None.

**4.3.5 Other issues**

1. The FM51 Chairman introduced doc FM(18)048. He explained that the FM51 Terms of Reference were established in 2011 and that some housekeeping maintenance was required.
2. WG FM approved the amended Terms of Reference (**Annex 15**).

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

**4.4.1 Progress Report**

1. The FM54 Chairman, Mr Kuha Sithamparanathan (UK), presented the group’s progress report (doc. FM(18)042), covering the meeting held at the ECO, FM54#17 (24 - 25 January 2018).

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

1. See section 4.4.3 below.

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

1. Project Team FM 54 acknowledged the LS from WG SE noting the technical work will be delayed by one WG SE meeting cycle.
2. WG FM noted the ongoing development of the draft new ECC Report on 400 MHz and the draft new ECC Decision and the need to consider the WG SE / SE7 study results during the ongoing work in FM54. WG FM approval for PC of these two deliverables is therefore rescheduled for the September 2018 WG FM meeting.

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

1. The LS from TWG-HCM was discussed in FM54 with regard to the revision of Recommendation T/R 25-08. WG FM noted that further work is required. A web-meeting on the 5th of March 2018 is scheduled to further develop the draft revised Recommendation. The plan is submission to the next WG FM meeting for PC approval.
2. The meeting concluded that FM54 should review the current versions of Annexes 3 and 4 of draft revised Recommendation T/R 25-08 by taking into account draft ECC Report 276 from WG SE. Only material should be included in these Annexes which is needed for the purpose of an ECC Recommendation.

**4.4.5 Work related to ITU-R**

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

1. WG FM noted the revision of ITU-R Report SM.2351-2 on smart grid utility management (ITU-R WP 1A) to include PMR/PAMR technologies currently used, targeting a CEPT submission for the WP 1A meeting in June 2018. This will be submitted to WG FM in May 2018 for approval prior to submission to WP 1A.

**4.4.6 Other issues**

1. The proposal for a ‘light-licence’ initiative did not receive any further support and this activity has ended.
2. See section 5.2.4 regarding the withdrawal of ECC Decision (11)04. See also section 4.7.6 (SRdoc on LP-WAN CSS).
3. The suggestion was noted that an ECC Newsletter article on PMR/PAMR would be issued in the autumn/winter period of 2018.

***4.5 FM PT 56 (Railway applications)***

**4.5.1 Progress Report**

1. The FM56 Chairman, Mr Vincent Durepaire (F), presented the progress made by the PT during its two last meetings in Paris / France, 4-5 December 2017, and in Copenhagen / Denmark, 22 - 23 January 2018.

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

1. WG FM was presented the draft ECC ‘Report #A’ with the following novelties: additions from ERA (including ERTMS corridors); first elements from UIC on the assessment of the spectrum needs, i.e. traffic demand during and after the migration; guard-band between GSM-R and its successor; sharing with MFCN, PPDR and PMR/PAMR.
2. FM56 aims at submitting the draft ECC ‘Report #A’ to WG FM for public consultation in May 2018. To this end, two meetings are planned in March and April 2018.

**4.5.3 Work related to ITU-R**

1. The LS from FM56 to CPG PTD on information regarding the harmonisation of frequencies and related frequency arrangements for the successor to GSM-R was noted.

**4.5.4 Other issues**

1. WG FM endorsed FM56’s proposal to use Railway Mobile Radio (RMR) as an umbrella application term, while leaving freedom to use GSM-R to designate the legacy system and FRMCS for the project related to the successor.
2. Draft answers to questions from the European Commission and national administrations related to the future spectrum use of GSM-R and the successor system to GSM-R were agreed by WG FM for submission to the ECC for final approval and communication to the EC (**Annex 20**).
3. The FM56 Chairman proposed WG FM to trigger the technical studies on the candidate bands for RMR so that the technical conditions can be known by the time ERA will issue a revision of the CCS TSI that includes FRMCS. First of all, the FM56 Chairman requested WG FM guidance on which bands, other than the 900 MHz band, should be investigated.
4. Based on the views from the administrations attending the meeting, WG FM concluded that the 1900 - 1920 MHz band would be investigated as an option for FRMCS while the 2.3 GHz TDD and 2.6 GHz TDD bands were rejected. With regard to the 5.9 GHz band, no technical study is planned but WG FM noted that RMR systems could possibly use the band under the regulatory framework that is being prepared for ITS Urban Rail by SRD/MG. Such considerations are still at an early stage.
5. The United Kingdom indicated that they had three current licensees in the 1900 - 1920 MHz band, including Everything Everywhere (EE) in 1900 - 1910 MHz where they have to provide critical communications for Public Safety. UK also proposed to investigate the 2.7 - 2.9 GHz band for RMR. The WG FM Chairman invited UK to contribute to FM56 so that administrations can decide whether the 2.7 - 2.9 GHz band should also be considered as an option.
6. Then the draft LS to ECC PT1 prepared by FM56 to seek assistance on defining the least restrictive technical conditions (BEM) required on RMR base stations, to ensure coexistence with MFCN base stations, in the 900 MHz range as well as in the 1900 - 1920 MHz band was introduced.
7. France was of the view that the cases related to FRMCS with a 3 MHz channel in 918 - 921 MHz or a 1.4 MHz channel in 918 - 919.4 MHz were not needed since no possibility of spectrum harmonisation is foreseen for RMR below 874.4 MHz / 919.4 MHz at EU level. In contrast, France added that it had no objection with studying RMR systems based on GSM-R in the whole 918 - 921 MHz as some CEPT countries have granted some rights of use for GSM-R in that band.
8. After further discussion, the meeting decided to keep all cases and the sentence related to defence usage was revised. The LS to ECC PT1 was approved (**Annex 21**).

Statement of France

“*France considers that the studies on RMR systems based on LTE/5G using a 3 MHz channel in 873 - 876 MHz / 918 - 921 MHz or 1.4 MHz channel in 873 - 874.4 MHz / 918 - 919.4 MHz are not needed. Indeed the ‘squeeze’ option, developed in the context of the RSCom as a balanced approach, targets an harmonised introduction of innovative SRD applications while preserving 2x1.6 MHz for RMR (the proposed lower band edges for RMR are respectively 874.4 MHz and 919.4 MHz) and safeguarding the band 870 - 874 MHz for critical Defence systems (which corresponds to the preferred band for SRD starting at 874 MHz as proposed by CEPT in the Addendum to CEPT Report 59).*”

1. The draft LS to WG SE prepared by FM56 to perform some technical studies related to RMR in the 900 MHz range as well as in the 1900 - 1920 MHz band was introduced. The text was aligned with the LS to PT1 and some precisions were added with regard to the studies involving SRD. France suggested that the coexistence studies with DECT systems below 1900 MHz should be limited to indoor systems in the absence of significant rollout of DECT WLL systems. This point was however agreed to be left open for contributions regarding all DECT usage scenarios to the studies. The LS to WG SE was approved (**Annex 22**).
2. The FM56 Chairman drew the attention of the railway community that their participation and involvement is necessary within ECC PT1 and WG SE to provide their views and ensure that railway specificities are taken on-board.

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

**4.6.1 Progress Report**

1. The meeting was informed by the FM57 Chairman, Mr Stephen Talbot (UK), that there had been one half day meeting in December, and whilst there was nothing for WG FM to discuss or agree, since that meeting the Radio Spectrum Committee had agreed a Mandate (doc. FM(18)011). Whilst the EC Mandate would be formally noted at the next ECC Plenary, at the end of February, the Mandate would be assigned to FM57.

**4.6.2 Other issues**

1. The meeting discussed an input from Sweden (FM(18)045), a proposed draft questionnaire on FS in 5925 - 6425 MHz. Following discussion and revision, the questionnaire was approved with a response deadline of 12 April 2018 (**Annex 23**).
2. In addition, it was noted that the related work item (FM57\_01) would need to be updated to reflect the new timing for the work of FM57, recognising the additional activity related to the EC Mandate and the fact that FM57 had not been created until the October 2017 meeting of WG FM. The work item was updated and approved (**Annex 17**).

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

**4.7.1 Progress Report**

1. Mr Thomas Weber (ECO) presented the progress report of SRD/MG as in document FM(18)035. 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**

**4.7.2.1 ECC/DEC/(15)05 on PMR446 (466.0 – 446.2 MHz)**

1. The draft revised ECC Decision (15)05 on PMR446 was adopted for submission to the ECC for final approval for publication without any further changes compared to the version which had been discussed at the WG FM #89 meeting (**Annex 36**). WG FM noted the publication of related RE Directive class 1 subclass 51 on 1 January 2018 that includes the harmonised European standard EN 303 405 for PMR446. The standard is also included in the ECA Table (ERC Report 25).
2. WG FM noted the earlier request from ETSI in document FM(17)173 which was not to proceed with the ECC/DEC/(15)05 until the situation with the ETSI Harmonised Standard EN 303 405 had been clarified. The meeting was informed that the discussions between the EC and the ETSI TG DMR officials did not result in an outcome and hence EN 303 405, although published by ETSI, will not be cited in the OJEU. The ETSI TG DMR Chairman and the SRD/MG Chairman discussed the issue and agreed to suggest WG FM to move forward with the revision of ECC/DEC/(15)05.

**4.7.2.2 ECC/DEC/(08)01 on ITS (CBTC/ITS)**

1. The minutes of the 46th ECC plenary meeting including the liaison statement sent by ECC to ETSI were noted.

**4.7.2.3 Revision of ECC/DEC/(04)10 on SRR at 24 GHz**

1. The draft update of ECC Decision (04)10 for Automotive Short Range Radars (SRR) in 21.65‑26.65 GHz was adopted for submission to the ECC for final approval for publication (**Annex 27**).

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

1. The draft revision of the Annex 10 (Radio microphone applications including assistive listening, device (ALD), wireless audio and multimedia streaming systems) of ERC Recommendation 70‑03 was presented.
2. The Russian Federation proposed to postpone sending the revised Annex 10 to public consultation as the new entry for Assistive Listening Systems (ALS) should be improved according to the assumptions made in ECC Report 270 (setting out of the power limitation, possible indoor restriction and scope of the application and installation requirements). In addition, ECC Report 270 doesn’t contain studies for satellite systems with regional, semi-global or global beams, so the Russian Federation needs additional time to analyse conditions for ALS which could provide protection of such satellite systems.
3. WG FM didn’t support the proposal to postpone the approval and after some discussion approved the draft revision of the Annex 10 of ERC Recommendation 70-03 for public consultation (**Annex 26**).
4. The SRD/MG Chairman confirmed that SRD/MG would look on the points raised by the Russian Federation at the next SRD/MG meeting together with all comments received during public consultation. He explained that ECC Report 270 deliberately had chosen a satellite spot beam covering UK for the aggregated impact into MSS from the 2 mW low power assistive listening device systems which are normally installed at locations such as big railway stations or airport terminals. Aggregation over much larger satellite coverages is not an easy consideration and unlikely to be just a summation of all ALS transmissions within regional, semi-global or global coverage contours.
5. WG FM agreed to task the SRD/MG to develop two new Annexes in ERC Recommendation 70‑03 for Wireless Power Transfer (non-beam) and for Medical Data Acquisition applications. In addition, WG FM agreed to send a liaison statement on Wireless Power Transmission applications (non-beam) to CPG to inform about the progress of work in WG FM (**Annex 30**).
6. SRD/MG will prepare revisions of ERC/REC 70-03 Annexes 2 and 3 at its next meeting for submission to WG FM for PC approval at WG FM #91.

**4.7.4 EC related activities**

**4.7.4.1 Permanent Mandate on SRDs**

1. Several input documents were noted (the guidance letter from the EC, the liaison statement from ETSI on regulatory provisions in the Addendum to CEPT Report 59, the minutes of the last ECC plenary meeting for this subject, and the information from WG SE on the status of the SE24 activities).
2. Based on the information in the liaison statement from ETSI on Smart Tachograph applications (doc. FM(18)024), the work in SE24 can start. The liaison statement is a result of discussions in SRD/MG and ETSI and it was required because the ETSI SRdoc TR 103 441 on Smart Tachograph, Weight and Dimension applications will come at a later stage of the process. The liaison statement informs WG FM that the SRdoc will address the questions that were raised by WG SE in their LS to WG FM (doc. SE(17)065-A12) and this liaison in fact already includes a list of proposed performance values for the parameters listed.
3. It was noted that the real implementation of the Smart Tachograph regulation includes a 15 years transition period until enforcement authorities must use the new application. SE24 received permission from WG SE to start the work immediately pending adoption of the formal work item at the following WG SE meeting. The process ensures that Smart Tachograph can still be considered within the 7th update process.
4. The SRD/MG Chairman presented the status of the initial work on the draft CEPT Report for the 7th update for information.
5. WG FM agreed to send a liaison statement to the European Automobile Manufacturers Association, the Radio Group ACEA/CLEPA and to ETSI TC ERM with a request for information with regard to any implementation in the market of the Wideband Low Activity Mode (WLAM) operating in 24.25 - 24.50 GHz (**Annex 35**).

**4.7.4.2 Permanent Mandate on UWB**

1. The SRD/MG Chairman presented the status of the work on the draft CEPT Report for UWB including the items which are currently considered for changes. He encourage all interested parties to provide contributions to SRD/MG as soon as possible since the draft CEPT Report is scheduled for adoption at the next WG FM meeting in May 2018 for submission to the ECC.
2. The information from WG SE about draft ECC Report 278 in public consultation and about MFCN protection from UWB (question to ECC PT1) was noted.
3. The SRD/MG Chairman explained that studies under work item SE24\_63 will not be completed in time for the current update process and the results will therefore be considered in the next following update.

**4.7.4.3 Mandate on ITS**

1. The EC Mandate was presented by the European Commission (Mr Giuseppe Rizzo).
2. WG FM adopted the draft Interim Report from CEPT to the European Commission in response to the EC Mandate to CEPT to study the extension of the Intelligent Transport Systems (ITS) safety-related band at 5.9 GHz for submission to the ECC for final approval and sending it to the European Commission (**Annex 31**).
3. WG FM agreed to request WG SE (SE24) to conduct studies for ITS in the 5.9 GHz range (Road ITS as well as Urban Rail - CBTC - ITS) within the timeframe of the two EC Mandates on ITS and SRD (7th update) (**Annex 34**). This includes amongst others for LTE-V2X, whether the assumptions and conclusions made in ECC Reports 101 and 228 are valid, and coexistence of Smart Tachograph as a new TTT application, different in its usage scenario from road tolling, with ITS.
4. No solution for co-channel operations can be seen between ITS-G5 and LTE-V2X based on currently available specifications. The sharing solutions in the band 5855 - 5925 MHz for ITS-G5 and LTE-V2X should be addressed in the standardisation. Coexistence between Road ITS and Urban Rail (CBTC) ITS: the work is ongoing within ETSI (JTFIR – Joint Task Force ITS-RT).

**4.7.5 Coexistence of RLANs in vehicles**

1. The information from WG SE was noted about draft ECC Report 277 in public consultation.
2. Based on a proposal from Germany, WG FM agreed to task the SRD/MG to consider RLAN operation in automotive vehicles within the range 5150 - 5250 MHz with the aim to amend the explanatory paper for RLAN usage in vehicles and to consider a power limit of up to 25 mW, which would provide consistency with the power level of RLAN operating under the regulation for non-specific SRDs in the 5.8 GHz band. SRD/MG is requested to come back with proposals at the next WG FM meeting. This may also include consideration about how to address this subject to standardisation.
3. France proposed to consider not only the explanatory paper but also the ECC Decision (04)08 on WAS/RLANs. After a short discussion it was agreed that those administrations wishing to review this ECC Decision should provide aspects to be considered at future WG FM meetings.
4. An amendment of the explanatory paper was considered as a first step which could be achieved within a short time frame. In a second step the review of the ECC Decision (04)08 could be considered. The C2C Consortia supported this way forward and indicated that the updated explanatory paper together with the HEN would be supportive also for Notified Bodies.

**4.7.6 SRDs in UHF**

1. The ETSI Liaison Officer introduced document FM(18)058 which contains a liaison statement and a System Reference document on Low Power Wide Area Networks - Chirp Spread Spectrum (LPWAN-CSS) operating in the UHF spectrum below 1 GHz. It was explained that this SRdoc was developed on a request from WG FM to get more details about these systems.
2. The last WG FM #89 meeting already decided that SRD/MG should consider the document. The SRD/MG progress report already included early considerations for information about the ongoing discussions about SRD in data networks which could not advance due to the delayed delivery of the LPWAN-CSS SRdoc.
3. FM PT 54 is invited to look at this SRdoc as it contains a lot of details on the technology behind Low Power Wide Area Networks using Chirp Spread Spectrum modulation which could be useful for FM54 since these systems are also considered within the 400 MHz studies in SE7.
4. WG FM agreed to send a liaison statement to WG SE indicating that SRD/MG should have first a look into the details of the ETSI requests for SRD in data networks (LP-WAN-CSS and UNB systems) (see **Annex 38**). WG FM #91 will provide the necessary clarifications with regard to work item SE24\_61.

**4.7.7 Wireless Power Transmission (WPT)**

1. See section 4.7.3.

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

1. Following a proposal from Germany, WG FM agreed to revise the work item SRD/MG\_44 on 57 - 66 GHz for wideband data transmission systems (**Annex 39**) including the possibility of a potential alignment of the mmWave ITS band with the wideband data transmission channelization; and the revision of ECC Decision (09)01. In addition, a liaison statement to CPG was approved to inform about the status of work in WG FM and SRD/MG (**Annex 18**).
2. See also **section 6.2** below.

**4.7.9 Non-professional UAS**

1. WG FM approved an explanatory paper related to non-professional Unmanned Aircraft System (UAS) use under general authorisations (**Annex 37**). A reference to this explanatory paper will be included in the introduction section of ERC Recommendation 70-03.

**4.7.10 SRDs operating below 9 kHz**

1. The ETSI Liaison Officer introduced document FM(18)034 in which it informs the WG FM on the current situation of equipment operating below 9 kHz, especially T-Coil systems and cochlear implants. It is also mentioned that TCAM decided this is Class 2 equipment due to the possibility of national restrictions in some member states. Operation in some member states could potentially even be illegal as they don’t have a regulation permitting its use.
2. In addition, the EC had identified short comings in the harmonised standard EN 303 348 for T‑coil devices and hence it will not be cited in the OJEU. One of the issues found was the lack of limits for unwanted emissions. As there are no CEPT nor ITU deliverables specifying these limits, ETSI is seeking guidance from the WG FM so ETSI would be in a position to address the short comings in a revision of EN 303 348.
3. The ETSI liaison statement further mentions that also other standards addressing the frequency range below 9 kHz received a negative assessment from the EC, e.g. EN 303 454 (metal sensors) and EN 303 447 (robotic mowers). Also these standards will not be cited in the OJEU.
4. The SRD/MG presented the consideration from the last SRD/MG meeting to WG FM. SRD/MG proposes to collect information via a questionnaire to CEPT administrations. It was clarified in response to concerns raised by the United Kingdom, that the questionnaire is solely for collection of factual information from CEPT administrations.
5. WG FM approved the questionnaire to CEPT administrations (deadline: 12 April 2018) on the need for regulation for the license-exempt use of frequencies below 9 kHz (**Annex 29**).

**4.7.11 ITU-R contributions**

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

**4.7.12 Other issues**

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 ITS to be approved for publication in autumn 2018, in order to ensure a good and seamless transition.

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

**4.8.1 Progress report**

1. The WG FM Chairman presented the items of interest to the group, where WG FM and ECC PT1 have shared responsibility.

**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, following consultation with the ECC PT1 Chairman, that the anticipated input to this meeting (on this matter) would not be addressed at this WG FM meeting.

**4.8.2.2 Other cross-border coordination issues**

1. The WG FM Chairman noted, for this item also in respect of IoT cross border coordination, it would not be addressed at this WG FM meeting.

**4.8.3 WRC-19 AI 9.1 issue 9.1.8**

1. None.

**4.8.4 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 the EFIS/MG progress report as in document FM(18)032 and Annexes 1 and 2 to it.
2. No physical EFIS/MG Meeting took place since the last meeting of WG FM.

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

1. Annex 2 (application terminology) and Annex 5 (data formats) of ECC Decision (01)03 for EFIS will be revised. New terms will be implemented in Annex 2 and the PMSE terminology will be reviewed in line with the feedback from FM51. These revised Annexes of ECC Decision (01)03 will then be submitted to the next WG FM meeting in May 2018 for administration consultation approval.

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

1. A liaison statement was sent to FM 44 by EFIS/MG to ask for a cross check of the satellite applications in the ERC Report 25 (ECA-Table) for the next ECA Table revision.
2. The meeting agreed that the EFIS/MG has to check the ECA table for column 2 (ECA) in the 800 MHz frequency range relating to the allocation to the mobile except aeronautical mobile service and to the allocation to fixed service in the 11.7 - 12.5 GHz range (ECA 28).
3. The next ECA Table revision is scheduled for submission to WG FM in September 2018.

**4.9.4 RIS Models**

1. None.

**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.

**4.9.6 ECO Report 05**

1. EFIS/MG will provide a revised ECO Report 05 to WG FM in May 2018.

**4.9.7 ECC Report 180**

1. WG FM finally approved the amended ECC Report 180 for publication (**Annex 19**). No comments were received during the public consultation.

**4.9.8 Action points for the administrations**

1. The updated list of the action points is included in the EFIS/MG progress report.

**4.9.9 ECO workshop on EFIS**

1. See 4.9.10 below.

**4.9.10 Questionnaire on usage of EFIS**

1. The EFIS/MG will prepare a draft questionnaire on usage of EFIS as agreed at the WG FM #89 meeting (based on the outcome of the workshop on EFIS) and will provide it to the next WG FM in May 2018.

**4.9.11 Other issues**

1. None.

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

**4.10.1 Progress report**

1. Mr Thomas Weber (ECO) presented on behalf of the FM Maritime Forum Group Chairman, Mr Jaap Steenge (HOL), the progress report in doc.FM(18)038.
2. WG FM agreed to prolong the target date for the two work items for the development of a draft ECC Decision on the harmonised usage of maritime VHF frequencies in CEPT (FG08) and the development of a draft ECC Decision on the harmonised usage of the VDES terrestrial in CEPT (FG09) by one meeting cycle respectively. The two draft ECC Decisions should be available for public consultation approval at WG FM #92 in September 2018. The MAR/FG has scheduled two physical meetings in March and June 2018 to progress the work on the two new ECC Decisions.

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

**4.11.1 Progress Report**

1. Mr Thomas Weber (ECO), acting Chairman of the forum group, presented a short progress report in doc. FM(18)033.
2. Mr Weber informed WG FM that 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 Recommendation T/R 61-01 for non-CEPT countries during the last revision (statement of conformity). The ECC will be informed that the Office has started communications with Anatel.

**4.11.2 Recommendation T/R 61-02 (HAREC)**

1. WG FM approved an editorial update of the Recommendation T/R 61-02 on ‘Harmonised amateur radio examination certificates’ (HAREC) (**Annex 16**).

**4.11.3 New entry level licence**

1. A written proposal from IARU-R1 (or a common proposal with EURAO) for new work in the Radio Amateur Forum Group to consider a new entry level licensing possibility, especially designed for young people, had not been received yet and is currently expected to be submitted to the following WG FM meeting. Any discussions in the RA FG and WG FM are postponed until a written proposal has been submitted.

**4.11.4 RA FG Chairmanship**

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

**4.11.5 Other issues**

1. None.

**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.

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

1. The WG FM Chairman noted the decision at the last ECC Plenary 46th (Nov 2017), which agreed that WG FM could work on a draft withdrawal ECC Decision for ECC/DEC/(15)02 on Broadband DA2GC in 1 900 – 1 920 MHz. ECO presented document FM(18)028; “New draft ECC Decision (18)AA on the withdrawal of ECC/DEC/(15)02 on Broadband DA2GC in 1900-1920 MHz”. Following discussion and amendment, this document was approved for public consultation (**Annex 32**). The WG FM Chairman noted that ECC Plenary 46, endorsed the retention of ECC Decision (15)03 on DA2GC in the 5 855 – 5 875 MHz band, for the time being.

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

1. The WG FM Chairman further noted the decision at the last ECC Plenary, which agreed that WG FM should work on a draft withdrawal ECC Decision for ECC/DEC/(07)02 on BWA in 3.4 - 3.8 GHz. ECO presented document FM(18)029; “New draft ECC Decision (18)BB on the withdrawal of ECC/DEC/(07)02 on BWA in 3.4 - 3.8 GHz”. This document was approved for public consultation as **Annex 33**.

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

1. A new draft new ECC Decision (18)CC for the withdrawal of ERC/DEC/(01)08 (2.4 GHz movement detectors) was approved for public consultation (**Annex 28**).

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

1. The WG FM Chairman noted, that ECC Plenary 46 agreed with the proposed course of action, to contact external organisations with a view to withdraw ECC/DEC/(11)04.
2. WG FM agreed a liaison statement to Public Safety Communication Europe (PSCE), to PSRG (Public Safety Radio Group) and to ETSI with regard to the possible withdrawal of ECC Decision (11)04, in particular with regard to PPDR terminals (**Annex 25**).
3. This item will be further considered at the September 2018 meeting of WG FM, together with the new ECC Decision for land mobile systems (provided by FM54).
4. An updated list of the ERC/ECC Deliverables is provided in **Annex 41** and will be submitted to the ECC. The list is also available in the new documentation database and will be updated after each ECC meeting.

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

1. There were no actions or discussions under this item.

***5.4 Frequency arrangements for PPDR***

1. WG FM received a liaison statement from the ITU-R (WP 5A) on public protection and disaster relief (PPDR) which had been sent to regional organisations (FM(18)013). Germany provided a proposal for a response liaison statement (FM(18)041).
2. The meeting agreed on a liaison statement back to the ITU-R as provided in **Annex 09**. Draft amended versions of Recommendations ITU-R M.1637 (**Annex 10**), M.1746 (**Annex 11)** and M.2009 (**Annex 12**) were attached to the LS.

***5.5 Roadmap on 5G***

1. The WG FM Chairman introduced the latest version of the CEPT Roadmap on 5G as agreed by ECC #46 in November 2017 (FM(18)008 - Annex 06). Based on the discussions with regard to agenda item 4.2.3 (Draft ECC Report 280 on satellite solutions for 5G, work item FM44\_32) the meeting agreed to propose an amendment on item D.1 of the Roadmap to the ECC, see **Annex 40**.

***5.6 Spectrum regulation for drones***

1. Mr Thomas Weber (ECO), on behalf of the CG Chairman Mr Florian Cziczatka (AUT), presented document FM(18)044R1, the progress report.

**5.6.1 Draft ECC Report 268 on UAS**

1. Mr Weber gave a presentation of the updates made in the draft ECC Report 268 at the CG web-meeting on 29 January 2018, mainly in relation to the applicability of the RE Directive and the EMC Directive (section 5.11 of the ECC Report). Some additional changes were incorporated during the WG FM meeting on request from Finland and ICAO.
2. WG FM finally approved the ECC Report 268 on ‘Technical and Regulatory Aspects and the Needs for Spectrum Regulation for Unmanned Aircraft Systems (UAS)’ for publication (**Annex 13**).
3. Ms Utsunomiya, ICAO, explained that following a request from the ICAO Member States, ICAO initiated work on development of a global regulatory framework for small unmanned aircraft that conduct primarily domestic operations. When it is finalised, she believes that there may be some discrepancies on the terminologies and assumptions used between the ECC Report and the global regulatory framework. Considerations to align those differences may be required in future.
4. Ms Utsunomiya, ICAO, asked for a clarification with regard to the schedule of the process towards the new EASA regulation as reflected in ECC Report 268. Mr Thomas Weber confirmed that the schedule as identified in the opinion from EASA, published on 6 February 2018, can be considered as stable.
5. Ms Utsunomiya also stated that ICAO will continue to assist this work together with WG FM but expressed needs of more close coordination between aviation side and the radio regulatory side from not only global/European level but also national level.
6. Work item FM\_34 was closed because of the final approval of ECC Report 268. Nevertheless the CG is tasked to continue the considerations on the frequency options, taking into account the outcome of the CEPT workshop on spectrum for drones/UAS in May 2018. WG FM may consider the creation of a work item during its meeting in September 2018.

**5.6.2 Frequency options**

1. The CG produced an update of the working paper during a CG web-meeting which was presented to WG FM. It is planned to continue to work on this document after the CEPT workshop. The following items were explained by Mr Weber in detail:

i. 790-862 MHz: the restriction of mobile except aeronautical mobile service is likely to be reinvestigated (e.g. the band can be of interest for drones via MFCN). The EFIS/MG is requested to consider this when discussing an update of the ECA Table (ERC Report 25). WG FM endorsed this way forward;

ii. 1900-1920 MHz: WG FM is requested to provide guidance whether the band should still be considered as an option for professional drones applications in light of other demand (RMR as well as ETSI SRdoc on DECT/PMSE in preparation) for future alternative use of the band. WG FM decided to discuss this together with the other ideas for new services in the band;

iii. Considerations on communications solutions for drones may lead to a demand for harmonisation. This is for communication solutions for drones-to-drones, drones-to-infrastructure (e.g. IEEE 802.11p and LTE-V2X aim for using the 5855-5925 MHz), cooperative awareness messages, or any other communication transmitters distributing positioning information in order to avoid collisions, spectrum for geo-fencing, e-identification, drones traffic management. It is expected that the CEPT workshop may provide some new information;

iv. In parallel, radiolocation - spectrum for DAA (meaning for collision avoidance, in particular for bigger low flying drones) under all circumstances may include radar use. Study the radiolocation service possibilities to find solutions outside of the existing aeronautical radars for airborne use for drones. Only if there is a requirement to do so; it could be superseded by the communications solutions above. It is expected that the CEPT workshop may provide some new information.

1. France informed WG FM that it had a request for governmental drones in the 1900 – 1920 MHz band which covers both control and command as well as data acquisition under individual authorisation regime.

**5.6.3 Workshop on drones**

1. Mr Weber presented the description of the CEPT workshop on spectrum for drones/UAS and the draft programme in detail to WG FM. The latest draft programme is in **Annex 14**. The workshop is open to all interested parties who want to participate at the workshop. The registration link for the workshop is open under: <https://cept.org/ecc/groups/ecc/client/meeting-calendar/event-registration/?meetingid=2182>.
2. It is planned to officially announce the CEPT workshop after the ECC Steering Group meeting (14 - 15 February 2018), which will consider the final draft programme. After the workshop, WG FM and ECC will discuss the results and it is planned to publish an ECC Newsletter informing about the workshop results.

**5.6.4 Other issues**

1. None.

***5.7 Low Power Wide Area Networks – Chirp Spread Spectrum (LPWAN-CSS) operating in the UHF spectrum below 1 GHz***

1. See section **4.7.6**.

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

1. The ETSI Liaison Officer informed WG FM that he had no update on this agenda item for this meeting but according to the ETSI portal the SRdoc TR 103 517 is to be finalised and published in May 2018.

***5.9 Information on LSA implementation***

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

***5.10 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. Document FM(18)009 contains a liaison statement from ETSI informing WG FM that a new work item had been adopted for the revision of TR 102 546 which is a SRdoc on Audio PMSE systems in the frequency range 25 MHz to 3 GHz. TR 102 546 will be revised with current technology including conference and other systems. No new frequency request is foreseen for this revision.

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

1. Document FM(18)010 contains a liaison statement from ETSI informing WG FM that a new work item had been adopted for the development of a new SRdoc TR 103 583 on Multiple Gigabit Wireless Systems (MGWS) in radio spectrum between 57 GHz and 71 GHz. The objective is to merge the existing SRdoc TR 102 555 (60 GHz MGWS) and the SRdoc TR 102 400 (60 GHz ITS) into a single SRdoc.
2. It was mentioned that the work schedule does not match with the work schedule for the work items SE19\_39 and SRD/MG\_44.
3. Questions were raised w.r.t. the upper limit in the SRdoc being 71 GHz which is higher that the upper limit within SE19 and SRD/MG work items. It was clarified that spectrum in 66-71 GHz is considered in CPG under WRC-19 Agenda Item 1.13.
4. The WG FM Chairman suggested waiting for the final System Reference document to arrive before having further discussions on the frequency range.

***6.3 Frequency band 1900 – 1920 MHz***

1. Document FM(18)018 contains a liaison statement from ETSI informing WG FM that a new work item had been adopted for the revision of an existing SRdoc TR 103 149 on DECT operating in the 1900 MHz - 1920 MHz band. The aim is to provide updated information on DECT and DECT ULE and to include information on the on-going developments regarding DECT evolution and DECT-2020.
2. ETSI TC DECT is of the view, that there is a need to extend the operation of DECT products into the band 1900 MHz to 1920 MHz in the near future.
3. The WG FM Chairman mentioned that the band 1900 to 1920 MHz is being discussed now in several groups as a candidate frequency band for RMR, professional Drones/UAS, DECT/SRD and PMSE and hence some coordination or organisation for this frequency band is needed within WG FM.
4. France suggested that WG FM should agree on prioritisation for this band taking into account new alternative primary application. This was confirmed by the WG FM Chairman. WG FM will come back on this issue after more detailed information has been provided by the relevant Project Teams.

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

1. Document FM(18)026 contains a liaison statement from ETSI informing WG FM that a new work item has been adopted for the development of a new SRdoc TR 103 594 on High-Definition Ground Based Synthetic Aperture Radars (HD-GBSAR) in 74 - 81 GHz. This document will also describe the relationship to the existing spectrum regulation and will cover the new spectrum requirements for these High-Definition Ground Based Synthetic Aperture Radars. A 1 GHz bandwidth is required and this could be accommodated in the frequency range between 74 and 81 GHz.

***6.5 Level Probing Radars***

1. Document FM(18)027 contains a liaison statement from ETSI informing WG FM that a new work item has been adopted for the development of a new SRdoc TR 103 595 on LPR within 75 GHz to 85 GHz. The aim is to provide information on the existing and intended applications, the technical parameters, the relation to the existing spectrum regulation (ECC/DEC/(11)02 and the SRD Decision).
2. This SRdoc will suggest that the current regulation to be reviewed in the light of half sphere concept and the needs from the market. This document will for example request a more flexible approach for the current requirement of a strict downwards pointing directional antenna.

**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#61 meeting (18 – 19 October 2017)**

1. Mr Rizzo summarised the issues discussed at RSC#61 meeting:
* An administrative simplification was approved for the automotive SRR 24 GHz Decision;
* The Mandate to the CEPT on expansion of the 5.9 GHz ITS safety related band was approved;
* The guidance letter to CEPT on the 7th update of the SRD Decision was endorsed;
* Debates took place on the forthcoming mandate on 6 GHz RLAN, on the 870-876 MHz and 915-921 MHz bands and on a future implementing Decision on the 1.5 GHz downlink WBB band.

**7.1.2 Second Joint RSC/TCAM meeting (19 October 2017)**

1. The 2nd joint RSC-TCAM meeting (19 Oct. 2017) discussed about:
* Interference to weather radar caused by RLAN in the 5 GHz band;
* Radio equipment below 9 kHz;
* A new version of the notification template of radio interface specifications and radio equipment classes;
* Status of work of expert groups on reconfigurable radio systems;
* Drones and the RED.

**7.1.3 RSC#62 meeting (06 – 07 December 2017)**

1. Mr Rizzo summarised the issues discussed at RSC#62 (6-7 Dec. 2017) which:
* gave a positive opinion for the Mandate to CEPT on 6 GHz RLAN;
* reached a stable text on the 1.5 GHz band (amendment to the harmonisation of the 1452-1492 MHz frequency band);
* reached a stable text on a Decision on IoT in the 900 and 1800 MHz bands;
* further discussed about the future SRD Decision on the 870-876 and 915-921 MHz bands;
* endorsed the new RIS template (Radio Interface Specifications) and had an initial discussion on drones.
1. RSC#63 will take place on 14-15 March 2018 in Brussels.

**7.1.4 RSPG#44 meeting (21 November 2017)**

1. RSPG#44 (21 Nov. 2017):
* adopted an opinion on audio/video PMSE applications and noted progress reports from WGs on spectrum for 5G, WRC-19, cross-border coordination ("good offices") and spectrum aspects of the Digital Single Market;
* agreed to launch a PC on the 2nd opinion on 5G networks and on the draft RSPG work programme 2018-19.

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

1. RSPG#45 (30 Jan. 2018) was chaired by the new Chairman Jonas Wessel (Sweden):
* The opinion on a "Strategic spectrum roadmap towards 5G for Europe" (the 2nd 5G opinion) was adopted and published, as well as the work programme "2018 and beyond";
* Progress reports were noted on WRC-19, “good offices” and spectrum for the Digital Single Market.
1. The next RSPG meeting will be on 5 June 2018.

***7.2. ETSI recent activity***

**7.2.1 Overview on ETSI SRdocs**

1. The ETSI Liaison Officer informed WG FM that the document behind the URL provided in the agenda of the WG FM meeting, [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), is up to date. The last revision was made mid-January 2018.

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

1. The ETSI Liaison Officer further reminded WG FM that the latest status of ETSI standards with regard to the Radio Equipment Directive can be found at <http://www.etsi.org/red>. He also reminded the meeting that being published by ETSI doesn’t mean these standards are also cited in the OJEU. It is only, when published in the OJEU, that they can be used for the presumption of conformity against the essential requirements of the RE-Directive.
2. 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 or missing receiver requirements such as receiver sensitivity. During the last TCAM meeting the EC announced an action on how to decrease the number of uncited HENs. Part of that action plan was, for some specific HENs that were blocked, to hold a meeting with the officials of the responsible ETSI TB and to agree on a way forward. A number of these focused meetings took place already and more are still to come. EC will also try to engage more during the development phase of a HEN.

**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 adopted for submission to the ECC for final approval (CEPT Reports / ECC Decisions) for publication**

1. Draft updated ECC Decision (04)10 on SRR in 24 GHz (**Annex 27**);
2. Draft revised ECC Decision (15)05 on PMR446 (**Annex 36**);
3. No draft CEPT Reports were adopted for submission to the ECC at this WG FM meeting;

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

1. Draft new ECC Report 280 on satellite solutions for 5G (**Annex 24**) for PC approval;
2. Draft answers to the European Commission on RMR (**Annex 20**) for final approval;
3. Draft Interim Report on the Mandate of the European Commission on ITS (**Annex 31**) for final approval;

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

1. New ECC Report 268 on Drones (**Annex 13**);
2. Editorially updated Recommendation T/R 61-02 on Harmonised Amateur Radio Examination Certificate (HAREC) (**Annex 16**);
3. Revised ECC Report 180 on EFIS (**Annex 19**);

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

1. Draft ECC Decision (18)AA on the withdrawal of ECC Decision (15)02 (**Annex 32**);
2. Draft ECC Decision (18)BB on the withdrawal of ECC Decision (07)02 (**Annex 33**);
3. Draft ECC Decision (18)CC on the withdrawal of ERC Decision (01)08 (**Annex 28**);
4. Draft ECC Decision (18)DD on land-based in-motion earth stations with GSO FSS satellite systems (**Annex 07**);
5. Draft ECC Decision (18)EE on NGSO Ku band earth stations in motion (**Annex 06**);
6. Draft revised Annex 10 of ERC/REC 70-03 (**Annex 26**);
7. Draft new ECC Report 279 on NGSO ESIM (**Annex 05**);

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

1. LS (response) to WP 5A on PPDR (**Annex 09**), Annexes 10, 11 and 12 attached to it;
2. Draft amended Recommendation ITU-R M.1637 on PPDR radiocommunication equipment (**Annex 10**);
3. Draft amended Recommendation ITU-R M.1746 on harmonized frequency channel plans for the protection of property using data communication (**Annex 11**);
4. Draft amended Recommendation ITU-R M.2009 on radio interface standards for PPDR (**Annex 12**);
5. LS (response) to WG SE on earth stations in 13 GHz (**Annex 08**);
6. LS to CPG on 60 GHz mmWave ITS (**Annex 18**);
7. LS to PT1 on RMR (**Annex 21**);
8. LS to WG SE on RMR (**Annex 22**);
9. LS to WG SE and SE24 on ITS (**Annex 34**);
10. LS to external PPDR bodies and ETSI (**Annex 25**);
11. LS to CPG on WPT (non-beam) (**Annex 30**);
12. LS on WLAM to ACEA/CLEPA and ETSI TC ERM (**Annex 35**);
13. LS to WG SE on SRdoc on SRD in data networks (LPWAN-CSS) (**Annex 38**);
14. Questionnaire on fixed services in 5925 – 6425 MHz (**Annex 23**);
15. Questionnaire to administrations on frequencies below 9 kHz (**Annex 29**);
16. Explanatory paper on non-professional UAS/Drones spectrum use (**Annex 37**);
17. Draft programme for CEPT Workshop on Spectrum for Drones (**Annex 14**);
18. Amended CEPT Roadmap for 5G – proposed to ECC (**Annex 40**);
19. Amendments on the work item SRD/MG\_44 regarding 60 GHz (**Annex 39**);
20. Update of work item FM57\_01 of PT FM57 (**Annex 17**);
21. Amendments of the FM51 Terms of Reference (**Annex 15**);
22. Amended list of review of ECC/ERC/ECTRA Decisions, for ECC endorsement (**Annex 41**);
23. Further information is available on the WG FM website:

<https://cept.org/ecc/groups/ecc/wg-fm/news/results-of-the-wgfm90-in-birmingham-uk-05-09-february-2018/>

**8. Nomination and appointment of chairmen**

***8.1 Vice Chairmanship of WG FM***

1. As agreed at the WG FM #89 meeting, a call for nominations for the vacant vice chairmanship of WG FM was sent out on 17 October 2017 (FM(17)NOM04).
2. Two nominations (FM(17)NOM05 and FM(17)NOM06) of candidates for the position of the WG FM Vice Chair had been submitted before the deadline (5 January 2018), for Mr Alexey Shurakhov (Russian Federation) and for Mr Vincent Durepaire (France).
3. The WG FM Chairman introduced the procedure for the appointment of the Vice Chairman. He referred to the relevant parts of the ECC RoP (especially to Articles 5, 8, 14 and 15). He also informed that Liechtenstein had provided a proxy to Switzerland before the meeting.
4. WG FM had been informed in advance of the meeting by the Chairman that a secret ballot will be used. More than 50 % of the CEPT members were attending the meeting.
5. Both candidates were introduced on the first day of the meeting; the appointment was scheduled for the second day of the meeting.
6. Based on the outcome of the voting (secret ballot) Mr Vincent Durepaire (F) was appointed as Vice Chairman of WG FM for the next three years. The Chairman and the meeting congratulated Mr Durepaire.

***8.2 Chairmen of WG FM project teams, maintenance and forum groups***

1. The WG FM Chairman introduced the latest list from the ECC (FM(18)030), providing an overview on the Chairmen (“Overview of the chairmanships within ECC (Update November 2017))”.
2. Within WG FM, appointments/reappointments were required for the Chairmen of FM22, FM44, FM51, SRD/MG, EFIS/MG, RA/FG and MAR/FG. The RA/FG is currently chaired by an acting Chairman, a nomination of a candidate is still outstanding. Administrations are invited to provide nominations for candidates for the RA/FG.
3. The Chairmen were reappointed by acclamation according to the table below, in general for three years. The Chairman of the SRD/MG was reappointed until the end of the year 2018, because Mr Thomas Weber will leave the ECO at the end of the year 2018. No candidate was available for the MAR/FG, therefore the previous Chairman, Mr Jaap Steenge, was appointed as an acting Chairman until the end of the year 2018 at the latest (this will be reconsidered at the following WG FM meeting in May 2018). He will be supported by the Vice Chairman of the MAR/FG. Administrations are invited to nominate candidates for the MAR/FG until the WG FM meeting in May 2018.
4. The meeting had a common view that, with regard to the chairmanship for the SRD/MG, the work should continue in the beginning of 2019 without any interruption. Therefore administrations are invited to provide nominations for the SRD/MG chairmanship as early as possible. The appointment of a new SRD/MG Chairman is planned for the WG FM meeting in September 2018 which will come into effect in January 2019, but nominations could already be provided for the meeting in May 2018.
5. At the next meeting in May 2018 there will be a need to appoint / reappoint the Chairman of FM54.
6. Overview on WG FM Project Teams, Maintenance Groups and Forum Groups:

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Chairman** | **Start in position** | **End of current term** |
| **FM22** | Ralf Trautmann (D) | February 2001,reappointed in February 2018 | February 2021 |
| **FM44** | Amar Saidani (F) | February 2014,reappointed in February 2018 | February 2021 |
| **FM51** | Lindsay Cornell (UK) | October 2011,reappointed in February 2018 | February 2021 |
| **FM54** | Kuha Sithamparanathan (UK) | May 2015 | May 2018 |
| **FM56** | Vincent Durepaire (F) | February 2017 | February 2020 |
| **FM57** | Stephen Talbot (UK) | October 2017 | October 2020 |
| **SRD/MG** | Thomas Weber (ECO) | September 2010,reappointed in February 2018 | December 2018 |
| **EFIS/MG** | Stefan Mayer-Bidmon (D) | May 2014,reappointed in February 2018 | February 2021 |
| **RA/FG** | Thomas Weber (ECO, acting) | 2014 | December 2018 |
| **MAR/FG** | Jaap Steenge (HOL, acting) | October 2011,appointed as acting chairman in February 2018 | December 2018 |

**9. Any Other Business**

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

1. Mr Thomas Weber (ECO) presented doc. FM(18)043rev1 on the ECO assistance to WG FM including the ECO Bulletin presented at the last ECC meeting (doc. FM(18)005). No questions were raised at the meeting with regard to the ECO Bulletin.
2. He explained that a number of updates were performed in EFIS, e.g. harmonised standards as published by ETSI are updated, the new class 1 subclasses under RE-D were included in EFIS on 1 January 2018, and for Fixed Services, a new graphical tool/statistical visualisation was added to show how specific channelization arrangements are implemented with regard to the authorisation approach.
3. ECO Report 03 has been reviewed for possible mistakes (e.g. correction of uplink/downlink frequency ranges for duplex bands) and has been updated during the last six months by many administrations. The new MFCN SDL bands identified in ECC/DEC/(17)06 were added, together with an update of the guidance document. The statistical tool includes now the possibility to also export selected RoU from a table.
4. New documentation database: creation and maintenance of the list of review of ECC/ERC Decisions within the database is available now under: <http://test.ecodocdb.dk/docdb/document/category/ECC_Decisions/review>. The quick search tool and the update history in the new DocDB was debugged and improved.
5. ECO maintains and updates a range of lists including national contact points for specific topics (PMSE, PPDR, PMR, T-DAB, satellite regulations and maritime communications). CEPT administrations are invited to check and update their national contact points included in those lists.

**10. 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.

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

***11.1 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).

***11.2 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** |
| --- | --- | --- |
| FM Maritime FG #29 | 09 February 2018 | Web-meeting |
| FM51Guidance 2.7 - 2.9 GHz | 13 February 2018 | Web-meeting |
| **ECC #47** | **27 February – 02 March 2018** | **Lisbon, Portugal** |
| FM54 on T/R 25-08 | 05 March 2018 | Web-meeting |
| FM51 M28 | 06 – 07 March | Maisons-Alfort, France |
| SRD/MG ITS | 09 March 2018 | Web-meeting |
| FM54 #18 | 12 – 13 March 2018 | ECO, Copenhagen |
| FM56 #4 | 14 – 15 March 2018 | ECO, Copenhagen |
| FM44 #47 | 16 March 2018 | Web-meeting |
| FM57 #2 | 16 March 2018 | Edinburgh, United Kingdom |
| FM Maritime FGAd –Hoc group meeting | 20 March 2018 | Hamburg, Germany |
| FM Maritime FG #30 | 21 – 22 March 2018 | Hamburg, Germany |
| EFIS/MG #41 | 27 – 28 March 2018 | Luxembourg, Luxembourg |
| SRD/MG #73 | 11 – 13 April 2018 | Rome, Italy |
| FM22 #49 | 17 – 20 April 2018 | ECO, Copenhagen |
| FM56 #5 | 23 – 24 April 2018 | Budapest, Hungary |
| FM44 #48 | 24 – 26 April 2018 | ECO, Copenhagen |
| FM51 M29 | 03 – 04 May 2018 | Brussels, Belgium |
| ***WG FM #91*** | ***14 – 18 May 2018*** | ***Basel (Pratteln), Switzerland*** |
| ECC CEPT Workshop on Spectrum for Drones/UAS | 29 – 30 May 2018 | Copenhagen, Denmark |
| FM54 #19 | 04 – 05 June 2018 | Helsinki, Finland |
| FM56 #6 | 06 – 07 June 2018 | Helsinki, Finland |
| FM57 #3 | 07 June 2018 | TBD |
| FM Maritime FG #32 | 19 – 21 June 2018 | ECO, Copenhagen |
| **ECC #48** | **03 – 06 July 2018** | **Rome, Italy** |
| FM44 #50 | 04 – 06 September 2018 | TBD |
| SRD/MG #74 | 05 – 07 September 2018 | Mainz, Germany |
| FM54 #20 | 10 – 11 September 2018 | Vienna, Austria |
| FM56 #7 | 12 – 13 September 2018 | Vienna, Austria |
| EFIS/MG #42 | 17 – 18 September 2018 | TBD, Spain |
| SRD/MG x/o meeting on ITS | 20 – 21 September 2018 | ECO, Copenhagen |
| ***WG FM #92*** | ***24 – 28 September 2018*** | ***Vilnius, Lithuania*** |
| FM57 #4 | 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 | Paris, France |
| FM57 #5 | 13 December 2018 | TBD |
| SRD/MG #75 | 19 – 21 December 2018 | TBD |
| **WG FM #93** | **04 - 08 February 2019** | **TBD** |
| **ECC #50** | **05 - 08 March 2019** | **TBD** |
| **WG FM #94** | **03 - 07 June 2019** | **TBD, Estonia** |
| **ECC #51** | **02 - 05 July 2019** | **TBD** |
| … | … | … |

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

**12. 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.

**13. Closure of the Meeting**

1. The WG FM Chairman thanked the UK’s communications regulator Ofcom for hosting the meeting. He especially addressed his thanks to Mr Stephen Talbot from Ofcom and his colleagues in the background for the perfect organisation of the meeting. Then he thanked the staff of the IET Birmingham Austin Court for the valuable support on site.
2. In addition he thanked for the social event on Wednesday evening, including a very interesting sightseeing walking tour through the city centre of Birmingham and a delicious dinner at the IET Birmingham Austin Court.
3. 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.
4. He also thanked his WG FM administrative secretary Mr Ali Daheur (D) and his technical secretary Mr Silvio Schwarz (D) for their active assistance.
5. Finally he closed the meeting and wished all the delegates a safe journey home and a relaxing weekend.

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