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| Working Group FM | FM(16)225 |
| 86th Meeting |  |
| Bordeaux/France, 17 – 21 October 2016 |  |
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**1. Opening of the Meeting**

1. The WG FM chairman, Mr Thomas Weilacher (D), opened the 86th meeting of WG FM and welcomed the participants. The city of Bordeaux, he mentioned, is not only famous as a world's wine capital but recently also for football, as some of the UEFA European Championship games took place in the city in 2016.
2. Mr Didier Chauveau, Deputy Director of Spectrum Planning and International Affairs at ANFR, welcomed the WG FM and its delegates to Bordeaux.
3. He recalled the key role of CEPT and WG FM for the development of harmonisation measures and for the proposals to EC in response to EC mandates under the Spectrum Decision. The review of the Telecom package has been launched while the Spectrum Decision is maintained. This is the recognition of the role of CEPT. This demonstrates also the importance of the cooperation between CEPT and the EC and work validation via public consultations.
4. He then highlighted one of the key subjects for this meeting as the draft Addendum in response to 6th SRD mandate which will pave the way for SRD and IoT development and innovation in Europe in 862-870 MHz, 870-876 MHz and 915-921 MHz, while taking into account of international harmonisation opportunities. He mentioned the importance of the WG FM work on drones and PMSE amongst many others important subjects. He recalled the current work carried out by ETSI on the revision of the ETSI harmonised standards to achieve compliance with the RE-D. Due to the need to ensure coherence between spectrum regulation and harmonised standards, he invited the administrations with support of ECO to explore collegiate working on the validations of these standards by sharing the workload and identifying a long term solution to detect if/how future revisions are coherent with spectrum regulation in force.
5. He informed the meeting of the ANFR international conference on spectrum management on 5G and IoT which will be held the 15th of December (morning) in Paris, invited interested administrations and stakeholders to attend it and provided the relevant information to register (<http://conference.anfr.fr/> ). Finally, he wished a fruitful WG FM meeting.
6. The meeting was attended by 98 delegates from 34 CEPT administrations and 14 international organisations, EC, ECO and ITU. The list of participants is given in **Annex 02**.
7. 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(16)159R4. 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 report from the 42nd ECC meeting in June 2016 (FM(16)173) and highlighted the most important 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 report of the 74th WG SE meeting in September 2016 (FM(16)187). The liaison statements from WG SE were discussed with regard to 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(16)220, the progress report of the project team. Since the last progress report of May 2016, FM22 has had one meeting.

**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. There are no activities to report about.

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

1. A new document proposing a revision of the ECC Recommendation (05)01 on harmonisation of automatic measuring methods and data transfer for frequency band registrations aiming to accommodate mobile data measurement results was discussed at the last meeting of FM22. The main change is the addition of new data fields into the recommended files for common data exchange. The document needs further development.

**4.1.5 New ECC REC on measurement uncertainty**

1. Mr Trautmann presented doc. FM(16)201, the draft new ECC Recommendation on measurement uncertainty assessment for field measurements.
2. The meeting approved the new draft ECC Recommendation (17)01 for public consultation (**Annex 07**).

**4.1.6 Work related to ITU-R**

1. Mr Trautmann presented doc. FM(16)196, a revision of ERC Recommendation 54-01 on method of measuring the maximum frequency deviation of FM broadcast emissions in the band 87.5 to 108 MHz at monitoring stations. The revision is necessary to correct and improve the text in Section A2.5.2 in this ERC Recommendation.
2. It is intended to revise Recommendation ITU-R SM.1268 next year accordingly.
3. The meeting approved the draft revised ERC Recommendation 54-01 for public consultation (**Annex 08**).

**4.1.7 LTE coverage measurements, new ECC Report 256**

1. Mr Trautmann presented doc. FM(16)199, draft amended ECC Report 256 on LTE coverage measurements after public consultation and further consideration by FM22.
2. WG FM finally approved the Report 256 for publication (**Annex 09**).

**4.1.8 Physical Cell Identifier (PCI)**

1. Measurements done by France had shown that it is vital to tune the measurement equipment exactly to the correct centre frequency which is often not known a priori. Mismatch of the frequency by only 6 kHz could lead to the display of a false LTE Cell ID.
2. This effect needs further consideration. Hence, WG FM decided to maintain WI-FM22\_25 as proposed by FM22.

**4.1.9 Field strength measurements within 87.5 – 108 MHz**

1. Mr Trautmann noted that no remarks or change requests were expressed during the public consultation phase regarding the new ECC Recommendation (16)04 on ERP determination for FM broadcast transmitters, see doc. FM(16)171.
2. WG FM finally approved ECC/REC/(16)04 for publication (**Annex 10**).

**4.1.10 Revision of ECC Recommendation (11)06**

1. Mr Trautmann introduced doc. FM(16)203, the revised ECC Recommendation (11)06 on block edge mask compliance measurements for base stations, after public consultation and further consideration by FM22.
2. The frequency range in the title of Annex 4 of the Recommendation was corrected on request of the WG FM chairman.
3. With this correction WG FM finally approved the revised ECC Recommendation (11)06 for publication (**Annex 11**).

**4.1.11 Frequency monitoring in 406.0-406.1 MHz**

1. In response to the new WI-FM22\_30, FM22 had drafted doc. FM22(16)42-Annex 08, an annex to the minutes of the last meeting. This document invites administrations to monitor the bands adjacent to the band 406.0 to 406.1 MHz which is used by COSPAS-SARSAT and to report to the Radiocommunication Bureau of the ITU.

**4.1.12 Other issues**

1. Mr Trautmann reported that there is no FM22 vice-chairman anymore because the previous vice-chairman is no longer available and no new volunteer could be found so far.
2. The next meeting of FM22 will be held from 4-7 April 2017 at the premises of ECO in Copenhagen.

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

**4.2.1 Progress Report**

1. Mr Amar Saidani (France), the FM44 chairman, presented the progress report of the group as in doc. **FM(16)219R1**.
2. The FM44 chairman highlighted the following activities:
3. Draft ECC Report on Carrier Identification (CID);
4. Assumption and methodology for the revision of ECC Report 66 concerning HIRF protection of aircraft from earth stations emissions;
5. Creating a new ECC Decision for fixed earth stations operating to NGSO systems in 10.7-12.75 GHz (space to Earth) and 14-14.5 GHz (Earth to space) FSS allocation;
6. Creating a new ECC Report on in-motion earth stations operating to NGSO systems in 10.7-12.75 GHz (space to Earth) and 14-14.5 GHz (Earth to space) FSS allocation. FM44 will also consider the preparation of a new ECC Decision on such in-motion earth stations or revising existing ECC Decisions to incorporate the relevant regulatory aspects;
7. Revision of ECC/ERC/ECTRA Decisions falling under the purview of FM44;
8. M2M via satellite;
9. RAS protection from unwanted emissions of the Iridium NEXT constellation.

**4.2.1.1 Withdrawal of ECTRA/DEC/(97)02 “Harmonisation of S-PCS authorisation and coordination”**

1. The project team chairman presented Annex 3 of doc. FM(16)219R1, the new draft ECC Decision (17)BB for the withdrawal of the ECTRA/DEC/(97)02.
2. The WG FM approved the draft ECC Decision (17)BB document for public consultation (**Annex 27**).

**4.2.1.2 Amendment of ECC Decision (05)09**

1. The project team chairman presented the draft amended ECC Decision (05)09 on “The free circulation and use of earth Stations on board vessels operating in fixed-satellite service networks in the frequency bands 5925 - 6425 MHz (Earth-to-space) and
3700 - 4200 MHz” (see doc. FM(16)219R1-Annex 4).
2. WG FM approved the draft amendment of ECC Decision (05)09 to be sent to ECC for approval for public consultation (**Annex 28**). The ECC has not endorsed the amendment of this ECC Decision so far.

**4.2.1.3 Amendment of ECC Decision (06)10**

1. FM44 was tasked to analyse whether the ECC Decision should be withdrawn rather than revised and concluded that it should be revised and updated to provide a better picture of the countries where fixed service stations are still deployed (see doc. FM(16)219R1-Annex 5). This was justified because the implementation status of this ECC Decision in the CEPT is not documented. Finally, it was noted that the ECC Decision is not designating frequencies for an application or service, and that the real extent of remaining FS links in the band is unknown.
2. The ECO explained that the situation of the fixed service in a country for those frequency bands was unclear, especially with regard to the differences of implementation of Decides items 1, 2 and 3, and impossible to understand just relying on the implementation status (yes/no) of this ECC Decision. It was also noted that these frequency bands are not considered by the on-going questionnaire on the use of the fixed service in WG SE / SE19. Only the allocation situation is provided in EFIS.
3. As requested by Finland and Switzerland, the project team chairman clarified that administrations not operating fixed service in these bands are only asked to confirm that those bands are available for the mobile-satellite service when implementing the proposed amended ECC Decision (06)10.
4. The Russian Federation expressed concerns regarding the modified Decides items 1 and 2, explaining that those proposals are forbidding the use of fixed service stations while the original ECC Decision (06)10 allowed FS use that would be compatible with MSS. Following a drafting exercise the draft amended ECC Decision (06)10 was modified to come back to the original wording of Decides 2 and an updated wording for Decides 1 in order to delete the reference to the withdrawn ECC/REC/(06)05. As proposed by the Russian Federation, the order of the Decides items was changed to better reflect the awaited information from administrations when implementing the ECC Decision.
5. WG FM adopted the draft amended ECC/DEC/(06)10 to be sent to ECC for approval for public consultation (**Annex 29**). The ECC has not endorsed the amendment of this ECC Decision so far.
6. The EFIS/MG and the ECO were tasked to investigate the real extent of fixed service usage when revising the ECA Table and to give advice to WG FM, whether the secondary FS allocation for these bands is still valid for column 2 (ECA column) in the ECA Table.

**4.2.1.4 Amendment of ECC Decision (11)01**

1. The project team chairman presented the draft amended ECC Decision (11)01 on “the protection of the Earth exploration satellite service (passive) in the 1400 - 1427 MHz band” (see doc. FM(16)219R1-Annex 6)
2. The WG FM approved it for public consultation (**Annex 30**).

**4.2.2 Ku band, 11/12/14 GHz**

Regulatory framework for NGSO **fixed** earth stations operating in the Ku band

1. The project team chairman reported that work on a new ECC Decision is progressing and at near completion. He explained that FM44 awaits the technical results from SE40 in order to finalise the draft ECC Decision and will be soon in a position to present it to WG FM.

Regulatory framework for NGSO **in-motion** earth stations operating in the Ku band

1. The project team chairman reported that work on a new ECC Report is progressing and this work need to consider the results of compatibility studies being undertaken by SE40. FM44 is also examining the approach for the preparation of an ECC Decision on in-motion Ku band earth stations, and is currently discussing the possibility of amending relevant existing ECC Decisions to incorporate the land-mobile, maritime and aeronautical elements of the NGSO in-motion earth stations or to prepare a new ECC Decision to capture all in-motion NGSO earth stations. WG FM will be informed of the outcome of these discussions.

Liaison Statement (LS) from WG SE to WG FM on 14 GHz band NGSO earth stations

1. The WG FM chairman presented the LS (see document FM(16)182) and the meeting noted the amendment to the Work Item opened in WG SE.

**4.2.3 Revision of ECC Report 66**

1. The project team chairman recalled that the ECC had approved and sent a letter to EASA to confirm the different assumptions and methodology to be used for a review of ECC Report 66 (see doc. FM(16)173-Annex 3). Through consideration of replies from EASA, FM44 prepared a consolidated document to merge the reference of the current aeronautical regulations and methodology confirmed by EASA. The document will be used as the new assumptions to revise ECC Report 66 via an LS to WG SE (see doc. FM(16) 219R1-Annex 2)
2. The project team chairman presented a draft LS from WG FM to WG SE to review the technical guidance related to the HIRF protection of aircraft from earth stations in the vicinity of and on aerodromes and to amend ECC Report 66 accordingly.
3. The liaison statement was approved by WG FM (see **Annex 31**).

**4.2.4 Carrier Identification (CID)**

1. The meeting agreed to close the work item due to a lack of contribution.

**4.2.5 Small transmitters for animal tracking**

1. The WG FM chairman presented the LS from WG SE (see document FM(16)182) related to the on-going public consultation of the related draft ECC Report 257. He reported that this application only uses low power (4 mW) with a very low duty cycle, in the frequency range 401-403 MHz.
2. As the subject has not been discussed inside FM44 so far, the WG FM meeting discussed the possible next steps and agreed to task FM44 to consider whether a regime of exemption of individual licence and an inclusion in the ERC Recommendation 70-03 - Annex 2 (data acquisition and tracking) related to the use of Short Range Devices (SRDs) could be appropriate for this equipment. Alternatively another approach to enable exemption from individual licencing and free circulation and use could be considered.
3. Mr Thomas Weber (ECO) explained that such an implementation in ERC/REC 70-03 would need to be described and restricted in its scope to ensure that the assumptions of the compatibility studies were followed.
4. France raised concerns because a SRD regulation for such an application would cause problems with the filing at the ITU from their point of view.
5. FM44 was tasked to consider possible options and to provide its view to WG FM.

**4.2.6 M2M via satellite and airplane below 1 GHz**

1. The analysis done on a more detailed consideration has been presented by France at the last FM44 meeting. This explained that in bands below 1 GHz, that are collectively used by SRDs, there was an absence of RR space allocations (in those frequency bands) except for a small number of countries in eastern Europe. From the French point of view the collection of data of such low power devices by a space station would be allowed on a regulatory basis but without protection.
2. Clarifications were given to the United Kingdom that the technical characteristics of terminals were not studied in detail at this stage and would need some joint work with SRD experts. It was also clarified that a satellite downlink sending orders to terminals is expected in such a satellite application and would need more analysis to check the viability of such transmission without a space allocation (feasibility is established under Article 4.4 of the RR).
3. The project team chairman reported that some administrations expressed the need during FM44 meetings, to extend the scope of such a work to M2M applications via satellite without limiting it to the existing SRD frequency bands below 1 GHz. During the meeting, the Russian Federation supported this view and proposed that such a work covers all kinds and trends of M2M applications via satellite.
4. For those reasons, FM44 had prepared a description of its possible contributions and tasks dealing with satellite regulatory issues (see doc. FM(16)219R1-Annex 7). The document does not constitute a requirement for a work item itself and should be completed after a joint work with the SRD/MG.
5. Italy and Germany proposed that a SRdoc describing the application should be developed first. The WG FM chairman explained that regulatory possibilities for such an application have to be clarified at least at a preliminary basis before any work on an ETSI SRdoc is commenced.
6. As the work may first need some joint work from the SRD and satellite groups, the meeting agreed to open a WG FM correspondence group and related email-reflector, led by France, to clarify open questions and better define the parameter before deciding to create a dedicated work item or any work on an ETSI SRdoc. The correspondence group will also be opened to ETSI members. WG FM, FM44 and SRD/MG will be informed.

**4.2.7 Other issues**

RAS protection from Iridium’s unwanted emissions

1. The WG FM chairman presented the LS from WG SE to the Sat MoU chairman related to measurements of Iridium’s unwanted emissions (see document FM(16)189).
2. As no work item is opened in WG FM on this issue, the meeting just noted the new schedule for the launch of the Iridium’s satellites and the expected measurements.

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

**4.3.1 Progress Report**

1. The secretary of FM51, Mr Vaughan John (UK), presented the progress report of the 21st meeting of the project team (doc. FM(16)192) which was held at ECO Copenhagen on 21 September 2016. The primary task of this meeting was to resolve the comments received through public consultation on the revised ERC/REC 25-10.
2. FM51 had prepared a revised draft ERC Recommendation 25-10 for approval by WG FM for publication. In addition it was noted that there were consequential actions to be considered. These are addressed under agenda item 4.3.3.
3. The FM51 secretary noted that FM51 had prepared a draft revised work programme (doc. FM(16)192-Annex 6) with an additional work item proposed on body effect of handheld and body worn PMSE equipment. The WG FM chairman clarified that input from WG SE is not expected (not required) on this work item. This work item was approved by WG FM (supported by Austria, Cyprus, Germany, Republic of Ireland, Switzerland, and UK).
4. With regard to the work programme two other work items were agreed and approved by WG FM. These were studies looking at low power audio PMSE sharing in the band 960‑1164 MHz and to develop best practices for Video PMSE in the 2.7-2.9 GHz band. These are discussed in detail under agenda items 4.3.2.1 (Audio PMSE) and 4.3.2.2 (Video PMSE) respectively.
5. WG FM approved the revised work programme for FM51 (**Annex 20**).
6. The FM51 secretary noted the latest version of the list of PMSE contact points in CEPT administrations available on the PMSE page of the ECC website (doc. FM(16)192-Annex 7). The WG FM chairman invited administrations to review the details and inform the ECO of any updates.
7. The next meeting of FM51 will be held on 24-25 January 2017, at ECO, Copenhagen.

**4.3.2 Spectrum for PMSE**

**4.3.2.1 Audio PMSE**

1. The WG FM chairman noted that the minutes of ECC#42 had been introduced under agenda item 3.1 (doc. FM(16)173), and that the meeting was aware of the outcome of ECC in relation to the UK presentation at ECC on PMSE sharing in the band 960 – 1164 MHz. The chairman also noted doc. FM(16)186, the liaison statement from WG SE to WG FM which advised that the draft ECC Report 253 had been approved for publication.
2. APWPT introduced doc. FM(16)178R1. The document highlighted the decision to include the band 1350 – 1400 MHz in Annex 10 of ERC/REC 70-03. APWPT also asked that WG FM consider studies on audio PMSE sharing in the band 960 – 1164 MHz, and a possible future consideration of studies in the band 1525 – 1559 MHz.
3. The UK introduced doc. FM(16)198 which provided additional information to WG FM to support its discussion on PMSE sharing in the 960 to 1164 MHz band and to restate its position on the 1350 – 1400 MHz band. The UK noted that Ofcom, the Civil Aviation Authority (CAA) and the Ministry of Defence had worked closely together to set out and agree the scope of the analysis for the 960 – 1164 MHz band and the conclusions.
4. Sweden noted that the band 470 – 694 MHz is still available for PMSE and that other bands, such as 1350 – 1400 MHz, had also been made available for PMSE. Sweden asked what issue is sharing in the 960 MHz band trying to address at this point in time and if the proposed studies could be limited to a part of 960-1164 MHz range. The WG FM chairman noted that high demand events require access to a significant amount of spectrum and it is difficult to define a general amount of spectrum. Therefore, given the changes in spectrum availability for PMSE new sharing opportunities provide options to address spectrum supply.
5. EUROCONTROL introduced doc. FM(16)197R1 which stated that sharing of the 960 - 1164 MHz band with non-aviation services presents significant risks to aviation safety. While aviation does not support the sharing of this band with PMSE, any agreed studies would have to include:
* Complete safety case that includes consideration of safety analyses, identification of hazards, development of accepted mitigations and other regulatory issues in order to demonstrate that there could be no adverse impact to aeronautical systems from PMSE operating both “normally” and “not as foreseen”;
* Should be considered a wider range of types of airborne and ground based DME and surveillance equipment, consistent with those that would be used in Europe;
* Should be considered all DMEs in the line of sight of a given aircraft; studies should not be limited to considering DME DOCs (or proxies for DOCs).
1. The EUROCONTROL document concluded that the complete band will be used, once LDACS and UAS CNPC are standardised and WG FM should not consider sharing studies in the band.
2. Germany introduced doc. FM(16)214 which invited WG FM to request WG SE to carry out compatibility studies in the band 960 – 1164 MHz, and provided a draft liaison statement to this effect. The draft liaison statement would also invite FM51 to consider the regulatory and legal status of the band.
3. A number of administrations raised concerns that the liaison statement was requesting studies which were not aligned with a defined work item. Also, any study request to WG SE should be well defined. The WG FM chairman noted that this was a complex issue and asked administrations to indicate if they were in favour of tasking FM51 to scope and define the requirements for technical compatibility studies to be presented to the 87th meeting of WG FM for consideration and to carry out a preliminary assessment of regulatory and legal issues in the band to be presented until the 89th meeting of WG FM in October 2017. WG FM would then decide on whether a new work item regarding the development of a spectrum designation for audio PMSE in the band 960-1164 MHz should be adopted or not.
4. France recalled the safety aspects of this band and noted that different administrations have national agreements between their aviation and military authorities; therefore it is difficult to see how studies in CEPT could address these national differences. Based on this view, France stated that it was undecided on creating the proposed work item at this stage but proposed to first evaluate the complexity of the studies and the feasibility to identify the relevant parameters instead. Italy indicated that they have frequency clearance agreement between civil and military authorities.
5. The following administrations expressed support for studies: Germany, Austria, Italy, UK, The Netherlands, Republic of Ireland, Denmark and Norway. A number of administrations voiced their objection to studies:
	* Sweden, Switzerland and Greece stated that the band is heavily used by aeronautical and military systems and were not in favour of sharing studies with PMSE;
	* The Russian Federation supported the view of Eurocontrol that studies should not be carried out;
	* Belgium, Estonia, Lithuania and Poland did not support studies; and
	* Italy generally supported to carry out studies, but also supported views as provided by Eurocontrol in document FM(16)197R1. In addition, Italy highlighted that helicopter use of PMSE would not be possible in this band and should therefore be excluded from the studies.
	* Finland informed the meeting that it would not object, if WG FM decided to ask studies from WG SE, but pointed out the importance to clearly define what should be studied and under which conditions PMSE would operate in this band.
6. WG FM approved a work item on preliminary studies for low power audio PMSE in the 960 – 1164 MHz band.
7. The tasks were added to FM51’s revised work programme (**Annex 20**).
8. APWPT confirmed that it was not pressing for studies in the band 1525 – 1559 MHz at this time, so this did not need to be considered.

**4.3.2.2 Video PMSE**

1. The chairman noted that Info Document 008 from the European Commission had already been discussed under agenda item 7.1 and therefore did not need to be considered here.
2. France introduced doc. FM(16)222R1, a combined contribution from France, Hungary, Spain, Austria and Portugal calling for a new work item looking to develop a flexible “toolbox” for the use of the 2.7 – 2.9 GHz band for wireless cameras. France confirmed that no additional studies by WG SE were called for at this time. It was noted that the contribution also called for a possible new ECC Recommendation, if required, addressing cross-border coordination for video PMSE as concluded by the ECC steering group.
3. The WG FM chairman noted that Denmark had also expressed support for the work item, and consequently with six supporting administrations the work item was approved.
4. It was agreed that work item FM51\_07 would be closed and a new work item developed (see **Annex 20**).

**4.3.3 Update of ERC/REC 25-10**

1. The WG FM chairman noted that doc. FM(16)176 had been addressed by FM51 at its meeting in September this year and did not need to be considered again.
2. The FM51 secretary introduced doc. FM(16)192-Annex 3, the resolution table and indicated that all comments received were accepted by the project team. The meeting then reviewed the revised ERC/REC 25-10, doc. FM(16)192-Annex 2. WG FM reviewed the document and agreed that the band 1518 – 1525 MHz should be included. With this, the revised Recommendation was approved for publication (**Annex 16**).
3. France recalled that ECC Report 253 did not conclude on the relevant technical conditions for the wireless microphones to coexist with satellite as the density of use wasn’t agreed upon.
4. The WG FM chairman reminded the meeting that the ERC/REC 25-10 should be understood as a future oriented Recommendation that does not harmonise spectrum as e.g. ERC/REC 70-03. Administrations were free to decide to implement fully or partially a band and under their own technical conditions.
5. WG FM agreed that the band should be considered by SRD/MG for inclusion in Annex 10 of ERC/REC 70-03 .
6. APWPT introduced doc. FM(16)202 requesting administrations to consider the revised Recommendation 25-10 at their individual national levels.
7. The FM51 secretary introduced doc. FM(16)192-Annex 4, the draft questionnaire to CEPT administrations on national conditions for PMSE in the frequency ranges which are included in ERC/REC 25-10. With the decision to include 1518 – 1525 MHz in the Recommendation it was also agreed to include this band in the questionnaire. The ECO advised that the tool to automatically update the Recommendation would be available in the first quarter of 2017. The Office explained that administrations could either forward updates to the ECO for them to update the Recommendation or they could do it themselves via EFIS. It is also possible to provide a ‘PMSE only’ account to users so that they can only update the PMSE elements.
8. WG FM approved the questionnaire and timescales (**Annex 17**).
9. The FM51 secretary introduced doc. FM(16)192-Annex 5, the proposed CEPT input contribution to ITU-R WP5C advising them of the recently updated ERC Recommendation 25‑10 and inviting them to consider this in relation to Resolution ITU-R 59-1.
10. The WG FM chairman noted that the revised Recommendation should be attached to the input contribution. With this WG FM approved the input to ITU-R WP5C (**Annex 18**).

***4.4 FM PT 54 (PMR, PAMR, GSM-R)***

**4.4.1 Progress Report**

1. The FM54 chair, Mr Kuha Sithamparanathan (UK), presented the group’s progress report, covering the last two meetings held in Copenhagen, FM54#10 (27-28 June 2016) and Dublin, FM54#11 (19-20 September 2016).
2. The progress report, consists of a cover page summary, doc. FM(16)209, and 7 annexes as below:

a) Annex 1: ECO Summary of the WG FM questionnaire to CEPT administrations on national coordination between GSM-R and MFCN;

b) Annex 2: Draft revised ECC Recommendation (05)08;

c) Annex 3: Reply liaison statement from FM54 to SE 7 and WG SE;

d) Annex 4: Latest draft ECC Report on PMR/PAMR at 400 MHz;

e) Annex 5: A proposal for a reply liaison statement from WG FM to ETSI on PMR/PAMR spectrum sharing;

f) Annex 6: FM54(16)45rev1, Minutes FM54#10;

g) Annex 7: FM54(16)56, draft Minutes FM54#11.

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

1. FM54 continued with the development of the draft new ECC Report on PMR/PAMR in the 400 MHz ranges and WG FM was requested to note this.
2. However, the main sections of this Report will only be completed once the studies in SE7 have been concluded. At this time, placeholders have been identified for various chapters and sections by FM54 and non-study based topic sections are being progressed, such as narrow band PMR channel sharing schemes, utilities scenarios, the description of LTE platforms that could be suitable for this band and maritime concerns.
3. Certain inputs to the group request that strategies or policies for the preservation of narrow band PMR and the introduction of LTE in the band are considered and put forward in the Report. The FM54 chair is not keen on this as the PT’s function is to provide information on current use, future opportunities and guidance to CEPT administrations for the 400 MHz PMR/PAMR frequencies. It will then be up to the various administrations to take strategic or policy actions to suit their own national needs going forward.
4. Italy made clear that they are not in the position to neither introduce nor use BB PMR, including optional PPDR use, in the 410-430 MHz (military) and 450-470 MHz (civil) due to heavy use and existing congestion by narrow and wide band applications in these frequency bands.
5. With respect to looking at alternative bands for BB-PMR, the bands 2570-2620 MHz and 3400-3600 MHz had been discussed in FM54. The ECO provided useful licensing information on the two bands showing authorisations by 21 administrations in the 2.6 GHz range and by 25 administrations in the 3.4-3.6 GHz range.
6. It was agreed that the 3.4-3.6 GHz range was earmarked for other initiatives across Europe (incl. 5G) and as such was dropped but a proposal to potentially develop a questionnaire to seek more information on the 2.6 GHz range was put forward to WG FM to consider. This proposal was not taken forward as there was no support from WG FM.
7. It was noted that France will soon be conducting a public consultation on BB-PMR and will share its results. France recalled that LTE technology can support use of PMR functionalities and therefore any other MFCN bands could be suitable for BB-PMR/BB-PAMR. France proposed that this should be reflected in the ECC Report.
8. WG FM endorsed the inclusion of information regarding the possibilities for MFCN bands as possible options on national basis in the ECC Report.
9. With regard to M2M, WG FM noted that ECC PT1 had commenced a review of MFCN deliverables to ensure that they contain no provisions that might inhibit M2M usage. Administrations and the project teams SRD MG, FM44 and FM54 had been invited by WG FM to review current ECC deliverables under their purview, to identify any possible limitations on M2M usage.
10. FM54 noted this and reported that review of PMR/PAMR deliverables would only be conducted once the ECC Report on PMR/PAMR will be concluded and so this was premature at this time. However, FM54 would have this item on the agenda for its next meeting and would consider a section in the draft ECC Report to address this. This initiative was supported and agreed by WG FM.
11. With regard to ERC Recommendation T/R 25-08, there was nothing to report noting further work requested of WG SE/SE7 with respect to BB-BB and BB-WB cross border coordination was still ongoing.
12. Germany contributed and presented an input document FM(16)215 (Proposed CEPT contribution to ITU-R WP5A on T/R 25-08). This proposal was to send the latest version of T/R 25-08 for consideration at ITU-R WP5A.
13. The WG FM chairman commented that the timing was good as WP 5A would be meeting in November this year. This (see **Annex 23**) was agreed by WG FM and would be sent directly by Germany. WG FM also noted that revisions to T/R 25-08 would happen and could be sent subsequently to WP 5A.

**4.4.3 Frequency bands 410-430 MHz and 450-470 MHz (ECC task)**

LS to WG SE/SE7

1. FM54 had received a liaison statement from WG SE/SE7 requesting the group help to prioritise the various compatibility studies required for the 400 MHz band as SE7’s workload was quite challenging.
2. After much deliberation, rather than prioritise particular compatibility studies, FM54 felt it would be better to get the full range of studies, else the ECC PMR/PAMR Report would be incomplete with respect to the numerous systems in existence in the 400 MHz range.
3. As such, FM54 was of the opinion that the target date of WI SE7\_25 could be relaxed by one WG SE/WG FM meeting cycle, so as to have the resulting complete draft study report from WG SE/SE7 in spring 2017 for WG SE public consultation approval.
4. The reply liaison statement from FM54 to SE7 and WG SE (FM(16)209R1-Annex 3) was introduced to the WG FM meeting. WG FM endorsed this way forward. WG SE had already modified the work item SE7\_25 accordingly at its last meeting in September. The LS from WG SE to WG FM confirming this was noted.

LS to ETSI and developments

1. Document FM(16)160 contains a liaison statement from ETSI with information about 410-430 MHz and 450-470 MHz broadband PMR/PAMR studies and the request to consider development of spectrum sharing mechanisms.
2. This LS informs WG FM that the use of the access/sharing protocol defined in EN 300 471 is quite limited and that in practice sharing between PMR/PAMR is often achieved by operating on licensed channels which are dedicated to a particular user. The LS further request clarification to a number of points raised in the initial LS sent by WG FM to ETSI in May 2016.
3. It was noted that the existing PMR sharing standard EN 300 471, which is quite dated, is unlikely to have a release under the RE-D but could potentially remain as an ETSI EN.
4. After much deliberation, FM54 had decided that it was difficult and premature at this stage to try and make a qualified proposal towards the review of the standard. FM54 had decided that the current work on PMR/PAMR sharing aspects in the new ECC Report should be done first before such an answer is provided. As it is seen at the moment, sharing considerations are limited to PMR/PAMR systems with up to 25 kHz channel bandwidth. Sharing is also linked to PMR/PAMR systems having limited traffic (in erlangs), or can use time-sharing. A reply LS to ETSI was drafted stating this whilst encouraging ETSI to continue development of EN 300 471.
5. This was agreed by WG FM (**Annex 24**).
6. It was noted from EUTC (utilities) that ETSI TR 103 401 is planned for publication in October.

**4.4.4 Review of ECC Decision (04)06**

1. Not for consideration until the finalisation of the new ECC Report on PMR/PAMR.

**4.4.5 Review of ECC Decision (06)06**

1. Not for consideration until the finalisation of the new ECC Report on PMR/PAMR.

GSM-R

**4.4.6 Review of ECC Recommendation (05)08**

1. Based on an input from ECC PT1, FM54 added considerations and amendments for GSM-R (not covered by ECC PT1 before) to the draft revised ECC Recommendation (05)08 on frequency planning and cross-border coordination between GSM land mobile systems (the GSM 900, GSM 1800, and GSM-R) that was presented to WG FM.
2. The updated draft ECC Recommendation (05)08 was approved for public consultation by WG FM (**Annex 25**).

**4.4.7 GSM-R**

1. The ECO summary of the responses to the WG FM questionnaire to CEPT administrations on national coordination between GSM-R and MFCN had already been endorsed by FM54. 22 responses were submitted to the ECO. WG FM was asked to note this and endorsed the summary as well.
2. The key outcome agreed was there would be no modification of ECC Report 229 at this point. Some suggestions to WG FM were agreed following the results of the questionnaire. This includes among others a recommendation to set up a new topic page on the ECC website for railway communications, the inclusion of the new EIRENE Specifications (to be also reflected in any future revision of ECC Report 229) and that the questionnaire results should also be included in the EFIS questionnaire section. WG FM agreed to this.
3. With regard to the ITU-R questionnaire on railway communications (see ITU-R Administrative Circular 5/LCCE/60, 3 June 2016), it was suggested to WG FM that parts of the results of the WG FM questionnaire could be provided to the ITU Radiocommunication Bureau (BR) for information. The ITU-R questionnaire (deadline 31 October) only deals with factual information about the national implementations for railway communications.
4. WG FM chair tasked FM54/ECO to prepare a short information document during the plenary that could be then sent directly to ITU BR. This was drafted and agreed at the plenary and will be sent by the chair of WG FM at the end of the WG FM meeting (**Annex 34**).

Future of GSM-R

1. The on-going activities in ETSI TC RT on the developing of TR 103 333 (System Reference document (SRdoc) - GSM-R networks evolution) was noted and the TR is expected by the end of the year.
2. The floor was then given to Mr Thomas Chatelet of the European Union Agency for Railways who then presented documents:
* FM(16)194, Feedback from 1st joint RSC/RISC meeting which was noted by WG FM;
* FM(16)193, Publication of studies on evolution of GSM-R.
1. Doc. FM(16)193 describes two studies carried out on behalf of the Agency on the evolution of GSM-R, and highlights the main conclusions from those.
2. The ‘[study on migration of Railway Radio Communication system from GSM-R to other solutions](http://www.era.europa.eu/Document-Register/Pages/GSM-R-migration.aspx)’ was to reach conclusions on possible migration scenarios for the introduction of new radio communication systems as a replacement of GSM-R, and to provide recommendations for managing the migration, based upon economic modelling using information about the business cases of Rail Undertakings (RUs), Infrastructure Managers (IMs), and the Member States (MS).
3. The study on ‘[coexistence of GSM-R with other communication systems](http://www.era.europa.eu/Document-Register/Pages/GSM-R-coexistence.aspx)’ aimed at analysing what would be the impact for the railway operations if the frequency bands “876-880 / 921-925 MHz” and “873-876 / 918-921 MHz” were shared by other radio communication systems for railway, used in coexistence with the existing GSM-R system operated in these frequency bands.
4. All of this is in the context of the Agency’s project on Evolution of Railway Radio, and of course currently also a matter for FM54. The discussions and updates reflected the debates and considerations within FM54 on the future of GSM-R within CEPT. This was noted by WG FM.
5. WG FM discussed the transition/migration issues. Sweden asked how migration will be handled in reality, and sought WG FM’s guidance on the matter. There was agreement to look at examples of MNO migration strategies, difficulties for the rail industry in terms of migrating everyone at the same time, that administrations should coordinate and not unilaterally change systems.
6. The Czech Republic expressed reservations about claiming safety of life status in this process.
7. The WG FM chair reflected on the complexities and activities of this topic.

**4.4.8 Other issues**

1. Taking all of the above into consideration, WG FM intends to open a new Project Team for future railway mobile communications after the arrival of the ETSI system reference document, TR 103 333, on future GSM-R network evolution, at the next WG FM meeting in January/February 2017.
2. CEPT administrations were invited to consider volunteering a chairman for the new Project Team.

***4.5 FM PT 55 (RLANs at 5 GHz)***

**4.5.1 Progress Report**

1. The FM55 chairman, Mr Andrew J. Gowans (UK), presented his report with the results of the resolution meeting of WG FM Project Team 55 on draft CEPT Report 64 (FM(16)188/FM55(16)17).
2. He informed the meeting that FM 55 was set up to develop draft CEPT Reports in response to the Mandate from the European Commission, the first part of which was provided in CEPT Report 57. Draft CEPT Report 64 was developed to answer the second part and was approved to go for public consultation. FM 55 was tasked to review the comments provided to the public consultation process, collect any relevant information from the other ECC entities currently involved in 5 GHz studies and develop the final draft of CEPT Report 64 for consideration at this meeting of WG FM.
3. The FM55 chairman also asked WG FM to note that FM55 had taken account of all the comments received as a result of the public consultation on draft CEPT Report 64 and FM(16)188/FM55(16)17-Annex 1 contained a table with the summary of resolution comments made by FM55;
4. The FM 55 chairman also noted that there were no areas of contention that were not resolved in FM55 and that the final draft of CEPT Report 64 was presented in FM(16)188/FM55(16)17‑Annex 2 for WG FM to approve for submission to ECC for final approval and publication.
5. The FM chairman thanked the FM55 chairman for his report and then asked if there were any questions or queries on the FM 55 progress report. There were no questions or queries.

**4.5.2 EC Mandate on 5 GHz**

1. FM55 chairman presented document FM16(188)/FM55(16)17-Annex 2 to the meeting going through the draft CEPT Report 64 section by section and indicating where any agreed changes from the PC were reflected. After the FM55 chairman gave a general overview of the draft Report, the WG FM chairman asked for any general queries or comments.
2. As there were no comments the chairman asked the meeting to approve the draft CEPT Report 64 as presented by FM55 in document FM16(188)/FM55(16)17-Annex 2.
3. The document was approved by the meeting to go forward to the ECC meeting for approval to go for publication and submission to the European Commission (**Annex 06**).
4. Because no tasks will be outstanding after the final approval of CEPT Report 64 in November 2016, the meeting also discussed the possible closure of FM55. It was agreed that the final decision on the closure should be drawn at the next meeting of WG FM, hence after the final CEPT Report will have been discussed at the RSC meeting in December 2016.
5. The WG FM chairman already now thanked Mr Andrew Gowans for his excellent work he has done on 5 GHz and for chairing the project team.

***4.6 Short Ranges Devices / Maintenance Group***

**4.6.1 Progress Report**

1. Mr Thomas Weber (ECO) presented the progress report of SRD/MG as in document FM(16)200rev1. WG FM endorsed the actions of the SRD/MG on the items reported under section 4.6 of the present report.

**4.6.2 ECC/ERC Decisions and Recommendations**

**4.6.2.1 ECC/DEC/(04)03 on SRR in 77-81 GHz**

1. In line with the decision on the new informative annex in ERC/REC 70-03 to be sent to public consultation, it is not intended to revise ECC/DEC/(04)03. In addition, in consequence, the entry in Annex 5 of ERC/REC 70-03 for 77-81 GHz SRR will be deleted after final approval for publication of this informative annex (new Annex 13 of ERC/REC 70-03, see agenda item 4.6.3.3 below).

**4.6.2.2 ECC/DEC/(06)04 on UWB below 10.6 GHz**

1. The Work Item SE24\_58 on UWB based vehicular access systems operating in the 3.4 GHz to 4.8 GHz and 6 GHz to 8.5 GHz frequency ranges was noted.
2. It was further noted that ETSI prepares a new SRdoc for medical applications based on UWB technology. Another ETSI Technical Report is under development summarising all the available mitigation techniques.
3. SRD/MG will consider a possible revision of ECC/DEC/(06)04 when results of the studies in WG SE will become available in the future.

**4.6.2.3 ECC/DEC/(15)05 on PMR446 (446.0 – 446.2 MHz)**

1. The liaison statement on PMR446 from ETSI in doc. FM(16)161 was discussed. It informs WG FM that administrations have different interpretations of what constitutes compliant PMR446 equipment. ETSI further informs WG FM that the new EN 303 405 will contain provisions that will help administrations to identify compliant and non-compliant PMR446 equipment. This may contribute to a more common understanding and a coordinated approach for dealing with non-compliant PMR446 equipment.
2. WG FM noted that the new harmonised standard EN 303 405 will contain the unconditional requirement that the equipment is handheld equipment with integral antenna and integral battery power source.
3. CEPT administrations have adopted differing interpretations of what constitutes a compliant product according to the ECC Decision (15)05 and this was recently also discussed in the ADCO RED from the market surveillance perspective, and some administrations do not recognise some PMR446 equipment as PMR446, i.e. as ‘handheld equipment´, e.g. equipment with long antenna cables and glued connectors, or external batteries, while others apply a more liberal approach.
4. WG FM decided that SRD/MG should review the ‘handheld’ requirement and develop a proposal for a reply to ETSI, also noting that it may be important to have a consolidated ETSI opinion on this aspect.
5. It was noted that until the harmonisation of the all analogue and digital PMR446 takes place, the equipment class 1 subclasses for analogue PMR446 and digital PMR446 remain valid.

**4.6.2.4 ECC/DEC/(16)01 on obstacle detection radars for rotorcraft use**

1. WG FM adopted a correction of the ECC Decision (16)01 on 76-77 GHz obstacle detection radars for rotorcraft use for submission to the ECC for approval for publication (**Annex 36**). A new note was added to the introduction section in the Decision to explicitly clarify that the Decision cannot be used by unmanned aircrafts. This is in line with CEPT Report 59 and the assumptions made with regard to the market and usage density of the application in ECC Report 222. A public consultation is considered to be not needed.

**4.6.2.5 ECC/DEC/(07)01 on specific material sensing devices using ultra-wideband (UWB)**

1. WG FM adopted a correction of the ECC Decision (07)01 on specific Material Sensing Devices using Ultra-Wideband (UWB) technology for submission to the ECC for approval for publication (**Annex 37**). The references to the harmonised European standards were updated which are used several times in this Decision for mitigation techniques and related measurements. This is also in line with CEPT Report 59. A public consultation is considered to be not needed.

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

1. WG FM noted the outcome of the public consultation for ERC/REC 70-03 - Annexes 1 and 10, and the report from the SRD/MG on comments resolution.
2. The United Kingdom reiterated in doc. FM(16)204 their comments made during the public consultation of ERC/REC 70-03 - Annex 1 with regard to the new proposed entries for the band 1900-1920 MHz.

**4.6.3.1 Draft revised Annex 1 of ERC/REC 70-03**

1. After discussion, WG FM decided to not include the two proposed new entries in the band 1900-1920 MHz at the present time in the Annex 1 of ERC/REC 70-03. The proposed entries remain as candidates for the band 1900-1920 MHz for SRD applications for DECT technology and SRD with low duty cycle, and SRD/MG should continue to discuss them, also with regard to new alternative primary usage (other than DA2GC) such as identified in the United Kingdom as well as by others, when information will become available in the future. The task would be to define the need for compatibility studies with these primary services.
2. Such compatibility studies with identified alternative future primary services are also a pre-requisite before a proposal for harmonisation could be made in the future for the EC Decision for SRDs for this band.
3. It was noted that the majority of the existing MFCN licences in the band 1900-1920 MHz will expire in the period 2020-2027, so only a minority of CEPT administrations could possibly use such entries in ERC/REC 70-03 in the next years.
4. The subject should be re-discussed when the ECC/DEC/(15)02 on BB-DA2GC will be reviewed at the end of 2017.
5. WG FM decided to not change the scope of the Annex 1. To reflect the 5 GHz RLAN in vehicles explanatory paper, the ECO was tasked to add a note in the introduction of ERC/REC 70‑03: “Note: see also the explanatory document FM(16)200R1-Annex 11 on 5 GHz RLAN in vehicles (cars, busses, on-board trains, on-board aircraft)” below the paragraph about SRD usage on-board aircraft.
6. As requested by France, WG FM agreed to review document FM(16)200R1-Annex 11 to take into account the results of the technical studies carried out by WG SE at a later stage.
7. The amendment of ERC/REC - Annex 1 was approved for publication as in **Annex 40**, with deletion of the notes in band entries f2) and f4).

**4.6.3.2 Draft revised Annex 10 of ERC/REC 70-03**

1. The amendment of ERC/REC Annex 10 was approved for publication as in (**Annex 38)**.
2. WG FM agreed a liaison statement to ETSI to consider the addition of scanning options in the next revisions of EN 300 422 and EN 301 357 for the relevant frequency bands as a general option (**Annex 39**).

**4.6.3.3 Draft new informative Annex of ERC/REC 70-03**

1. WG FM approved a new informative Annex 13 of ERC/REC 70-03 for public consultation covering terrestrial applications operating under general authorisation regime which are not covered by Annexes 1 to 12 of the ERC Recommendation 70-03, and for which ERC/ECC Decisions exist (**Annex 43**).
2. The informative annex clarifies - with regard to potential new future applications in the respective frequency bands - that sharing and compatibility analysis for all of the concerned services and applications are to be studied and this will look at the potential for interference in both directions in order to give a clear view on any future sharing environment. By means of the EFIS database, the national implementation information will be maintained as for the other applications covered by ERC Recommendation 70-03. This will also increase the visibility of the applications and avoid misinterpretation of the regulations, especially with regard to stakeholders and users from the outside of Europe.
3. As a result, it is not intended to continue making a revision of ECC/DEC/(04)03. In addition, in consequence, the entry in Annex 5 of ERC/REC 70-03 for 77-81 GHz SRR will be deleted after final approval for publication of this new informative Annex 13.

**4.6.4 EC related activities (6th update)**

**4.6.4.1 Draft Addendum on 870-876 MHz and 915-921 MHz**

1. The draft Addendum to the CEPT Report 59 in response to the EC Permanent Mandate on the “Annual update of the technical annex of the Commission Decision on the technical harmonisation of radio spectrum for use by short range devices - Possibilities for a harmonisation approach for the bands 870-876 MHz and 915-921 MHz also taking into account new opportunities in the band 862-868 MHz” was adopted for submission to the ECC for public consultation approval and sending to the EC (**Annex 14**).
2. During the WG FM meeting, a drafting group amended the footnotes in Annex 3 of the draft Addendum. The WG FM meeting concluded that an individual footnote cannot be seen in isolation because in some countries constraints addressed in various footnotes can apply in parallel resulting in a situation that the minimum amount of spectrum to be made available will be reduced.
3. A draft cover letter for the draft Addendum was prepared for the ECC (**Annex 26**).
4. An invitation (liaison statement) to create a System Reference Document (SRdoc) on Low Power Wide Area Network (LP-WAN) was agreed to be sent to ETSI (cc to WG SE) (**Annex 21**). WG FM also noted that the ECC framework for generic SRDs within frequency band 863-870 MHz does not set a maximum antenna height, nor prohibits fixed outdoor installations. The current ECC framework for generic SRDs can indeed provide a home for wide range of innovative applications consistently with key principles of “minimum regulations” and “application and technology neutrality”. In this regard, WG FM confirms that it is not intended to restrict or remove already existing opportunities for SRDs in the range 863-870 MHz. The understanding of the characteristics of LP-WAN and other innovative SRD network solutions will enable CEPT administrations in future sharing consideration for conventional SRDs and SRD networks to find optimal solutions for equal basis sharing of all these applications.
5. As part of the draft Addendum, WG FM was also considering the possible introduction of high power (500 mW) Narrowband Networked SRDs (NBN SRD), including Network Relay Points (NRPs), operating in the RFID interrogator channels within the band 915-921 MHz. In order to further investigate on such a harmonisation opportunity, WG FM and SRD/MG would appreciate a technical support and feedback from WG SE and SE24, regarding the interference issue from NBN SRDs in the RFID interrogator channels. The WG FM meeting agreed on a liaison statement which was sent to WG SE (**Annex 13**).
6. SRD/MG will start working on new entries in ERC Recommendation 70-03 taking into account the draft Addendum to CEPT Report 59, draft ECC Report 261 and draft ECC Report 246. In addition, Annex 9 (inductive applications) of ERC/REC 70-03 will be revised.
7. The SRD/MG chairman informed the WG FM that a first discussion in SRD/MG with regard to the next guidance letter and the timing for the 7th update process of the EC Decision for SRDs under the permanent mandate had taken place. It is expected that the guidance letter is received in spring/summer 2017 and that the work plan for providing the CEPT Report for the 7th update will be shorter than for the 6th update (no WRC) and will last about one year.

Statement from Germany:

*In Germany the protection of primary services and military applications in the bands 870‑876 MHz and 915-921 MHz is required.*

*With the results achieved in the draft Addendum to CEPT Report 59 some progress has been achieved in this regard.*

*However, Germany observes that the solution results in a number of issues and potentially unintended consequences:*

*- instead of a full harmonisation a rather fragmented solution is achieved which is partially based on the smallest common denominator;*

*- so far there is no easy way for users and industry to get the information how member states implement the flexible provisions especially considering that ERC/REC 70-03 and the Commission Decision are not fully aligned. This may lead to uncertainty on the market;*

*- in some countries individual licensing limited for professional users is required for the protection of primary services which may i.a. result in geographical restrictions within a country and thereby in additional uncertainty on the spectrum availability;*

*- the flexible approach implies that there cannot be Class 1 equipment for these bands.*

Statement from Italy:

*Italy, while appreciating all parties’ efforts made to produce the draft CEPT Report 59 Addendum (ref. par. 30 above) in short time and in particular of the SRD/MG chairman, wishes to reserve its position in particular because it feels not regulatory and legally coherent the proposed falling of SRD Wide Area Networks within “non-specific SRD” category – see more by Italian doc. FM(16)223.*

**4.6.5 ITU-R contributions**

1. In June 2016 ITU-R SG1/WP 1B elevated the working document to PDNR on SRD categories based on European definitions (six categories included, see doc. FM(16)200R1-Annex 7). An agreement, especially with the USA, could be achieved. It is expected that this PDNR can be finally adopted by SG1 in June 2017.

**4.6.6 Adjacent band coexistence of SRDs**

1. No activities since the last WG FM meeting. This item is kept on the agenda of SRD/MG.

**4.6.7 Wireless Industrial Applications (WIA)**

1. No activities since the last WG FM meeting. This item is kept on the agenda of SRD/MG.

**4.6.8 SRDs in UHF**

1. See under agenda item 4.6.4.

**4.6.9 Review 5805-5815 MHz**

1. ETSI had approved a new Work Item to develop a System Reference document (SRdoc) for both Smart Tachograph and Weight & Dimension (TR 103 441). The work is supported by technical experts from the EC (JRC). The final approval of the System Reference document, originally planned for the beginning of December 2016, may be delayed.
2. There is no work item for ETSI Harmonised Standards so far.
3. SRD/MG awaits the results of the studies in WG SE / SE24 about SRD usage in cars equipped with 5.8 GHz road toll equipment, RLAN use based on the 5.8 GHz SRD regulation (25 mW) as well as co-channel ITS communications (5855-5875 MHz). Administrations and stakeholders were reminded by the WG FM chairman that this work in SE24 would need support and contributions.

**4.6.10 Radio microphone applications**

1. The information in doc. FM(16)162 about a new work item for the development of an ETSI SRdoc TR 103 450 - Technical characteristics and parameters for Wideband Multichannel Audio Systems (WMAS) in the frequency range from 25 MHz to 3000 MHz was noted. The final version may be presented at the next meeting of WG FM.

**4.6.11 ULP wireless medical capsule endoscopy**

1. The ETSI SRdoc TR 103 451 on ULP wireless medical capsule endoscopy was presented by the ETSI Liaison Officer, Mr Edgard Vangeel. This new technology offers health care providers a range of innovative options for visualizing, diagnosing and monitoring the human Gastrointestinal (GI) tract by the use of a disposable capsule that contains a small endoscope camera transmitting optical images to an external data recorder.
2. SRD/MG had already requested WG SE/ SE24 to conduct studies for a medical capsule endoscopy application in the frequency band 430-440 MHz with -40 dBm/10 MHz low power (doc. FM200R1-Annex 10). In order to not loose time due to the order of meetings, SRD/MG therefore agreed to address this in a direct liaison statement to WG SE for duly consideration. A rapporteur for the work in SE24 is available. WG FM did not identify any difficulties and agreed to confirm the request to WG SE / SE24. It was agreed to only note the conclusion of this discussion in the minutes of this WG FM meeting, without the need to send a formal liaison statement to WG SE.
3. IARU Region 1 mentioned that the band 430 – 440 MHz is an important primary allocation for the amateur service and this application would need to take account of significant emission levels from transmitters in the amateur service operating in residential premises.

**4.6.12 ALD/TRS further harmonisation possibilities**

1. No action at this meeting. The extended deadline is January 2017 in SE24 for the spectrum sharing studies in the frequency range 1656.5-1660 MHz for Telecoil Replacement Systems (TRS). Based on contributions in SE24 a draft document is now available in SE24.

**4.6.13 Spectrum requirements for Urban Rail Systems**

1. The SRD/MG received presentations from the UITP, the Car-2-Car Consortia and Kapsch about the on-going work in ETSI on Urban Rail applications as part of ITS (Intelligent Transportation Systems). The exchange of information set out needs for new future ITS applications and also the need for Urban Rail applications. The Technical Report ETSI TR 103 442 V1.2.1 has been received by WG FM and was presented (doc FM(16)180) by the ETSI Liaison Officer, Mr Edgard Vangeel.
2. In the band 5905 MHz to 5925 MHz, according to the TR, all sharing proposals assume that CBTC urban rail safety related applications will have a prioritisation over the C-ITS applications. In the band 5875 MHz to 5905 MHz C-ITS will have the priority. In the band 5855 MHz to 5875 MHz both systems are treated equally. The prioritisation rules could be defined in common ETSI protocol specifications for ITS and Urban Rail Systems.
3. WG FM agreed to the proposal from the SRD/MG to start a revision of ECC Decision (08)01 with the aim to include Urban Rail Systems, for shared use of the current ITS spectrum and Urban Rail (CBTC) in 5875-5905 MHz as well as Urban Rail (CBTC) use with future ITS applications in 5905-5925 MHz. This needs to be endorsed by the ECC.
4. WG FM also agreed that a revision of ECC Decision (08)01 should not lead to a fragmentation of the spectrum designated to ITS.
5. The liaison statement from WG SE to 3GPP TSG RAN on LTE based solutions for ITS is an important condition for the scope of this revision work, noting that all compatibility studies for ITS in the 5 GHz range were based on IEEE 802.11p (ETSI ITS G5) and the corresponding ETSI profile standard EN 302 663 and the harmonised standard ETSI EN 302 571, respectively. No application outside the existing compatibility studies for ITS will be considered.
6. Future Urban Rail applications are planned to be included in ECC/DEC/(08)01 and must comply with the existing compatibility studies between WAS/RLAN applications and ITS G5 applications as specified in ETSI including the mitigation techniques currently under development. Otherwise, a very complex situation would arise with the on-going work in ETSI TC BRAN (e.g. mitigation techniques to be used by WAS/RLAN for ITS) and the activities under the 5 GHz Mandate.
7. If new Urban Rail Systems would deviate and be fully based on 4x5 MHz systems, new spectrum compatibility studies would be needed. A solution should be found in ETSI to avoid this. In addition, mitigations with regard to ITS protection should also be valid for Urban Rail Systems complying with the existing compatibility studies.
8. Furthermore, SRD/MG was informed that ETSI had started to investigate whether TD-LTE based ITS and ITS G5 could share the same channels. This is however difficult at the moment since some elementary parameters (including receiver parameters) are not specified yet in 3GPP.
9. The UITP SUG indicated to SRD/MG that the solution providing the highest flexibility and the fastest implementation would be for them to implement warning beacons for identifying the limits of the mitigation area where CBTC systems have the priority in the sub-band 5905 MHz to 5925 MHz. Such warning beacons should be implemented with a low duty cycle (TBD) in ITS compatible channels (10 MHz wide), each one grouping 2 CBTC channels (5 MHz wide). The frame structure should be recognised as an IEEE 802.11 standard. Such a solution can be made consistent if necessary for sharing the band with an extension of RLAN, both CBTC and ITS being protected. The choice of the preferred solution – with or without a harmonised access layer needs time. In this regard, ETSI TR 103 442 V1.2.1 is to be seen as an interim report.
10. WG FM also concluded that existing Urban Rail System implementations would need to be recognised.

**4.6.14 RLANs at 5 GHz operated in vehicles**

1. WG FM approved an explanatory paper related to RLAN equipment using the 5 GHz bands in vehicles, including the usage under the non-specific SRD regulation (**Annex 15**). The paper will be referenced in a note in the introduction of ERC/REC 70-03 and also published on the SRD topic webpage and in EFIS.

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

1. SRD/MG will discuss the response from WG SE/ SE19 in doc. FM(16)184 at its next meeting. The aim is to find a better harmonisation approach for all applications under general authorisation regime.

**4.6.16 Radar equipment operating in the 76-77 GHz range for fixed transport infrastructure**

1. SRD/MG will consider conclusions of the draft ECC Report 255 at its next meeting in January 2017 and after the PC of the draft ECC Report, noting that the current regulations for 76‑77 GHz include all ground based vehicle and infrastructure systems.

**4.6.17 RFIDs**

1. No action at this meeting.

**4.6.18 Other issues**

1. No other action at this meeting.

***4.7 ECC PT1 (MFCN)***

**4.7.1 Progress report**

1. The FM54 chairman briefly introduced the progress report of ECC PT1 (document FM(16)208), providing an overview of the ECC PT1 activities on issues which are relevant to WG FM.
2. ECC PT1 submitted three updated draft ECC Recommendations, on cross border coordination to WG FM for approval for public consultation.
3. The three updated draft Recommendations for WG FM PC approval were:
4. ECC/REC/(05)08 on GSM 900 MHz, GSM 1800 MHz and GSM-R (see agenda item 4.4.6 )
5. ECC/REC/(11)04 on 790-862 MHz (FM(16)208-Annex 1)
6. ECC/REC/(11)05 on 2500-2690 MHz (FM(16)208-Annex 2)

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

**4.7.2.1 Review of ECC Recommendation (05)08**

1. Updated draft ECC Recommendation (05)08 was presented and approved for public consultation (**Annex 25**, see also agenda item 4.4.6 (FM54)).

**4.7.2.2 Review of ECC Recommendation (11)04**

1. ECC Recommendation (11)04 was presented and approved for public consultation (**Annex 32**).

**4.7.2.3 Review of ECC Recommendation (11)05**

1. ECC Recommendation (11)05 was presented and approved for public consultation (**Annex 33**).

**4.7.3 Frequency bands 1427-1452 MHz and 1492-1518 MHz**

1. WG FM also noted ongoing development of a work item on harmonisation of the frequency bands 1427-1452 MHz and 1492 – 1518 MHz for MFCN.

**4.7.4 Other issues**

1. ECC PT1 also invited WG FM to note the ongoing activities in ECC PT1, the updated list of ERC/ECC Decisions/Recommendations for review and the planned ECC PT1 meeting schedule.
2. WG FM also noted the two questionnaires launched, a list of correspondence activity on M2M and SEAMCAT parameters and finally the schedule of ECC PT1 meetings for next year.

***4.8 EFIS Maintenance Group***

**4.8.1 Progress Report**

1. Mr Stefan Mayer-Bidmon (D), chairman of the EFIS/MG, presented the EFIS/MG progress report as in document FM(16)213 and Annexes 1 to 4 to it.
2. The EFIS/MG#38 took place on 30-31 August 2016. The minutes, agreed by correspondence, with Annexes are provided in Annex 1 of document FM(16)213 were noted by WG FM.
3. The EFIS/MG had discussed the following items: Reports related to EFIS from the latest meetings of WG FM, and ECC; Action Point’s for administrations and ECO; update/status of EFIS software and content (ECO); revision of Annexes 2 and 5 of the ECC Decision (01)03; further development of EFIS; update of ECO Report 05 on CEPT, ECC and EC deliverables in relation to the application terminology specified in ECC Decision (01)03 (Annex 2) and the revision of ERC Report 25 (ECA Table).

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

1. Annex 2 (application terminology) of ECC Decision (01)03 for EFIS had been revised. After its meeting, EFIS/MG had considered by correspondence the revision of Annex 5 (data formats) of ECC Decision (01)03. The revised ECC Decision (01)03 for EFIS was submitted to WG FM for administration consultation approval.
2. WG FM approved the revised version of ECC Decision (01)03 (draft revised Annexes 2 and 5 to it) for administration consultation (**Annex 35**).

**4.8.3 Update of the ECA Table**

1. The new task for EFIS/MG to revise ERC Report 25 (ECA Table) was decided at the last meeting of WG FM. The EFIS/MG had set up a common understanding in view of revising the ECA Table. Also EFIS/MG should deliver to WG FM revised versions of the ECA Table with proposed changes and provide WG FM proposals for decision finding. The target date for publication of the next revision is June 2017.
2. The ECO had prepared a document which includes frequency sub-bands of the ECA Table which are different compared with the ITU-R RR Art. 5 frequency bands.
3. The EFIS/MG had considered to merge or split frequency sub-bands of the ECA Table or to keep the current entries and also to explain why this was proposed, because some sub-frequency ranges have big differences with regard to the relevant radio applications for CEPT.
4. The result of the proposed revisions was set out in Annex 3 and Annex 4 of the EFIS/MG progress report. The WG FM chairman invited the administrations to consider this further until the forthcoming meetings of EFIS/MG and WG FM.
5. At the next meeting of EFIS/MG it is planned to prepare a revision of ERC Report 25 (ECA Table) with proposed changes and to provide proposals to WG FM for decision finding to have a final document for public consultation after the WG FM in May 2017.
6. EFIS/MG was tasked to discuss the terms of footnote ECA3 (see also agenda item 4.10.4 below).
7. EFIS/MG was tasked to review section 5 (military applications) of ERC Report 25 (see also minutes of the ECC meeting in June 2016, doc. FM(16)173).
8. EFIS/MG was tasked to consider the public available NJFA in the revision of ERC Report 25.
9. EFIS/MG was tasked to consider the application terminology for unmanned aircrafts in ECC/DEC/(01)03 (Annex 2).
10. All administrations are invited to response to EFIS/MG with regard to the working document to ERC Report 25 on the proposed merging, keeping or splitting of frequency sub-bands. The aim is to be in line with RR Art. 5 as much as possible taking into account the differences in major European utilisations in case of deviations to RR Art. 5 sub-banding.
11. See also agenda item 4.2.1.3 (par. 12), agenda item 5.7 (par. 2) and agenda item 5.9 (par. 1).

**4.8.4 RIS Models**

1. No proposals for RIS Models were received by EFIS/MG for its meeting.
2. At this point it is to note agenda item 8.1 below, taking into account the situation under the new RE Directive regarding the equipment subclasses.

**4.8.5 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.
2. It is possible to add frequency band footnotes and allocation footnotes in the allocations section of the EFIS. This function was developed for the ECA Table and was also made available for NTFAs. At this point it is to note that it is possible to import all the footnotes from the ECA Table into the national account.
3. For administrations it is voluntary to present frequency band footnotes and allocation footnotes in their NTFAs.
4. For a better understanding there are some examples shown in a separate document which is included in Annex 1 of the progress report (Annex 7 of the EFIS/MG minutes). It is therefore useful to revise ECC Report 180 in the next meeting of EFIS/MG to include these examples.
5. The progress of the EFIS system was endorsed by WG FM.

**4.8.6 ECO Report 05**

1. References to new CEPT/ECC deliverables had been added in the ECO Report 05 by EFIS/MG in relation to the used EFIS application terms. In particular the use of the application terminology for PT1 deliverables was reviewed by the ECO and PT1.

**4.8.7 Action points for the administrations**

1. The action points as shown in the EFIS/MG minutes for administrations and the ECO had been checked whether they had been completed or not. New action points are reflected in the EFIS/MG minutes under the relating agenda items. The updated list of the action points is included in Annex 1 of the EFIS/MG progress report (Annex 3 of the EFIS/MG minutes).

**4.8.8 Other issues**

1. The next meeting of the EFIS/MG will take place in Lisbon, Portugal, on 4-5 April 2017.

***4.9 Maritime Forum Group (MAR FG)***

**4.9.1 Progress report**

1. No progress report was presented to the 86th WG FM meeting.

**4.9.2 Market surveillance campaign on AIS-SART Beacons**

1. Nothing was reported.

**4.9.3 Other issues**

1. During the previous meeting, WG FM requested MAR FG to propose the number of physical meetings to be held in 2017, while presenting as well the reasoning for that (based on ECC RoP, Article 7a.3).
2. On behalf of the MAR FG chairman, Mr Jaap Steenge (HOL), Mr Thomas Weber (ECO) introduced document FM(16)212. The MAR FG proposed to hold two physical meetings in 2017.
3. WG FM discussed the need to have MAR FG physical meetings in 2017. Considering the limited workload according to the work programme of MAR FG, there was no agreement to hold physical meetings in 2017.
4. Mr Weber introduced document FM(16)217, providing a draft questionnaire to CEPT administrations on treatment of foreign maritime radio operator’s certificates. Mr Weber informed the meeting that the answers to the questionnaire could directly be provided electronically and administrations were encouraged to use this facility to submit the response to this questionnaire.
5. WG FM discussed the contents of the draft questionnaire and agreed to slightly modify the proposed text in the introduction (**Annex 44**).
6. Mr Weber presented document INFO 007, containing the initial CEPT guidance on the overview of documents for Sub-Committee on Navigation, Communications and Search and Rescue, 3rd session (NSRC-3). INFO 007 was noted by WG FM.
7. Regarding the work programme, it was noted that the work item Maritime FG\_04 was initiated in 2011 and an ECC Report was expected to be delivered. So far, the MAR FG had not provided any output on this WI. Therefore, WG FM agreed to seek clarification until the next WG FM meeting on this – if this WI is still needed – while taking into account the activities of CPG PTC on WRC-19 agenda item 1.8.
8. It was noted that the work item Maritime FG\_06 was ongoing. This will be reconsidered, whether additional actions are needed after the responses to the questionnaire have been made available.

***4.10 Radio Amateur Forum Group (RA FG)***

**4.10.1 Progress Report**

1. The acting chairman of the RA FG, Mr Thomas Weber (ECO), introduced document FM(16)195, the progress report.

**4.10.2 REC T/R 61-01 (CEPT Radio Amateur Licence)**

1. WG FM had tasked the ECO to inform CITEL, other regional organisations as well as other individual non-CEPT countries to inform about this new possibility for a self-declaration. Mr Weber informed the meeting that letters informing about the new ‘Statement of Conformity (SoC)’ concept were so far sent to CITEL/OAS, CRASA (Communications Regulators’ Association of Southern Africa), APT, Radio Sector of RCC Executive Body, and ATU. It is intended to continue and send further letters to the Arab Spectrum Management Group and also individual non-European countries of interest, e.g. some in Latin America (e.g. Brazil, Argentina, Chile).
2. With respect to countries which may join T/R 61-01 by means of the new SoC it is likely that the SoC would also be acceptable to ECO in order to secure participation in T/R 61-02 or the Novice Licence.
3. Mr Weber informed that a possible issue was identified about the expiry date/ validity of radio amateur licences: in some countries, no expiry date is given, and this could potentially lead to enforcement problems (e.g. licence not always taken back in justified cases). The radio amateur Recommendations avoid the word ‘expiry date’ and instead use ‘within the limit of validity of the national licence’. So far there has been no reporting that this situation really caused problems.
4. Concerning those countries providing multiple prefixes in T/R 61-01 it is understood that any of the prefixes listed in the appropriate annex to T/R 61-01 may be used.
5. WG FM discussed the issue of short term licences and related fees for radio amateurs operating in foreign countries under T/R 61-01. WG FM agreed that the intentions of T/R 61-01 are that no short term licence is needed and no related fees are to be paid. This understanding is shared even with the administrations overseas (i.e. these do not inform their radio amateurs about such needs). A footnote in this regard may not help, if individual administrations apply short term licences / fees.
6. WG FM agreed that in order to avoid that single radio amateurs infringe national rules, those countries should actually not participate in the framework of T/R 61-01. This information should be provided on the ECC’s radio amateur topic website and communicated by the Office as appropriate.

**4.10.3 Revision of ERC Report 32**

1. The results of the public consultation in doc. FM(16)167 and the result of the comment resolution in the forum group in doc. FM(16)195, Annexes 1 and 2, were presented. Since not all comments were resolved by the RA FG, a drafting group during the WG FM meeting resolved the remaining comments.
2. WG FM approved the draft revised ERC Report 32 (amateur radio examination syllabus for the CEPT radio amateur novice licence as in ECC/REC/(05)06) for publication (**Annex 19**). The revision aligns ERC Report 32 with the revised text of T/R 61-02.
3. With regard to the mentioning of the radio amateur code of conduct in ERC Report 32 as well as Recommendation T/R 61-02, the IARU-R1 and EURAO are invited to work together on a common code of conduct which may be set out as information on the radio amateur topic page, once consensus will have been achieved.

**4.10.4 Other issues**

1. WG FM agreed to task ECO to editorially align Recommendation T/R 61-02 and ECC/REC/(14)06 with the Terms of Reference of the forum group and the wording recently approved in ECC/REC/(05)06, i.e. to replace the ‘IARU’ with ‘international organisations representing amateur radio service licensees’.
2. WG FM noted that Japan was included in Annex 4 of Recommendation T/R 61-02, ECO received a verbal note from Japan and added a footnote as requested in the verbal note, with regard to the situation for radio amateurs who are Japanese nationals. This makes it also possible to consider an entry for Japan in Recommendation 61-01. Japan was invited to consider joining, and to do so, Japan should use the 'Statement of Conformity' (SOC) form included in the Recommendation T/R 61-01.
3. WG FM noted the amended new radio amateur topic website: <http://www.cept.org/ecc/topics/radio-amateurs/>. Suggestions for amendment should be sent to Mr Thomas Weber (ECO).
4. WG FM noted that CPG PTD had been reminded by the ECO that administrations are urged to remove their assignments to broadcasting service in the band 50-54 MHz. This action will be in line with earlier decision to protect assignments according to the Stockholm Agreement 1961 Plan. CPG19 PTD has included in their work programme the need to remove unused assignments affecting the band 50 - 54 MHz in view of Agenda Item 1.1 of WRC-19. However, the ECA Table (ERC Report 25) is reviewed frequently at WG FM meetings. Footnote ECA3 states 'CEPT administrations are urged to take all practical steps to clear the band 47-68 MHz of assignments to the broadcasting service. The broadcasting assignments according to Stockholm Agreement 1961 shall be protected.' From a WG FM standpoint it could be useful if the totality of broadcasting Band I could be addressed in accordance with ECA3 and unused assignments listed in the MIFR could be suppressed. It is therefore suggested that progress in respect of meeting the terms of ECA3 should be reviewed at future WG FM meetings when the ECA is addressed. Such an action is also likely to help CPG PTD in their task to prepare for WRC-19. EFIS/MG was tasked to discuss the terms of footnote ECA3.
5. The FCC published DA 16-1048A1 about AMATEUR SERVICE OPERATION IN CEPT COUNTRIES, and it is assumed it was sent in particular to member of the ARRL. ECO informed the FCC about necessary updates with regard to the URLs used for CEPT and the ECO, and the latest on-line versions of documents (i.e. Recs. T/R 61-01 and (05)06). The FCC confirmed they will use the new URLs in their next update about CEPT regulations for radio amateurs.

**4.10.5 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, should continue as acting chairman of RA FG.
2. Since the revisions of the radio amateur deliverables are finalised (T/R 61-01, T/R 61-02, ECC/REC/(05)06 and ERC Report 32), the remaining tasks are of administrative nature and handled by the ECO. WG FM therefore decided that the RA FG is put in ‘idle mode’. Proposals for new work should be provided via a CEPT administration directly to WG FM before a task is assigned to the RA FG. In this case in the future, the administration suggesting new work should also provide a candidate for the chairmanship of this forum group.

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

***5.1 Civil-Military meeting***

1. The final agenda for the civil-military meeting (23-24 November 2016 in Prague) was already approved at the last WG FM meeting in May 2016 (FM(16)158-Annex 6). Slight amendments in the agenda and in the schedule may still be needed. This will be done by the WG FM chairmanship together with the NATO representative (Mr Dietmar Poplawski).
2. France asked for a possibility for a presentation on LSA. Mr Poplawski (NATO) informed the meeting that he would try to find an appropriate time slot for such a presentation. However, also other requests need to be taken into account.
3. The WG FM chairman emphasised that the schedule is already very tight and sufficient time should be provided during the civil-military meeting for discussions. But the aim is to fulfil the outstanding requests on presentations.
4. The Czech Republic introduced Info document 006 and emphasised that registrations for the civil-military meeting has to be done until 31st of October 2016 due to administrative and organisational reasons.

***5.2 PPDR Workshop on 29 September 2016 (follow-up activities)***

1. The WG FM chairman presented doc FM(16)181, a summary of the joint ETSI – CEPT/ECC Workshop on PPDR, which took place on 29 September 2016 at the ETSI premises.
2. First he presented highlights from the presentations held at the workshop during the 4 sessions, as well as issues raised and some discussion points.
3. This was followed by a description of the general conclusions of the workshop and an outlook on the next steps and follow up activities (session 5 of the workshop).
4. Three presentations on national solutions were provided during the workshop. The WG FM chairman highlighted that, taking from the discussions at the workshop, it seems to be that those countries which already had rather stable views on a future BB-PPDR implementation are focusing their considerations on hybrid models.
5. The information regarding the workshop was noted by the meeting.
6. It was noted that an article in the ECC Newsletter about the PPDR workshop will be published at the end of October 2016.
7. The WG FM chairman thanked ETSI for the excellent cooperation between ETSI and ECC at the workshop and during the organisation of it.

**5.2.1 Other issues**

1. The WG FM chairman briefly introduced document FM(16)173-Annex 2, an LS from ECC to ETSI TC ERM and 3GPP on BB-PPDR in the 700 MHz and 400 MHz ranges. The LS informs about the publication of ECC/DEC/(16)02 on “Harmonised technical conditions and frequency bands for the implementation of Broadband Public Protection and Disaster Relief (BB-PPDR) systems”. Furthermore, the LS kindly requests ETSI and 3GPP to consider the inclusion of the technical requirements as in ECC/DEC/(16)02 in ETSI standards and 3 GPP Specifications.
2. So far no official response on that has been received within CEPT/ECC. This was noted by the meeting.
3. France reported back to WG FM on the presentation of the CEPT contribution (doc. FM(16)158-Annex 19) at the last meeting of ITU Working Party 5D on the draft revision of Report ITU-R M.2291-0. This Report addresses the current and possible future use of international mobile telecommunications (IMT) including the use of long term evolution (LTE) in support of broadband public protection and disaster relief (PPDR) communications.
4. The CEPT contribution presented by France was discussed over a few drafting sessions at ITU Working Party 5D. It was approved by WP 5D with some amendments of editorial nature in the main body of the Report (section 3.2.11 on Capabilities (e.g. talk group configuration)). Annex 4 of the ITU-R Report which describes the CEPT work on BB-PPDR was accepted without modifications.

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

1. The WG FM chairman informed the meeting that the ECC, at its 42nd meeting in June 2016, had supported the updated list of ECTRA/ERC/ECC Decisions as provided by WG FM in document FM(16)173 - Annex 1.
2. WG FM noted the contributions to the general review process provided by SRD/MG (document FM(16)200R1), ECC PT1 (doc. FM(16)208 Annex 3) and FM44 (doc. FM(16)209).
3. The ECO made available to WG FM an updated list of ECC/ERC/ECTRA Decisions for regular review (document FM(16)218), containing the ones within the scope of WG FM and ECC PT1.
4. As a result of the discussions held during the meeting, an updated list of ECC/ERC/ECTRA Decisions within the scope of WG FM and ECC PT1 was agreed (**Annex 42**).
5. Discussions on other deliverables that are not dealt with under particular project teams / maintenance groups are captured in the following subsections.

**5.3.1 Review of ECC/DEC/(99)15 on MWS in 40 GHz**

1. The 84th WG FM meeting (February 2016) decided to review ERC Decision (99)15 at its May 2016 meeting, as a result of the 5 year period review process.
2. Views and preferences from administrations were expressed during the 85th WG FM meeting in May 2016. WG SE launched a questionnaire on “Revision of ECC Report 173 on current use and future trends for Fixed Service in Europe” in April 2016 and WG FM felt useful to wait for its results.
3. Meanwhile, in response to a LS sent by WG FM (see doc. FM(16)158 Annex 58), ETSI provided clarification on the industry’s view on MWS (doc. FM(16)164). It was highlighted that the actual RE-D revision of P-MP HS EN 302 326-2 (including MWS) was delayed and would likely be concluded in early 2018.
4. Due to lack of urgency, Germany proposed to shift 1-2 years the review of ERC/DEC/(99)15, so as to wait for the revision of the P-MP HS EN 302 326-2. WG FM agreed to this proposal.

**5.3.2 Review of ECC/DEC/(01)01 on phasing out CT1, CT1+**

1. WG FM agreed in its 86th meeting (May 2016) to withdraw ECC Decision (01)01, on phasing out CT1 and CT1+, and ECC Decision (01)02, on phasing out CT2. ECC endorsed this in its 42nd meeting (June 2016).
2. Mr Thomas Weber (ECO) presented Annex 1 to document FM(16)177R1, a draft ECC Decision to withdraw simultaneously ECC Decision (01)01 and (01)02. WG FM considered this draft ECC Decision (17)AA and approved it to be sent to public consultation (**Annex 22**).

**5.3.3 Review of ECC/DEC/(01)02 on phasing out CT2**

1. See section 5.3.2.

**5.3.4 Review of ECC/REC/(06)04 on BFWA in 5.8 GHz**

1. At the 85th WG FM meeting in May 2016, administrations were invited to provide updated information, if available, to the ECO regarding the implementation of ECC Recommendation (06)04 on BFWA in the 5.8 GHz range.
2. Mr Thomas Weber (ECO) presented document FM(16)216R1, reflecting updated information on implementation and use of BFWA in the 5800 MHz band. WG FM noted this information.

**5.3.5 ECC/DEC/(16)03 on withdrawal of ERC Decision (99)17 (AIS channels)**

1. At its 85th meeting, WG FM adopted the draft ECC Decision (16)CC on “withdrawal of ERC Decision (99)17 (on the Universal Shipborne Automatic Identification System (AIS) channels in the maritime VHF band)” for public consultation. The deadline for comments ended on 1 August 2016.
2. The draft ECC Decision (16)03 as sent to public consultation was presented in document FM(16)165 - Annex 1. Spain had proposed to merge considering items b) and d) as shown in document FM(16)165-Annex 2.
3. WG FM considered the result of the public consultation as in document FM(16)165-Annex 3 and endorsed the ECC Decision (16)03 for submission to ECC for final approval for publication (**Annex 12**).

**5.3.6 ECC/DEC/(12)01 on exemption from individual licensing and free circulation and use**

1. Mr Thomas Weber (ECO) presented document FM(16)221, an overview on the outcome of the public consultation of the draft revised ECC/DEC/(12)01 with regard to an addition in section 3 on “Exemption from individual licensing and free circulation and use of terrestrial and satellite mobile terminals operating under the control of networks”.
2. WG FM discussed the outcome of the public consultation of the draft revised ECC/DEC/(12)01. The group was of the view that the factual information reflected in a new sentence in section 3, *Requirement for an ECC Decision*, would better fit in the *Considerings* part, namely after *Considering b)*. The WG FM chairman will highlight this during the 43rd ECC meeting in November in 2016.

***5.4 Maritime Broadband Radio Links (MBR)***

1. WG FM#78 (October 2013) established a correspondence group with terms of reference to generally assist WG FM in the work with possible allocation of harmonised European frequencies for MBR in the 5 GHz band and to consider the preparation of a draft ECC Decision on MBR.
2. The WG FM chairman recollected that WG FM in October 2013 decided that an ECC Decision should be prepared and that the ECC plenary endorsed this in November 2013.
3. SE19 had finalised the draft ECC Report on sharing studies and interference analyses for MBR operating on the frequencies 5862 MHz and 5890 MHz. WG SE informed WG FM about the approval for public consultation of draft ECC Report 259 on “on sharing and compatibility studies between Maritime Broadband Radio (MBR) in the 5850–5900 MHz frequency band and other systems” (FM(16)183).
4. The basis for an ECC Decision would be ECC Report 259 from WG SE with a harmonised standard as reference. The MBR is regarded as an application under the mobile service and it is expected that this service may be a licensed service. There may also be areas where coordination with other services is needed and an ECC Decision may therefore contain coordination guidance for administrations.
5. The draft harmonised ETSI standards on MBR are halted in anticipation of WG FM's near future considerations. The draft ECC Report 259 has given considerations also to MBR with lower output power than specified in ETSI's System Reference Document (TR 103 109). Additionally, the ECC Report is pointing at the need for closer specification of polarisation for MBR.
6. Mr Eirik Bliksrud (NOR), chairman of the WG FM Correspondence Group on Maritime Broadband Radio Links (MBR), presented the report from the correspondence group given in doc. FM(16)207.
7. He highlighted that draft ECC Report 259 deals with extreme worst case scenarios, often with very low probability and short duration, and it seems to be necessary to give guidance to administrations in their licensing and coordination work.
8. WG FM agreed that the CG MBR should now continue its work and will decide at the next meeting about the format of the ECC harmonisation deliverable after having been presented the major items of the draft deliverable from CG MBR.
9. Especially the CG should analyse ECC Report 259 and develop elements for a future regulation.
10. The CG may also consider operational frequencies for MBR, but it is assumed that the work would concentrate on the frequencies 5 862 MHz and 5 890 MHz.
11. WG FM also approved the possibility for a physical meeting of the CG MBR, in addition to using electronic working methods.

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

1. WG SE informed WG FM about the approval for public consultation of draft ECC Report 258 on “guidelines on how to plan Line-of-Sight (LoS) MIMO for Point-to-Point Fixed Service Links” (FM(16)183).

**5.5.1 ECO Report 04**

1. The ECO Report 04, Implementation status of the fixed service in Europe, dated 2 September 2016, is available at [http://www.cept.org/eco/deliverables/eco-reports/.](http://www.cept.org/eco/deliverables/eco-reports/)

***5.6 Machine-to-Machine (M2M)***

**5.6.1 Workshop on M2M (21-22 March 2016)**

1. The subordinate entities of WG FM should check current ECC deliverables under their purview, to identify any possible limitations on M2M usage. This is in line with the activities within ECC PT1 and had been agreed by WG FM in May 2016 and was then endorsed by the ECC in June 2016.
2. So far no project team has identified any need for an immediate amendment of a deliverable because of M2M requirements. This issue will also be considered in the future in relation to the review of ECC Decisions and Recommendations.
3. The SRD/MG provided the following view:
4. SRD/MG already had investigated the issue during the 5th update process under the permanent mandate for SRDs.
5. The principles are set out in section 4 of CEPT Report 44 with regard to application neutrality, technology neutrality, and neutrality principles. At each update of the regulatory approach, SRD/MG checks whether ‘other usage restrictions’ can be deleted. A more flexible duty cycle definition approach in the Appendix 5 of ERC/REC 70-03, which should lead to deletion of some “other usage restrictions”, was already introduced.
6. Quite application neutral, wide, categories in ERC/REC 70-03, in particular non-specific SRDs (Annex 1), RFID (Annex 11), wideband data transmission systems (Annex 3), Data acquisition (Annex 2), TTT (Annex 5), are already available.
7. New evolutions towards networked SRDs are addressed in the Addendum to CEPT Report 59 (6th update) and may also lead to new entries in ERC/REC 70-03 as well as in the EC Decision for SRDs, either during the current update or during future updates.

***5.7 Spectrum regulation for drones***

1. The chairman of the CG on Drones, Mr Florian Cziczatka (AUT), presented doc. FM(16)211, the progress report. One face to face meeting was held in September 2016.
2. The chairman of the CG gave a short presentation of the Annexes 1 and 2 of doc FM(16)211, which contains the current version of the draft ECC Report as well as some preliminary considerations on possible frequency bands incl. proposals for a new application terms for EFIS and missing allocations in the ECA in the bands 5030 – 5150 MHz. The proposed chances to EFIS have been taken on board by the chairman of the EFIS/MG. A corresponding input to the next meeting of the EFIS/MG will be provided by the chairman of the CG. The missing allocations in the ECA are seen as a correction and can be added immediately by ECO following the rules for the ECA Table for allocations.
3. The focus of the draft ECC Report is on the civil use of UAS pilotless and follows the “Prototype” Regulation from EASA which only encompasses the “Open” Category and the “Specific” Category but not the “Certified” Category as defined in the new regulatory approach for Europe.
4. The chairman of the CG presented the first considerations of possible frequency bands. These are the bands 1900 – 1920 MHz and 5030 – 5250 MHz. Eurocontrol informed the meeting that the RPAS group of ICAO is also focusing on the same parts of the 5 GHz band for the CNPC link. Their intention is to use this band for the “Certified” category.
5. The Czech Republic asked about the definition of “professional use“ of drones and the related operational range. This would need to be clarified in the draft ECC Report. It was outlined by the ECO that information about the prototype regulation included in chapter 5 of the draft ECC Report allows to map professional use to the “Specific Category” and perhaps also the “Open categories” A2 and A3.
6. After some discussion on a possible invitation to ICAO to participate in the work of the CG by the ECC it was concluded that at this point in time, it was not necessary. The CG was tasked to monitor the ongoing work on the “EASA prototype regulation” and incorporate the relevant parts and final conclusions into the draft ECC Report.
7. The chairman of the CG asked the meeting to note the progress report as well as the draft ECC Report. In addition, administrations, stakeholders and interested parties are requested to provide additional information and if possible to actively take part in the work of the CG. In particular, any information on possible frequency options for professional use is highly welcomed.
8. In addition, WG FM agreed a liaison statement to ETSI noting the work item for ETSI TR 103 373 - frequency use for professional unmanned aircraft systems; this could be used to support this initiative (**Annex 46**).
9. The WG FM noted the progress report and the draft ECC Report. Furthermore, the WG FM encourages all interested parties to provide additional information and participate in the work of the CG. The meeting also endorsed the request of the CG to have a further face to face meeting before the next meeting of WG FM in order to finalise the draft ECC Report for public consultation.

***5.8 Information on LSA implementation***

1. In response to work item FM\_33 on LSA implementation and testing, ECO maintains a dedicated page on the ECC website: <http://www.cept.org/ecc/topics/lsa-implementation>
2. Since the previous WG FM meeting, the section related to the relevant activities in France has been updated. Administrations are invited to provide relevant information to the ECO (bruno.espinosa@eco.cept.org).

***5.9 Implementation of WRC-15 results***

1. The WG-FM vice-chair, Mr Stephen Talbot (UK), introduced document FM(16)175 which, with the kind assistance of the ECO, noted actions required of ECC outside the modification of the ECA Table when considering WRC-15 outcomes. This was in accordance with the request made at the 41st ECC meeting. The vice-chair noted that he had not received any contributions related to this document. Specific actions noted were;
* Agenda Item 1.5 (“*Unmanned Aircraft use of FSS bands and networks*”), it was agreed that the EFIS Maintenance Group should consider whether the term Unmanned Aircraft (UA) be included into Annex 2 of ECC/DEC/(01)03.
France noted that the terminology used to describe UA was complex and needed careful consideration.
* Agenda Item 1.8 (“*FSS earth stations on vessels*”), it was noted that FM44 were already considering a revision to ECC/DEC/(05)09 in order to reflect outcome of WRC-15 for the changes to C-band.
* Agenda Item 1.15 (“*On-Board maritime UHF in the 450 – 470 MHz band*”), reflected that T/R 32-02 (“*Frequencies to be used by On-Board Communication Stations*”), of some years’ vintage, would need to be revised.
In discussions it was felt that this document be brought to the attention of FM54 as it potentially impacted the study work and possible regulatory provisions for BB and NB PMR the 450-470 MHz band.
* Agenda Item 1.18 (“*Short Range Radar in 77.5-78.0 GHz*”) it was reflected that SRD/MG had already discussed the need to revise ECC/DEC/(04)03 and it was decided to find a solution within ERC/REC 70-03.
1. Outside these actions it was confirmed that the application WAIC (Wireless Avionic Intra Communications), as considered under agenda item 1.1.7, was already incorporated into layer 3 of ECC/DEC(01)03 - Annex 2.
2. Also that the monitoring campaign considered in FM22 for bands adjacent to 406.0-406.1 MHz might provide information that would assist in protection of the mobile satellite service in the 406-406.1 MHz frequency band. However, at this stage, no action would be required.
3. Finally FM(16)175 was modified and issued under **Annex 45**.

***5.10 Wireless Power Transmission (WPT)***

1. The ETSI Liaison Officer, Mr Edgard Vangeel, introduced document FM(16)191 which contains a liaison statement on TR 103 409 – System Reference document for Wireless Power Transmission (WPT) systems for Electric Vehicles (EV) operating in the frequency band 79 - 90 kHz.
2. To accommodate these WPT-EV systems, the SRdoc proposes to increase the limits in the frequency range from 79 - 90 kHz in Annex 9 of ERC Recommendation 70-03 to 82 dBµA/m to allow power transfers of up to 22 kW.
3. The WG FM chairman clarified that, although Wireless Power Transfer is also an agenda item for WRC19 and as such also being considered by CPG, there is no potential overlap as the request here is to update ERC/REC 70-03 and the EC Decision on SRDs.
4. The IARU observer expressed concerns w.r.t. these proposed systems. First of all, he questioned whether wireless power transfer can be considered a wireless communication system. In addition, if every household will have such charging system in use in the future, the aggregate interference into the HF bands up to 30 MHz may make short wave communications impossible for radio amateurs.
5. The UK stated that according to their measurements, the intended power levels can be transferred while remaining within the existing limits of ERC/REC 70-03, nevertheless they do not object to WG SE to initiate sharing studies.
6. WG FM agreed to send a liaison statement to WG SE, copied to CPG, to request WG SE to initiate sharing studies based on the information contained in the SRDoc. This Liaison Statement (supported by Austria, Germany, Finland, The Netherlands, Norway and UK) is contained in **Annex 41**.

***5.11 Maintaining the WI95revCO07 and MA02revCo07 plans***

1. The WG FM chairman noted this item to the meeting, which he reflected is routinely added to the WG FM meeting agenda.
2. The ECO introduced document FM(16)206 “Activities on the T-DAB Plans (WI FM45\_06)”. ECO noted that the two frequency plans are currently published in two electronic formats, ASCII97 and Co07. Due to the fact that Co07 has been existence for nine years and is easily interchangeable with the ITU electronic notices, ECO suggested that it could stop publishing the ASCII97 format. The meeting had no comment to this proposal and could not finally conclude. It was decided that administrations should consider this until the next meeting. The publishing of the ASCII97 format will be stopped after the WG FM #87 meeting if no objections are submitted.
3. Additional ECO noted the possibility for ECO to develop a tool for test point calculations (TPC) in order to provide and display test points (see also Annex 4 of both Wi95revCo07 and Ma02revCo07 Special Arrangements). Whilst the topic had been discussed in the past, since 2010 there have been no further views. As the ECO has budget identified for this task, administrations were invited to provide views to future WG FM meetings.
4. Finally, ECO brought the meetings attention to the related information that is placed on the ECC website <http://www.cept.org/ecc/topics/t-dab-plans/>, and invited administrations to review its T‑DAB contact point and to communicate changes to Vibeke Hansen at the ECO (vibeke.hansen@eco.cept.org).
5. WG FM will decide at the next meeting at the open questions with regard the publication format and the TPC tool.

***5.12 New ECC/REC/(16)03 on cross-border coordination of BB-PPDR in 700 MHz***

1. At its 85th meeting, WG FM adopted the draft ECC Recommendation (16)03 on “Cross-border coordination for Broadband Public Protection and Disaster Relief (BB-PPDR) systems in the frequency band 698 to 791 MHz” for public consultation. The deadline for comments ended on 1 August 2016.
2. The draft ECC Recommendation (16)03 as sent to public consultation is presented in document FM(16)174-Annex 1. Neither comments nor change requests were received.
3. WG FM considered the result of the public consultation and approved the ECC Recommendation (16)03 for publication (**Annex 05**).

**6. New work items**

1. Regarding new ETSI SRdoc TR 103 409 (Wireless Power Transmission (WPT) systems for Electric Vehicles (EV) operating in the frequency band 79 - 90 kHz), see agenda item 5.10 above.

***6.1 ULP wireless medical capsule endoscopy***

1. See agenda item 4.6.11 above.

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

***7.1 EC recent activity***

1. The EC Councillor, Mr Giuseppe Rizzo, informed WG FM about the latest RSC (see Info 001 and Info 008) and RSPG meetings (Info 002). Main subjects discussed by the Radio Spectrum Committee meetings of 6-7 July and 5-6 October 2016 (RSC#56 and #57) include the forthcoming adoption of Implementing Decisions on mobile communications on board aircraft (MCA) and on board vessels (MCV).
2. In view of the sixth update of the SRD Decision, CEPT Report 59 as well as a first draft Decision were discussed.
3. A study presented by JRC (see Info 003) shed some light on the issue of compatibility between LTE in the 2.3 GHz band and Wi-Fi in the neighbouring 2.4 GHz band, where some risks for home Wi-Fi networks were indeed confirmed. The Commission encouraged Member States to gain more experience with LSA to make the technology more mature for future application scenarios.
4. CEPT Report 61 on "Harmonised compatibility and sharing conditions for video PMSE in the 2.7-2.9 GHz band taking into account radar use" was presented at RSC#56. Considering the need for a case-by-case approach which emerged from Member States' observations the Commission services do not currently see enough scope for a harmonisation measure in the 2.7-2.9 GHz band.
5. RSC#57 had a first discussion on a draft Commission Mandate to the CEPT on 5G frequency bands. A revised version will be presented at the next meeting which will take place on 7-8 December 2016 in Brussels.
6. The Radio Spectrum Policy Group had its 40th meeting on 8 June 2016. The RSPG adopted reports on the results of WRC-15 and on the results of the Commission's Public consultation on the EU telecommunications framework review. Other agenda items included the "good offices" mediation service, developing a practical programme based on best practices for spectrum awards and publication for p.c. of a draft opinion on spectrum-related aspects of 5G. The RSPG will start working on an opinion on a long term strategy on spectrum requirements facing the future needs and use of wireless audio and video PMSE applications.
7. Two important initiatives of the Commission, both taken on 14 September 2016, were shortly presented: the proposal for a European Electronic Communications Code and the launch of the "5G for Europe" Action Plan.
8. Two more information documents presented by Mr Rizzo concerned a joint (European Union Rail Agency, DG Move, DG Connect) working document on GSM-R interference and coexistence (see Info 005) and the draft minutes of the first joint meeting of the Radio Spectrum Committee and the Rail Interoperability and Safety Committee (see Info 004R1), mainly dedicated to the discussion of that document and of the next generation rail communication system.

***7.2. ETSI recent activity***

**7.2.1 Overview on ETSI SRdocs**

1. The ETSI Liaison Officer, Mr Edgard Vangeel informed the meeting that the document behind the link in the WG FM agenda is up to date. See also below.
2. See link: https://portal.etsi.org/Portals/0/TBpages/ERM/Docs/ERM SRdoc overview.doc

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

1. See link: <http://www.etsi.org/red>

**7.2.3 Overview on ECC deliverables**

1. In accordance with the cooperation process between ECC and ETSI, WG FM informs ETSI as appropriate about the approval for public consultation and publication of the following draft ECC deliverables:

**a) Deliverables adopted for submission to the ECC (CEPT Reports / ECC Decisions)**

1. Draft CEPT Report 64 (draft ‘CEPT Report B’) on 5 GHz to ECC for final approval for publication and sending it to the EC (**Annex 06**);
2. Draft Addendum to the CEPT Report 59 on the 6th update of the EC Decision on SRDs, to ECC for approval for public consultation and sending it to EC (**Annex 14**); with a draft cover letter (**Annex 26**);
3. Draft ECC Decision (16)03 on withdrawal of ERC/DEC/(99)17 on AIS, to ECC for final approval for publication (**Annex 12**);
4. Corrected ECC Decision (07)01 on specific Material sensing Devices using UWB technology, to ECC for approval for publication (**Annex 37**); a public consultation is considered to be not needed;
5. Corrected ECC/DEC/(16)01 on 76-77 GHz obstacle detection radars for rotorcraft use; for submission to ECC for approval for publication (**Annex 36**); a public consultation is considered to be not needed;
6. Draft amended ECC Decision (05)09 on earth stations on board of vessels, to ECC for approval for public consultation (**Annex 28**). The ECC has not endorsed the amendment of this ECC Decision so far;
7. Draft amended ECC/DEC/(06)10 on transitional arrangements for the Fixed Service and tactical radio relay systems, to ECC for approval for public consultation (**Annex 29**). The ECC has not endorsed the amendment of this ECC Decision so far.

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

1. New ECC/REC/16(03) on BB PPDR cross-border coordination in 700 MHz (**Annex 05**);
2. New ECC/REC/(16)04 on ERP determination from FM sound broadcasting stations (**Annex 10**);
3. Amended ECC/REC/(11)06 on BEM compliance measurements for base stations, now including the 700 MHz range (**Annex 11**);
4. Amended ERC/REC 25-10 on frequency ranges for PMSE (**Annex 16**);
5. Amended Annexes 1 and 10 of ERC Recommendation 70-03 on SRDs (**Annex 40, Annex 38);**
6. New ECC Report 256 on LTE coverage measurements (**Annex 09**);
7. Amended ERC Report 32 on amateur radio examination syllabus (**Annex 19**).

**c)** **Deliverables approved for Public Consultation (PC) or Administration Consultation (AC) - ECC Decisions / ECC Recommendations / ECC Reports**

1. Draft ECC Decision (17)AA on withdrawal of ECC Decision (01)01 on phasing out CT1/CT1+ applications and ECC Decision (01)02 on phasing out CT2 application, for PC (**Annex 22**);
2. Draft new ECC Decision (17)BB on withdrawal of Decision ECTRA/DEC/(97)02 on  S-PCS, for PC (**Annex 27**);
3. Draft amended ECC Decision (11)01 on the protection of the earth exploration satellite service, for PC (**Annex 30**);
4. Draft revised Annexes 2 and 5 of ECC Decision (01)03 on EFIS, for AC (**Annex 35**);
5. Draft new ECC Recommendation (17)01 on measurement uncertainty for field measurements, for PC (**Annex 07**);
6. Draft revised ECC Recommendation (05)08 on frequency planning and coordination between GSM land mobile systems (GSM 900, GSM 1800, and GSM-R), for PC (**Annex 25**);
7. Draft amended ECC Recommendation (11)04 on MFCN cross-border coordination in the 790-862 MHz band, for PC (**Annex 32**);
8. Draft amended ECC Recommendation (11)05 on MFCN cross-border coordination in the 2500-2690 MHz band, for PC (**Annex 33**);
9. New draft informative Annex 13 of ERC Recommendation 70-03 on SRDs, for PC (**Annex 43**);
10. Draft revised ERC Recommendation 54-01 on measuring the maximum frequency deviation of FM broadcast emission in the 87.5-108 MHz band, for PC (**Annex 08**).

**d)** **Other Deliverables**

1. Questionnaire to CEPT administrations on treatment of foreign maritime radio operator’s certificates (**Annex 44);**
2. Questionnaire on national conditions for PMSE applications in the frequency ranges included in ERC Recommendation 25-10 (**Annex 17**);
3. CEPT Contribution to ITU-R WP 5C to assist the ITU with Resolution 59-1 towards a worldwide and/or regional harmonisation of tuning ranges for PMSE, contributing ERC Recommendation 25-10 (**Annex 18);**
4. CEPT contribution to ITU-R WP 5A to assist the ITU on various work items related to land mobile systems below 470 MHz, contributing the recently revised ERC Recommendation T/R 25-08 (**Annex 23);**
5. Information document to ITU BR on the ITU-R questionnaire on railway communications (**Annex 34);**
6. LS to ETSI and WG SE on LP-WAN (**Annex 21**);
7. Reply LS to ETSI on NB PMR spectrum sharing mechanisms in the bands 410-430 MHz and 450-470 MHz (**Annex 24**);
8. LS to ETSI to consider the addition of scanning options in the next revisions of EN 300 422 and EN 301 357 (**Annex 39**);
9. LS to ETSI on professional UAS (**Annex 46**);
10. LS to WG SE and SE24 on NBN SRDs (**Annex 13**);
11. LS to WG SE on assistance with the revision of ECC Report 066 (**Annex 31);**
12. LS to WG SE and CPG on sharing studies based on ETSI TR 103 409 on WPT (**Annex 41);**
13. Explanatory paper on 5 GHz RLANs in vehicles (**Annex 15**);
14. Implementation of WRC-15 results, overview on measures for the ECC (**Annex 45**);
15. Further information is available on the WG FM website:

<http://www.cept.org/ecc/groups/ecc/wg-fm/news/results-of-the-wgfm86-meeting-17-21-october-2016-in-bordeaux/>

**8. Any Other Business**

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

1. Mr Weber (ECO) presented doc. FM(16)210 on the ECO assistance to WG FM as well as the ECO Bulletin presented at the last ECC meeting (doc FM(16)179). An update to the ECO bulletin was provided with additional recent information about the FCC incentive auction process.
2. No questions were raised with regard to the ECO bulletin or the ECO assistance to WG FM.
3. Following the information provided by ECO, in order to keep the information and to assist the administrations, radio interface specifications for harmonised spectrum use with restrictions are needed in EFIS (subclasses of class 2 which will not exist anymore under the RE Directive). EFIS/MG and the ECO are tasked by WG FM to work on this and provide the respective RIS templates to the next WG FM meeting. These will be published in EFIS in the R&TTE and RE Directive equipment subclass information.

**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 2016 and consider possible venues for WG FM meetings in 2017 and 2018.
2. The schedule for future WG FM and Project Team meetings with indicating ECC, ECC PT1 meetings is as follows:

| **Meeting** | **Date** | **Place** |
| --- | --- | --- |
| CEPT workshop on 5G mobile communication | 02 - 04 November 2016 | Mainz, Germany |
| FM54#12 | 09 - 10 November 2016 | Maisons-Alfort, France |
| **ECC #43** | **15 - 18 November 2016** | **Praque, Czech Republic** |
| **WG FM civ/mil meeting** | **23 - 24 November 2016** | **Praque, Czech Republic** |
| FM44#40 | 28 - 30 November 2016 | Mainz, Germany |
| WG FM CG MBR | 07 - 08 December 2016 | ECO, Copenhagen |
| SRD/MG #69 | 11 - 13 January 2017 | ECO, Copenhagen |
| FM44#41 | 11 - 13 January 2017 | TDB |
| FM54#13 | 23 - 24 January 2017 | Budapest, Hungary |
| **WG FM #87** | **30 January - 03 February 2017** | **Luxembourg-Kirchberg, Luxembourg** |
| **ECC#44** | **28 February - 03 March 2017** | **TBD** |
| EFIS/MG | 04 - 05 April 2017 | Lisbon / Portugal |
| FM22#47 | 04 - 07 April 2017 | ECO, Copenhagen |
| WG FM CG Drones | 06 - 07 April 2017 | Lisbon / Portugal |
| SRD/MG#70 | 26 - 28 April 2017 | Mainz, Germany |
| **WG FM #88** | **15 - 19 May 2017** | **TBD, Ireland** |
| **ECC#45** | **27 - 30 June 2017** | **TBD, Netherlands** |
| **WG FM #89** | **09 - 13 October 2017** | **TBD** |
| **ECC#46** | **14 - 17 November 2017** | **TBD** |
| … | … | … |

1. Up-to-date 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 French administration for hosting the meeting, especially Ms Jocelyne Morel, Mr Christophe Le Biannic and Mr Laurent Bodusseau from ANFR for the smooth organisation and also the local team on site for their support (Mr Florent Allibert, Mr David Boucris and Mr Manuel Allard). In addition he thanked for the social event, which took place at the vineyard “Château Couhins-Lurton” located in the wine-growing town of Villenave-d’Ornon, south of Bordeaux. There, the participants were welcomed with an aperitif and an insightful guided tour of the vineyard estate. After that the participants enjoyed delicious French cuisine together with a choice of excellent wines.
2. The WG FM chairman thanked the WG FM delegates, the Project Team / MG / FG / CG chairmen, the ECO (Mr Thomas Weber) and the vice-chairs, Ms Cristina Reis (POR) and Mr Stephen Talbot (UK) for their support.
3. Finally the WG FM chairman also thanked his crew, WG FM secretaries Ms Hannelore Schwarz (D) and Mr Silvio Schwarz (D) for their assistance.
4. Mr Apostolos Stathakis (LUX) informed the meeting that his administration (ILR) will host with pleasure the next WG FM in Luxembourg City (Kirchberg) in beginning of 2017.
5. The WG FM chairman thanked Luxembourg for the kind invitation.
6. Last but not least the WG FM chairman closed the meeting and wished all the delegates a safe journey home and a relaxing weekend.

**- - -**