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| Working Group FM | FM(17)177  |
| 89th Meeting |  |
| Zagreb / Croatia09 – 13 October 2017 |  |
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**1. Opening of the Meeting**

1. The WG FM Chairman, Mr Thomas Weilacher (D), opened the 89th meeting of WG FM and welcomed the participants to the venue, the Hotel Esplanade in Zagreb.
2. He thanked the Croatian Regulatory Authority for Network Industries (HAKOM, *Hrvatska regulatorna agencija za mrežne djelatnosti*) for inviting WG FM to the capital of Croatia.
3. Mr Mario Weber, Executive Director of the HAKOM, welcomed the WG FM delegates to Zagreb.
4. He highlighted, that it is a great pleasure for HAKOM to host the meeting of such a large and important group that is dealing with the management of the radio spectrum, helping to develop the society.
5. He recommended participants to explore the city of Zagreb with its rich history, great architecture and monuments as well as unique museums, if time permits.
6. Since the WG FM Chairman as well as lots of his colleagues work in the BNetzA office in Mainz he emphasized the 50-year-long city partnership between Mainz and Zagreb.
7. The meeting was attended by 87 delegates from 31 CEPT administrations and 15 international organisations, including EC, ECO and ITU. The list of participants is given in **Annex 02**.
8. The list of documents is in **Annex 03**. The list of abbreviations is in **Annex 04**.

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

1. The WG FM Chairman introduced the draft agenda and the schedule of the meeting, as provided in document FM(17)128R4. The references to the latest contributions were added, then the agenda was adopted without further amendments and can be found in **Annex 01** of these Minutes.

**3. Report from ECC entities**

***3.1 Report from ECC Plenary***

1. The WG FM Chairman introduced the meeting report from the 45th ECC meeting, 27th - 30th June 2017 in Rotterdam / The Netherlands (FM(17)150) and highlighted the most relevant aspects. The WG FM meeting took into account the relevant plenary decisions. Annex 1 (List of review of ECC/ERC/ECTRA Decisions) and Annex 2 (CEPT Roadmap on 5G) of doc. FM(17)150 were discussed with regard to the relevant agenda items.

**3.1.1 ECC RoP**

1. He also introduced the amendments of the ECC Rules of Procedure (RoP), for further information see **agenda item 8.2** below.

***3.2 Report from WG SE***

1. The WG FM Chairman referred to the draft meeting report of the 77th WG SE meeting, 25 - 29 September 2017 in Sibiu / Romania (FM(17)172). The draft report was not introduced in detail, because WG SE had provided liaison statements for the most relevant items. However, he indicated that the WG FM meeting could refer to specific sections in the draft meeting report if necessary. The liaison statements from WG SE were introduced and 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(17)152, the progress report of the Project Team.
2. France announced in FM22 that they cannot draw the same conclusions as FM22 regarding frequency deviation measurements, namely that the maximum gradient of the amplitude frequency response should not exceed 0.4%/kHz as demanded by Recommendations ITU-R SM.1268 and ERC/REC 54-01. France plans to submit measurement results to the next FM22 meeting.
3. Regarding the development of a new ECC Report for the development of a concept for monitoring vehicles, it was proposed to create a new Work Item. With the support of the Czech Republic, France, Germany, Norway and the Netherlands the meeting approved the new WI [FM22\_34](http://eccwp.cept.org/WI_Detail.aspx?wiid=646) (Development of a new ECC Report. This ECC Report will outline a vehicle concept.).
4. The Russian Federation asked for clarification regarding interference to GNSS aeronautical navigation systems. Mr Trautmann reported that GPS devices on-board aircraft had been interfered by GNSS jammers. ECO will inform ADCO/RED accordingly because ADCO/RED will also discuss the issue of GNSS jammers at its next meeting.
5. Regarding the proposal from FM22 to liaise with ETSI TFES and 3GPP regarding the difficulty to perform EMF measurements on 5G systems with beamforming antennas, the meeting decided to first wait for the expected information from ECC PT1, although EMF measurements are different from measurements of the total radiated power (TRP). See also section 6.2 of the Minutes of the 45th ECC meeting in doc. FM(17)150.

**4.1.2 HF monitoring campaign**

1. The automatic observation of the HF frequency range from several monitoring stations is ongoing. The administration of the Netherlands will prepare a new schedule so that the measurements can be continued after 2018.

**4.1.3 Radio interference statistics**

1. Mr Trautmann presented doc. FM(17)169, the draft 2017 interference questionnaire. The meeting amended the proposed new lines 9a and 12 in various tables regarding interference from/to meteorological radars and RLANs They read now “thereof meteorological radars (5600 - 5650 MHZ)” and “thereof 5 GHz RLAN” to address the issue of 5 GHz RLAN into meteorological radars more precisely.
2. Mr Trautmann responded to a question of the Czech Republic why the questionnaire is repeated annually. The intention is to identify trends.
3. Estonia supported the collection of the data and stressed the importance of collecting information about source of interferences (for example type and manufacturer of the equipment in use).
4. The meeting approved the draft interference questionnaire for the year 2017 for submission to administrations by ECO in February 2018 (**Annex 08**).

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

1. ECO presented doc. FM(17)144rev1, the summary of the responses to the questionnaire on interference cases caused by WAS/RLANs into meteorological radars in 5600 - 5650 MHz.
2. Mr Trautmann introduced doc. FM(17)154, the conclusions drawn by FM22 on the document mentioned above including the proposal to liaise with ADCO/RED.
3. The ECO introduced doc. TEMP005 which was a merger of doc. FM(17)154 and some elements from doc.FM(17)144rev1.
4. Russia requested an amendment of doc. FM(17)144rev1 to clarify the Russian situation. This was done and doc. FM(17)144rev2 was provided.
5. ETSI raised the question whether the conclusions of FM22 on short-term interference caused by end-consumer equipment were drawn from the reported interference cases. These conclusions could not directly be taken from the responses to the questionnaire because the responses did not clearly distinguish between interference due to end-user stations and RLAN access points. This fact was considered in **Annex 05** (“Summary of discussions based on the replies of CEPT administrations to the questionnaire on interference cases caused by WAS/RLANs in meteorological radars operating in the 5600 - 5650 MHz frequency range”), which was approved by the meeting.
6. France stressed that the summary of CEPT responses to the questionnaire indicates that there were a considerable number of short-term interference cases according to the reporting, but most administrations have not included them in this total number of cases, having therefore only reported long-term interferences. FM22 discussed short-term interference cases and concluded that, when identified, these short-term interference cases were mainly caused by emissions of end-user outdoor stations, while long-term interferences were mainly caused by emissions from RLAN access points used for infrastructure purposes. While recognizing that there can be a focus on non-compliant equipment operated at fixed outdoor location, it is however essential that the ADCO surveillance campaign considers various types of equipment (infrastructure, home boxes, etc.) and reports various categories of non-conformity.
7. The meeting decided to send a liaison statement to ADCO/RED (**Annex 07**).
8. Also because of the amended questionnaire on annual interference statistics the meeting concluded that there is no need for a repetition of this questionnaire in the near future.
9. FM22 should continue to monitor the evolution of the interference cases to meteorological radars by 5 GHz RLAN over the years. This should be based on the analysis of the yearly interference questionnaire. Hence, the activities under the WI FM22\_32 will continue.
10. With regard to ECC Report 192, a reference to the questionnaire assessment should be included, so that it is visible in this ECC Report. Administrations are invited to provide contributions for Annex 2 of ECC Report 192 which contains information about national examples how to deal with the interference situation.

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

1. Mr Trautmann introduced doc. FM(17)153, the draft revision of ECC/REC/(05)01 on the harmonisation of automatic measuring methods and data transfer for frequency band registrations.
2. After some corrections and one amendment the meeting approved the draft revised version of ECC/REC/(05)01 for Public Consultation (**Annex 09**).

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

**4.2.1 Progress Report**

1. Mr Amar Saidani (F), the FM44 Chairman, presented the progress report of the group as in document FM(17)166. The WG FM Chairman presented the LS from WG SE, document FM(17)159, dealing with on-going activities in SE40 linked to FM44 work items.

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

1. The draft ECC Report 272 prepared by WG SE is in Public Consultation and will replace ECC Report 66. It was clarified during the meeting that WG SE is responsible for reviewing ECC Report 66 and FM44 will revise the related ECC Decisions dealing with satellite terminals, as appropriate.

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

**4.2.3.1 Draft new ECC Decision for in-motion earth stations operating with NGSO satellite systems**

1. The draft ECC Report 271, prepared by WG SE, is in Public Consultation. The results of the technical studies will be used by FM44 to produce a new draft ECC Report on regulatory issues and a new draft ECC Decision for in-motion NGSO Ku band earth stations. Both will be prepared during the next FM44 meeting and presented to the administrations during the WG FM meeting #90 in February 2018.

**4.2.3.2 Draft new ECC Decision for land-based in-motion earth stations operating with GSO satellite systems**

1. The Project Team Chairman informed the meeting that the FM44 task had not started because the Project Team needs to wait for the first technical results from SE40 and SE19 before initiating the work on this draft new ECC Decision.

**4.2.4 New draft ECC Report on satellite solutions for 5G**

1. The Project Team Chairman informed the meeting that FM44 prepared a first version of this draft new ECC Report, which is available on the FM44 website. It will be completed at the FM44 meeting in November 2017 and will then be sent to ECC PT1 for comments. The consolidated version will be presented at the next WG FM meeting.

**4.2.5 M2M/IoT via satellite**

1. The Project Team Chairman informed the meeting that work in FM44 has not started yet. Contributions are expected from interested parties at the next FM44 meeting.

**4.2.6 Other issues**

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

1. WG SE came to the conclusion that compatibility between fixed links and maritime and land-based earth stations is not feasible and will focus its work on airborne NGSO and GSO earth stations.

**4.2.6.2 List of ECC Recommendations under the scope of FM44**

1. ECO informed the meeting that a list of ECC Recommendations under the scope of FM44 is available and proposed to task FM44 to review these ECC Recommendations.
2. This proposal was supported by the Russian Federation and WG FM tasked FM44 to review the list and provide a preliminary analysis at the next WG FM meeting. Recommendations ECTRA/REC/(99)02, ECTRA/REC/(01)02, ERC/REC 11-01 and T/R 75-04 are concerned.

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

**4.3.1 Progress Report**

1. The Chairman of FM51, Mr Lindsay Cornell (G), presented the progress report from the Project Team (doc. FM(17)174) which covered the 24th and 25th PT meetings.
2. Mr Cornell reported that although FM51 had continued to progress all the work items assigned to it in the work plan, progress had not been as rapid as he hoped.
3. FM51 had discussed the difference in terminology between ERC/REC 25-10 and EFIS in relation to PMSE, as raised by EFIS/MG and outlined in doc. FM(17)127 - Annex 039. The document proposed two options to align the terminology, and FM51 expressed a preference for Option 1, which is to avoid fragmentation into broadcast and land mobile, because PMSE is more production oriented (whereas broadcasting is only one distribution media). This was noted and will be used by EFIS/MG to update Annex 2 of the ECC Decision on EFIS.
4. Regarding work item FM51\_10, to develop deliverables on the preliminary investigations on regulatory and legal issues for PMSE sharing in the 960 - 1164 MHz band, the discussion had been intense and progress had been made, but thus far, FM51 had not been able to complete the report as originally envisaged for this WG FM meeting. Mr Cornell said that it had not been possible in FM51 to form a consensus on the scope and timing of the information required by WG FM and therefore requested that WG FM discuss the way forward in order to provide clear guidance on the continuation of this work item.
5. Regarding work item FM51\_08, whose aim is to collect and summarise data related to body effect for handheld and body-worn audio PMSE devices in order to identify a model to be used in future sharing studies, and work item FM51\_09, to develop a new report on best practice for the use of Video PMSE in the 2.7 - 2.9 GHz band, the work is advancing slowly. Due to the intensity of the work on FM51\_10, these WIs are delayed because contributors had limited time available.
6. The next meetings of FM51 will be held on 22 - 23 November 2017, at ECO, Copenhagen and on 16 - 17 January 2018, venue to be confirmed.

**4.3.2 Spectrum for PMSE**

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

1. ICAO introduced doc. FM(17)129, a letter to European ICAO member states advising them of the work in CEPT regarding preliminary studies concerning low power audio PMSE and aeronautical services in the band 960 - 1164 MHz and inviting them to co-ordinate with their state representatives in CEPT. The contribution was noted.
2. The Republic of Belarus supported the ICAO requirements regarding the frequency band 960 - 1164 MHz, as reflected in the ICAO contribution.
3. NATO introduced doc. FM(17)142 (from NATO Spectrum Capability Panel (CaP 3) in military session), informing WG FM that NATO had begun its contribution to the technical studies in WG SE, and in particular to SE7. It was emphasised in this contribution that measurements were also required in addition to studies. The contribution was noted.
4. APWPT noted that they had also contributed to the SE7 work.
5. The WG FM Chairman introduced doc. FM(17)161, a liaison statement from WG SE advising of the work of SE7. He highlighted the information concerning the new work item SE07\_28 (Low power audio PMSE in the aeronautical frequency band 960 - 1164 MHz), with a deadline of September 2019.
6. The FM51 Chairman introduced doc. FM(17)174 - Annex 1, which is the current status of the report from FM51 to WG FM on the preliminary investigations on regulatory and legal issues for PMSE sharing in the 960 - 1164 MHz band. He emphasised that despite intensive work, there were still many parts of the document which had not yet been discussed and that agreement on the text was problematic due to the sincerely held, but differing, views of the FM51 members. Therefore there were still extensive parts that were in revision marking, indicating the contributions made but not the consolidated position of FM51.
7. Sweden introduced doc. FM(17)155, a contribution providing thoughts on how to further develop the report, in particular the legal and regulatory feasibility aspects. Sweden emphasised the need for more administrations (especially those which had supported the work item) to engage in the work.
8. The WG FM Chairman noted that there are legal issues related to treaty obligations and that these are outside the scope of CEPT. Therefore these aspects can be described in the report, but CEPT is not able to provide conclusions or legal interpretations.
9. The WG FM Chairman opened the floor for discussion on how to guide FM51 to continue the work.
10. The United Kingdom recalled the sequence of events that produced the work item, namely that the UK had been invited to give a presentation to the ECC and from that a work item was created in WG FM, and this was not a proposal from the UK. The usage of the band for audio PMSE is based on a national implementation.
11. The Russian Federation supported the proposals made by Sweden and remarked that this is a very complex task that required different positions to be presented, particularly ICAO and military requirements, and how they could be fulfilled by PMSE.
12. Switzerland confirmed that they do not support the work item and that it should be stopped.
13. ICAO said they were concerned about illegal use of the band. Eurocontrol added that this is also a cross-border issue. Italy is of the same view as ICAO and Eurocontrol. France proposed that unauthorised usage is an issue that FM51 could propose countermeasures to. The WG FM Chairman noted that unauthorised use could usually better be explored when regulations are available, and we were currently far away from such a regulation. The Czech Republic urged that the report should contain only realistic information, and not speculate on every unlikely scenario. Austria stated that more liaison was needed between the aeronautical sector and spectrum regulators, noting the proposed introduction of LDACS in the future.
14. Germany said that the report needed to be an internal WG FM document at this stage because it formed only part of the work that needed to be done. This view was supported by France, the Russian Federation, Sweden, the Netherlands, Belarus and Austria.
15. There were still some questions that need to be addressed, but the results of the technical studies in WG SE were required before all preliminary steps could be concluded. Therefore, Germany proposed that the draft report should be further developed and presented to the next WG FM meeting, and then FM51 should pause in its work on this topic until the results from WG SE were available. At that point, FM51 could resume work on creating an ECC Report providing the full picture.
16. France proposed that given the complexity of the topic, the deadline should instead be the May 2018 WG FM meeting. This view was supported by the Russian Federation, the Netherlands, Sweden, and ICAO.
17. France, the Netherlands, Austria, United Kingdom and Belarus also expressed support that the FM51 work be paused after the May 2018 WG FM meeting until the WG SE results could be included into an ECC Report.
18. WG FM agreed the following guidance to FM51:
* the draft report is an internal WG FM document;
* FM51 shall bring the completed report to the May 2018 meeting of WG FM and that no extensions were envisaged;
* WG FM requires presentation of the issues, with balanced positions when there is no agreement;
* WG FM does not expect conclusions, but a short summary of the issues is appropriate;
* the work in FM51 on this work item will be paused at the May 2018 WG FM meeting and resumed again when the outcome of the WG SE studies is available;
* the final deliverable will be an ECC Report with a deadline of May 2020.

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

**4.4.1 Progress Report**

1. The FM54 Chairman, Mr Kuha Sithamparanathan (G), presented the progress report (FM(17)163R1).

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

1. FM54 had continued with the development of the draft new ECC Report on PMR/PAMR in the 400 MHz range.
2. The meeting noted the latest version of the draft ECC Report.
3. FM54 acknowledged the LS from WG SE / SE7 noting the technical work will be delayed by one WG SE reporting cycle.

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

1. WG FM noted the ongoing development of the draft new ECC Decision and the need to consider the SE7 study results during the ongoing work in FM54.
2. The IARU-R1 indicated to have an interest in the draft new ECC Decision and would provide proposals to FM54 related to the 400 MHz range.

**4.4.4 Withdrawal of ECC Decision (11)04**

1. Information to external bodies about the possible withdrawal of ECC/DEC/(11)04 will be drafted for submission to WG FM in February 2018. FM54 then will propose to draft a withdrawal Decision for ECC/DEC/(11)04 with the aim to send it out for Public Consultation in May 2018. WG FM endorsed this way forward.

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

1. FM54 had produced a first draft revision of Recommendation T/R 25-08 which included information from SE7 to enable cross-border coordination between different bandwidth systems (WB vs. NB and combinations of this) operating in the same bands or blocks of a band.
2. FM54 also noted that SE7 intends to produce an ECC Report and thus go through the associated Public Consultation process to finalise this. FM54 proposed to simplify and shorten this effort and process by having an internal report from SE7 instead of an ECC Report.
3. The plenary did not support the approach as proposed by FM54. Therefore FM54 will revise the Recommendation T/R 25-08 based on the ECC Report produced in SE7.

**4.4.6 Work related to ITU-R**

1. FM54 agreed to draft some elements for a further revision of Report ITU-R SM.2351-2 on smart grid utility management (ITU-R WP1A) to include PMR/PAMR technologies currently used, targeting a CEPT submission for the June 2018 WP 1A meeting.
2. WG FM suggested drafting a preliminary input during the week to submit to the WP 1A meeting in November 2017 as advance notice of the intended final input in June 2018.
3. A CEPT contribution was agreed by WG FM and the Chairman of FM54 will ensure that a CEPT administration will submit it to WP 1A for the meeting in November 2017 (**Annex 20**). The status of the contribution (“preliminary input”) will be indicated on the cover page.
4. FM54 also provided elements for the draft CEPT Brief on WRC-19 AI 9.1 related to PMR/PAMR systems used to provide M2M/IoT. Along with inputs from SRD/MG and FM44, a consolidated response was developed for ECC PT1; see also **agenda item 4.7.3**.

**4.4.7 Other issues**

1. A proposal for a ‘light-licence’ initiative was discussed in parallel with PMR446 matters. WG FM requested FM54 to consider this further within the Project Team and report at the next WG FM meeting. Germany and the Netherlands along with the UK already provide such a PMR licence offering. Switzerland indicated not to have such an offering.

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

**4.5.1 Progress Report**

1. The FM56 Chairman, Mr Vincent Durepaire (F), presented the group’s progress report (doc. FM(17)164) covering its second meeting in Bonn / Germany, on 14 - 15 September 2017.

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

1. The draft ECC “Report A” with the following novelties was presented to WG FM: some definitions related to railway regulation; revised structure of section 3 according to the discussions that took place during the July web-meeting and to the preliminary inputs from UIC; and Finland’s input on the current migration of the railway applications from the GSM-R network to the VIRVE network based on TETRA.
2. FM56 should receive several contributions from UIC’s group UGFA (UIC Group on Frequency Aspects) for its meeting in December 2017 on several topics directly related to the assessment of the spectrum requirements for railways.

**4.5.3 Work related to ITU-R**

1. The LS from FM56 to CPG PTD on technical and operational characteristics for the RSTT systems used within CEPT and related to WRC-19 AI 1.11 was noted.
2. Another LS from CPG PTD to FM56 on further consideration of needed bandwidth for GSM-R (or its successor) was noted. It will be handled by FM56 at its next meeting in December 2017.

**4.5.4 Other issues**

1. Switzerland introduced the information document Info003 which was summarised with the following statement.

Statement from Switzerland

*The European Commission is envisaging to make spectrum available on a harmonised basis for RFID- and also IoT-applications in the 900 MHz. In the view of Switzerland such a harmonisation is not possible due to the following regulatory reasons:*

* *CEPT Administrations (including all EU member states) have to consider the fact that the frequency band 862 - 960 MHz is allocated on a primary basis to the radio service “Mobile” according to the Radio Regulations (RR).*
* *GSM-R as well as E-GSM-R are determined as such primary mobile services and thus operate in accordance with RR.*
* *According to ECC/DEC/(04)06 CEPT Administrations can decide on a national basis about the implementation of E-GSM-R. In Switzerland such a decision has been taken. The frequency ranges 873 - 876 MHz and 918 - 921 MHz have been assigned to rail operators by means of national licenses.*
* *RFIDs belong to the category of Short-Range Devices (SRDs). In regulatory terms they are therefore assigned only a secondary status. Consequently they must not cause interference in primary radio applications. Pursuant to the Radio Regulations (RR Art. 4.4), the CEPT States are obliged to respect this principle.*
* *SRDs can only be operated on a “Non-Interference- and Non-Protected Basis (NIB / NPB)”. This is also reflected in paragraph (3) of the Commission Decision 2006/771/EC (the so-called SRD Decision).*
* *Switzerland is not member of the European Union. From a regulatory point of view the European Commission treats Switzerland as a third country. It has to be noted that the Implementing Decisions of the European Union are not applicable to Switzerland.*
* *In case of cross-border co-ordination between Switzerland and affected CEPT countries (including all EU member states) the Radio Regulations as well as bi- or multilateral Agreements have to be applied.*

*If the EU Commission were to contemplate the adoption of harmonised technical conditions for the use of RFID and loT devices in the 873 - 876 MHz and 918 - 921 MHz frequency bands, it would have to be noted in the implementing provisions that the use of such applications in relation to third countries such as Switzerland is possible only outside a protection distance, yet to be defined along the national borders. This protection distance would have to be defined by the third countries concerned.*

*Switzerland strongly opposes to any harmonisation measures of SRDs in the 873 - 876 MHz and 918 - 921 MHz frequency bands without sufficient protection of the primary service because such an approach is not compliant with the existing regulatory framework and is therefore not feasible.*

1. Sweden did not share the views expressed by Switzerland’s statement and mentioned that the discussions within RSC on the development of an EC Decision are outside the scope of the work of WG FM. In addition, Sweden stressed that there is no harmonisation for the extension of the GSM-R frequency bands.
2. France believes there is a misunderstanding from BAKOM and SBB with regard to the scope of the draft EC Decision (related to the frequency ranges 870 - 876 MHz and 915 - 921 MHz). If this Decision were adopted, it won’t change anything in terms of regulation or amount of available spectrum for ER-GSM specific national use. This is ensured by a Note in the draft EC Decision (as proposed in the Addendum to CEPT Report 59) which allows national administrations to set up individual authorisation and/or geographical restrictions to protect GSM-R in the extension part of the ER-GSM band (873 - 876 MHz / 918 - 921 MHz).

***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(17)151. WG FM endorsed the actions of the SRD/MG on the items reported under section 4.6 of these present WG FM Minutes.

**4.6.2 ECC/ERC Decisions**

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

1. Two liaison statements from ETSI were considered in docs. FM(17)131 and FM(17)173 and a response liaison statement was agreed (**Annex 33**).
2. WG FM decided to wait with the final approval of the ECC Decision (15)05 on PMR446 for one meeting cycle as requested by ETSI with the understanding that the proposed changes are considered as adopted and will not be re-discussed at the next WG FM meeting. Taking into account the results of the Public Consultation, the content of the draft revised ECC Decision was considered as stable.
3. Concerning the suggestion from ETSI to increase the PMR446 power level, WG FM would like to remind that this had been previously discussed several times when changes had been made to the ECC harmonisation deliverable for PMR446 and there was no support for such an increase in WG FM. PMR446 had just recently been added in the amendment of the EC Decision for SRD ((EU) 2017/1483) with the 500 mW power limit. Many CEPT administrations provide other licensed PMR usage opportunities which could be used in the frequency ranges identified in Recommendation T/R 25-08.

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

1. A letter from 5GAA (doc. FM(17)145) was noted. It was not supported by WG FM (see also **agenda item 5.4**).
2. The progress of work in SRD/MG was reported and noted. SRD/MG follows the existing guidance principles from WG FM. The working assumptions as defined by WG FM and set out in the liaison statement to ETSI from WGFM#87 (February 2017) are still valid with regard to shared spectrum use.
3. A Mandate from the EC on ITS/Urban Rail, under discussion in the Radio Spectrum Committee, is expected to be approved in October 2017. Work arrangements will be set up immediately after the reception of the Mandate and may include web-meetings and an extraordinary SRD/MG meeting in January 2018, focussing on this subject. This is important since the first interim report is expected for March 2018 according to the draft Mandate.
4. It is likely that a CEPT Report will be required. The schedule for the revision making of ECC/DEC/(08)01 needs to be aligned with the schedule of the EC Mandate, when adopted.

**4.6.2.3 Updates of ERC/ECC Decisions in the SRD domain**

1. WG FM adopted five proposed updates of the Decisions ERC/DEC/(01)11 on 35 MHz flying model control, ERC/DEC/(01)12 on 40 MHz model control, ERC/DEC/(01)17 on ultra-low-power active medical implants, ECC/DEC/(05)02 on the 169 MHz range, ECC/DEC/(11)02 on level probing radars for submission to the ECC for approval for publication. The editorial changes include updates to the new format for ECC Decisions, changes following the transition from the R&TTE Directive to the RE Directive, updating the references to harmonised European standards or adding a footnote to inform about EC Decisions with equivalent technical requirements, where applicable (**Annexes 28 - 32**).
2. WG FM will propose to the ECC the withdrawal of ERC/DEC/(01)08 for 2.4 GHz movement detectors (also covered by ERC/REC 70-03 - Annex 6 and the EC Decision for SRD) and implemented nearly throughout the CEPT.
3. The progress report from SRD/MG included also an overview on ECC Decisions (12)03, (06)04 and (07)01 (all UWB related) as well as (09)01 (ITS in 63-64 GHz) which are proposed to be revised or updated at a later stage, after the on-going investigations are completed.

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

1. WG FM approved revisions of the Annexes 1 (non-specific SRD), Annex 2 (data acquisition, tracking and tracing), Annex 3 (wideband data transmission systems), Annex 5 (transport and traffic telematics), Annex 9 (inductive applications) and Annex 12 (medical implants) of ERC Recommendation 70-03 for publication. The changes include alignments following the CEPT Report 59 and its Addendum, and new entries for SRD in 862 - 863 MHz, for SRDs in data networks (within 865 - 868 MHz), wideband data transmission systems in data networks (863 - 868 MHz), and ultra-low-power medical capsules for endoscopy in 430 - 440 MHz. See **Annexes 22 - 27**.
2. SRD/MG will prepare a revision of ERC/REC 70-03 - Annex 10 at the next meeting for submission to WG FM for PC approval. For ERC/REC 70-03 - Annex 2, it was decided in SRD/MG to keep the current title but also to reconsider the title during the next revision to align it with the medical data acquisition category in the EC Decision for SRD and consideration about the best location for medical entries (to move it and wider scope of ERC/REC 70-03 - Annex 12). SRD/MG may consider additional possibilities for the band 862 - 863 MHz as indicated in ECC Report 261.

**4.6.4 EC related activities**

1. WG FM noted the SRD/MG progress report and the latest draft CEPT Report on UWB.
2. The guidance letter for the 7th update of the EC Decision on SRDs is expected to be approved in RSC in October 2017, so SRD/MG will start work on the 7th update immediately after reception of the guidance letter.

**4.6.5 Coexistence of RLANs in vehicles**

1. 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) and noted the information from WG SE about the progress in SE24.

**4.6.6 SRDs in UHF**

1. The SRD/MG progress report and information about related work items in SE24 were noted. SRD/MG will continue the work on network-based Ultra Narrow Band SRD when TR 103 526 (Low Power Wide Area Networks - Chirp Spread Spectrum (LPWAN-CSS) operating in the UHF spectrum below 1 GHz) is available (see also **agenda item 5.7**).

**4.6.7 Wireless Power Transmission (WPT) non-beam**

1. SRD/MG is waiting for the results in WG SE concerning the possible relaxation of limits in 79 - 90 kHz. Mr Thomas Weber reported about the discussions in SRD/MG and the overall situation. The proposal is to consider WPT non-beam applications as radio applications within ERC/REC 70-03, either in a separate new Annex or in Annex 9 (inductive applications). WG FM agreed that WPT non-beam applications should be included in ERC/REC 70-03.
2. Mr Weber explained that technically, non-beam WPT often is comparable with an inductive RFID application. However, some aspects may be different. The option to create a new separate Annex in ERC/REC 70-03 may have some advantages since it could allow a better and more extensive non-beam WPT description (scope), and avoids ‘mixing’ of regulation for non-beam WPT and other inductive SRD applications.
3. The ETSI Liaison Officer informed the meeting that w.r.t. the ETSI SRdoc on WPT below 30 MHz (TR 103 493) some coordination is taking place between CENELEC and ETSI on how to jointly progress the work. The idea is to create a CENELEC/ETSI group to coordinate the WPT activities. The issue will be further discussed at the next ERM meeting.

Statement from IARU

*IARU expresses concern with respect to the possible impact of high power LF WPT non-beam SRD installations on MF and HF frequency ranges as a consequence of harmonic and spurious radiation in urban and semi urban environments. Additionally the likely frequency spread of the fundamental frequency and its impact on the bandwidth of harmonic emissions is also of concern. IARU believes that the current limits for such emissions were developed for a very different category of SRD in terms of the number of likely installations and their duty cycle.*

Statement from Italy

*Italy while recognising IARU expressed concerns noted that there is a currently in-progress WG SE work item SE24\_60 for studies on Wireless Power Transmission (WPT) systems for Electric Vehicles (EV) operating in the frequency band 79 - 90 kHz. However despite a target date being set for 01-05-2018 it seems that activity is slowly moving.*

*Moreover Italy also noted that other frequency bands identified by CPG PTD for WPT for EV may be considered in the study.*

*The scenarios as above makes the situation quite unclear which appears not fully supporting as necessary the investments and planning certainty to automotive industry which is struggling to satisfy EU targets for green-environmental plan.*

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

1. The SRD/MG Chairman provided the progress report from SRD/MG including an updated working document. SRD/MG is of the opinion that nomadic and mobile use should not be excluded but the focus should be on the inclusion of fixed outdoor usage under license-exempt regulation. The target is to finalise a regulatory approach in the second half of 2018.
2. The new work item agreed by WG SE for SE19 was noted. The work item is open to also consider contributions about nomadic and mobile use.
3. The ETSI Liaison Officer informed the meeting that a new work item had been proposed in ETSI to merge the existing TR 102 555 (60 GHz MGWS) and TR 102 400 (60 GHz ITS) into a single SRdoc which would be covering both the MGWS in 57 to 71 GHz and the mmW-ITS which is being proposed to move into a single MGWS channel. The proposed WI is up for adoption at the next week ERM meeting.

**4.6.9 Non-professional UAS**

1. SRD/MG will work on an explanatory paper as of its next meeting taking into account the draft ECC Report 268 after PC.

**4.6.10 ITU-R contributions**

1. Classification of SRDs: the new Recommendation ITU-R SM.2103-0 (09/2017) on the global harmonisation of SRD categories is published now.

**4.6.11 Other issues**

1. WG FM agreed a change in the ToR of the SRD/MG to reflect the new EC Permanent Mandate on UWB: add ‘The Maintenance Group shall regularly review and revise as necessary the EC Decision for UWB’.
2. The ETSI Liaison Officer informed the meeting that already in early 2016, ETSI had approved a new work item to develop a SRdoc for both Smart Tachograph and Weight & Dimension (TR 103 441) in 5 GHz. But the work never started as the person that initially proposed to be the rapporteur could not take the role. Finally, a new rapporteur had presented himself (Mr Dieter Smely from Kapsch) and the work will now start within ERM TG37.

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

**4.7.1 Progress report**

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

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

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

1. The WG FM Chairman noted that there would be no input to the meeting on this ECC Recommendation, however an input was anticipated at the next WG FM meeting.

**4.7.3 Other issues**

1. A liaison statement from PT1 was considered (FM(17)147) which contained the current version of the draft CEPT Brief on issue 9.1.8 (Narrowband and broadband machine-type communication infrastructures). WG FM was being invited to contribute to the draft CEPT Brief, particularly where non-IMT technologies were being used for M2M. SRD/MG and FM54 had considered the request and had both made proposals to this meeting, for additions to the draft CEPT Brief.
2. Following drafting, these modifications were agreed together with some suggestions from the FM44 Chairman with regard to M2M/IoT via satellite. A reply liaison statement to ECC PT1 is shown in **Annex 06 incl. Annex 21**.

***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(17)149 and Annexes 1 to 7 to it.

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

1. The draft revised ECC Decision (01)03 for EFIS was adopted to be submitted to the ECC for final approval for publication (**Annex 10**). In addition, due to some additions in Annexes 2 and 5 of the ECC Decision (application terminology and xml import/export format), another administration consultation was agreed for these Annexes 2 and 5, which will start after the WG FM meeting.

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

1. The WG FM gave the following guidance to EFIS/MG:
* ETSI published ENs should only be included in the ECA Table if there is an application term agreed for the entry, incl. receiver-only ENs;
* ETSI ENs which have not been published in the Official Journal of the European Union (OJEU) but relate to an application included in the ECA Table should be included in the ECA Table.
1. The revised ERC Report 25 (ECA Table) was approved for publication (**Annex 11**). Publication by the ECO will take place after the next ECC meeting in November 2017.

**4.8.4 RIS Models**

1. No proposals for RIS Models were received by EFIS/MG for its meeting.

**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.

**4.8.6 ECO Report 05**

1. The WG FM agreed to the proposal to update ECO Report 05 (relation of CEPT documents to the used EFIS application terms) only once a year.

**4.8.7 ECC Report 180**

1. A revision of ECC Report 180 (Guidance on the interpretation of requirements for the EFIS database) was approved for Public Consultation **(Annex 12)**.

**4.8.8 Action Points for the administrations**

1. The action points for administrations were noted by WG FM.

**4.8.9 ECO workshop on EFIS**

1. The meeting was informed about the results of the workshop. There will also be an ECC newsletter article informing about the workshop. Additional information about the workshop results are provided under **agenda item 9.1**.
2. The EFIS/MG was tasked to develop a questionnaire to all users of the EFIS (interested public, administrations, industry, operators, test houses etc.) about the EFIS database.

**4.8.10 Other issues**

1. The next meeting of EFIS/MG will take place in Luxembourg, 18 - 19 April 2018.

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

**4.9.1 Progress report**

1. Mr Thomas Weber (ECO) presented on behalf of the FM Maritime Forum Group Chairman, Mr Jaap Steenge (HOL), the progress report in doc. FM(17)167.
2. WG FM agreed to the proposal from the FM Maritime Forum Group (MAR FG) to develop two new ECC Decisions for the ‘Harmonised usage of frequencies in the VHF maritime mobile band for vessels’ (i.e. the scope of work item FG\_08 is wider than originally proposed by the MAR FG) and on ‘The use of the VHF Data Exchange System (VDES) terrestrial component’ and will inform the ECC accordingly with the request to confirm the development of two new ECC Decisions. The Forum Group will have two physical meetings in 2018 to progress the work.
3. The FM Maritime Forum group may discuss whether a different structure for the new ECC Decisions, e.g. only one new ECC Decision to cover all VHF maritime or all VDES related items could be a better way forward.
4. WG FM agreed a liaison statement to ADCO/RED to inform that a market surveillance campaign for AIS-SART is not considered useful anymore (**Annex 17**).
5. WG FM agreed a response liaison statement to ETSI ERM (cc ERM TG26) with regard to the usage of the VHF maritime radiotelephony channels (**Annex 16**).
6. The subject ‘Over The Horizon Radar’ will be considered when setting up the agenda for the next Civ/Mil meeting as requested in doc. FM(17)167 - Annex 3.
7. WG FM agreed that the collected information of the responses to the WG FM questionnaire to CEPT administrations on treatment of Foreign Maritime Radio Operator's Certificates will be published on the maritime topic webpage with a disclaimer on the webpage as well as in the ECO summary document.

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

**4.10.1 Progress Report**

1. ECO updated the radio amateur topic webpage including the document with answers for frequently asked questions. ECO will continue to amend the frequently asked questions with the aim to add clarifications as appropriate.
2. The WG FM Chairman held a presentation at the General Conference of IARU-R1 in Landshut / Germany in September 2017, see on <https://cept.org/ecc/deliverables/ecc-presentation-page>.

**4.10.2 RA FG Chairmanship**

1. No administration had provided a candidate for the RA FG chairmanship so far. WG FM decided that Mr Thomas Weber, ECO, should continue as acting Chairman of the RA FG.

**4.10.3 Other issues**

1. The IARU-R1 made a proposal for new work in the Radio Amateur Forum Group to consider a new entry level licensing possibility, especially designed for young people. ECC Report 89 could be a starting point for starting the development of an ECC Recommendation. WG FM decided to task the RA FG to consider the idea. IARU-R1 is expected to provide a written proposal to the Forum Group.

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

***5.1 Civil-Military meeting***

1. The WG FM noted the proposal from the MAR FG. See **agenda item 4.9.1**.

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

1. The general review of ECC/ERC deliverables was considered. An updated list of the ERC/ECC Decisions is provided in **Annex 34**.
2. The meeting agreed that following previous correspondence with PT1 and following a review that ECC/DEC/(07)02 – *ECC Decision on availability of frequency bands between 3 400 – 3800 MHz for the harmonised implementation of Broadband Wireless Access systems (BWA)*, could be withdrawn. This fact would be relayed to the next ECC meeting (#46).

**5.2.1 Review of ECC/DEC/(15)02 on Broadband DA2GC in 1900 – 1920 MHz and of ECC/DEC/(15)03 on Broadband DA2GC in 5855 – 5875 MHz**

1. With respect to ECC/DEC/(15)02 on Broadband DA2GC in 1900 – 1920 MHz and ECC/DEC/(15)03 on Broadband DA2GC in 5855 – 5875 MHz, Sweden and France felt both ECC Decisions could be withdrawn. The WG FM Chairman recommended that, based on the information noted in the ECO Bulletin, there seemed to be a case to retain the ECC Decision in the 5855 – 5875 MHz band for now. For the ECC Decision in 1900 – 1920 MHz the WG FM Chairman recommended that a withdrawal ECC Decision be considered at the next WG FM meeting. The meeting agreed on this approach.
2. ETSI reminded the meeting that ETSI had been working on two harmonised standards for DA2GC. The main difference is the antenna technology used. One of the systems is using beamforming antennas to continuously track the plane where the other one is using fixed pattern antennas. Both these standards cover the 1.9 GHz and the 5.8 GHz bands.
3. The first standard is EN 303 339, had been completed some time ago and published by ETSI and also in the OJEU.
4. EN 303 316, which is covering the beamforming based DA2GC system had recently been modified to address comments raised by the EC. This work was completed during the last ETSI TC BRAN meeting but the outcome was approved afterwards during a Remote Consensus which ended a few days before the WGFM#89 meeting. The standard is now ready to be sent into the 90 days ENAP period.

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

1. A liaison statement, from WG SE, on the current work in progress in SE19 was noted (doc. FM(17)160.

**5.3.1 ECO Report 04**

1. The meeting noted the planned addition of a statistics tool for FS in EFIS.

***5.4 WAS/RLANs in the band 5925 – 6425 MHz***

1. The WG FM Chairman noted the advice from ECC#45 (doc FM(17)150, sec. 8.11) which recommended WG SE and WG FM to work together to provide an efficient method to handle this work. He further noted that at the recent WG SE meeting (#77) a new Project Team had been established, [SE45](https://cept.org/ecc/groups/ecc/wg-se/se-45/client/introduction/), to study the compatibility issues in the band (doc. FM(17)158).
2. In discussions, it was agreed by WG FM to establish a new Project Team, [FM57](https://cept.org/ecc/groups/ecc/wg-fm/fm-57/client/introduction/), and Mr Stephen Talbot (G) was agreed as the Chairman by acclamation. Terms of Reference for the group, which reflected the need for both SE45 and FM57 to work together, were discussed and are shown in **Annex 18**.
3. In further discussions, it was identified that WG SE (copied to SE45) needed to be updated on the nature of the studies to be undertaken. To this end, a liaison statement was agreed and is shown in **Annex 19**.
4. A letter from 5GAA was noted by the meeting (doc. FM(17)145). WG FM did not support the proposal to consider ITS in 5925 - 6425 MHz. See also **agenda item 4.6.2.2**.
5. The ETSI Liaison Officer informed the WG FM meeting that the proposal in this document, which requests WG FM to also consider the band 5925 MHz to 6425 MHz (which is currently being studied for potential use by RLANs in WI FM\_52) for use by ITS safety applications, had not been seen or discussed within any of the relevant ETSI groups such as ETSI TC ERM, ETSI TC ITS or ETSI ERM TG37. Therefore this is not being requested by ETSI, or by the ITS community within ETSI.
6. The meeting was shown a presentation by the Microsoft Corporation, related to the potential use of the 6 GHz for RLAN (INFO 005R1).
7. The ETSI Liaison Officer provided an update on the status of the SRdoc (TR 103 524) on 6 GHz RLANs in ETSI. The objective was to have a stable draft available after the web-meeting on 10 October 2017.
8. He further clarified that the current version of the ETSI Work Item specifies that the SRdoc will specify the technical characteristics for RLANs operating in the frequency range from 5925 to 6425 MHz. But the supporters of the work item would like to extend this frequency range up (for the SRdoc) to 6725 MHz and therefore had proposed a change to the existing work item. There was a Remote Consensus procedure on this work item change and two comments/objections were received. Further discussions on this WI change are scheduled for the next meeting of ETSI TC ERM in October 2017. Whatever the outcome of that debate will be, the objective is to submit either a stable draft or the final draft for the first meetings of SE45 and FM57.

***5.5 Roadmap on 5G***

1. The WG FM Chairman introduced the latest version of the CEPT Roadmap for 5G as agreed by the 45th ECC meeting (Annex 2 to doc. FM(17)150). The previous changes, submitted by WG FM #88, were endorsed and are now covered in the updated version of the roadmap.

***5.6 Spectrum regulation for drones***

1. The Chairman of the CG on Drones, Mr Florian Cziczatka (AUT), presented doc. FM(17)168, the progress report. The CG had one physical meeting on 22 September 2017 in Mainz / Germany.
2. The Chairman of the CG gave a short presentation of the progress since the last WG FM meeting. The main objective of the meeting was to incorporate the results of the Public Consultation into the draft ECC Report 268 as appropriate. The updated draft ECC Report 268 is contained in Annex 1 and the comment resolution table in Annex 2 of doc. FM(17)168.
3. The CG meeting had also been informed that the EASA public consultation (NPA 2017-05 (A)) for the new regulatory approach for UAS in the European Union was extended to a new deadline on 15 September 2017. The results of this consultation are unknown for the time being, and hence, the application of the RE Directive for UAS is not clear. Therefore, the WG FM CG on Drones proposed to wait with the final approval of the ECC Report 268 until this aspect is clarified.
4. WG FM endorsed the proposal postponing the final approval of draft ECC Report 268 by one meeting cycle until the aspect of the applicability of the RE Directive for UAS of the open and specific classes under the new regulatory EASA regulation is clarified.
5. The WG FM CG on Drones proposed to WG FM to consider a liaison statement from ECC to the EC stating that the RE Directive should apply in order to support the interference-free and efficient use of the spectrum by commercially available UAS applications. This proposal was supported by Finland.
6. After some discussion WG FM rejected this proposal. It was stated that such a liaison statement may not provide an added value to the discussion in this point of time. However, WG FM agreed to inform the ECC about the position and proposals sent from ADCO/RED to the EC and the EASA consultation process (doc. [FM\_CG\_Drones(17)17](https://cept.org/Documents/wg-fm/38468/fm_cg_drones-17-17_adco-red-comments-npa-a)) stating that the RE Directive should apply in order to support the interference-free and efficient use of the spectrum by commercially available UAS applications.
7. Furthermore, WG FM CG on Drones proposed to WG FM to consider a liaison statement to ECC/PT1 on the possibility to use MFCN for UAS operations and its implications.
8. WG FM endorsed this proposal. The liaison statement is contained in **Annex 13.**
9. The Chairman of the CG presented the working document on the frequency options (see Annex 3 to doc. FM(17)168). The work on the frequency options is still ongoing. In addition, the WG FM CG on Drones proposed that for UAS applications in the focus of draft ECC Report 268, considerations should not be limited to bands with specific radio service allocations (a priory no need to link the application to (a) specific radio service allocation(s)). WG FM endorsed this finding of the CG on Drones.
10. Document FM(17)130 contains a liaison statement from ETSI in which they inform the WG FM that due to the lack of support, the work on TR 103 373 had not progressed.

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

1. The ETSI Liaison Officer informed the meeting that the drafting of the System Reference Document (TR 103 526) had been completed and the document is now submitted to ETSI TC ERM for approval at its next week meeting.
2. The meeting agreed that once ETSI has approved this document, it can be forwarded directly to SRD/MG so they can already provide some feedback about their considerations to the following WG FM meeting (see also **agenda item 4.6.6**).

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

1. The ETSI Liaison Officer informed the meeting that the drafting of the System Reference Document (TR 103 517) had been started but the document still is in the ‘early draft’ stage.

***5.9 Information on LSA implementation***

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

***5.10 Maintaining the WI95revCO07 and MA02revCo07 plans***

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

***5.11 Frequency arrangements for PPDR (Res. 646 (Rev. WRC-15))***

1. The WG FM Chairman introduced the liaison statement from ITU-R WP 5A (Counselor ITU-R SG 5) on the revision of Recommendation ITU-R M.2015-1 (Frequency arrangements for public protection and disaster relief radiocommunication systems in accordance with Resolution 646 (Rev.WRC-15)), doc. FM(17)132. This liaison statement was sent to the regional groups, hence also to CEPT. The next meeting of ITU-R Working Party 5A is scheduled for 6 - 16 November 2017 and the deadline for submission of contributions is on 30 October 2017.
2. He then introduced his proposal for a response to ITU-R WP 5A on revision of Rec. ITU-R M.2015-1 (PPDR), doc. FM(17)171.
3. After some editorial amendments and the inclusion of the 5 GHz range for BBDR in Annex 2 of the draft revised Recommendation, the meeting agreed on a liaison statement back to ITU-R WP 5A (**Annex 15**) and to the attached proposal (**Annex 14**). The proposed changes in the draft revised Recommendation are related to Annex 1 (pages 17 - 20 and 31 - 33) and to Annex 2 (pages 39 - 40) to it.
4. It was shown in doc. FM(17)171 that the revision of Report ITU-R M.2377 (Radiocommunication objectives and requirements for Public Protection and Disaster Relief (PPDR)) is also under discussion in ITU-R WP 5A.
5. The liaison statement from WG SE (FM(17)161) on SE7 activities was introduced by the WG FM Chairman. Work Item SE07\_26 is related to complementary compatibility and sharing studies for BB-PPDR systems operating in the frequency band 410 - 430 MHz. A single draft ECC Report is under development, covering work items SE07\_25 and SE07\_26. WG SE had decided to postpone the deadline for this ECC Report until May 2018. This was noted by the meeting.

**6. New work items**

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

1. Document FM(17)133 contains a liaison statement from ETSI informing the WG FM about a new SRdoc TR 103 450 on ‘Technical characteristics and parameters for Wireless Multichannel Audio Systems (WMAS)’. This document was presented by the ETSI Liaison Officer who explained that these WMAS provide multi-channel audio transmission capabilities. These systems are designed for scenarios in an area, where a band of contiguous spectrum is available and where multiple wireless audio channels are necessary.
2. It was further explained that these systems comply with the provisions currently included in ERC Recommendations 70-03 and 25-10, however some CEPT administrations limit the bandwidth to 200 kHz or may have other restrictions in their national radio interface.
3. The objective of the SRdoc is to have confirmed that these wideband systems can operate under the current provisions included in ERC Recommendations 70-03 and 25-10, to align the national radio interface descriptions among CEPT administrations and to adopt new studies for adoption of PMSE, including WMAS, under the LSA framework.
4. Based on a request from Eurocontrol, it was clarified that these wideband systems can operate with a bandwidth up to 20 MHz (and as such combining multiple 200 kHz channels) but it will remain a single carrier that is subject to the power limits defined in the ERC Recommendations and as such the total power spectral density will be much lower compared to the typical narrow band PMSE systems.
5. The WG FM Chairman indicated that he does not see a need to involve WG SE at this moment. As a first step, CEPT should investigate and confirm whether the existing ERC Recommendations 70-03 and 25-10 can be used by these wide band WMAS systems. The administrations are invited to verify whether the current national regulations could prevent the introduction of WMAS systems. He suggested that these tasks should be coordinated by FM51. FM51 may also take some information from the responses to previous questionnaires (e.g. regarding the implementation of the bands in REC 25-10). Administrations should check their national situation and provide feedback directly to FM51. The WG FM endorsed this way forward.
6. The SRD/MG Chairman informed the meeting that the current version of ERC/REC 70-03 (Annex 10) contains a bandwidth limitation of 200 kHz for radio microphones in the frequency range 823 - 832 MHz. The SRD/MG already decided at the last meeting to propose the deletion of this restriction which is neither found in the related CEPT Report nor in the EC Decision for PMSE. A revision of Annex 10 of ERC/REC 70-03 is planned to be submitted to the next WG FM meeting.

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

***7.1 EC recent activity***

1. The EC Counsellor, Mr Giuseppe Rizzo, informed the meeting about the following items of interest.

**7.1.1 Workshop 870-876 MHz, 915-921 MHz (19 June 2017)**

1. On 19 June 2017 the Commission organised a workshop on "Efficient use of spectrum in the bands 870 - 876 and 915 - 921 MHz by IoT, RFID, and Railways".
2. On that occasion the so-called "squeeze option", i.e. 2 x 1.4MHz for rail usage (instead of the full 2 x 3MHz E-GSM-R band), was proposed as a compromise to accommodate RFID and IoT. Discussions are still open.

**7.1.2 Second Joint RISC/RSC meeting (04 July 2017)**

1. The 2nd joint meeting of the Radio Spectrum Committee (RSC) and of the Railway Interoperability Committee (RISC) – Brussels, 4 July 2017, was called in order to fine-tune positions on the migration process between GSM-R and its successor system for critical applications, and to speed up the definition of the actual needs in terms of spectrum allocation for it.
2. Different hypothesis have been put forward for migration – the Commission and ERA will facilitate the coordination work in order to safeguard interoperability during the migration period.

**7.1.3 RSC#60 meeting (12 – 13 July 2017)**

1. Main results include: adoption of an updated version of UWB Decision 2007/131/EC in order to align with a new harmonised standard; a proposal to simplify reporting requirement of Decision 2005/50/EC on 24GHz SRR; adoption of a Mandate to CEPT on suitability of IoT in the 900/1800 MHz band; adoption of the 6th update of the SRD Decision; discussion on a draft guidance letter for the 7th update of the SRD Decision, and first discussion of a Mandate to CEPT on the extension of the ITS safety related band from 5875 - 5905 MHz to 5875 - 5925 MHz and inclusion therein of CBTC (urban rail).

**7.1.4 RSPG#43 meeting (6 June 2017)**

1. RSPG#43 of 6 June 2017 saw updates from working groups on spectrum for 5G, “Good offices”, PMSE and the Digital Single Market. A new work programme will be adopted beginning of 2018.
2. A new Chairman and Vice Chairman will also be elected soon. Next RSPG meeting will be on 21st November 2017.

**7.1.5 Workshop on short range communications in the 5.9 GHz band**

1. On 5 September 2017 a workshop on short range communications in the 5.9 GHz safety-related ITS band took place, organised by the Commission in Brussels. Its aim was to facilitate the debate between supporters of two different - and, for the time being, incompatible - technologies, i.e. ETSI-ITS-G5 and C-V2X. While participants found the event useful, it was not possible to produce a common deliverable on a way forward.
2. For more info on this workshop: <https://ec.europa.eu/digital-single-market/en/news/workshop-short-range-vehicular-communications-59-ghz-band>

***7.2. ETSI recent activity***

**7.2.1 Overview on ETSI SRdocs**

1. The ETSI Liaison Officer informed the WG FM that the document behind the URL [https://portal.etsi.org/Portals/0/TBpages/ERM/Docs/ERM SRdoc overview.doc](https://portal.etsi.org/Portals/0/TBpages/ERM/Docs/ERM%20SRdoc%20overview.doc) provides an up to date overview of the SRdocs recently published and those still under development. For each of the SRdocs more specific information (like the timeline) is available by using the hyperlinks contained in this document.
2. See link: <http://portal.etsi.org/erm/srdoc_overview.doc>

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

1. The ETSI Liaison Officer further informed the WG FM that <http://www.etsi.org/red> contains specific information about the RE Directive including a list of harmonised standards recently published by ETSI.
2. ETSI had informed WG FM earlier that a number of standards which were completed by ETSI are still not published in the OJEU because they have been rejected by the EC for technical reasons such as missing receiver requirements. This has caused a lot of frustration lately as a correction to a standard means it is subject again to the entire procedure of preparing a new draft, send the new version into ENAP (90 days), holding a resolution meeting, to conclude with national voting (30 days). Manufacturers are now forced to go to a Notified Body. Moreover, stakeholders in ETSI are frustrated because the group may have had a good reason for not including one or another requirement.
3. The ETSI Liaison Officer informed, in order to avoid further frustration, there was an informal meeting organised in the week before the WGFM#89 meeting between ETSI, EC, member states and other stakeholders. Also some member states during that meeting brought strong positions and questioned whether the approach by the EC is appropriate. They are of the view that the EC should get involved from the beginning of the standardisation process to prevent that at the end of the process a given standard cannot be published in the OJEU.
4. ETSI had suggested organising a workshop to discuss the technical issues such as measurement uncertainty and receiver requirements with the EC as there were often the reason for the objection by the EC. The EC accepted that proposal.

**7.2.3 Other issues**

1. Additional information for active WG FM topics were provided during the week and are reflected in the discussions for those specific agenda items.

**7.2.4 Overview on ECC deliverables**

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

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

1. Draft revised ECC Decision (01)03 on EFIS (**Annex 10**). Due to some additions, another administration consultation (deadline: 30 October 2017) was agreed for the Annexes 2 and 5 of this ECC Decision;
2. Draft updated ERC Decision (01)17 on Ultra Low Power Active Medical Implant (ULP-AMI) (**Annex 28**);
3. Draft updated ERC Decision (01)12 on SRDs used for model control in 40 MHz (**Annex 29**);
4. Draft updated ERC Decision (01)11 on SRDs used for flying model control in 35 MHz (**Annex 30**);
5. Draft updated ECC Decision (05)02 on harmonised frequency plan for the use of the band 169.4 - 169.8125 MHz (**Annex 31**);
6. Draft updated ECC Decision (11)02 on Industrial Level Probing Radars (LPR) (**Annex 32**);
7. No draft CEPT Reports were adopted for submission to the ECC at this WG FM meeting;

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

1. Draft revised Annex 1 (non-specific SRD), Annex 2 (data acquisition, tracking and tracing), Annex 3 (wideband data transmission systems), Annex 5 (transport and traffic telematics), Annex 9 (inductive applications) and Annex 12 (medical implants) of ERC Recommendation 70-03 on SRDs (**Annexes 22 - 27**);
2. Draft revised ERC Report 25 (ECA Table) (**Annex 11**);

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

1. Draft revised ECC Recommendation (05)01 on the harmonisation of automatic measuring methods and data transfer for frequency band registrations; the Public Consultation is scheduled to 12 December 2017 (**Annex 09**);
2. Draft revised ECC Report 180 on guidance on the interpretation of the requirements of ECC/DEC/(01)03 on EFIS; the Public Consultation is scheduled to 12 December 2017 (**Annex 12**);
3. No ECC Decisions were approved for Public Consultation at this WG FM Meeting;

**d)** **Other deliverables**

1. Assessment of the reported interference at meteorological radars caused by 5 GHz WAS/RLAN (**Annex 05**);
2. LS (response) to ECC PT1 on WRC-19 AI 9.1, issue 9.1.8 (**Annex 06, see also Annex 21**);
3. Proposed elements on draft CEPT Brief on WRC-19 Agenda Item 9.1, issue 9.1.8 (**Annex 21, attached to Annex 06**);
4. LS to ADCO/RED on interference from 5 GHz WAS/RLAN to meteorological radars and on 5 GHz WAS/RLAN use(**Annex 07**)**;**
5. Questionnaire to CEPT Administrations on Interference Statistics 2017 (**Annex 08**);
6. LS to ECC PT1 on the usage of MFCN for UAS (**Annex 13**);
7. Proposed amendments on the draft revised Recommendation ITU-R M.2015-1 on Frequency arrangements for public protection and disaster relief radiocommunication systems in accordance with Resolution 646 (Rev.WRC-15), attachment to Annex 15 (**Annex 14**);
8. LS (response) to ITU-R WP 5A on the Revision of Recommendation ITU-R M.2015-1 (**Annex 15**);
9. LS (response) to ETSI TC ERM on 20xx VHF Channels (**Annex 16**);
10. LS to ADCO/RED on AIS-SART beacons (**Annex 17**);
11. Terms of Reference of new Project Team FM57 on Wireless Access Systems (including RLANs) in the frequency band 5925 - 6425 MHz (**Annex 18**);
12. LS (response) to WG SE / SE PT45 on Wireless Access Systems (including RLANs) in the frequency band 5925 - 6425 MHz (**Annex 19**)
13. Input to ITU-R SG WP1A, CEPT contribution on PMR/PAMR issues to Report ITU-R SM.2351-2 (**Annex 20**);
14. LS (response) to ETSI TC ERM on PMR446 (**Annex 33**);
15. Amended list of review of ECC-ERC-ECTRA Decisions, for ECC endorsement (**Annex 34**);
16. Further information is available on the WG FM website:

[https://cept.org/ecc/groups/ecc/wg-fm/news/results-of-the-WG FM89-meeting-9-13-october-2017-in-zagreb/](https://cept.org/ecc/groups/ecc/wg-fm/news/results-of-the-wgfm89-meeting-9-13-october-2017-in-zagreb/)

**8. Nomination and appointment of chairmen**

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

1. According to Article 8.1 of the ECC Rules of Procedure only Members’ representatives are entitled to be Vice Chairman. As Mr Laurent Bodusseau is not working for a CEPT administration anymore, WG FM has to appoint a new Vice Chairman.
2. The WG FM Chairman expressed his gratitude for the work done by Mr Bodusseau. He highlighted the difficult challenges as Chairman of the former Project Team FM49 (PPDR) and mentioned also the great support with regard to many other topics, also as a member of the French delegation.
3. A call for nominations will be sent out after the WG FM meeting. CEPT members are invited to consider submitting a candidate for the vacant post of the WG FM Vice Chairman. It is planned to appoint a new Vice Chairman of WG FM at the 90th WG FM meeting in February 2018.

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

1. The WG FM Chairman introduced the outcome of the latest ECC meeting with regard to the changes of the ECC Rules of Procedure (FM(17)150, section 14). He especially referred to the amendments in Article 8, e.g. provision No. 8.5ter was added. The principle of rotation of chairmanships should be applied as far as possible, but with regard to Project Teams and Forum Groups the RoP also provide some flexibility. The amendments in the RoP are shown in Annex 4 to doc. FM(17)150.
2. According to Annex 3 to doc. FM(17)150 the Chairmen of FM22, FM44, FM51, SRD/MG, EFIS/MG, RA FG, MAR FG need to be appointed / re-appointed. Because it might be necessary for the current Chairmen / for the candidates to firstly clarify the endorsement within the relevant national administration, the appointment / re-appointment will be done at the 90th WG FM meeting in February 2018. A formal call for nominations is not necessary (not required by the RoP for the Chairmen of Project Teams and Forum Groups).

**9. Any Other Business**

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

1. Mr Thomas Weber (ECO) presented doc. FM(17)165rev1 on the ECO assistance to WG FM including the ECO Bulletin presented at the last ECC meeting (doc ECC(17)040). No questions were raised at the meeting with regard to the ECO Bulletin.
2. Mr Thomas Weber gave an online presentation of the new documentation database (<http://test.ecodocdb.dk/docdb/> , will replace <http://www.ecodocdb.dk/> in January 2018). WG FM welcomed this development. Suggestions for improvements to be done in the new database should be directed directly to Mr Thomas Weber.
3. He explained that the new Documentation Database is available live for testing since the end of May 2017. It contains ECC deliverables (ECC Decisions, Recommendations and Reports), CEPT Reports, ECO Reports, and the EC Decisions and ETSI harmonised standards related to ECC deliverables. The documentation is provided together with information about applicable frequency ranges and application terminology, related documentation and attachments. The database features amongst others a new layout, an archive showing older versions of a document, an improved search functionality and linkage with EFIS (e.g. information about harmonised standard and the application terminology is imported from the EFIS). National implementation information can also be provided by CEPT administrations directly via their own account for editing such information. Administrations wishing to have their account information should contact Mr Thomas Weber.
4. Creation and maintenance of the list of ordinary review of ECC/ERC/ECTRA Decisions (specifications were discussed and endorsed in WG FM and ECC in the past); this is a separate module within the new documentation database and will be added in 2018.
5. A one-day ECO Workshop on EFIS took place on 19 September in Mainz, Germany. More than 50 participants attended the workshop. The workshop provided guidance to CEPT administrations on providing information to EFIS and guidance to the interested public on how to use EFIS. Suggestions were made for improvement and what could be added to the EFIS. Presentations were provided by ECO, national administrations, ADCO/RED and RED/CA demonstrating how they update, use, or what they expect from the EFIS. The workshop [webpage](https://cept.org/ecc/groups/ecc/wg-fm/efismg/news/eco-efis-workshop-on-19-september-2017/) contains the programme, link to presentations and a summary. An ECC newsletter article will inform about the EFIS workshop and the new documentation database.
6. One result of the EFIS workshop was that a documentation web-service is planned to be added which is based on a new application programming interface (API). This API will be used for the EFIS and the new documentation database.

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

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

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

***11.1 Work Programme***

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

***11.2 Meeting Schedule***

1. The WG FM Chairman invited the participants to note the schedule of meetings in 2017 as well as in 2018 and consider possible venues for WG FM meetings in 2019 and 2020.
2. WG FM agreed to have only two meetings in 2019 due to the WRC-19, overlapping with the CPM in 2019 should be avoided.
3. The schedule for future WG FM and Project Team meetings with indicating ECC, ECC PT1 meetings is as follows:

| **Meeting** | **Date** | **Place** |
| --- | --- | --- |
| FM44 #44 | 07 – 09 November 2017 | Toulouse, France |
| **ECC #46** | **14 - 17 November 2017** | **Bucharest, Romania** |
| FM51-M26 | 22 – 23 November 2017 | ECO, Copenhagen |
| FM56 #3 | 04 – 05 December 2017 | Paris, France |
| SRD/MG #72 | 13 – 15 December 2017 | Dublin, Ireland |
| FM51-M27 | 16 – 17 January 2018 | TBD |
| FM44 #45 | 16 – 18 January 2018 | TBD |
| FM54 #17 | 24 – 25 January 2018 | ECO, Copenhagen |
| **WG FM #90** | **05 – 09 February 2018** | **Birmingham, United Kingdom** |
| **ECC #47** | **27 February – 02 March 2018** | **TBD** |
| FM54 #18 | 12 – 13 March 2018 | ECO, Copenhagen |
| FM56 #4 | 14 – 15 March 2018 | ECO, Copenhagen |
| SRD/MG #73 | 11 – 13 April 2018 | Rome, Italy |
| FM22 #49 | 17 – 20 April 2018 | ECO, Copenhagen |
| EFIS/MG #41 | 18 – 19 April 2018 | Luxembourg, Luxembourg |
| **WG FM #91** | **14 – 18 May 2018** | **Basel, Switzerland** |
| FM56 #5  | 06 – 07 June 2018 | Helsinki, Finland |
| **ECC #48** | **12 – 15 June 2018** | **TBD** |
| SRD/MG #74 | 05 – 07 September 2018 | TBD |
| FM54 #19 | 10 – 11 September 2018 | TBD |
| FM56 #6 (tentatively) | 12 – 13 September 2018 | Budapest, Hungary |
| EFIS/MG #42 | 17 – 18 September 2018 | TBD, Spain |
| **WG FM #92** | **24 – 28 September 2018** | **Vilnius, Lithuania** |
| **ECC #49** | **23 – 26 October 2018** | **TBD, France** |
| FM56 #7 (tentatively) | 04 – 05 December 2018 | Lille, France |
| … | … | … |

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

**12. Minutes of the Meeting**

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

**13. Closure of the Meeting**

1. The WG FM Chairman thanked the Croatian Regulatory Authority HAKOM for hosting the meeting. He especially addressed his thanks to Ms Ivančica Sakal, Ms Vesna Radočaj and Mr Alen Štefanac from HAKOM for the perfect organisation as well as the crew of Hotel Esplanade for their attentive support.
2. In addition he thanked for the social event on Wednesday evening, including a very interesting sightseeing walking tour through the heart of Croatia’s capital and a delicious dinner at Hotel Esplanade, including dancing stimulating live music as the crowning end of the evening.
3. The WG FM Chairman thanked the WG FM delegates, the Project Team / MG / FG / CG Chairmen, the ECO (Mr Thomas Weber) and his Vice-Chair Mr Stephen Talbot (G) for their support.
4. He also thanked his WG FM administrative secretary Mr Ali Daheur (D) and his technical secretary Mr Silvio Schwarz (D) for their active assistance.
5. Finally he closed the meeting and wished all the delegates a safe journey home.

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