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| Working Group FM | | FM(17)067 | | |
| 87th Meeting | | | |  |
| Luxembourg City / Grand Duchy of Luxembourg  30 January – 03 February 2017 | | | |  |
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| **N**  Group membership required to read? (Y/N) | | | | |

**1. Opening of the Meeting**

1. The WG FM chairman, Mr Thomas Weilacher (D), opened the 87th meeting of WG FM and welcomed the participants.
2. Mr Luc Tapella, Director of the Luxembourgian National Regulatory Authority ILR (Institute Luxembourgeois De Régulation) welcomed the WG FM delegates to the Grand Duchy of Luxembourg.
3. After a brief presentation of the ILR he highlighted that one issue which is of particular interest of Luxembourg is 5G, especially the implication of satelliteand how satellite could be a part of a global communication infrastructure.
4. However, Mr Tapella highlighted that Luxembourg is not only focussing on satellite issues but also items related to other areas such as the mobile service, PPDR, SRD applications or monitoring of spectrum for different radio services.
5. In addition, Luxembourg does also appreciate the deliverables developed within this working group, which give guidance to administrations on various subjects.
6. Finally, he wished the chairman’s team a fruitful meeting as well as all the delegates good luck to achieve their goals and objectives.
7. The meeting was attended by 88 delegates from 31 CEPT administrations and 19 international organisations, 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)001R4. 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 43rd ECC meeting in November 2016 (doc. FM(17)007) and highlighted the most important aspects. The WG FM meeting took into account the relevant plenary decisions. Annexes 1 and 2 of doc. FM(17)007 were discussed with regard to the relevant agenda items.

***3.2 Report from WG SE***

1. The WG FM chairman referred to the draft meeting report of the 75th WG SE meeting in January 2017 (doc. FM(17)064). 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 meeting could refer to specific sections in the draft report if necessary. 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(17)037, the annual report of the project team. FM22 held two meetings in 2016, one in Hungary and one at ECO in Copenhagen. On 20 January 2017 a web-meeting was held to resolve the comments received during the public consultation of the draft ECC Recommendation (17)01.

**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. Recently ECO submitted the new questionnaire on interference statistics regarding the interference cases in 2016.
2. France proposed that FM22 should discuss the interference cases in more details, create a tool box and action plan to help administrations resolving the major issues. France is of the view that ECC should define regulation that is enforceable. In some cases, the recommendation to review the regulation could be envisaged to resolve interference cases if market enforcement is unable to do so. France emphasised the relevance of interference cases to meteorological radars caused by non-compliant use of 5 GHz RLANs but also current regulatory work on PMR446 and RLANs in vehicles at 25mW without DFS. France is also of the view that WG FM should retain the current format of the questionnaire in order to draw comparison with previous years.
3. WG FM concluded that the number of cases cannot explicitly be taken from the interference statistics. The meeting favoured to retain the structure of the questionnaire and to deal with the 5 GHz RLAN problem separately. Because FM22 is also responsible for enforcement, administrations were invited to provide relevant proposals directly to future FM22 meetings. See also agenda item 6.1 below.

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

1. The revision of ECC Recommendation (05)01 on “Harmonisation of automatic measuring methods and data transfer for frequency band registrations” aims at the inclusion of data collected during mobile measurements. The FM22 chairman noted this was a complex task and that the current draft revision requires further improvements.

**4.1.5 Revision of ERC/REC 54-01 (87.5 – 108 MHz)**

1. Mr Trautmann presented doc. FM(17)022, the draft revision of ECC Recommendation 54-01 “Method of measuring the maximum frequency deviation of FM broadcast emissions in the band 87.5 to 108 MHz at monitoring stations”.
2. The meeting finally approved the revised ECC Recommendation 54-01 for publication (**Annex 22**) and agreed to close work item FM22\_31.

**4.1.6 New ECC/REC/(17)01 on measurement uncertainty**

1. Mr Trautmann presented doc. FM(17)038, the draft new ECC Recommendation (17)01 on “Measurement uncertainty assessment for field measurements”.
2. The meeting finally approved the new ECC Recommendation (17)01 for publication (**Annex 23**) and agreed to close work item FM22\_22.

**4.1.7 Work related to ITU-R**

1. There is currently no work related to ITU-R. However, after the final approval of the revised ERC/REC 54-01 it is intended to draft an input document for the next ITU-R WP 1C meeting to improve the corresponding Recommendation ITU-R SM.1268.

**4.1.8 Physical Cell Identifier (PCI)**

1. Measurements 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. This effect needs further investigation.

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

1. Mr. Trautmann referred to the monitoring activities required from administrations to satisfy WRC Resolution 205 which calls for the organisation of monitoring programmes in the bands adjacent to the COSPAS/SARSAT band (406-406.1 MHz). Administrations are invited to monitor these bands referred to document FM22(16)42-Annex 8 and to report directly to the Radiocommunication Bureau of the ITU.
2. As there are no further activities of FM 22 required, the meeting agreed to close work item FM22\_30.

**4.1.10 Other Issues**

1. 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(17)033.
2. The FM44 chairman highlighted the following activities:
3. Assumption and methodology for the revision of ECC Report 66 concerning HIRF protection of aircraft from earth stations emissions (work item FM44\_27);
4. Fixed or 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) (Work Item FM44\_28);
5. Withdrawal of ERC Decision (98)15;
6. Satellite based animal tracking;
7. A proposal for a new work item on land-based in-motion earth stations working with GSO satellites in the Ku band.

**4.2.1.1 Draft ECC Decision (17)BB on withdrawal of ECTRA/DEC/(97)02 on S-PCS**

1. The public consultation for this draft ECC Decision ended on 20 December 2016 without comments.
2. WG FM adopted draft ECC Decision (17)02 for submission to the ECC for final approval for publication (**Annex 05**).

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

1. The public consultation for this amended ECC Decision ended on 4 January 2017 without comments.
2. WG FM adopted the amended draft ECC Decision (05)09 for submission to the ECC for final approval for publication (**Annex 06**). The implementation status of this ECC Decision should be maintained.

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

1. The public consultation for the amended ECC Decision (06)10 ended on 4 January 2017 with one comment from the Russian Federation. As the comment was received by ECO after the end of the public consultation phase, the WG FM meeting discussed this comment directly. The proposal from the Russian Federation was to withdraw this ECC Decision on the basis that the Russian Federation was of the view that the majority of CEPT administrations had already removed FS stations from the bands 1980-2010 MHz and 2170-2200 MHz.
2. The WG FM chairman recalled that the extent of usage of the bands by FS stations was not clear to ECC. Therefore ECC proposed to retain the ECC Decision in its revised form for the next few years and also to mention in the ECC/ERC/ECTRA review table a request to administrations to assess the real FS usage of the band before reviewing the document. He added that both the EFIS/MG and the ECO had been tasked at WGFM#86 to investigate the real extent of fixed service usage when revising the ECA Table and to subsequently give advice to WG FM, as to whether the secondary FS allocation for these bands is still valid for column 2 in the ECA Table (ERC Report 25).
3. WG FM adopted the amended draft ECC Decision (06)10 for submission to the ECC for final approval for publication (**Annex 07**). WG FM proposes to ECC that the implementation status of this ECC Decision should be reset.

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

1. The public consultation for the amended ECC Decision (11)01 ended on 4 January 2017 without comments.
2. WG FM adopted the amended draft ECC Decision (11)01 for submission to the ECC for final approval for publication (**Annex 08**). WG FM proposes to ECC that the implementation status of this ECC Decision should be maintained.

**4.2.1.5 Draft ECC Decision (17)CC on withdrawal of ERC/DEC/(98)15**

1. The FM44 chairman presented the draft ECC Decision (17)CC for the withdrawal of ERC/DEC/(98)15. This proposal to withdraw was on the basis that the only system covered by this ECC Decision was “Euteltracs”, previously operated by the Eutelsat company. “Euteltracs” ceased operation in August 2016.
2. The WG FM adopted the draft ECC Decision (17)CC for public consultation (**Annex 09**).

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

1. The project team chairman recalled that the work item FM44\_28 includes the preparation of two new separate ECC Decisions on both fixed and in-motion NGSO Ku band earth stations. SE40 and SE19 had worked on both issues and SE40 had sent two LS to FM44 explaining that only the compatibility studies for the fixed stations are finalised. SE40 concluded that compatibility between NGSO FSS earth stations at fixed locations and existing services is comparable to the situation already studied between GSO FSS earth stations at fixed locations and existing services. SE40 indicated also that the technical work for in-motion earth stations needed additional technical exchanges with SE19 and that the results would be provided at a future time. Therefore, FM44 will report at a subsequent WG FM meeting with respect to the work on in-motion earth stations.
2. The FM44 chairman also clarified that an ECC Report will be produced by WG SE, containing the technical results of the compatibility studies for both fixed and in-motion earth stations. In addition FM44 will produce an ECC Report on regulatory measures only for in-motion earth stations, because the regulatory framework for fixed NGSO earth stations is broadly similar to the existing framework already established for fixed GSO earth stations in the Ku band. This was backed up by the fact that studies in SE40 had reached similar conclusions when assessing the technical compatibility studies. Therefore an additional ECC Report from WG FM for fixed earth stations was not considered necessary.
3. The project team chairman reflected that the work on a new ECC Decision (17)DD for fixed earth stations in the Ku band working to NGSO platforms is largely finalised and presented this to the meeting as per document FM(17)033-Annex 2. He explained that the regulatory measures in the draft ECC Decision are predominately the same as for earth stations working to GSO platforms as contained in ECC Decisions (06)02, (06)03 and (03)04. The regulatory frameworks for these three ECC Decisions were based on the study material as undertaken by SE40. He added that the new draft ECC Decision had been finalised at the end of the last FM44 meeting but there was not sufficient time to discuss the maturity of the document in respect of WG FM assessing its stability for public consultation. Discussion had been held via correspondence with some administrations supporting it being sent to WG FM for public consultation consideration, others noting they would support it if no major issues were raised at WG FM level, one administration opposed WG FM approval for public consultation.
4. Italy informed the meeting that its administration would not implement this ECC Decision due to the number of existing fixed links deployed in the 14.25-14.50 GHz band in addition to the protection of RAS in the band 14.47-14.5GHz.

Statement from Italy:

*In Italy the 14.25-14.5 GHz band is heavily used for the fixed service. In this band there are more than one thousand fixed links operating all over the territory, used for the transmission of TV video signals. These links are expected to be used in the future, due to the intensive use of DTT. Therefore Italy will not be able to implement the new draft ECC/DEC(17)(DD) proposed by FM44.*

1. The project team chairman mentioned that according to the CEPT questionnaire on the use of fixed links in the Ku band and the LS from SE19 (doc. FM(17)018), it was recognised that only four administrations mentioned that they retained operational fixed links in 14.25-14.5 GHz band. The LS from SE19 did mention the proportionally higher number of fixed links in Italy, although this information did not appear in the responses to the CEPT FS questionnaire.
2. ECO informed the meeting that an SRdoc related to the same type of earth station was prepared in ETSI and questioned its status. Dr Azzareli (OneWeb) clarified that the document addressing fixed and in-motion NGSO earth stations had been submitted two weeks before this WG FM meeting and will be developed by ETSI TC SES.
3. Finland, Switzerland and the Russian Federation were of the view that the documents should only go for public consultation after SE19/S40 had completed their technical works. The FM44 project team chairman recalled that SE40 and SE19 had worked on fixed and in-motion NGSO earth stations and SE40 had sent an LS to FM44 explaining that the studies for NGSO earth stations at fixed locations had been finalised, however the specific technical studies for in-motion earth stations are still in progress. The UK administration stated that it could support this draft ECC Decision with some amendments, to explicitly take into account administrations that retained fixed links in the 14.25-14.5 GHz band.
4. The WG FM chairman explained that a drafting group during this meeting would not really be necessary if the decision to postpone the public consultation was made. Alternatively the proposal would be to task FM44 to continue the work and to send an LS to WG SE / SE40 requesting clarification on the technical studies status concerning fixed earth stations. The meeting agreed that the draft ECC Decision could be approved for public consultation, if there were no strong opposition from administrations.
5. Following drafting activities, WG FM considered the updated document. There was no objection from any administration and consequently the draft ECC Decision (17)DD was approved for public consultation (**Annex 26**).
6. Lithuania noted that its administration would be unable to implement this ECC Decision in the 14.25-14.5 GHz band, while fixed service stations are still operated in the territory of its neighbouring countries, due to cross-border coordination issues.

**4.2.3 Revision of ECC Report 66**

1. The project team chairman presented the comments from NATO concerning the assumptions to be used for the HIRF protection of military aircraft, when revising ECC Report 66. FM44 had prepared a consolidated document (doc. FM(17)033-Annex 1). A similar document dealing with assumptions confirmed by EASA had been presented at the last WG FM meeting. Both documents will be sent to SE40 as the new validated assumptions to be used in the revision of ECC Report 66.
2. The WG FM chairman presented an LS from WG SE clarifying that SE40, as the initial producer of the ECC Report 66, will be responsible for producing the revised Report. This would take into account FM44 inputs (see document FM(17)054). The project team chairman said FM44 would work on the method to assist administrations in use of the new ECC Report 66, once first technical results will be available. The meeting agreed that WG SE (SE40) is responsible for the revision of the ECC Report and WG FM / FM44 will provide assistance.

**4.2.4 Small transmitters for animal tracking**

1. The WG FM chairman presented the LS from WG SE related to the finalisation of ECC Report 257 (doc. FM(17)049).
2. The project team chairman said that DLR Germany had participated to the FM44 meeting of November 2016 and explained that the technical studies concluded on possible interference with meteorological equipment and the need to implement mitigation techniques. DLR considered that ECC Report 257 was a sufficient tool to reach agreements on a country by country basis and to obtain the licences. DLR, as the operator of the system, is fine with the work done by CEPT and will progress with administrations to consider national constraints.
3. On the basis of these details, it was felt no additional work at CEPT level was required. As a result this work item was closed.

**4.2.5 Other issues**

**New work item on land based in-motion earth stations, operating with Ku Band GSO FSS systems**

1. The project team chairman recalled that the current ECC regulatory framework for earth stations operating with Ku band GSO satellite covers earth stations at fixed locations, earth stations on board vessels and aircraft earth stations but not land-based earth stations in-motion.
2. FM44 had received a proposal from Intelsat to address vehicle mounted earth stations and earth stations on trains and prepared a draft new work item (see document FM(17)033-Annex 4). The FM44 chairman indicated that compatibility studies are likely to be necessary and therefore an LS to WG SE was proposed.
3. The Russian Federation was of the view that an ECC Report on linked regulatory measures had to be produced, before considering a new ECC Decision, in a similar manner as for NGSO land-based earth stations for work item FM44\_28.
4. The UK administration requested that technical work be completed before adopting a new ECC Decision.
5. The WG FM chairman proposed to task FM44 to check whether an ECC Report from WG FM was necessary following the finalisation of the ECC Report from WG SE. This was agreed by the meeting. The meeting also agreed to remove any reference to ITS in the work item.
6. As a result, a new Work Item (FM44\_31) for an ECC Decision regarding land-based in-motion earth stations operating with GSO FSS systems in the Ku band was supported by nine administrations (Germany, Switzerland, Croatia, France, Sweden, The Netherlands, Liechtenstein, Portugal, Austria) and was adopted (**Annex 10**).
7. The meeting approved the LS to WG SE requesting studies (**Annex 11**).
8. WG FM decided that FM44 will start the preparation of a draft ECC Decision and check the need for an ECC Report (WG FM) once results of SE40 compatibility studies are available and that SE40 may report on the results of the compatibility studies directly to FM44.

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

**4.3.1 Progress Report**

1. The chairman of FM51, Mr Lindsay Cornell (UK), presented the progress report of the 22nd meeting of the project team (doc. FM(17)061) which was held at ECO Copenhagen from 24 to 25 January 2017. The primary task of this meeting was to develop the draft LS from WG FM to WG SE concerning possible sharing in the band 960 to 1164 MHz.
2. FM51 had understood and begun work on the two new work items allocated to FM51 at the 86th WG FM meeting:  
   FM51\_09 - Best practices for Video PMSE in the 2.7-2.9 GHz band; and   
   FM51\_10 - Consideration of possible usage of low power audio PMSE in the band 960-1164 MHz.
3. Regarding work item FM51\_10, FM51 had developed a draft liaison statement, as requested in part one of the work item, to WG SE on the requirements for sharing and compatibility studies between low power audio PMSE and aeronautical services in the band 960 to 1164 MHz, along with brief supporting background information. The liaison statement identifies the objectives which would need to be addressed in possible studies.
4. FM51 had also begun work on the second part of work item FM51\_10 by developing a draft structure for a future report considering preliminary investigations on regulatory and legal issues concerning sharing of the band 960 to 1164 MHz.
5. FM51 had considered the outcome from the questionnaire on ERC Recommendation 25-10 and the way in which the collected national information, submitted through the questionnaire, should be reflected in the tables in Annexes 4 and 5 of ERC/REC 25-10. The proposal from the ECO to make a slight amendment to the presentation of the information was agreed by FM51 for endorsement by WG FM.
6. Regarding work item FM51\_09, FM51 had received input on developing a new ECC Report on best practice for the use of Video PMSE in the 2.7-2.9 GHz band, taking into account the existing ECC deliverables (CEPT Report 61, ECC Report 243 and ECC/REC/(02)09).
7. Regarding work item FM51\_05 (Response to ITU-R Res. 59), ITU-R WP 5C had reacted positively to the recent CEPT contribution containing the revised version of ERC/REC 25-10 in relation to ITU-R Resolution 59-1. FM51 also took note of the work plan for future WP 5C activities and will develop further contributions accordingly.
8. 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, FM51 is awaiting contributions to begin the work.
9. The chairman of FM51 also informed WG FM that the [PMSE topic page](http://www.cept.org/ecc/topics/programme-making-and-special-events-applications-pmse) on the ECC website had been updated.
10. The next meeting of FM51 will be held on 23 to 24 March 2017, at ECO, Copenhagen.

**4.3.2 Spectrum for PMSE**

**4.3.2.1 Audio PMSE**

1. The FM51 chairman introduced doc. FM(17)061-Annex 1, the draft liaison statement to WG SE regarding the requirements for sharing and compatibility studies between low power audio PMSE and aeronautical services in the band 960 to 1164 MHz, and FM(17)061-Annex 2, the supporting information. These contributions had been developed at the FM51 meeting in January 2017, which was attended by a wide range of stakeholders, in response to the request from WG FM. The draft liaison statement sets out the objectives for the studies, including development of sharing criteria for services in the band and with adjacent bands, potential impact of future aeronautical systems and increased use of existing aeronautical systems on the amount of spectrum able to be shared, and the effects of cumulative interference. The supporting information contains background information on low power audio PMSE and a preliminary list of aeronautical services using the band.
2. France introduced document FM(17)062 which set out their concerns with the work item and with the issues that should be addressed before WG FM asks WG SE to perform technical studies. France emphasised that there were many issues that are relevant to the technical studies, including future deployment, enforcement, environmental impact from rerouting (e.g. fuel use), illegal use of PMSE equipment, the need for safety certificates for equipment and operators and the EC objectives in the single European sky project. France also noted that in the past, studies had been performed to examine sharing scenarios for PMSE that had not finally been taken up by the PMSE industry and therefore the PMSE community must confirm their interest in the band. In addition, further consultation is needed with interested parties to ensure that all the necessary parameters are provided to WG SE. Especially, there is a need to communicate with ICAO, NATO and the PMSE community.
3. Eurocontrol introduced document FM(17)065, emphasising that the 960 to 1164 MHz band is allocated globally to ARNS, AM(R)S, and AMS(R)S Earth-to-space and that the introduction of PMSE into this band raises several legal, regulatory, liability and safety issues which must be addressed prior to launching any technical studies. Eurocontrol noted that the band is shared with military users which are subject to similar civil aviation safety constraints and that ICAO has a regulatory role for the use of the band and so it is desirable for WG FM to seek ICAO's opinion on sharing. Eurocontrol stated that there would be significant economic impact from sharing with PMSE because current equipment would need to be changed to accommodate new failure mechanisms, re-certification, revision of procedures, training, etc. Furthermore, the development of modernising the aeronautical systems would be frozen and the flexibility to improve the efficient use of the band would be constrained. The introduction of LDACS and other systems such as UAV/drones would be hampered. Eurocontrol was also concerned about equipment misuse - operators selecting the wrong channel, using excess power, etc. which would lead to capacity issues, accidents, etc.
4. Eurocontrol introduced document FM(17)066 which provides further information on performance and technical operations of aeronautical services in the 960 to 1164 MHz band and GNSS above, which provided different insights compared to the previously provided which due to slow roll receiver roll off needs to be considered in PMSE study. Eurocontrol stated that all sharing studies in the band are laid down by ICAO, including the need for theoretical, practical and flight testing, and that these procedures should be followed by WG SE when conducting its studies. Eurocontrol highlighted some important technical characteristics of aeronautical systems and stated that unlike for previous sharing states there is a lack of a definition for the modulations and parameters of PMSE applications that need to be studied. Without such definition, theoretical assumptions cannot be verified through the necessary practical tests.
5. The FM51 chairman informed WG FM that the issues raised by France and Eurocontrol had been raised also in the 22nd FM51 meeting and that the work item provided for preliminary studies only. Further, he said that the draft LS set out the objectives for theoretical studies only by WG SE and that no decision to share the band has been taken - gathering information and performing studies was the scope of the work item.
6. The WG FM chairman noted that the allocations to the 960 to 1164 MHz band are to aeronautical mobile (R) and aeronautical radionavigation services and that there is no allocation to the mobile service. Therefore the spectrum designation for low power audio PMSE would be that PMSE cannot cause interference nor claim any protection, and that this would be the same situation as in the 2700 to 2900 MHz band where video PMSE shares with radiolocation and aeronautical radionavigation services.
7. WG FM agreed that PMSE would have a lower regulatory status than all other radio applications / services which are currently in use in the range 960 - 1164 MHz within the scope of the aeronautical radio services.
8. The Netherlands stated that the ITU footnotes in the ECA Table must be observed and that footnote 5.328 means that other uses of the band are not permitted.
9. The WG FM chairman replied that the relevant footnotes apply to the stated allocation - in this case 5.328 applies to aeronautical radionavigation service and 5.327A applies to aeronautical mobile (R) service according to the ITU Radio Regulations. Furthermore, the Radio Regulations allow nations to designate the services that may be used, with Article 4.4 providing international protection because administrations may assign frequencies in derogation of the ITU Table of Frequency Allocations “on the express condition that harmful interference shall not be caused to services carried on by stations operating in accordance with the provisions of the Convention and of these Regulations.” He also referred to provision 4.10 of the ITU Radio Regulations.
10. The Russian Federation noted that Eurocontrol proposed to stop the work item, whilst France advocated a more cautious approach. However, the Russian Federation stated that the WI is approved and that work had begun and therefore a way forward was needed.
11. Switzerland stated that they shared the position of the Netherlands.
12. Austria stated that they felt that given the discussion at the last WG FM meeting, the input from Eurocontrol was a bit late. They also asked Eurocontrol when sharing studies will be available for LDACS and that they expected to see the effect on services in adjacent bands; in order to issue the necessary national licenses, they would need to have available the sharing studies. Finally, Austria asked that information on drones should be input to the related FM correspondence group.
13. Eurocontrol replied that they have only limited resources and so although the LDACS studies had started long ago, it was proving difficult to complete them due to ensuring safe operation of the system in the band. However, things were moving fast and so the study outcomes might come to CEPT in 2020.
14. The United Kingdom stated that it has concerns about international regulation as set out by France in document FM(17)062 which were not considered relevant.
15. Belgium stated that they support the position of France, but it would also be acceptable to stop all work.
16. Greece stated that they support the positions of Eurocontrol and France because they have serious concerns about using the band for PMSE.
17. Switzerland stated that the requirements which are listed in the documents of France and Eurocontrol are very significant for compatibility study, but it would be also acceptable to stop all activities on this issue.
18. Sweden stated that they believe that sharing with audio PMSE is possible even without an allocation. Furthermore, if the UK decides to use low power audio equipment in this band, equipment will become available and so all need to be better informed. However, Sweden stated that there was no rush and so the proposal from France to seek more information makes sense.
19. Italy, while reiterating its position made at WG FM#86, stated that the capacity for WG SE to perform studies should also be considered.
20. The Netherlands noted that the UK has referred to trials using the band already and wondered if the PMSE equipment is certified to aeronautical standards.
21. Germany stated that the last WG FM meeting had agreed to the work item with two parts, technical and regulatory, and that the work within WG FM and WG SE could proceed in parallel. Germany considered this to be the right way to proceed because with more information, WG FM could consider whether something is possible or not.
22. Finland stated that it shares the position of France that more progress is needed on regulatory and legal matters before technical studies should begin.
23. The United Kingdom stated that their position is that there are no insurmountable legal issues but that the concerns of others will be addressed as the work item progresses. The United Kingdom supports the position of Germany that technical studies should proceed.
24. The Russian Federation stated that it supports the positions of Belgium and Greece.
25. NATO stated that the military uses the band internationally and would contribute to ensure their aeronautical systems are protected.
26. Denmark stated that they support the position of Germany to begin technical studies.
27. APWPT stated that they support the parallel approach and that the PMSE community was well aware of the work item and would continue to contribute towards the work.
28. The WG FM chairman stated that for all work items where additional use is studied, the technical and regulatory issues are interrelated and that there are enormous benefits to a parallel approach where the WG SE and WG FM teams help each other understand the constraints better and develop the deliverables in cooperation.
29. The WG FM chairman asked France to clarify the approach if relevant stakeholders do not contribute as requested within a reasonable time frame.
30. France said that CEPT is contribution driven and as such if they did not contribute within a reasonable time period that they should understand that the work would proceed without their input.
31. The WG FM chairman said that he preferred a parallel approach but also recognised that there was limited support from the meeting. He therefore proposed that FM51 should work further on the regulatory and legal aspects and that the LS to WG SE should be sent from the following WG FM meeting in May 2017, at which time letters to invite input from stakeholders could be dispatched.
32. France proposed that since NATO and APWPT had already indicated their support, a letter to ICAO from this meeting would further highlight the issue thereby encouraging contributions. The letter was developed and, after careful discussion and amendments, was agreed as **Annex 25**.
33. WG FM finally approved the following course of action:
    1. WG FM send the agreed letter to ICAO (**Annex 25**), copied to others;
    2. FM51 to further develop the regulatory and legal aspects;
    3. FM51 may make improvements to the draft LS to WG SE;
    4. WG FM will forward the LS to WG SE following approval at the May WG FM meeting.

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

1. FM51 is awaiting contributions.

**4.3.2.3 Video PMSE**

1. See 4.3.2.4 below.

**4.3.2.4 Best practises for video PMSE in the 2.7-2.9 GHz band**

1. The FM51 chairman reported that a first contribution had been received and discussed. The structure and content of the report is not yet agreed.

**4.3.2.5 Responses to the questionnaire on PMSE (REC 25-10)**

1. The ECO informed WG FM that replies had been received from 27 administrations and that ECO was still collecting information and encouraged further contributions.
2. The ECO introduced document FM(17)043 and explained the tables in the annexes to ERC/REC 25-10. In transferring the information supplied by the responses to the questionnaire it had become clear that editorial amendments in the tables should be considered. The ECO also noted that they will check the consistency between information in ERC/REC 70-03-Annex 10 and ERC/REC 25-10 and will contact administrations if any issues are discovered.
3. WG FM endorsed the proposed editorial changes.

**4.3.3 Work related to ITU-R**

1. There was nothing to report in addition.

**4.3.4 Other issues**

1. No other issues were discussed.

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

**4.4.1 Progress Report**

1. The FM54 chairman, Mr Kuha Sithamparanathan (UK), presented the group’s progress report, covering the last two meetings held in Paris, FM54#12 (9-10 November 2016) and Budapest, FM54#13 (23-24 January 2017).
2. The progress report consists of a summary, doc. FM(17)059, and eight annexes as below:

* Annex 1: Draft ECC/REC/(05)08 after PC for submission to WG FM for final approval for publication;
* Annex 2: Draft ECC/REC/(05)08 PC, comment resolution table;
* Annex 3: Proposed revised ToR of FM54 for approval at WG FM;
* Annex 4: Proposal of the FM56 ToR for supporting the discussions at WG FM;
* Annex 5: Latest draft ECC Report on ‘Current Use, Future Opportunities and Guidance to Administrations for the 400MHz PMR/PAMR frequencies’;
* Annex 6: First draft new ECC Decision for land mobile systems in the frequency ranges 68-87.5 MHz, 146-174 MHz, 406.1-410 MHz, 410-430 MHz, 440-450 MHz, and 450-470 MHz and replacing ECC/DEC/(04)06 and ECC/DEC/(06)06;
* Annex 7: Minutes FM54#12 (FM54(16)67rev1);
* Annex 8rev1: Minutes FM54#13 (FM54(17)13).

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

1. Project Team FM 54 continued with the development of the draft new ECC Report on PMR/PAMR in the 400 MHz range and WG FM was requested to note this.
2. However, FM 54 awaits compatibility study results from WG SE / SE7, who in turn are having difficulty progressing this work, as contributions towards the studies had not been as forthcoming as hoped. The WG FM chairman made a request to all interested administrations and stakeholders to assist in providing contributions also to the work in SE7.
3. The structure and other sections of the draft ECC Report were being improved and developed by FM54 in parallel with inputs from administrations and industry members of the PT.
4. The following considerations were undertaken and continue to be discussed and reviewed to develop the draft ECC Report by FM54:

* UHF maritime on-board communications;
* Footnote 5.265 and Resolution 205 (no new PMR assignments in 406.1-406.2 MHz);
* PMR/PAMR network models;
* applications;
* definitions;
* PMR/PAMR frequency sharing;
* comparison and differences between PMR/PAMR and other ECS-bands.

1. The executive summary would be considered properly once the main body of the document was in a stable state. WG FM noted this progress.
2. The task to consider 5G compatibility in the 400 MHz range was felt to be unclear and difficult to address at this stage as 5G is not fully defined yet.
3. The WG FM meeting endorsed the way forward as described by the FM54 chairman.

**4.4.3 Frequency bands 410-430 MHz and 450-470 MHz**

1. With regard to ERC Recommendation T/R 25-08 there was nothing to report, noting further work requested from WG SE / SE7 with respect to BB-BB and BB-WB cross border coordination was still ongoing.
2. FM54 had agreed that a new ECC Decision for land mobile systems was the best way forward, replacing the current ECC Decisions (04)06 (wideband) and (06)06 (narrowband). The intention would be to have a single ECC Decision that took into account NB, BB, M2M, digital, analogue and other considerations in the 400 MHz bands as well as the related VHF PMR/PAMR bands.
3. WG FM endorsed the work in FM54 towards a new ECC Decision for land mobile systems in the frequency ranges 68-87.5 MHz, 146-174 MHz, 406.1-410 MHz, 410-430 MHz, 440-450 MHz, and 450-470 MHz and replacing ECC/DEC/(04)06 and ECC/DEC/(06)06, and will inform the ECC accordingly.
4. It was further reported that FM54 considers the existing ECC/DEC/(04)06 for wideband digital PMR/PAMR to be not technology-neutral and intends to solve this issue with the new ECC Decision.
5. France requested that the new ECC Decision should be flexible with regard to other channel bandwidths and should cover IOT and M2M in 410-430 MHz and 450-470 MHz. It was agreed that FM54 should take this point into account in their work. The ToR were amended accordingly.
6. It was also endorsed that the new ECC Decision should be ‘backwards compatible’ with regard to the two current ECC Decisions.
7. With respect to the task to review Recommendation T/R 32-02 (UHF frequencies on-board vessels), investigations revealed that ITU-R Radio Regulations’ footnote 5.287 and Recommendation ITU-R M. 1174-3 contained all the necessary information and therefore Recommendation T/R 32-02 could be withdrawn.
8. FM54 requested WG FM to consider this proposal for withdrawal and suggested that administrations should be given time until the May 2017 WG FM plenary to consider this proposal.
9. A point was made that the ECO and the MAR FG may consider updating their topic page on UHF on-board vessel use at the appropriate time when national implementations of the Recommendation ITU-R M.1174-3 and digital channelization options (6.25 kHz, 12.5 kHz and 25 kHz) will be more widespread.
10. WG FM endorsed this approach and proposal in principal with respect to Recommendation T/R 32-02. If no objections will be submitted until the next WG FM meeting in May 2017, the Recommendation T/R 32-02 will be withdrawn.

**4.4.4 Review of ECC Decisions (04)06 and (06)06**

1. See above under 4.4.3.

**4.4.5 Review of ERC Recommendation T/R 32-02**

1. See above under 4.4.3.

**4.4.6 Revision of ECC Recommendation (05)08 (900 MHz/1800 MHz)**

1. The results of the public consultation as well as the ECC PT1 position on the comment resolution proposals (documents FM54(17)06 and FM54(17)12) were finalised by FM54 and presented to WG FM.
2. The revised ECC Recommendation (05)08 was finally approved by WG FM (**Annex 13**).

**4.4.7 GSM-R**

1. The new SRdoc ETSI TR 103 333 was introduced by the ETSI representative under agenda item 6.3.
2. As agreed, this would trigger the formation of a new Project Team (FM56 - Radio spectrum for railway applications) that would consider the current GSM-R system and its successor system, referred to as the Future Rail Mobile Communication System (FRMCS).
3. FM54 presented the draft new FM 56 ToR for discussion at the plenary.
4. See section 4.4.10 below with regard the discussions and the agreed way forward.

**4.4.8 Work related to ITU-R**

1. WG FM had approved a contribution to the ITU-R (WP 5A) at its meeting in October 2016, related to Recommendation T/R 25-08, and provided information to the ITU-R Radiocommunication Bureau on railway issues (based on the analysis of the questionnaire). These two contributions were considered at the latest meeting of ITU-R WP 5A.

**4.4.9 Other issues**

1. As the topic on GSM-R, FRMCS and railway matters was now under the responsibility of FM56, FM54 also presented its draft new Terms of Reference for discussion and agreement by WG FM.
2. The amended ToR for FM54 were agreed as per **Annex 15**.

***4.4.10 New FM PT 56 (Radio spectrum for railway applications)***

1. At the its 86th meeting in October 2016, WG FM had considered to open a new Project Team for future railway mobile communications after the arrival of the ETSI system reference document on future GSM-R networks evolution (TR 103 333), expected in January/February 2017. Therefore CEPT administrations had already been invited in October 2016 to consider volunteering a chairman for the new Project Team.
2. Following the reception of the SRdoc on “GSM-R networks evolution”, ETSI TR 103 333, WG FM decided to establish Project Team FM56 – Radio Spectrum for Railway Applications (see also section 6.3 of these Minutes).
3. Mr Vincent Durepaire from the French administration (ANFR) was nominated during the WG FM meeting and was appointed as FM56 Chairman by acclamation. Thomas Weber is the ECO contact.
4. The Terms of Reference were discussed. The United Kingdom requested that they can be revised once the RSPG opinion on ITS is published. This comment was supported by the Netherlands.
5. Italy indicated its disagreement on the 2x7 MHz requested in the SRdoc to enable the transition from GSM-R to its successor, named FRMCS at this stage. The SRdoc does not make a clear enough argument about the spectrum amount justification and why spectrum should be harmonised for a temporary use. The document is also unclear on the need for harmonisation in respect of the technology envisaged.
6. Finland, Sweden and United Kingdom requested that synergies with commercial and other networks, such as BB-PPDR, be considered by FM56. The Terms of Reference were amended accordingly.
7. Then the ToR for FM56 were approved by WG FM (**Annex 14**).
8. The first FM56 work item was approved (see **Annex 27**). Sweden remarked that FM56 should assess the spectrum needs before identifying spectrum bands; in doing that compatibility with other services need to be studied. The WG FM chairman and the ECO replied that it was the common understanding that the current work item description is generic enough and in line e.g. with the first work item that had been defined at the establishment of FM49 on PPDR. The ECO added that the first FM56 meeting will be able to revise the work item description if desired.
9. The first meeting of FM56 is planned in Lille/France, on 27th and 28th March 2017, at EUAR’s meeting facilities.
10. PTD had sent an LS to WG FM related to the draft new ITU-R Report on technical and operational characteristics and spectrum needs of railway radiocommunication systems between train and trackside (RSTT). It invites CEPT administrations to provide more information on railway radio systems. This will be handled in FM56 and WG FM authorised FM56 to directly liaise with PTD for that purpose. Administrations were invited also to contribute directly to ITU-R WP 5A and to PTD.

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

1. WG FM, at its meeting in October 2016, had already discussed the possible closure of FM55. It was agreed that the final decision on the closure should be drawn at the following WG FM meeting, hence after the CEPT Report has been finally approved and submitted to the EC for discussion at the RSC meeting in December 2016.
2. Because no tasks are outstanding, WG FM agreed to close FM55.

***4.6 Short Range 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)031rev1. 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/(06)04 on UWB below 10.6 GHz**

1. A revision will become necessary in 2017/2018 due to three work items in process, for UWB based vehicular access systems, UWB medical applications and new UWB mitigation techniques. 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.

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

1. The guidance about PMR446 in the ECC#43 (November 2016) meeting report was noted.
2. Mr Weber reported that this was discussed in SRD/MG and several aspects were considered: ‘hands-free use cases’ are more important nowadays and some legislation forbids the handportable use in vehicles in road traffic. In addition, it is difficult to find a ‘demarcation line’ with regard to dimensions of PMR446 equipment – what is handportable and what is too big for being considered as handportable (note that the definition of handportability was from the beginning included in the PMR446 use description).
3. SRD/MG is of the opinion that the exclusion of fixed installed base stations and repeaters (‘parrot repeaters’) is more important, as it is clearly defined in the ECC Decision (15)05. In addition, the draft new specific harmonised standard EN 303 405 for PMR446 equipment was already including the same definitions as in ECC/DEC/(15)05 and a statement that ‘Those controls, which if maladjusted, might increase the interfering potentialities of the equipment should not be accessible for adjustment by the user.’, which should actually avoid that PMR446 equipment with > 500 mW e.r.p. will be operated. The 500 mW e.r.p. limit was considered to be much more important than the ‘handportable’ aspect.
4. It should be made clear that only the intended, dedicated antennas are to be used with PMR446 products.
5. Portugal volunteered to lead the discussions in SRD/MG and will draft a proposal until the next SRD/MG meeting in April 2017. The SRD/MG guidance is also that an amendment could possibly be found by restricting any changes to the Annex 1 (definitions) of the ECC Decision (no other parts or frequency utilisation aspects need change). In addition, the outcome of the ETSI approval process for the PMR446 specific HEN 303 405 should be awaited. For definitions about dedicated antenna use, ETSI TEDDI (TErms and Definitions Database Interactive) may be a good source.

**4.6.2.3 ECC/DEC/(08)01 on ITS**

1. Mr Weber reported that after consideration of the available background material (ETSI SRdoc, ETSI TS, SRD/MG early analysis, WG SE LS to 3GPP, other related documentation), SRD/MG discussed Urban Rail Systems during a web-meeting on 5 January 2017 and also at the ordinary SRD/MG meeting.
2. SRD/MG agreed on a work plan for the revision of ECC Decision (08)01 which also includes the creation of an ECC Report in parallel.
3. This plan is reflected in the proposed liaison statement to ETSI which was, after modifications, approved by WG FM as in **Annex 36**.
4. The work will progress in SRD/MG by means of dedicated web-meetings and as far as necessary also by means of extra-ordinary physical meetings focussing on ITS/Urban Rail.

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

1. WG FM noted the input document from ETSI in doc. FM(17)002 which was also considered in SRD/MG before.
2. Document FM(17)002 contains a liaison statement from ETSI asking the WG FM view on how acknowledge signals (e.g. ACK/NACK) should be treated in EN 300 220-1. Such signals are part of modern communications protocols and are assumed to lead to improved spectrum usage efficiency but the current spectrum regulation does not contain provisions for these other than e.g. LBT and AFA.
3. It was argued whether the spectrum regulation should address these issues and should contain this level of details. As all stakeholders including administrations are present in ETSI, it was agreed that it should be left to ETSI to find agreements on the technical requirements for inclusion into the Harmonised Standard in order to allow the manufacturer to declare compliance with the spectrum regulation and with article 3.2 of the RE-D in general.

**4.6.3.1 New informative Annex 13 of ERC/REC 70-03**

1. WG FM noted the results of the public consultation and approved the new informative Annex 13 of ERC/REC 70-03 for publication, as in **Annex 31.** Itcovers terrestrial applications operating under general authorisation regime which are not covered by Annexes 1 to 12 of ERC/REC 70-03, and for which an ERC/ECC Decision exists. In relation the deletion of the entry g) for 77‑81 GHz in Annex 5 of Rec. 70-03 was approved since this entry is now included in Annex 13.

**4.6.3.2 Annex 5 of ERC/REC 70-03 (77-81 GHz)**

1. See above under 4.6.3.1.

**4.6.3.3 Annex 10 of ERC/REC 70-03 (1518-1525 MHz)**

1. WG FM approved the draft Annex 10 of ERC Recommendation 70-03 for public consultation (**Annex 32**). Annex 10 includes a new entry for radio microphone use in the band 1518‑1525 MHz. This was welcomed by APWPT at the meeting. Also the European Commission appreciated the inclusion of the band 1518-1525 MHz in Annex 10.
2. The proposed revision includes a new entry for the band 1518-1525 MHz as previously already agreed by WG FM. The parameters are the same as for the band 1492-1518 MHz. It was noted that the related ECC Report 253 had assumed indoor usage for radio microphones with regard to the compatibility with the MSS (clearly stated in the executive summary of the report).
3. At the same time, it was also noted that the United Kingdom has experience with licensed audio links with much higher power in the band and without indoor restriction, and no interference was ever reported (most likely due to the very low MSS usage in the band up to 1525 MHz).
4. Switzerland informed that it would not stop the public consultation of this draft Annex, but also it will be not able to implement this part of the Annex because this band is heavily used for FS.
5. Following the discussions about Narrowband Networked SRDs (NBN SRD) use on the 915‑921 MHz RFID interrogator channels and the proposals in the draft Addendum to CEPT Report 59, also with regard to ‘streamlining the demand’, and because ALD demand in 915‑921 MHz has not materialised or is unlikely to materialise in the future, SRD/MG proposed to delete the entries h1 to h2 from Annex 10 in Rec. 70-03. This was accepted by WG FM.
6. WG FM agreed on amendments in the draft Annex 10 with regard to the wording for the low power short range FM transmitters.

**4.6.3.4 Annex 9 of ERC/REC 70-03**

1. WG FM approved amendments of Annex 9 of ERC Recommendation 70-03 for public consultation. Annex 9 includes amendments for the scope and 13.56 MHz entries (for inductive SRD, RFID including NFC applications) as in **Annex 33**.
2. The revision addresses several aspects: the entries for the 13.56 MHz transmission masks are aligned with the EC Decision on SRDs (change proposals due to the 6th update are considered now as stable). The same category and reference to the harmonised standard with the transmission mask requirements and possibility to use a ‘combined mask’ is provided. The scope for related RFID applications (including NFC and EAS) was also reconsidered and in consequence, a flaw was removed with regard to the application of the masks (applies to all applications using the inband field strength).
3. A relaxation in Table 9bis was proposed to be considered, based on the fact that the Russian Federation allows higher field strength in their jurisdiction at 66.6 kHz, but not agreed as indicated by the Russian Federation at the meeting.
4. The result of the considerations was also checked with the ETSI LS in document FM(17)012 and found in line with the items mentioned by ETSI. Note that EN 300 330 is indicated for all sub-bands in Annex 9 of ERC Recommendation 70-03.

**4.6.3.5 RLAN at 5 GHz operated in vehicles**

1. Based on the proposal from SRD/MG, WG FM made some further amendments and approved a revision of the explanatory paper related to RLAN equipment using the 5 GHz bands in vehicles (planes, cars, trains), including the usage under the non-specific SRD regulation for publication, see **Annex 37**. The explanatory paper is referenced in the ERC/REC 70-03.

**4.6.3.6 Main text of ERC/REC 70-03**

1. WG FM approved amendments of the main text of ERC Recommendation 70-03 for public consultation (**Annex 30**). The main text of the Recommendation include necessary updates to reflect the RE Directive and also clarify the situation with regard to equipment subclasses for harmonised use without restriction, harmonised use with restrictions, and non-harmonised use of SRDs.

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

1. Mr Weber explained that a discussion had taken place in SRD/MG with regard to the next guidance letter and its timing for the 7th update of the EC Decision for SRDs under the permanent Mandate. It is expected that such a guidance letter is received in spring/summer 2017 and that the workplan for providing the CEPT Report for the 7th update will be shorter than for the 6th update (no WRC in this period) and will last about one year. If the Implementing Decision following CEPT Report 59 is only approved after the summer 2017, the guidance letter will be expected to come later in autumn.

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

1. The results of the public consultation were presented by Mr Weber (ECO). SRD/MG worked through all comments and a comment resolution table with the outcome is accompanying the draft Addendum. The process and results in WG SE / SE24 set out in ECC Reports 246 and 261 as well as on NBN SRD in the band 915-921 MHz were also followed and taken into account.
2. Mr Weber explained that comments received from Sweden and Portugal were agreed to be highlighted in the reporting from SRD/MG to WG FM. These comments concern the setting out of the frequency opportunities in the executive summary (currently the complete frequency ranges indicated in line with the results of the compatibility studies) and in the Annex 3 of the draft Addendum (preferred frequency ranges indicated with footnotes explaining the flexible concept and the whole possible range for the concerned entries). This matter was already discussed before. As such, the comments were not new. SRD/MG preferred to highlight these discussions to the WG FM level, rather than making a change in the draft Addendum. Other administrations in SRD/MG were in favour of keeping the entries as they were in the draft Addendum.
3. Sweden reminded WG FM that the frequency bands in the Addendum to CEPT Report 59 were not originally covered in the CEPT response to the Mandate on SRD, from their point of view due to divergent positions concerning possibilities for harmonisation in Europe. Given the outcome presented in the Addendum, Sweden foresees a soft harmonising EU Decision with limited value in comparison to ERC/REC 70-03 and a risk to degrade the value of EU Implementing Decisions in general.
4. Portugal indicated in doc. FM(17)045 again their proposal for change in Annex 3 with the wider frequency ranges directly in the table instead of the footnotes. Portugal is of the view that WG FM should discuss and take a position on the question whether a separate EC Decision for the new bands 870-876 MHz and 915-921 MHz is necessary.
5. In document FM(17)063, France was of the view to keep the wider frequency ranges in the executive summary and the preferred ones in the table. For wideband data transmission devices in the 915-921 MHz range, France also proposed the removal of footnote “x6” and the extension of the preferred frequency range by 200 kHz down to 917.8 MHz. The other entries would remain unchanged.
6. Because the proposals from France and Portugal with regard the setting out of the preferred frequency ranges were going in opposite directions, these proposals were not further discussed at WG FM, as proposed by the WG FM chairman.
7. In addition, discussing the possibility of taking a position as requested by Portugal, which could be outlined in a draft cover letter, different views were expressed and WG FM did not reach any common conclusions and decided not to draft a cover letter.

Statement from Portugal:

*Portugal wishes to highlight that the preferred solution presented in the draft Addendum can currently not be implemented by several countries, including Portugal.*

*Concerning the second point raised in the contribution from Portugal (on whether the EC Decision on SRDs should, as a consequence of the Addendum, be amended during the regular update), few views, in support and in opposition, balanced, were expressed in WG FM#87. Therefore, Portugal further encourages EU CEPT Administrations to take a position, given the fact that the harmonisation proposed therein is far from being supported by the vast majority and consequently its implementation at EU level could be undermined.*

1. Finland requested to add the transmission mask Option 1 requirement value figure in the spurious domain (-54 dBm/100 kHz) everywhere in the main texts of the draft Addendum and this was agreed. This is also added in the executive summary and the conclusions section. The application harmonised standards are expected to include this requirement as set out in the liaison statement to ETSI.
2. A drafting group chaired by Mr Weber made some additional changes and clarifications in the draft Addendum. A paragraph was also added in the liaison statement to ETSI about the needs for the spectrum access protocol for wideband data transmission devices in data networks in relation to a listen-before transmit functionality to detect audio applications and ALD in the band 863-865 MHz.
3. 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 approved for submission to the ECC for final approval for publication and sending to the EC (see **Annex 19**). The draft Addendum is also accompanied by the comments resolution table which was updated at WG FM to provide an overview to ECC about the comments’ handling in SRD/MG and WG FM (see **Annex 20**).
4. In relation, WG FM agreed to send the liaison statement to ETSI regarding the associated standardisation activities which are needed (see **Annex 21**). The content of the liaison statement is based on the results in the published ECC Reports 246 and 261 and will also be needed in relation to the entries foreseen in ERC/REC 70-03, i.e. independent from the results of the discussions in the ECC when approving the Addendum in March 2017.
5. WG FM agreed a liaison statement to WG SE to request additional investigations on the possible use of narrowband networked SRDs (NBN SRD) in the lower channel close to 915 MHz and used by UHF RFID (see **Annex 29**).
6. SRD/MG had started working on new entries in ERC Recommendation 70-03 in the Annexes 1, 2 and 3, taking into account the draft Addendum to CEPT Report 59, ECC Report 261 and ECC Report 246.

Statement from Sweden:

*Sweden is of the opinion that Annex 3 in the draft Addendum to the CEPT Report 59 does not accurately reflect the outcome of the technical studies performed by WG SE with respect to the fundamental aspect of deployment scenario, i.e. indoor or outdoor use (ECC Report 200, ECC Report 246 and ECC Report 261). One possibility to address this could be to include category specific text in the column “Other usage restrictions”, capturing the fact that the terminals are mainly to be used indoor. If a high level of outdoor use is expected, additional technical studies have to be performed to support that.*

Statement from Italy:

*Mr. Tosato (Italy) made clear that the performed WG SE studies for wide band networked SRD, most notably ECC Rep. 261, were properly done on the basis of the “indoor scenario” simply because WG SE (SE24) agreed on this assumption as result of data provided by ETSI SRdoc and two (2014) official questionnaire investigations, which resulted by confidence that the indoor usage is the utmost likely predominant scenario.*

*Therefore similarly to other cases (not only for SRDs) the ECC conducts its studies on the most likely scenario’s assumption basis.*

*For example also the density units/km² is a key typical scenario’s assumption but it is not implemented then as regulatory restriction. All of these types of “reasonably expected deployment assumptions” are therefore remaining as agreed assumptions since they are not legally enforceable, especially for license free SRDs.*

*Therefore many years ago it was made clear, even by ECC WG RR, to not propose regulatory provisions or restrictions which cannot be enforceable.*

**4.6.4.2 Smart tachograph**

1. Based on the documentation in FM(15)174-Annexes 2 and 3, the report of the 40th ECC meeting (July 2015), information about the applicable EU Regulation and the proposal from SRD/MG to send a liaison statement to WG SE, WG FM discussed how to proceed with the activities on smart tachograph. This will be an issue for the 7th update of the EC Decision on SRDs. It was already indicated in CEPT Report 59 that smart tachograph, weight and dimension applications in the 5.8 GHz band should be studied during the 7th update cycle for the EC Decision on SRDs. The aim is to add provisions for these applications to the Annex of the EC Decision, which currently restricts the TTT in 5795-5815 MHz to road tolling systems.
2. WG FM agreed to request WG SE to open a new work item for conducting the necessary studies (see **Annex 35**). The published EU regulation includes information about the ‘communication profiles’ for roadside inspections in Appendix 14 of Commission Implementing Regulation (EU) 2016/799.
3. WG FM was also informed by the Car-2-Car consortium that activities within ETSI towards the provision of an SRdoc in support of the studies in WG SE have been started. The scenarios and technical parameters may further be defined in detail during the ongoing process in SRD/MG and SE24.

**4.6.5 ITU-R contributions**

1. The information about related ITU activities in relation to work in SRD/MG was noted (see chapter 6 in doc. SRDMG(17)032rev1).

**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. See under agenda item 4.6.4.2.
2. 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).

**4.6.10 Radio microphone applications**

1. See under agenda item 4.6.3.3.

**4.6.11 ULP wireless medical capsule endoscopy**

1. WG FM noted that WG SE had adopted a new work item for studies in SE24. SRD/MG will wait for the results.

**4.6.12 ALD/TRS further harmonisation possibilities**

1. WG FM agreed on a liaison statement to WG SE with regard to the ongoing sharing studies between Telecoil Replacement Systems (TRS) and MSS in the frequency range 1656.5-1660.5 MHz (see **Annex 34**).
2. Not all the characteristics of the TRS system have been defined yet, therefore, the outputs of the compatibility studies will be used in order to define some of the characteristics. WG FM is of the view that the study is most useful when defining the operational requirements for TRS to be able to share with the MSS without causing harmful interference.

**4.6.13 SRDs operated below 9 kHz**

1. Document FM(17)003 is a liaison statement from ETSI containing an update on activities within ETSI on radio devices operating below 9 kHz and which are now covered by the RE-D. This update includes information regarding EN 303 660 (generic SRD standard), EN 303 447 (inductive mowers), EN 303 454 (metal and object detection sensors) and EN 301 348 (inductive loop systems for hearing impaired). The liaison statement also informs that the work on the SRdoc on SRD applications below 9 kHz was put on hold.
2. For draft harmonised standards for applications with wanted emissions below 9 kHz, SRD/MG had agreed to wait and see which harmonised standards will be published in the Official Journal of the European Union (OJEU) before any considerations in SRD/MG will then take place.

**4.6.14 Wireless Power Transmission (WPT)**

1. SRD/MG is waiting for the results in WG SE concerning the possible relaxation of limits in 79‑90 kHz in ERC/REC 70-03, Annex 9. In addition, concerns had been expressed by participants about CISPR activities (see section 21 of the SRD/MG minutes in SRDMG(17)032rev1) with an overview figure of which limits CISPR is specifying and which are over greater frequency ranges exceeding the limits in ERC/REC 70-03-Annex 9.

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

1. The ECC Minutes of the 43rd meeting (November 2016) concerning 57-66 GHz were noted. The aim is to find a better harmonisation approach for all applications under general authorisation regime.
2. WG FM agreed that SRD/MG should work on a better harmonisation approach with less restrictive regulations for all applications under general authorisation regime to be included within the ERC Recommendation 70-03 for the frequency range 57-66 GHz. SRD/MG is requested to provide a detailed analysis. The SRD/MG chairman will invite SE19 to collaborate.
3. The analysis will include considerations about the precise regulatory solutions under general authorisations outside of Europe, how a modified channelization arrangement for WiGig could take better into account ITS in 63-64 GHz, whether partition of the spectrum between a FS approach in 57-59 GHz and a better harmonisation approach in ERC Recommendation 70-03 for the spectrum above 59 GHz under general authorisation is feasible, and will address the technical questions raised in the LS from WG SE / SE19.
4. SRD/MG plans a web-meeting in February 2017 to kick-off this analysis.

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

1. In light of the results in ECC Report 262 on studies related to surveillance radar equipment operating in the 76 to 77 GHz range for fixed transport infrastructure, SRD/MG had a first discussion about how the technical details could possibly be reflected in the regulatory approach.
2. This early discussion led to the opinion that detailed technical parameters (e.g. radar dwell times and duty cycles) maybe best reflected in the harmonised standard (EN 301 091-3 for fixed radars), and that both ERC Recommendation 70-03 (an additional paragraph under frequency issues) and the EC Decision for SRDs (referring to the harmonised standard under RE-D or equivalent, possible proposal in the 7th update) refer to the harmonised standard.
3. In relation to ERC Recommendation 70-03, a solution in any revised HEN needs a reference in the Recommendation. On the other hand, inclusion of the parameters in the standard has the benefit that the parameters will only apply to new products (no issue with ‘grandfathering’ older fixed radars).
4. SRD/MG will continue the discussions at its next meeting.

**4.6.17 RFIDs**

1. See section 4.6.4.1.

**4.6.18 Other issues**

1. SRD/MG also contributed to the FM CG on M2M via Satellite and the results of the discussions are in chapter 10 of the SRD/MG minutes in doc. SRDMG(17)032rev1. This was subsequently discussed in the FM CG.
2. SRD/MG discussed information from the USA about a process to open 95-475 GHz to commercial use. SRD/MG considered that it may be the right time to introduce proposals for use at these frequencies. The activities in SE19 for fixed service applications were noted. In addition, a considerable part of the spectrum above 100 GHz shows entries for passive services. From the SRD side, a potential demand is seen for sensor applications, also within the automotive field. There is no military radar use above 100 GHz according to ECA Table. In addition, the allocation status is identical for all three ITU-R regions.
3. SRD/MG suggested to WG FM that it would be preferential that all demand (in this case: fixed service and SRD or under the existing radiolocation service allocations) be considered at the same time. A better coordination between WG FM and WG SE is needed in this regard. WG FM agreed to take this action on board (see also section 5.5 below).
4. It was further noted that ETSI may support the action with an SRdoc (UWB >120 GHz).

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

**4.7.1 Progress report**

1. The progress report of ECC PT1, containing an overview of the ECC PT1 activities on issues relevant to WG FM, was made available to WG FM (document FM(17)041).

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

1. The list of ECC Decisions and Recommendations reviewed by ECC PT1 was issued as Annex 3 to document FM(17)041, see agenda item 5.3 below.

**4.7.2.1 Review of ECC Recommendation (05)08 (900 MHz / 1800 MHz)**

1. See agenda item 4.4.6 (FM54).

**4.7.2.2 Review of ECC Recommendation (11)04 (800 MHz)**

1. The WG FM chairman introduced Annex 1 to document FM(17)041, the draft revised ECC Recommendation (11)04 on “Cross-border Coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency band 790-862 MHz”, after public consultation and further consideration by ECC PT1.
2. As no additional comments were provided in WG FM, the group finally approved the revised ECC Recommendation (11)04 for publication (**Annex 16**).

**4.7.2.3 Review of ECC Recommendation (11)05 (2.6 GHz)**

1. The WG FM chairman introduced Annex 2 to document FM(17)041, the draft revised ECC Recommendation (11)05 on “Cross-border Coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency band 2500-2690 MHz”, after public consultation and further consideration by ECC PT1.
2. No additional comments were provided in WG FM, therefore the group finally approved the revised ECC Recommendation (11)05 for publication (**Annex 17**).

**4.7.2.4 Review of ECC Recommendation (08)02 (900 MHz, 1800 MHz, GSM, UMTS)**

1. WG FM noted that ECC Recommendation (08)02 on “Frequency planning and frequency coordination for GSM / UMTS / LTE / WiMAX Land Mobile systems operating within the 900 and 1800 MHz bands”, as well as ECC Decision (06)01 onthe *“*Harmonised utilisation of the bands1920-1980 MHz and 2110-2170 MHz for mobile/fixed communications networks (MFCN) including terrestrial IMT”, are due for review in 2017.

**4.7.3 Other issues**

1. There were no other issues.

***4.8 EFIS Maintenance Group***

**4.8.1 Progress Report**

1. The chairman of the EFIS/MG, Mr Stefan Mayer-Bidmon (D), presented document FM(17)040, the progress report.
2. No physical meeting had taken place since the last meeting of WG FM.
3. Some work via correspondence on received RIS templates had been done.

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

1. No action at this meeting.

**4.8.3 Update of the ECA Table**

1. A revision of ERC Report 25 (ECA Table) with proposed changes and proposals for decision finding will be provided to WG FM in May 2017.
2. The aim is to have a document for public consultation after the WG FM meeting in May 2017.
3. EFIS/MG and ECO had been tasked to take into account by EFIS/MG when revising the ECA Table:

* to discuss the terms of footnote ECA3 (Status of clearing the band 47-68 MHz of assignments to the broadcasting service);
* to review section 5 (military applications) of ERC Report 25 (see also minutes of the ECC#42 meeting in June 2016, doc. FM(16)173);
* to discuss footnote ECA36 with regard to the reference to the NATO Joint Civil/Military Frequency Agreement (NJFA);
* to consider the public available NJFA in the revision of ERC Report 25;
* to consider the application terminology for unmanned aircrafts in ECC/DEC/(01)03 (Annex 2);
* to consider the proposal from IARU-R1 for the amateur service in the band 1850-2000 kHz (document FM(17)11);
* to investigate the real extent of fixed service usage in the frequency bands 1980-2010 MHz and 2170-2200 MHz 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 (see also section 4.2.1.3 above).

1. All administrations were invited to respond to EFIS/MG with regard to the working document to ERC Report 25 on the proposed merging, keeping or splitting of frequency sub-bands. A working draft with a proposal for splitting of frequency-bands had been distributed via the EFIS/MG email-reflector on 9 December 2016. 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.

**4.8.4 RIS Models**

1. The RE-D (2014/53/EU) replaces the Radio & Telecommunication Terminal Equipment Directive (R&TTE Directive), repealed with effect from 13 June 2016. The RE-D can be applied from 13 June 2016 and within a transition period of one year. The R&TTE Directive can still be applied until June 2017.
2. In the Radio Equipment Directive (RE-D) the subclasses of Class 2 developed under R&TTE that corresponded to radio equipment using harmonised frequency bands and for which, in consequence notification in accordance with Article 6(4) of the R&TTE Directive was not necessary, do not exist anymore.
3. Class 1: radio equipment that can be operated without any restriction in EU, EEA and EFTA. According to Article 8(1)b of the RE-D, it is clarified that no national radio interfaces specifications are required to be notified under RE-D.
4. Class 2: radio equipment is subject to restrictions in one or more EU, EEA and EFTA countries.
5. To cover the gap of information relating to Class 2 radio equipment, the Radio Interface Specifications Templates can be used to provided information in the EFIS database for applications which use is in harmonised radio spectrum, however with restrictions.
6. EFIS/MG had considered by correspondence six RIS Templates from SRD/MG for:

* Radio LANs (5.15-5.35 GHz, restricted to indoor use);
* UWB applications (1.6-10.6 GHz, fixed outdoor location or connected to a fixed outdoor antenna or in vehicles are excluded);
* Wideband data transmission systems (57-66 GHz, fixed outdoor installations are excluded);
* Active medical implants (12.5-20.0 MHz, restricted to indoor use);
* Transport and traffic telematics (TTT) (5795-5815 MHz, applies only to road tolling applications);
* Active medical implants (2483.5-2500 MHz, LP-AMI, this set of usage conditions is applicable to peripheral master units, peripheral master units are for indoor use only).

1. In the correspondence process some main verifications and comments to the RIS templates had been made, so the chairmen of SRD/MG and EFIS/MG had exchanged their views on the issue and agreed that the proposed changes made by EFIS/MG should also be agreed by SRD/MG.
2. These RIS templates were approved by WG FM for publication in EFIS (**Annex 24**).

**4.8.5 EFIS software developments**

1. No action at this meeting.

**4.8.6 ECO Report 05**

1. No action at this meeting.

**4.8.7 ECC Report 180**

1. No action at this meeting.

**4.8.8 Action Points for the administrations**

1. No action at this meeting.

**4.8.9 Other issues**

1. It is planned to organise an ECO workshop on EFIS on 19 September 2017 in the premises of the Federal Network Agency (BNetzA) in Mainz, Germany (see also section 9.1 of this report for more information about the plans for this ECO workshop about EFIS).
2. It is to note that an article in the following ECC Newsletter about the EFIS workshop should be published.
3. WG FM agreed to the proposed intention to organise such an ECO workshop on EFIS.

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

**4.9.1 Progress report**

1. On behalf of the MAR FG chairman, Mr Jaap Steenge (HOL), Mr Daniel Bielefeld (D) introduced document FM(17)036, the progress report. The MAR FG held one web meeting on 20th of January 2017. Major topic of this meeting was the discussion of the group’s work programme (see 4.9.2, 4.9.3, and 4.9.4.2). WG FM also noted the discussions within the MAR FG with regard toAIS-SART beacons.

**4.9.2 Revision and modernisation of GMDSS**

1. Based on considerations in the web meeting the MAR FG proposed to close the work item on the revision and modernisation of GMDSS (WI-MFG\_04), as this topic is under discussion under WRC-19 AI 1.8 and therefore out of the responsibility of the group. WG FM agreed to close the work item.

**4.9.3 Personal maritime radio equipment**

1. Based on considerations in the web meeting, the MAR FG proposed also to close the work item on personal maritime radio equipment (WI-MFG\_06), as this topic is under discussion under WRC-19 AI 1.9.1 and is therefore also out of the responsibility of the group. WG FM agreed to close the work item.

**4.9.4 Other issues**

**4.9.4.1 Responses to the questionnaire on treatment of foreign maritime radio operator’s certificates**

1. Mr. Thomas Weber (ECO) introduced the results of the questionnaire on treatment of foreign maritime radio operator’s certificates FM(17)023R1.
2. Mr. Daniel Bielefeld (D) introduced doc. FM(17)046 from Germany stating concerns of a plain publishing of the answers to the questionnaire as this could lead to wrong understanding. It was proposed to task the MAR FG to consider the responses to the questionnaire and the way on how to reflect the information on the ECC website and to report to WG FM before the answers are published. WG FM agreed to this proposal.

**4.9.4.2 Work programme for the MAR FG**

1. Based on considerations in the web meeting, the MAR FG proposed two new work items covering topics resulting from modifications to Appendix 18 of the Radio Regulations at WRC‑15 which are explained in doc. FM(17)030.
2. The first newly proposed work item intends to develop an ECC deliverable (ECC Recommendation or ECC Decision) proposing to not put into practice certain dates of implementation for VDES given in Appendix 18 of the RR as further modifications at WRC-19 as well as modifications of regulations of IMO are expected. This new work item was supported by the administrations of France, Finland, Estonia, Denmark, Belgium, Germany, Norway, Malta, the Netherlands, Italy, Switzerland, and Portugal.
3. The second newly proposed work item intends to develop an ECC deliverable (ECC Recommendation or ECC Decision) which clearly stipulates how the VDES terrestrial component will be used in CEPT in particular with regard to the introduction of a regional system that has been introduced by WRC-15 and is supported by some Asian and African countries. This new work item was supported by the administrations of France, Finland, Estonia, Denmark, Belgium, Germany, Norway, Malta, the Netherlands, Italy, Switzerland, and Portugal.
4. In doc. FM(17)030 the MAR FG also requested to have one physical meeting in 2017 to carry out the tasks of the newly established work items. This was approved by WG FM.

***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(17)04, the report with information about the activities of the ECO since the last WG FM meeting.
2. ECO plans to update the radio amateur topic webpage including the document with answers for frequently asked questions. IARU-R1 expressed support for this action. WG FM endorsed this plan.

**4.10.2 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.

**4.10.3 Other issues**

1. There were no other issues.

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

***5.1 Civil-Military meeting***

1. The WG FM chairman provided an oral overview of the civil-military meeting (23-24 November 2016 in Prague) and the results based on the presentation which was produced as the “outcome document” (doc. FM(17)005-Annex 05).
2. During this presentation NATO provided a statement on the current status of the “public” NJFA and EUAR specified a fact presented during the Civ/Mil meeting regarding the Finnish situation on railway communication development (based on TETRA).
3. The WG FM chairman also noted that the working methods for the Civ/Mil meeting (last revision 2010, see FM(17)005-Annex 4) will need to be reviewed with a possible revision as appropriate.

***5.2 Update on PPDR***

1. The WG FM chairman referred to the outcome of the ETSI/ECC PPDR workshop in September 2016 (doc. FM(16)181). The information and conclusions from this workshop will still be relevant for future considerations on PPDR. However, all deliverables regarding BB-PPDR have already been finally approved. Therefore no specific work items are currently active on BB-PPDR.
2. The WG FM chairman encouraged the CEPT administrations to provide information on national BB-PPDR solutions, in addition to those already provided during the workshop. The Netherlands informed the meeting that a hybrid solution is under consideration.

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

1. The WG FM chairman informed the meeting that the ECC, at its 43rd meeting in November 2016, had supported the updated list of ECTRA/ERC/ECC Decisions as provided by the previous WG FM meeting (see document FM(16)225 - Annex 42).
2. WG FM noted the information for the general review process provided by SRD/MG (document FM(17)031R1, page 7), ECC PT1 (Annex 3 to document FM(17)041) and FM44 (document FM(17)033).
3. The ECO made available to WG FM an updated list of ECC/ERC/ECTRA Decisions for regular review (document FM(17)060), 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 40**).
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 Draft ECC Decision (17)AA on withdrawal of ECC/DEC/(01)01 on phasing out CT1, CT1+ applications and ECC/DEC/(01)02 on phasing out CT2 applications**

1. WG FM#86 adopted the draft ECC Decision (17)AA on the withdrawal of ECC Decision (01)01 on ‘phasing out analogue CT1 and CT1+ applications in the 900 MHz band’ and ECC Decision (01)02 on ‘phasing out digital CT2 applications in the 900 MHz band’ for public consultation.
2. Neither comments nor change requests were received during the public consultation. Therefore, the draft ECC Decision (17)AA as sent to public consultation was submitted to WG FM#87 for consideration (Annex 1 to document FM(17)013).
3. WG FM considered the result of the public consultation and adopted the draft new ECC Decision (17)01 for submission to the ECC for final approval for publication (**Annex 18**).

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

1. ECO provided an update about the national implementation situation with regard to Denmark and Sweden. The frequency band 5725-5875MHz is currently not available for BFWA in Sweden. Denmark accidentally used the wrong application terminology in EFIS for WAS/RLAN – this was corrected.

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

1. 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(17)39.
2. The WG FM CG MBR had one physical meeting at ECO, 7 - 8 December 2016 and additional considerations and discussions by correspondence.
3. The CG considered the nature of a deliverable and agreed that an ECC Recommendation, with guidance on the coordination and use of MBR, would be more appropriate than an ECC Decision and a general authorisation is not proposed and there seems to be limited support and interest from administrations. Accordingly, the group prepared a draft ECC Recommendation with the purpose to give guidance to administrations in their work on coordination of, and licensing for, MBR systems.
4. The group considered operating frequencies for MBR including the two frequencies 5862 MHz and 5890 MHz and concluded that these frequencies were the best suited as they are above the radio location use up to 5850 MHz and below the FS use as of 5925 MHz. Further these frequencies have been used in all MBR considerations and calculations, and no other frequencies have been mentioned. The CG therefore recommended the use of the frequencies 5862 MHz and 5890 MHz for MBR.
5. During the work in WG SE / SE19 with the compatibility report for MBR, it became clear that a reduction in the output power could significantly ease the compatibility and sharing conditions.
6. The CG also noted that adaptive transmitter power control is an efficient way to reduce the output power to the lowest necessary and thereby significantly reducing the interference potential, and therefore proposes that this facility is included in the MBR parameters.
7. The CG further noted that there is a need to specify the mode of polarisation in the technical parameters for MBR.
8. Additionally, the CG is of the opinion that MBR equipment should include a self-monitoring facility which could detect any malfunction which could cause harmful interference to other radio systems.
9. The CG was of the opinion that these technical parameters should be included in the ETSI standards and prepared a draft liaison statement to that effect.
10. WG FM endorsed the ECC Recommendation for MBR and approved the draft ECC Recommendation (17)03 for public consultation (**Annex 38**).
11. WG FM also approved the liaison statement to ETSI with proposed amendments of some technical parameters for MBR and recommendation on the use of the frequencies 5862 MHz and 5890 MHz (**Annex 39**). The liaison statement is a response to FM(13)149 (Liaison statement of 29 September 2013 from ETSI/ERM to CEPT/ECC - WG FM on frequency considerations for MBR).

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

1. WG FM noted the information on the fixed service in the band 14.25-14.5 GHz as provided by SE19 (doc. FM(17)018).
2. WG FM further noted that WG SE approved ECC Report 258 on “Guidelines on how to plan Line-of-Sight (LoS) MIMO for Point-to-Point Fixed Service Links” for publication (document FM(17)050).
3. For considerations in relation to FS in higher bands (>92 GHz), see section 4.6.18, a better coordination between WG FM and WG SE is proposed by WG FM. WG SE/ SE19 agreed to develop two ECC Recommendations on channelling arrangements for the 92-114.5 GHz and 130-174.8 GHz bands, and one ECC Report covering both bands, but there may also be other spectrum demand than for FS, e.g. for radiolocation and short range sensor applications.

**5.5.1 ECO Report 04**

1. Mr Weber briefly informed WG FM that the ECO is providing support for the update of the RIS Models for the fixed service. This will be discussed with SE19, EFIS/MG and will come to WG FM in May 2017. The ECO might propose to update the ECO Report 04 accordingly in May 2017, i.e. a new chapter with RIS information for fixed service will be considered.

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

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

1. The WG FM chairman noted the discussions at the 43rd ECC meeting (Prague, November 2016). He reported that ECC was informed that no WG FM project team, correspondence or maintenance group had reported any deliverables, under their peer view, had been found to limit the potential for IoT / Machine to Machine applications. This, he added, was an action that had come from the resultant discussions following the March 2016 workshop on M2M.
2. The WG FM chairman asked subordinate group chairmen to continue to review deliverables and invited administrations to bring any observations, in relation to IoT/M2M applications, into those groups. In addition, he stated that this rolling agenda item would be removed from future WG FM agendas, adding that this issue will be considered in future with respect to the ongoing review of ECC Decisions and Recommendations.

**5.6.2 ITU-R Workshop on IoT (November 2016)**

1. The WG FM chairman then drew delegates attention to FM(17)026, which provided information of the ITU-R Workshop: experts review of radio frequency aspects related to Internet of Things. CEPT was represented by the WG FM vice chairman, Mr Stephen Talbot (UK). Mr Talbot noted that the workshop facilitated a forum for the positions of regional groups and industry, to be aired. He added this was a useful platform for such an exchange, but that no specific actions were required of ECC.

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

1. The chairman of the correspondence group on M2M via satellite, Mr Emmanuel Faussurier (F), presented doc. FM(17)035, the progress report of the correspondence group.
2. He underlined the three main issues that are proposed to be investigated:

1) possible harmonisation measures for SRDs in the 860 MHz frequency range to support uplink satellite communications;

2) assessment of technical conditions for downlink satellite communications in the 860 MHz frequency range that will ensure coexistence with incumbent uses;

3) opportunities for global harmonisation of a frequency range for hybrid satellite-terrestrial M2M IoT device operation to address future LPWAN network requirements.

1. Luxembourg, The Netherlands, France and Norway expressed their support for the proposed work items. Germany, Sweden, Switzerland and UK expressed concerns or wished to have more technical details on the proposal.
2. After further consultation with interested parties, Mr Emmanuel Faussurier (F) presented draft work items for SRD/MG and FM44 relating to the demand described in document FM(17)035.
3. In this draft, the CG chairman underlined that the target dates had been adjusted so as to facilitate further consultation within administrations and final decision by WG FM at its meeting in May 2017. He indicated that the work can progress within SRD/MG concerning SRD regulations within 862-863 MHz but that opportunities within frequency band 915-921 MHz for M2M IoT communications that may be used worldwide for both satellite and terrestrial M2M IoT under SRD regulations could be investigated only in a second step.
4. In the draft, the CG chairman further underlined that investigations by FM44 on downlink satellite communications in the 860 MHz frequency range relate to possible operation outside space allocations (i.e. under RR No. 4.4) and would require formal adoption of the work item by WG FM.
5. Mr. Thomas Weber, chairman of the SRD/MG, confirmed that SRD/MG is considering possible new regulations for non-specific SRDs with 25 mW and 0.1 % DC within frequency band 862-863 MHz without an indoor restriction. In addition ECC Report 261 provides positive conclusions for specific networks with 500 mW and 0.1% DC. SRD/MG will investigate the whole package.
6. Following a request for clarification by Sweden on necessary studies concerning possible use by SRDs of the frequency band 862-863 MHz, Mr Emmanuel Faussurier (F) expressed that studies for M2M via satellite may have to focus on appropriate regulatory measures to ensure that SRD use with 500 mW and 0.1% DC would be limited within specific networks (e.g. smart metering in rural or remote area and low density deployments), taking into account studies presented in ECC Report 261.
7. Sweden expressed concerns referring to ECC Report 261 in document FM(17)035 since this ECC Report is addressing indoor use of terminals.
8. Italy expressed that there are a number of technical aspects which are unclear in doc. FM(17)035.
9. Italy questioned the ability for SRDs to receive signals at ground level with a power flux density that would have to be very low. E.g. resulting by -125 dBm according to doc. FM(17)035 indication. Italy further indicated that an antenna gain of 8 dBi for devices on the ground would contradict the claimed benefits on seeking interoperability of the same LPWAN device either through terrestrial infrastructure or through satellite networks.
10. Italy also expressed that the capacity of the system is not consistent with the objective of low density. In order to answer such questions, it was also expressed that industry proponents could take benefit of the ETSI SRdoc for LPWAN (terrestrial) and expand it to address LPWAN‑Sat as a quick and effective way.
11. The chairman of WG FM proposed to attach the draft Work Items to these minutes for consideration at the 88th WG FM meeting in May 2017 (**Annex 28**). It can as such be made available to SRD/MG and FM44 for appropriate consideration. The WG FM correspondence group could be used to further consider the points made by Italy.
12. WG FM endorsed this way forward.

***5.7 CEPT Workshop on 5G and follow-up activities***

1. The WG FM chairman introduced the outcome of the 5G workshop (Mainz/D, November 2016) and of the latest ECC plenary meeting in November 2016 (docs. FM(17)008 and FM(17)007 (Sec. 7.2 and Annex 2)). The Counsellor of the European Commission, Mr Giuseppe Rizzo, introduced the Mandate on 5G which had been issued to CEPT (doc. FM(17)025). This information was noted by the meeting.
2. The WG FM chairman especially introduced section C of the roadmap (Annex 2 to doc. FM(17)007), which is related to the vertical sectors, and section D on ‘Other spectrum challenges’. These sections are also relevant for WG FM and its project teams.
3. The C2C Communication Consortium, represented by Mr Friedbert Berens, asked how the vertical sectors could provide their ideas and suggestions into the process. E.g. the band 3.4-3.8 GHz is currently under discussion in ECC PT1. He further reflected that this band is also of interest for verticals where the difficulty is that the current regulation for this band covers MFCN, and PT1 is responsible for MFCN but e.g. not for radio solutions in the area of transport, wireless industrial or railways.
4. The WG FM chairman emphasised that overlapping activities between ECC entities should be avoided, e.g. between PT1 and WG FM on the band 3.4-3.8 GHz. But a pragmatic solution has to be found to cooperate between each other, which is also important to fulfil the tasks of sections C and D of the 5G roadmap.
5. It is indicated in the roadmap that it will be reviewed at each ECC plenary meeting with an assessment of the related activities. This also provides a possibility to further clarify how to manage the requests from the vertical sectors. The WG FM chairman will report on that at the next ECC meeting (Feb/Mar 2017). He also emphasised that the ongoing discussion of these sectors will require contributions from the relevant stakeholders.
6. The WG FM meeting endorsed this way forward.
7. The LS from ECC PT1 (doc. FM(17)034) was introduced by the WG FM chairman. PT1 informed about a contribution to its meeting which focuses on the background and rationale for providing complementary satellite-based solutions in the context of 5G and which provides a number of use cases where satellite-based solutions may play a role, and identifies areas where architecture and standardisation considerations can be relevant. With regard to item D.1 of the 5G roadmap, PT1 also informed that it is ready to liaise with WG FM on any satellite aspects related to IMT-2020 networks.
8. Luxembourg introduced its contribution regarding satellite solutions for 5G (doc. FM(17)032). Luxembourg proposed to create a new Work Item in WG FM and to task FM44 to develop an ECC Report on satellite solutions for 5G, in cooperation with ECC PT1. The contribution also provided the rationale for this proposal.
9. The meeting considered both contributions and then adopted the new Work Item FM44\_32 as provided in **Annex 12**. This Work Item was supported by France, Germany, Latvia, Lithuania, Luxembourg, Norway, Spain (via email), Switzerland, The Netherlands and the United Kingdom.

***5.8 Spectrum regulation for drones***

1. The chairman of the CG on drones, Mr Florian Cziczatka (Austria), presented a short oral report of progress, due to the fact, that since the last WG FM meeting only limited progress had been made.
2. As outlined during the last WG FM meeting the draft “Prototype” Regulation from EASA has been in public consultation, which ended last year, but the results are still not published. It is expected that they will be available in March 2017. The draft ECC Report provides already a full overview on the drones’ categories under the draft Prototype Regulation from EASA.
3. The chairman of the CG informed the meeting, that there will be a web meeting before the physical meeting depending on the availability of the “Prototype” Regulation.
4. Austria noted upcoming tests of drones and their control and non-payload communications (CNPC) equipment. The requirements, the relevant technical data of this equipment and the test scenarios will be provided to the CG as relevant and appropriate.
5. The chairman of the CG appealed the meeting to note the progress report. In addition, administrations, stakeholders and interested parties are requested to provide additional information. In particular, any information on possible frequency options for professional use as well as on tests of drones including the technical data and scenarios is highly welcomed.
6. The WG FM noted the progress on the draft ECC Report on “Technical and Regulatory Aspects and the Needs for Spectrum Regulation for UAS”. Furthermore, the WG FM encourages all interested parties to provide additional information and to participate in the work of the CG.

***5.9 Information on LSA implementation***

1. In response to work item FM\_33, on LSA implementation and testing, ECO maintains a dedicated web page on the ECC website: <http://cept.org/ecc/topics/lsa-implementation>
2. Since the previous WG FM meeting, additional information with respect to trials undertaken in The Netherlands, have been added. Italy provided updated information. Administrations are invited to provide relevant information to the ECO ([bruno.espinosa@eco.cept.org](mailto:bruno.espinosa@eco.cept.org))

***5.10 Implementation of WRC-15 results***

1. The WG FM chairman noted that ECC#43, in November 2016, endorsed the way forward as proposed by WG FM. This was the list of actions, post WRC-15, required of WG FM recognising that the update of the ECA Table had already been updated under a separate process. A table of those endorsed actions was provided in FM(17)009. As a result, this action was closed.

***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. He added that at the last WG-FM meeting (#86, Bordeaux, France) the ECO introduced document FM(16)206 “Activities on the T-DAB Plans (WI FM45\_06)”. At that meeting ECO had reflected that of the two published frequency plan formats (i.e. ASCII97 and Co07), it appeared that the ASCII97 format was no longer required. Following this, the meeting endorsed that the ASCII97 will no longer be published by the ECO.
2. Additionally, at the last WG FM meeting, ECO had raised the possibility of developing a software tool for test point calculations (TPC) in order to provide and display test points. Whilst the topic had been discussed in the past, since 2010, there had not been any views expressed by administrations. As the ECO has budget identified for this task, administrations had been invited to provide views to this WG FM. No comments were made and the WG FM chairman recommended ECO not to allocate resources to such a project. This approach was endorsed by the meeting.
3. Finally, the ECO noted that Latvia had provided an update of their T-DAB assignments in the VHF band. Information on T-DAB assignments can be found at; <http://www.cept.org/ecc/tools-and-services/t-dab-plans> (secretarial note: this is an updated web address compared to that detailed in the report of WG FM #86).

**6. New work items**

***6.1 Meteorological radars in the 5600-5650 MHz band***

1. At the latest ECC meeting in November 2016, the difficulties with illegal use and non-compliant equipment were also discussed (section 13.1 in doc. FM(17)007). In the light of the results from recent ADCO market surveillance campaigns (e.g. on 5 GHz RLANs and on radio controlled toys), ECC discussed on the possible ways to handle the high number of non-compliant equipment in certain sectors. As a result, ECC highlighted the importance of close cooperation between the concerned organisations (including TCAM, frequency management bodies and market surveillance authorities) both at national and European level, noting also the importance of involving CEPT countries outside EU.
2. The WG FM chairman introduced a letter from Eumetnet (doc. FM(17)024), which had been sent to the European Commission (DG Connect and DG Grow) and copied to the ECC. It explains that since the publication of ECC Report 192, the situation as described in that report has not changed. The illegal use of 5 GHz RLAN or the use of non-compliant 5 GHz RLAN equipment, in addition to the lack of adequate market enforcement actions against such equipment, continues to cause serious issues for Eumetnet.
3. France indicated being very concerned that this issue has been there for a long time and no solution seems to be found.
4. During the discussion the meeting had a common view on the fact that the intentional illegal use of the RLAN equipment, e.g. by switching off the DFS mechanism, is the main source of the problem (see ECC Report 192). The spectrum regulation, the relevant ECC Decision and EC Decision, as well as the harmonised standard contain adequate provisions for RLANs to protect other radio services (e.g. the radiolocation service).
5. It is also mentioned in CEPT Report 64 that the situation as presented in ECC Report 192 shows that there are interference cases to meteorological radars due to intentional illegal use of RLAN and non-compliant RLAN equipment in the 5600-5650 MHz band (from fixed outdoor installations) and that they are still being reported according to the interference statistics for 2015.
6. Hungary informed the meeting that in their country interferences were caused in specific cases by RLAN equipment for which compliance with the regulation was declared.
7. The ETSI Liaison Officer informed the meeting that also the FCC is investigating the same problem in the USA and the relevant companies, responsible for the illegal use of RLAN equipment, are listed on the FCC website.
8. The ETSI Liaison Officer stated that this in the first place should be discussed in TCAM and ADCO as this clearly a market enforcement issue. The current regulatory regime in Europe (RE-D, EMCD, LVD,…) is a market surveillance/enforcement regime. However if there is inadequate market enforcement resulting in situations like this where stakeholders request a change in the regulation to overcome the situation, such measures would only confirm a failure of the current regulatory regime. RLANs are part of our daily live, in our houses, in enterprises etc. as well as weather radars which help us to live the life we want. Closing bands for one application to make the world perfect for another application is not the way forward. Spectrum is scarce and we have to make it work that multiple applications share the same band. Including detailed technical requirements in a harmonised standard that would ensure sharing, only makes sense if market enforcement ensures that equipment only operates as intended.
9. The European Commission confirmed that they are preparing a response to Eumetnet.
10. The ECO informed the meeting about a solution in the Czech Republic where fixed outdoor RLANs in the 5 GHz range need to be registered. In case of interferences the source then could easier be identified. For full information see annex 2 of ECC Report 192.
11. The meeting concluded that the enforcement activities need to be improved to avoid the illegal use of RLAN equipment as far as possible. This is mainly a national matter.

***6.2 Ultra Narrow Band (UNB) SRDs operating in the UHF spectrum below 1 GHz***

1. Document FM(17)028 contains a liaison statement from ETSI with a new Systems Reference document (TR 103 435) on Ultra Narrow Band (UNB) SRDs operating in the UHF spectrum below 1 GHz. The document explains how very narrow signal bandwidths together with state of the art signal processing techniques result in a high link budget offering unique opportunities for the deployment of Low Power Wide Area Networks. The target frequency bands are the 865 to 868 MHz and the 915 to 921 MHz bands however some more flexibility is required w.r.t. the duty cycle and the output power.
2. The Netherlands commented that the SRdoc does not provide a clear separation between the network aspects and the transmission (radio) aspects. Furthermore the Netherlands clarified that the band 915 to 921 MHz is used by the military in the Netherlands.
3. The UK stated that when further considering this SRdoc within the CEPT it should be looked at the definition of SRD contained in the Commission Decision for SRDs as the intended use (longe range / wide area) described in this SRdoc may be in conflict with that definition.
4. Italy raised some concerns to the SRdoc as the intended spectrum is used by military applications in Italy. Italy further stated that the aggregate effect of a large number of end-points had not been investigated. In addition, the targeted spectrum is of key importance for the existing SRD technologies and applications.
5. The SRD/MG chairman indicated that the principles set out in CEPT Reports 14 and 44 (SRD strategy) will be applied.
6. After further discussion, it was agreed to task the SRDMG to further study the SRdoc, taking into account the comments made and to report their findings back to WG FM.

***6.3 ETSI TR 103 333***

1. Document FM(17)058 contains a liaison statement from ETSI with a new Systems Reference document (TR 103 333) on GSM-R networks evolution. This document explains that the current GSM-R will be replaced by a new system called Future Railway Mobile Communication System (FRMCS). In parallel with the implementation of this new system, the GSM-R system need to remain in operation until the transition is completed and subsequently the GSM-R system is taken out of service. The preferred solution to support the introduction of FRMCS is that the 873-880 MHz UL / 918-925 MHz DL band needs to be fully harmonised for railway purposes allowing both FRMCS and GSM-R.
2. The ETSI liaison officer further draw the attention of the meeting on the comments provided by several ETSI members (SRD community), which are contained in clause 4 of the SRdoc.
3. The UK reminded the meeting that the RSPG is developing an Opinion on ITS, including issues on future railway applications and the WG FM may need to take this into account once that is finalised.
4. Italy reminded that the comments in clause 4 from the SRD community should be taken into account by the Project Team (FM56).
5. The UK supported comments from France and Sweden made earlier and questioned whether TR 103 333 is complete and containing all information WG FM needs as the requirements for the migration are not sufficiently addressed in detail.

***6.4 Amended mitigation techniques for UWB***

1. Document FM(17)056 contains a liaison statement from ETSI with a new Systems Reference document (TR 103 314) on amended mitigation techniques for UWB. This SRdoc analyses the existing and describes new mitigation techniques for UWB devices and investigates how they can be deployed in other application domains and usage scenarios. The inclusion of these in the existing UWB regulation will significantly extend the application area of the UWB technology.
2. It was agreed to task the SRD/MG to further study the SRdoc and to report their findings back to the WG FM.

***6.5 UWB for medical applications***

1. Document FM(17)057 contains a liaison statement from ETSI with a new Systems Reference document (TR 103 313) on UWB in medical applications. This SRdoc provides information on three categories of medical applications using UWB and makes proposals on what needs to be done in order to address the spectrum needs of these applications in the current UWB regulation.
2. It was agreed to task the SRD/MG to further study the SRdoc and to report their findings back to the WG FM.

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

***7.1 EC recent activity***

1. The EC councillor Mr Giuseppe Rizzo briefly reported on the latest RSPG and RSC meetings.

**7.1.1 RSC#58 meeting (7 December 2016)**

1. RSC#58 took place on 7 December 2016.
2. A Decision on MCV (Mobile Communications on board Vessels) was approved at unanimity (and thereafter adopted by the Commission on 1st February).
3. A positive opinion was also given on a Commission mandate to CEPT "To develop harmonised technical conditions for spectrum use in support of the introduction of next-generation (5G) terrestrial wireless systems in the Union".
4. Furthermore, the Commission services presented a new version of the Draft Implementing Decision for the 6th update of the SRD Decision. The RSC will continue its discussions at the next meeting (15-16 March 2017) namely concerning the Addendum to CEPT Report 59.

**7.1.2 RSPG#41 meeting (9 November 2016)**

1. At RSPG#41 of 9 November 2016 a Strategic Roadmap Towards 5G for Europe was adopted.
2. The following working groups presented progress reports:

1) “Good offices” to assist in bilateral negotiations between EU countries;

2) A long-term strategy with regard to future PMSE spectrum requirements;

3) Spectrum related aspects for next-generation wireless systems (5G);

4) Spectrum aspects of the Digital Single Market;

5) Review of the Telecomms Regulatory Framework;

6) WRC-19 preparation;

7) Spectrum aspects of Intelligent Transport Systems (ITS) and Spectrum aspects of Internet-of-things (IoT) including M2M.

1. Opinions on subjects 5-7 are planned for adoption at the next RSPG on 7 February 2017.

***7.2. ETSI recent activity***

**7.2.1 Overview on ETSI SRdocs**

1. An overview on ETSI SRdocs is provided under: <https://portal.etsi.org/Portals/0/TBpages/ERM/Docs/ERM%20SRdoc%20overview.doc>

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

1. The ETSI Liaison Officer informed the meeting that <http://www.etsi.org/red> contains general information about the Radio Equipment Directive.
2. Information about the recent RE-D workshop held by ETSI on 1st December 2016, can be found at:

<http://www.etsi.org/news-events/events/1102-53-shades-of-re-d-six-months-to-go>

including a pointer to the presentations made at that workshop.

1. The following link contains the list of RE-D Harmonised Standards which are completed and published by ETSI:
2. See link: <http://www.etsi.org/standards/looking-for-an-etsi-standard/list-of-harmonised-standards>

**7.2.3 ETSI workshop on “Managing Rail Mobile Communications Evolution”**

1. The ETSI Liaison Officer further informed the meeting that a workshop on ‘Managing Rail Mobile Communications Evolution’ was held on 2 and 3 November 2016. Information regarding this workshop including a pointer to the presentations can be found at:

<http://www.etsi.org/news-events/events/1109-workshop-managing-rail-mobile-communications-evolution>

**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 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 Addendum to the CEPT Report 59 on the 6th update of the EC Decision on SRDs, to ECC for final approval for publication and sending it to EC (**Annex 19**); with the comment resolution table (**Annex 20**);
2. Draft new ECC Decision (17)01 on withdrawal of ECC Decision (01)01 on phasing out CT1/CT1+ applications and ECC Decision (01)02 on phasing out CT2 application; to ECC for final approval for publication (**Annex 18**);
3. Draft new ECC Decision (17)02 on withdrawal of Decision ECTRA/DEC/(97)02 on  S-PCS; to ECC for final approval for publication (**Annex 05**);
4. Draft amended ECC Decision (05)09 on the free circulation and use of earth stations on board vessels operating in FSS networks in 5925-6425 MHz and 3700-4200 MHz; to ECC for final approval for publication (**Annex 06**);
5. Draft amended ECC/DEC/(06)10 on transitional arrangements for the Fixed Service and tactical radio relay systems in 1980-2010 MHz and 2170-2200 MHz; to ECC for final approval for publication (**Annex 07**);
6. Draft amended ECC Decision (11)01 on the protection of the earth exploration-satellite service in 1400-1427 MHz; to ECC for final approval for publication (**Annex 08**);

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

1. Revised ECC Recommendation (05)08 on frequency planning and coordination between GSM land mobile systems (GSM 900, GSM 1800, and GSM-R) (**Annex 13**);
2. Amended ECC Recommendation (11)04 on MFCN cross-border coordination in the 790-862 MHz band (**Annex 16**);
3. Amended ECC Recommendation (11)05 on MFCN cross-border coordination in the 2500-2690 MHz band (**Annex 17**);
4. Revised ERC Recommendation 54-01 on measuring the maximum frequency deviation of FM broadcast emission in the 87.5-108 MHz band (**Annex 22**);
5. New ECC Recommendation (17)01 on measurement uncertainty assessment for field measurements (**Annex 23**);
6. New informative Annex 13 of ERC Recommendation 70-03 on SRDs (**Annex 31**);
7. No ECC Reports were approved for publication at this WG FM meeting;

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

1. Draft new ECC Decision (17)CC on the withdrawal of ERC Decision (98)15 on 'Licensing of Omnitracs terminals for Euteltracs' (**Annex 09**);
2. Draft new ECC Decision (17)DD on 'The harmonised use and exemption from individual licensing of fixed earth stations operating with NGSO FSS satellite systems in the frequency bands 10.7 - 12.75 GHz and 14.0 - 14.5 GHz (**Annex 26**);
3. Draft amended ERC Recommendation 70-03 on SRDs, main text (**Annex 30**);
4. Draft amended Annexes 9 and 10 of ERC Recommendation 70-03 on SRDs (**Annex 33, Annex 32**);
5. New draft ECC Recommendation (17)03 providing 'Guidance for the harmonised use and coordination of Maritime Broadband Radio (MBR) systems on board ships and off-shore platforms operating within the frequency bands 5852-5872 MHz and 5880-5900 MHz' (**Annex 38**);
6. No ECC Reports were approved for public consultation at this WG FM meeting;

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

1. LS to WG SE on land based in-motion earth stations, operating with GSO FSS systems in the Ku band (**Annex 11**);
2. LS to ETSI on new regulatory provisions for SRDs within the Addendum to CEPT Report 59 (**Annex 21**);
3. LS to WG SE related to the draft Addendum to CEPT Report 59, NBN SRDs operating in the band 915-921 MHz (**Annex 29**);
4. LS to WG SE on TRS sharing studies with MSS (**Annex 34**);
5. LS to WG SE on studies for smart tachograph, weight and dimension applications (**Annex 35**);
6. LS to ETSI on common Urban Rail and ITS spectrum sharing solutions (**Annex 36**);
7. LS (reply) to ETSI on frequencies for Maritime Broadband Radiolinks (MBR) (**Annex 39**);
8. Six RIS templates from SRD/MG for publication in EFIS (**Annex 24**);
9. Letter to ICAO on sharing the band 960-1164 MHz with wireless microphones(**Annex 25**)**;**
10. Revised explanatory paper on 5 GHz RLANs in vehicles (**Annex 37**);
11. Updated list of ECC/ERC/ECTRA Decisions (**Annex 40**);
12. Revised ToR for FM54 (PMR/PAMR) and the ToR for the new FM56 on radio spectrum for railway applications (**Annexes 15, Annex 14**);
13. Further information is available on the WG FM website:

<http://www.cept.org/ecc/groups/ecc/wg-fm/news/results-of-the-wgfm87-meeting-30-january-3-february-2017-in-luxembourg/>

**8. Vice Chairmanship of WG FM**

1. After this WG FM meeting, Ms Cristina Reis (POR) has completed her second term as WG FM vice chair and Mr Stephen Talbot (G) has finished his first term as WG FM vice chair. The WG FM chairman informed the meeting that the procedure for appointment / re-appointment of both vice chairs at the next WG FM meeting in May 2017, based on the ECC RoP (Articles 5, 8 and 9), needs to be started. A call for nominations will be sent out after the WG FM meeting.
2. CEPT administrations are invited to provide nominations for both vice chairs in advance of the WG FM meeting in May. According to No. 8.5 of the RoP, appointments shall normally be for a maximum of three years with the possibility of reappointment for one further consecutive term only.

**9. Any Other Business**

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

1. Mr Weber (ECO) presented doc. FM(17)044 on the ECO assistance to WG FM as well as the ECO Bulletin presented at the last ECC meeting in November 2016 (doc FM(17)004).
2. Users of the new CEPT web portal are recommended to ensure that their internet browsers are updated. Some functionality is not available for users of smart phones or pads (e.g. document group download).
3. The ECA Table is now available in EFIS in excel-format, the FS information in ECO Report 04 can be improved following the WG SE questionnaire on Fixed Service, and the new module for PMSE will directly create in future the ERC Recommendation 25-10. The ECO will ensure in support of the CEPT administrations that the national implementation information in ERC Recommendation 70-03 - Annex 10 and ERC Recommendation 25-10 will not show differences.
4. A one-day ECO Workshop about EFIS is planned (19 September 2017, Mainz, Germany, followed by EFIS/MG during the next days): The workshop will consist of two parts, i.e. guidance to the CEPT administrations about their possibilities when providing information to the EFIS and guidance to the interested public using the EFIS, and especially how to best find certain information. Most of the presentation will be provided by ECO but 1-2 case presentations from national administrations (how they update EFIS) might be useful. An exchange of views amongst all participants of what would be useful to add in EFIS / suggestions for improvement may also be a very useful session. It is proposed by ECO to develop together with EFIS/MG a detailed programme until the WG FM May 2017 meeting, after which the official announcement of the workshop will occur. This course of action was endorsed by WG FM. See also section 4.8 of this report.
5. Doc. FM(17)044 also includes the relevant information about new information about LSA from CEPT administrations on the LSA topic webpage, about T-DAB (no request received by ECO for ASCII97 format or a tool for test point calculations (TPC), updates of the WI95revCO07 (VHF) plan), and update of the national implementation information for BFWA as in ECC/REC/(06)04. See also sections 5.3.2, 5.9 and 5.11 of this report.
6. When presenting the ECO Bulletin, Mr Weber (ECO) explained in particular the FCC Order and Authorisation for Iridium Constellation LLC in the USA which could be of interest for CEPT administrations. He also reported about new plans for Broadband Direct-Air-to-Ground Communications in the USA in the 2.4 GHz ISM-band.
7. With regard to the ongoing specification work for V2X/V2V in 3GPP, Mr Weber draw the attention to a press release from 3GPP confirming that the two intended communication configurations (with or without base stations) use a dedicated carrier for V2V communications, meaning the target band is only used for these V2V communications as set out clearly in the press release.
8. No questions were raised with regard to the ECO bulletin or the ECO assistance to WG FM.

**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 and consider possible venues for the first WG FM meeting in 2018 and for all WG FM meetings in 2019.
2. The schedule for future WG FM and Project Team meetings with indicating ECC, ECC PT1 meetings is as follows:

| **Meeting** | **Date** | **Place** |
| --- | --- | --- |
| **ECC#44** | **28 February - 03 March 2017** | **Dublin, Ireland** |
| FM54#14 | 22 -23 March 2017 | Biel, Switzerland |
| FM51-M23 | 23 -24 March 2017 | ECO, Copenhagen |
| FM56#1 | 27-28 March 2017 | Lille / France |
| 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 |
| FM44#42 | 19 – 21 April 2017 | ECO, Copenhagen |
| SRD/MG#70 | 26 - 28 April 2017 | Mainz, Germany |
| FM54#15 (tentative) | 08 -09 May 2017 | ECO, Copenhagen |
| **WG FM #88** | **15 - 19 May 2017** | **Dublin, Ireland** |
| **ECC#45** | **27 - 30 June 2017** | **Rotterdam, The Netherlands** |
| FM51-M24 | 11 -12 July 2017 | TBD |
| SRD/MG#71 | 06 – 08 September 2017 | Biel, Switzerland |
| FM54#16 | 12 -13 September 2017 | TBD |
| FM51-M25 (tentative) | 25 -26 September 2017 | TBD |
| **WG FM #89** | **09 - 13 October 2017** | **TBD, United Kingdom** |
| **ECC#46** | **14 - 17 November 2017** | **TBD, Romania** |
| SRD/MG#72 | 10 – 12 January 2018 | TBD |
| **WG FM #90** | **TBD 2018** | **TBD** |
| **WG FM #91** | **TBD 2018** | **TBD, Switzerland** |
| **WG FM #92** | **TBD 2018** | **TBD, Lithuania** |

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 Luxembourg Regulatory Authority (ILR) for hosting the meeting on short notice. He especially addressed his thanks to Mr Claude Rischette and Mr André Meysembourg from ILR for the fine organisation. In addition he thanked for the invitation to dinner on Wednesday evening, which took place in the restaurant “La Table du Belvédère” beside European Luxembourg Convention Centre (ECCL). There, the participants enjoyed a superb three course menu.
2. As this was the last WG FM meeting for Ms Cristina Reis (POR) as WG FM vice-chair after two terms, the WG FM chairman thanked her for the great job she’s done. He highlighted the pleasant cooperation during the last six years, also in the name of the previous WG FM chairman Mr Sergey Pastukh (RUS). With great applause the delegates joined the speech of thanks.
3. He also thanked his WG FM administrative secretary Ms Hannelore Schwarz (D), who will finish her work for WG FM. The WG FM chairman highlighted her indispensable support during the last three years. Also here the delegates expressed their appreciation by a big applause.
4. The WG FM chairman thanked the WG FM delegates, the Project Team / MG / FG / CG chairmen, the ECO (Mr Thomas Weber), his vice-chair Mr Stephen Talbot (UK), his technical secretary Mr Silvio Schwarz (D) and Mr Ali Daheur (D) for their support.
5. The delegate from Ireland expressed, that it will be an honour for his administration to host the next WG FM Meeting in May 2017 in Dublin.
6. After giving thanks to the Irish administration for their invitation the WG FM chairman finally closed the meeting and wished all the delegates a safe journey home.

**- - -**