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|  |  Doc. CPG(17)011 ANNEX IV-21E |
| CPG19-3 |
| Vienna, Austria, 14th - 17th March 2017 |
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| Date issued:  | 17th March 2017 |
| Source:  | CPG19-3 minutes |
| Subject:  | Draft CEPT Brief on WRC-19 Agenda Item 9.1 issue 9.1.5 |
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| Summary:  |
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| Proposal:  |
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DRAFT CEPT BRIEF ON AGENDA ITEM 9.1. – ISSUE 9.1.5

9.1.5 Resolution 764 (WRC‑15) – Consideration of the technical and regulatory impacts of referencing Recommendations ITU-R M.1638-1 and M.1849-1 in Nos 5.447F and 5.450A of the Radio Regulations;

# ISSUE

This Agenda item comes under Agenda item 9: to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention

Agenda item 9.1.5 addresses possible changes to the footnotes referenced in the allocations in 5 250-5 350 MHz and 5 470-5 725 MHz which gives protection to radiolocation service from RLANs.

# Preliminary CEPT position

CEPT is of the view that Recommendation ITU-R M.1849-1 (on Met based radars) can be referenced in No 5.450A without changes to the allocation conditions of the frequency band 5 470-5 725 MHz for the incumbent radio services. Possible reference of Recommendation ITU-R M.1849-1 in No 5.447F related to the band 5 250-5 350 MHz is still under consideration.

CEPT is still investigating the potential technical and regulatory impacts of referencing Recommendation ITU-R M.1638-1 (on radars except Met radars) in Nos 5.447F and 5.450A, in particular in the light of DFS specifications.

# Background

Recommendation ITU-R М.1638-0 is incorporated in Radio Regulations by reference in Nos. 5.447F and 5.450А. In accordance with these RR provisions for protection of radiodetermination services in the frequency bands 5 250-5 350 MHz and 5 470-5 725 MHz more stringent protection criteria shall not be imposed based on system characteristics and interference criteria, than those stated in Recommendation ITU‑R M.1638-0. However, since the allocation for WAS/RLAN was made in WRC-03 this Recommendation has been revised. As a result of this revision of Recommendation ITU‑R M.1638-1 the list of radiolocation radars operating in the frequency range 5 GHz contained in the Recommendation has increased. In addition, the information with respect to the ground based meteorological radars has been moved to a separate Recommendation ITU-R М.1849-1. Both of these new Recommendations are not currently incorporated into the Radio Regulations. Therefore, for Nos 5.447F and 5.450А currently there is no clarification with respect to the latest version of Recommendation incorporated by reference in Radio Regulations. The work is to investigate the technical and regulatory impacts on the allocations referred to in Nos 5.447F and 5.450A that would result from referencing Recommendations ITU‑R M.1638‑1 M.1849‑1 in place of the original Recommendation ITU‑R M.1638‑0.

Recommendation ITU‑R M.1638‑1 gives the Characteristics of and protection criteria for sharing studies for radiolocation (except ground based meteorological radars) and aeronautical radionavigation radars operating in the frequency bands between 5 250 and 5 850 MHz.

Recommendation ITU‑R M.1849‑1 gives the technical and operational aspects of ground-based meteorological radars.

It should also be noted that there is already a significant roll out of WAS/RLAN devices in the band that have been designed to share with and recognise the radio determination systems contained in the original Recommendation ITU‑R M.1638‑0. There is no guarantee that these WAS/RLAN devices will be able to share with and recognise any new radio determination systems contained in the new Recommendations ITU‑R M.1638‑1 and Recommendation ITU‑R M.1849‑1.

The aim of the studies is to ensuring that no undue constraints are imposed on the services referenced in these footnotes and then to take any regulatory action as appropriate.

The comparison of the technical characteristics of the meteorological radars given in Recommendations ITU-R M.1638-0 and M.1849-1, operating in the frequency band 5 470-5 725 MHz showed that both Recommendations contain the technical characteristics of the meteorological radars leading to the lowest interference protection level.

In addition, an analysis of the relevant DFS detection by WAS/RLAN comparing the meteorological radars described in Recommendations ITU-R M.1638-0 and M.1849-1 shows that that adding a new reference to Recommendation ITU‑R M.1849‑1 to Nos [5.447F](file:///C%3A%5CUsers%5CTRISTANT%5CDocuments%5CA-TRAVAIL%5CWRC-19%5CAgenda%5C5.447F.docx) and [5.450A](file:///C%3A%5CUsers%5CTRISTANT%5CDocuments%5CA-TRAVAIL%5CWRC-19%5CCPG%5CCPG-PTD%5CPTD-2%20%28Helsinki%20Janv%202017%29%5CContribution%20EUMETNET%5C5.450A.docx) will not impose more stringent protection criteria on the mobile service, in particular RLAN/WAS, and will keep unchanged the protection of meteorological radars.

Therefore, a reference to Recommendation ITU-R M.1849-1 in No 5.450A will not lead to any changes of allocation conditions of the frequency band 5 470-5 725 MHz to the incumbent radio services. Possible reference of Recommendation ITU-RM.1849-1 in No 5.447F related to the band 5 250-5 350 MHz is still under consideration.

Additional studies are needed to assess the potential technical and regulatory impacts of referencing Recommendation ITU-R M.1638-1 in Nos 5.447F and 5.450A, taking in particular into account the current RLAN/WAS DFS specifications.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* Recommendation ITU-R M.1638-0 “Characteristics of and protection criteria for sharing studies for radiolocation, aeronautical radionavigation and meteorological radars operating in the frequency bands between 5 250 and 5 850 MHz”
* Recommendation ITU-R M.1638-1 Characteristics of and protection criteria for sharing studies for radiolocation (except ground based meteorological radars) and aeronautical radionavigation radars operating in the frequency bands between 5 250 and 5 850 MHz
* Recommendation ITU-R M.1849-1 “Technical and operational aspects of ground-based meteorological radars”

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

To investigate the technical and regulatory impacts on the services referred to in Nos 5.447F and 5.450A that would result from referencing Recommendation ITU-R M.1638-1 in place of Recommendation ITU-R M.1638-0;

To investigate the technical impacts on the services referred to in Nos 5.447F and 5.450A that would result from adding a new reference to Recommendation ITU-R M.1849-1;

To develop a methodology with proposals to change the provisions of Radio Regulations as required.

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (date of proposal)

ATU (date of proposal)

Arab Group (date of proposal)

CITEL (date of proposal)

RCC (16/09/2016)

The RCC Administrations consider that additional studies on compatibility between WAS/RLAN systems and radiolocation systems might be required, in addition to those which have been already conducted in preparation to WRC-15 and which have been identified in WRC-19 agenda item 1.16, and they should take into account parameters of new radiolocation systems, described in Recommendations ITU-R M.1638-1 and M.1849-1.

The RCC Administrations are in favour of maintaining the conditions for allocation of the frequency bands 5250–5350 MHz and 5470–5725 MHz to radiodetermination services.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

Although this agenda item does not appear to involve space science services, SFCG members will continue to monitor the developments of this agenda item in WP 5A for any potential outcomes identified that could impact space science service operations.

WMO and EUMETNET (21/11/2016)

Support referencing Recommendation ITU-R M.1849-1 in No 5.450A of the Radio Regulations

## Regional organisations

ESA/SFCG(June 2016)

Although this agenda item does not appear to involve space science services, SFCG members will continue to monitor the developments of this agenda item in WP 5A for any potential outcomes identified that could impact space science service operations.

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)