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| Subject: | Draft CEPT Brief on WRC-15 Agenda Item 1.15 | |
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| Summary: | | |
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| Proposal: | | |
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DRAFT CEPT BRIEF ON AGENDA ITEM 1.15

AI 1.15 to consider spectrum demands for on-board communication stations in the maritime mobile service in accordance with Resolution 358 (WRC-12).

# ISSUE

Resolution 358 (WRC-12) invites WRC-15 to consider, based on the results of ITU-R studies, the need to possibly identify additional UHF channels within the bands already allocated to the maritime mobile service for on-board communication stations.

Resolution 358 (WRC-12), invites ITU-R to conduct studies, in time for WRC-15, to determine the spectrum requirements and potential frequency bands for on-board communication stations, taking into account the protection of services to which the frequency band is currently allocated.

# Preliminary CEPT position

CEPT recognises the importance of onboard communications to safe ship operations and from work it has carried out has established that in some geographic areas frequencies for on board communications are congested.

CEPT supports amendments to RR footnote No. 5.287 and to Recommendation ITU-R M.1174-2. CEPT recognises the need for more efficient usage of the existing frequencies, such as 12.5 kHz bandwidth for all the channels identified in the RR for on-board communications, and/or the use of Continuous Tone Coded Squelch Systems (CTCSS).

CEPT also advocates that information is provided to mariners on what UHF frequencies are available for on board communications in every Member State having contiguous sea areas under their jurisdiction.

CEPT does not support the identification of new frequencies for on-board communications in UHF, due to existing heavy usage by other services.

# Background

The use of UHF frequencies for on board communications is considered very important, without these, critical functions of the ship in restricted waters could not effectively take place. These functions include Anchoring, Berthing, control of Fire Fighting/Damage control parties, security patrols, terrorism threats etc. Whilst these are of significant concern to those operating the ship the consequences of failure affect not only the seafarer but have significant implication for the immediate environment the ship is operating in.

Only six frequencies, in the bands between 450 and 470 MHz, are currently identified in No. 5.287 for on-board communication stations using 25 kHz channels spacing. These frequencies are 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications.

The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174-2.

CEPT has developed a questionnaire which it has circulated to its Member States. A summary of the results can be found in CPG PTC(13)INFO18. These results indicate that in several areas communication by UHF between areas of a ship were either prevented on some channels by traffic from other vessels or shore operations or were severely interfered.

Also it should be noted that several Administrations actively use these frequencies for land mobile communications. In accordance with 5.286AA the bands 450-470 MHz is identified for use by Administrations wishing to implement IMT.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other):

Annex 03 to Document 5B/ 304 (13 June 2013) working document towards draft CPM text on Agenda item 1.15

Annex 04 to Document 5B/ 304 (13 June 2013) – Draft Work plan- Agenda item 1.15

CPG PTC(13) INFO 18\_Summary of replies of a Questionnaire on AI 1.15

CPG PTC(14) TEMP 9

Updated information/documentation on the ITU-R Preparatory Studies for WRC-15 are available at <http://www.itu.int/ITU-R/go/rcpm-wrc-15-studies>.

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

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

# Actions to be taken

* Consider the revision of RR footnote No. 5.287.
* Consider the revision of Recommendation ITU-R M,1174-2

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

## European Union (date of proposal)

## Regional telecommunication organisations:

APT (4 - 5 December 2013)

APT supports ITU-R studies on the spectrum demands for on-board communication stations in the maritime mobile service in accordance with Resolution 358 (WRC-12).

Possible Methods to address this Agenda item are: The use of analogue system with 12.5 kHz channel spacing that can double the capacity.

Transition from analogue system to digital system, by using Time Division Multiple Access (TDMA) or Frequency Division Multiple Access (FDMA) that can provide up to 4 times the capacity compared with traditional 25 kHz system.

Continuous Tone-Coded Squelch System (CTCSS) and/or Digital Coded Squelch (DCS) could be used in analogue FM equipment to mitigate co-channel interference.

This may require revision of footnote No. 5.287 and Recommendation ITU-R M.1174-2.

No constraints should be placed on the existing analogue on-board communication systems with 25 kHz channel spacing.

Studies on sharing and compatibility between on-board UHF communication stations and IMT systems should be taken into consideration if new frequencies are required.

ATU (January 2014)

Support ongoing studies, and final decision to be taken after the availability of the results of the studies

ASMG (Arab Spectrum Management Group) (4 - 5 December 2013)

Follow up the current studies with ensuring the protection of the existing services in this band, especially the mobile service.

Request the Arab administrations to review the frequencies in the footnote 5.287 and provide their proposals to the next ASMG meeting.

CITEL (4 - 5 December 2013)

Preliminary views:

Canada

Studies to determine spectrum requirements and possible technology improvement must be carried out to ascertain any additional spectrum requirements.

RCC (4 -5 December 2013)

The RCC Administrations recognize the importance of on-board communications to the safe ship operations (alarm and fire warnings, mooring operations and passenger traffic control) and suppose the possible congestion of frequencies for on-board communications in some geographic areas of the world.

The RCC Administrations do no support the additional frequency allocation to meet on-board communications due to intensive usage of VHF band by the other services and applications and also since the demand in additional frequencies for on-board communication has not been proved by the study results.

The RCC Administrations suppose that the more effective usage of the existing frequencies (12.5 kHz channel spacing, modern equipment usage) is sufficient to avoid possible congestion in the large ports.

The RCC Administrations support the incorporation of the provisions to the RR which allow more effective usage of the existing allocation for on-board communications stations in the MMS without allocation of new frequency bands.

## International organisations

IATA (date of proposal)

ICAO (July 2013)

Position

No impact on aeronautical services has been identified from WRC-15 Agenda Items 1.15

IMO (7 November 2013)

Draft IMO position

IMO support measures which would make more efficient use of the frequency band available for onboard systems and would welcome an international solution for the identification of the channels in provision No. 5.287 of the Radio Regulations.

NATO (29 August 2013 )

TBD

SFCG (July 2013)

SFCG supports the protection of existing space science service allocations in the 300-3000 MHz range. No new allocations to the maritime mobile service should be made unless acceptable sharing criteria with the affected space science service are developed.

WMO and EUMETNET (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (19 September 2013 )

TBD

ESA (date of proposal)

Eurocontrol (date of proposal)

GSMA (date of proposal)