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| Radiocommunication Study Group 5 |
| DRAFT NEW RECOMMENDATION ITU-R M.[BSMS700] |
| Specific out-of-band emission limit of IMT mobile stations operating in the frequency band 694-790 MHz for protection of existing services in Region 1 in the frequency band below 694 MHz |
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Summary of the discussion on and the reasons for the objection to the draft new Recommendation ITU-R M.[BSMS700]

# 1 Summary of the discussion on the draft new Recommendation ITU‑R M.[BSMS700] at the Study Group 5 meeting in July 2015

The Chairman noted that many documents had been received on the subject of the draft new Recommendation ITU-R M.[BSMS700]. The Chairman also noted the reservations expressed by one administration and some sector members in Report of the Chairman of WP 5D in Document [5/245](http://www.itu.int/md/R12-SG05-C-0245/en).

The Russian Federation, based on its input (Doc. [5/217](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=R12-SG05-C-0217)), objected to adopt the DNR in its current status and proposed further consideration in collaboration with WP 6A to address all missing elements for the protection of broadcasting service.

The Islamic Republic of Iran, based on its input (Doc. [5/224](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=R12-SG05-C-0224)), also provided its objection to adopt the DNR and actions to be taken for this DNR including forwarding it to WP 6A for consideration.

France, on behalf of multiple administrations (43 countries) from CEPT, ATU, and ASMG (Doc. [5/240](http://www.itu.int/md/R12-SG05-C-0240/en)), proposed to adopt the DNR without further work at this stage.

Nigeria spoke in support of approval of the Recommendation, citing its maturity and the resoluteness of Africa in moving ahead with the implementation of IMT in the band. The United Kingdom supported the view of Nigeria.

The Vatican disagreed with characterization of an agreement being reached in the JTG and supported those asking for further consultations with Study Group 6.

The UAE stressed that efforts were taken in WP 5D to reach compromise; but, despite best efforts, no agreement could be reached. It asked for adoption at this meeting and, failing that, transmittal to the Radiocommunication Assembly.

The Russian Federation reiterated its concerns with the technical maturity of this ITU-R deliverable and strong opposition to approval in Study Group 5.

France reminded the meeting of the extensive efforts made to reach compromise.

With these discussions, the Chairman indicated that the meeting should decide to forward the text to the next Radiocommunication Assembly in accordance with 10.2.1.2 item a) of Resolution ITU‑R 1-6.

Appendix

Statement of the Russian Federation on the draft revision of
Recommendation ITU-R M.[BSMS700] (Document 5/214)

Russian Federation objects to consideration of the draft new Recommendation ITU‑R M.[BSMS700] at the SG 5 meeting and submitting this draft to the Radiocommunication Assembly 2015 because the studies on this subject have not been completed. Further details concerning deficiencies in the studies are specified below.

In the *recommends* part of the new proposed Recommendation ITU-R M.[BSMS700] two levels of out-of-band emissions (be more precise “unwanted emissions”) from IMT mobile terminals in the frequency band below 694 MHz for the protection of exiting services are proposed. However, these two levels proposed in the draft Recommendation do not fully address protection of existing services, having allocations below 694 MHz and do not provide clear “guidance to administrations on specific out-of-band emission (OOBE) level of IMT mobile stations operating in the frequency band 694-790 MHz”. The content of this draft is not in consistency with the title and the scope, which claim that the purpose is “protection of existing services in Region 1 in the frequency band below 694 MHz”. For example *recommends* 1 and 2 of this draft Recommendation contradict each other providing different levels to protect systems of existing services without explaining how it relates to the protection of other services or interference potential into receivers.

From the text of the new draft Recommendation ITU-R M.[BSMS700] it is impossible to derive for which services the protection has been recommended, even though the proposed values have been originally considered within JTG 4-5-6-7 only for broadcasting service. It is necessary to further and properly address the protection of stations of the broadcasting service in close collaboration with WP 6A and SG 6 to resolve all missing elements. Further studies are required to address the protection of several services having allocations in the frequency band below 694 MHz. According to § 6.1.2 NOTE 3 of Resolution ITU-R 1-6 “Study Groups developing Recommendations that include sharing criteria for radiocommunication services must obtain agreement, prior to their adoption, of the Study Groups responsible for those services”. These further studies must be carried out in close collaboration with the relevant Study Groups/Working Parties.

Furthermore, the draft new Recommendation ITU-R M.[BSMS700] does not provide any additional type of information on unwanted emissions comparing with Recommendation ITU-R M.2071 on generic unwanted emission characteristics of mobile stations using the terrestrial radio interfaces of IMT-Advanced. Moreover, Recommendation ITU-R M.2071 is being developed in more detailed and constructive manner involving consultation with relevant standardization organizations. Having two ITU-R Recommendations providing guidance on the same issues may lead to duplication and may create inconsistencies between them in the future.

It is should be noted that the draft new Recommendation ITU-R M.[BSMS700] that has significant number of not-resolved technical issues and should not be even considered by RA-15 in accordance with Resolution ITU-R 1-6. As WP 5D or SG 5 has no mandate to develop ITU-R Recommendations or Reports in relation to WRC-15 AI 1.2 the consideration of the draft new Recommendation ITU-R M.[BSMS700] is subject to §10.2.1.2 b) of Resolution ITU-R 1-6. In accordance with this paragraph the draft new Recommendation ITU-R M.[BSMS700] could be sent for the consideration of RA-15 only “with sufficient evidence reached by consensus that the technical objection has already been adequately addressed”, which hasn’t been done by WP 5D or SG 5 at all.

Summary

This Recommendation provides guidance to administrations on specific out-of-band emission (OOBE) level of IMT mobile stations operating in the frequency band 694-790 MHz for the frequency band below 694 MHz in Region 1 for protection of existing services.

DRAFT NEW RECOMMENDATION ITU-R M.[BSMS700]

Specific out-of-band emission limit of IMT mobile stations operating in the frequency band 694-790 MHz for protection of existing services in
Region 1 in the frequency band below 694 MHz

Scope

This Recommendation provides guidance to administrations on specific out-of-band emission (OOBE) level of IMT mobile stations operating in the frequency band 694-790 MHz for the frequency band below 694 MHz in Region 1 for protection of existing services.

The ITU Radiocommunication Assembly,

considering

*a)* that Recommendations ITU-R M.1581 and ITU-R M.[IMT OOBE MS] specify the generic unwanted emission characteristics of IMT-2000 and IMT Advanced mobile stations, respectively;

*b)* that Recommendation ITU-R M.1036 provides the frequency arrangements of IMT networks, including those to be used in the band 694-790 MHz;

*c)* that Resolution **232 (WRC-12)** has invited the ITU-R to study the compatibility between the mobile service and other primary services to which the frequency band is allocated, including in adjacent frequency bands;

*d)* that the out-of-band emissions of IMT mobile stations operating in Region 1 in the frequency band 694-790 MHz need to be limited;

*e)* that too stringent limits may lead to an increase in size, cost or in complexity of IMT radio equipment;

*f)* the need to facilitate global harmonization and circulation of equipment to ensure roaming and promote economies of scale;

*g)* that administrations decide on the channel bandwidth which is to be used by the user equipment;

*h)* that in some countries of Region 1 the deployment of IMT systems in the 700 MHz band is expected to start immediately after WRC-15,

recognizing

*a)* that a limit on the OOBE from IMT mobile stations is one of the factors necessary for the protection of the existing services in the band below 694 MHz;

*b)* that the recommended IMT mobile station OOBE limit should satisfy the following conditions:

• manage the risk of interference from mobile usage;

• being technically feasible from the point of view of practical implementation of IMT mobile stations; and

• to achieve global harmonization of mobile stations;

*c)* that different OOBE limits for IMT mobile stations operating in the 700 MHz band have been considered by Region 1 administrations;

*d)* that ITU-R studies indicate different OOBE limits into bands below 694 MHz including:

• −25 dBm/8 MHz for up to 20 MHz IMT channel bandwidth;

• −42 dBm/8 MHz for up to 10 MHz IMT channel bandwidth;

• −56 dBm/8 MHz for up to 10 MHz IMT channel bandwidth,

noting

a) that ITU-R studies were based on the lower duplexer of A5 channelling arrangement in Recommendation ITU-R M.1036 (i.e. uplink in 703-733 MHz) and a maximum output power of 23 dBm;

*b)* that an OOBE limit of −26.2 dBm/6 MHz for an IMT mobile station using the A5 channelling arrangement is applicable within a regional organization and is included in the relevant 3GPP specification;

*c)* that new relevant 3GPP specifications contain an OOBE limit of −25 dBm/8 MHz for up to 20 MHz IMT channel bandwidth and a value of −42 dBm/8 MHz for 10 MHz IMT channel bandwidth;

*d)* that existing mobile devices not complying with the OOBE limit referred to in *recommends* 2 might continue to be deployed,

recommends

1 that the out-of-band emissions of an IMT mobile station operating in Region 1 in the frequency band 703-733 MHz with an IMT channel bandwidth greater than 10 MHz should not exceed −25 dBm/8 MHz into the frequency band 470-694 MHz;

2 that the out-of-band emission of an IMT mobile station operating in Region 1 in the frequency band 703-733 MHz with an IMT channel bandwidth of 10 MHz or less should not exceed −42 dBm/8 MHz into the frequency band 470-694 MHz;

3 that administrations should, when deciding on the relevant channel bandwidth, take into account *recommends* 1 and 2.

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