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| A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23) Dubai, 20 November - 15 December 2023** | |  |
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| PLENARY MEETING | | **Document 122-E** | |
|  | | **30 October 2023** | |
|  | | **Original: English** | |
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| Lao People's Democratic Republic/Viet Nam (Socialist Republic of) | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
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| Agenda item 10 | | | |

10to recommend to the ITU Council items for inclusion in the agenda for the next world radiocommunication conference, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the ITU Convention and Resolution **804 (Rev.WRC‑19)**,

Background

Since ITU initiated the studies on International Mobile Telecommunications (IMT) in 1985, IMT has evolved not only for providing the international mobile telecommunications but also for supporting the development of various industry sectors. Furthermore, IMT will be an important enabler of achieving the UN Sustainable Development Goals (SDGs) and societal, economic, environmental, and cultural development.

The evolution of IMT has been facilitated through the identification of the frequency bands for IMT in the ITU Radio Regulations (RR). In the early stage of the identification of IMT spectrum, global harmonized use of IMT was the main purpose. However, it is now well recognized that the identification of IMT spectrum is also associated with the information on proper conditions regarding how IMT could share the frequency bands with other incumbent services through the provisions in the RR.

These provisions in the RR gives flexibility for Members to use the identified IMT frequency bands in accordance with their own national spectrum policies.

Considering the enlargement of usage scenario of IMT, the development of technology which also enables the sharing of the frequency bands with other incumbent services and IMT identification for the proper use of IMT, ITU (collectively of Members) should continue exploring new identification of IMT spectrum in order not only to keep providing a way of efficient use of spectrum but also to assist Members to use/select those identified frequency bands for IMT according to their own national spectrum policies.

At the past WRCs, while the frequency ranges below 7.125 GHz and between 24.25 GHz and 86 GHz were extensively discussed for IMT, other frequency ranges were not thoroughly studied. Therefore, it would be useful to study some specific frequency bands for IMT from the frequency ranges that were not fully studied previously considering the needs for IMT to provide broadband capacity together with a certain level of coverage. As an example, one country started an examination of the frequency band 12.7 GHz for next-generation wireless services, including 5G (IMT-2020), 6G (IMT-2030), and beyond[[1]](#footnote-1). For this study, it is essential to keep in mind that there were some reasons why some of these frequency ranges were not considered for IMT at the past WRCs, such as heavy use of spectrum by the incumbent services and requirements of their protection and their future development.

There is a significant gap of time between the identification of frequency bands for IMT in the ITU Radio Regulations and the implementation and deployment of IMT systems in those bands. Therefore, timely identification of IMT spectrum in the ITU Radio Regulations is important to support the development of IMT, while considering the need to protect existing services and to allow for their continued development.

Proposals

ADD LAO/VTN/122/1

Draft New Resolution [LAO/VTN-WRC‑27 AGENDA on IMT] (WRC‑23)

Agenda for the 2027 World Radiocommunication Conference

The World Radiocommunication Conference (Dubai, 2023),

…

resolves

to recommend to the Council that a world radiocommunication conference be held in 2027 for a maximum period of four weeks, with the following agenda:

1 on the basis of proposals from administrations, taking account of the results of WRC‑23 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the frequency bands under consideration, to consider and take appropriate action in respect of the following items:

…

1.[X] to consider identification of frequency bands in the frequency range 7.125-15.35 GHz for the future development of terrestrial component of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution **[AI 10‑IMT @ 7.125-15.35 GHz] (WRC‑23)**;

…

**Reasons:** There is a significant gap of time between the identification of frequency bands for terrestrial component of IMT in the ITU Radio Regulations and the implementation and deployment of IMT systems in those bands. There are robust demands to access new spectrum for terrestrial component of IMT. The availability of wide and contiguous bandwidth of spectrum is important to support the development of IMT as well as the growth of traffic in IMT networks.   
Therefore, timely identification of IMT spectrum in the ITU Radio Regulations is important to support the development of IMT, while considering the need to protect existing services and to allow for their continued development.

ADD LAO/VTN/122/2

Draft New Resolution [AI 10-IMT @ 7.125-15.35 GHz] (WRC‑23)

Studies on frequency-related matters for IMT identification including possible additional allocations to the mobile services on a primary basis in portion(s) of the frequency range between 7.125 GHz and 15.35 GHz for the future development of terrestrial component of IMT for 2030 and beyond

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that International Mobile Telecommunications (IMT) is intended to provide telecommunication services on a worldwide scale, regardless of location and type of networks or terminals;

*b)* that IMT systems are now being evolved to provide diverse usage scenarios such as [to be clarified at a later stage based on the progress of studies by WP 5D], and applications including fixed broadband;

*c)* the development of IMT for 2030 and beyond is to continue improving quality of life for all and to expand its goals towards societal, environmental, cultural and economic sustainability;

*d)* that some of the frequency bands below 7 125 MHz and between 24.25 and 86 GHz have been studied and identified for IMT in the ITU Radio Regulations (RR) globally, regionally and/or nationally;

*e)* the identification of spectrum for IMT – in the RR provides the information not only for the harmonized use of radio spectrum but also for the proper use of radio spectrum for IMT, which enables IMT to achieve sharing and compatibility with other applications and services in the same and/or adjacent frequency bands;

*f)* that while the frequency bands are identified for IMT, some countries have not been used or not be planned for use by IMT due to different spectrum usage for other applications and services;

*g)* that continuation of studies regarding additional identification for IMT spectrum is needed in order to provide proper conditions for a use of IMT, which provide sharing and compatibility with other incumbent applications, and then to give flexibility for administrations to select the frequency bands among those identified bands for IMT;

*h)* that at previous WRCs, frequency ranges other than those mentioned in *considering* *d)* were not thoroughly studied;

*i)* that it may be required to study additional spectrum requirements to meet the gigabit-per-second user data rate, high quality of user experience (QoE) and user demands in dense urban areas and/or in peak times;

*j)* that the ITU Radiocommunication Sector has been working on standardization for IMT for 2030 and beyond;

*k)* that adequate and timely availability of spectrum and supporting regulatory provisions is essential to support the future development of IMT and to realize the objectives in Recommendation ITU‑R M.[IMT.FRAMEWORK FOR 2030 AND BEYOND];

*l)* that harmonized worldwide frequency bands and harmonized frequency arrangements for IMT are highly desirable in order to achieve global roaming and the benefits of economies of scale;

*m)* that identification of additional frequency bands for IMT may change the sharing situation regarding applications of all services to which the frequency band is already allocated, and may require additional regulatory actions;

*n)* that IMT has effectively shared the limited spectrum resource with other services and applications through the provisions in the RR;

*o)* the need to protect existing services and to allow for their continued development when considering frequency bands for possible additional allocations to any service,

noting

*a)* that Resolution ITU‑R 65 addresses the principles for the process of development of IMT for 2030 and beyond;

*b)* that IMT encompasses IMT‑2000, IMT‑Advanced, IMT‑2020 [and IMT‑2030] collectively, as described in Resolution ITU‑R 56;

*c)* that Question ITU‑R 229/5 seeks to address the further development of IMT;

*d)* that Question ITU‑R 262/5 addresses the study of usage of IMT systems for specific applications;

*e)* Recommendation ITU‑R M. [IMT.FRAMEWORK FOR 2030 AND BEYOND], on the framework and objectives of the future development of IMT for 2030 and beyond;

*f)* that Report ITU‑R M.2516 addresses future technology trends of terrestrial IMT systems;

*g)* Report ITU‑R M.2376, on technical feasibility of IMT in bands above 6 GHz;

*h)* that No.**5.340** lists the frequency bands where all emissions are prohibited,

recognizing

*a)* that there is a lead time between the allocation of frequency bands by world radiocommunication conferences and the deployment of systems in those bands, and that timely availability of wide and contiguous blocks of spectrum is therefore important to support the development of IMT;

*b)* that in order to ensure the future development of IMT it is important to ensure the timely identification of additional spectrum;

*c)* the developments in new spectrum sharing techniques including use of Artificial Intelligence, Machine Learning, Integrated Access & Backhaul, Dynamic Spectrum Access, etc.;

*d)* that various frequency bands in the frequency range 7.125-15.35 GHz are being used extensively by incumbent services, including satellite-based services;

*e)* that any identification of frequency bands for IMT should take into account the use of the frequency bands by other services and the evolving needs of these services;

*f)* there should be no additional regulatory or technical constraints imposed to services to which the band is currently allocated on a primary basis;

*g)* that the preamble of the RR provides objectives including: *to facilitate the efficient and effective operation of all radiocommunication services; and to provide for and, where necessary, regulate new applications of radiocommunication technology*,

resolves to invite ITU Radiocommunication Sector

1 to conduct and complete in time for WRC‑27 the appropriate studies of technical, operational and regulatory issues pertaining to the possible use of the terrestrial component of IMT in the frequency bands listed in *resolves to invite the ITU Radiocommunication Sector*2, taking into account:

– evolving needs to meet emerging service demand;

– situations with high data traffic demands, such as in dense urban areas and/or in peak times;

– technical and operational characteristics of IMT systems that would operate in these specific frequency bands, including the evolution of IMT through advances in technology and enabling technique;

– the deployment scenarios envisaged for IMT systems and the related requirements of balanced coverage and capacity;

– the time-frame in which spectrum would be needed;

2 to conduct and complete in time for WRC‑27 the sharing and compatibility studies[[2]](#footnote-2)1, with a view to ensuring the protection of services to which the frequency band is allocated on a primary basis, without imposing additional regulatory or technical constraints on those services, and also, as appropriate, on services in adjacent bands, for the frequency bands:

– portions of the frequency range 7 125-8 500 MHz;

– portions of the frequency range 8 500-10 000 MHz, some of which may require additional allocations to the mobile service on a primary basis;

– 12.75-13.25 GHz;

– 13.25-14.3 GHz, some of which may require additional allocations to the mobile service on a primary basis;

– 14.5-15.35 GHz,

resolves

1 to invite the first session of the Conference Preparatory Meeting for WRC‑27 to define the date by which technical and operational characteristics needed for sharing and compatibility studies are to be available to ensure that studies referred to in *resolves to invite the ITU Radiocommunication Sector* can be completed in time for consideration at WRC‑27;

2 to invite WRC‑27 to consider, based on the results of the above studies, additional spectrum allocations to the mobile service on a primary basis and to consider identification of frequency bands for the terrestrial component of IMT, the frequency bands to be considered being limited to part or all of the frequency bands listed in *resolves to invite the ITU Radiocommunication Sector*2,

invites administrations

to participate actively in these studies by submitting contributions to the ITU Radiocommunication Sector.

encourages Member States, Sector Members, Academia, and Associates

to participate in the studies by submitting contributions to ITU‑R.

**Reasons:** There is a significant gap of time between the identification of frequency bands for terrestrial component of IMT in the Radio Regulations and the implementation and deployment of IMT systems in those bands. There are robust demands to access new spectrum for terrestrial component of IMT. The availability of wide and contiguous bandwidth of spectrum is important to support the development of IMT as well as the growth of traffic in IMT networks.   
Therefore, frequency bands studied within Resolution **[AI 10‑IMT @7.125-15.35 GHz]** **(WRC‑23)** could support both coverage and capacity demands of IMT‑030, while considering the need to protect existing services and to allow for their continued development.

ANNEX

Proposal for WRC‑27 agenda item for identification of   
new frequency bands for IMT

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| ***Subject:*** Proposal for a new WRC-27 agenda item to consider identification of specific frequency bands in the frequency range 7.125-15.35 GHz for International Mobile Telecommunications (IMT) | |
| ***Origin:*** Lao (People's Democratic Republic) and Viet Nam (Socialist Republic of) | |
| ***Proposal:***  to consider identification of specific frequency bands in the frequency range 7.125-15.35 GHz for International Mobile Telecommunications (IMT), in accordance with Resolution **[AI 10-IMT @ 7.125-15.35 GHz] (WRC‑23)**; | |
| ***Background/reason:***  Since ITU initiated the studies on IMT in 1985, IMT has evolved not only for providing the international mobile telecommunications but also for supporting the development of various industry sectors. Furthermore, IMT will be an important enabler of achieving the UN Sustainable Development Goals (SDGs) and societal, economic, environmental, and cultural development.  The evolution of IMT has been facilitated through the identification of the frequency bands for IMT in the ITU Radio Regulations (RR). In the early stage of the identification of IMT spectrum, global harmonized use of IMT was the main purpose. However, it is now well recognized that the identification of IMT spectrum is also associated with the information on proper conditions regarding how IMT could share the frequency bands with other incumbent services through the provisions in the RR.  These provisions in the RR gives flexibility for Members to use the identified IMT frequency bands in accordance with their own national spectrum policies.  Considering the enlargement of usage scenario of IMT, the development of technology which also enables the sharing of the frequency bands with other incumbent services and IMT identification for the proper use of IMT, ITU (collectively of Members) should continue exploring new identification of IMT spectrum in order not only to keep providing a way of efficient use of spectrum but also to assist Members to use/select those identified frequency bands for IMT according to their own national spectrum policies.  At the past WRCs, while the frequency ranges below 7.125 GHz and between 24.25 GHz and 86 GHz were extensively discussed for IMT, other frequency ranges were not thoroughly studied. Therefore, it would be useful to study some specific frequency bands for IMT from the frequency ranges that were not fully studied previously considering the needs for IMT to provide broadband capacity together with a certain level of coverage. As an example, one country started an examination of the 12.7 GHz frequency band for next-generation wireless services, including 5G (IMT-2020), 6G (IMT-2030), and beyond[[3]](#footnote-3). For this study, it is essential to keep in mind that there were some reasons why some of these frequency ranges were not considered for IMT at the past WRCs, such as heavy use of spectrum by the incumbent services and requirements of their protection and their future development.  There is a significant gap of time between the identification of frequency bands for IMT in the ITU Radio Regulations and the implementation and deployment of IMT systems in those bands. Therefore, timely identification of IMT spectrum in the ITU Radio Regulations is important to support the development of IMT, while considering the need to protect existing services and to allow for their continued development. | |
| ***Radiocommunication Services concerned:***  – Portions of the frequency range 7 125-8 500 MHz;  – Portions of the frequency range 8 500-10 000 MHz, some of which may require additional allocations to the mobile service on a primary basis;  – 12.75-13.25 GHz;  – 13.25-14.3 GHz;  – 14.5-15.35 GHz; | |
| ***Indication of possible difficulties:***  The proposed frequency bands are widely used for other services on a co-primary basis. | |
| ***Previous/ongoing studies on the issue:***  The following studies have been initiated and are now ongoing in ITU-R Working Party 5D:  – Report ITU-R M.2516,  – Draft new Recommendation ITU-R M.[IMT.FRAMEWORK FOR 2030 AND BEYOND] | |
| ***Studies to be carried out by:***  ITU-R SG 5/WP 5D | ***with participation of:***  Administrations and Sector members of the ITU-R |
| ***ITU-R Study Groups concerned:***  SG 5/WP 5A, 5B, 5C; SG 4/WP 4A; SG 7/WP 7B | |
| ***ITU resource implications, including financial implications (refer to CV 126):***  This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. As the responsible group on IMT matters, ITU-R WP 5D usually has meetings three times a year, each of which lasts around 10 days. | |
| ***Common regional proposal:*** | ***Multicountry Proposal:*** Yes  ***Number of countries:*** 2 |
| ***Remarks*** | |

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1. <https://www.fcc.gov/document/fcc-examine-127-ghz-band-next-gen-wireless> [↑](#footnote-ref-1)
2. 1 Including studies with respect to services in adjacent bands, as appropriate. [↑](#footnote-ref-2)
3. <https://www.fcc.gov/document/fcc-examine-127-ghz-band-next-gen-wireless> [↑](#footnote-ref-3)