

**ITUWRS**  
ONLINE2020

29<sup>TH</sup> WORLD RADIOCOMMUNICATION SEMINAR  
**30 November - 11 December 2020**

# ITU-R SG5 **Terrestrial Services**

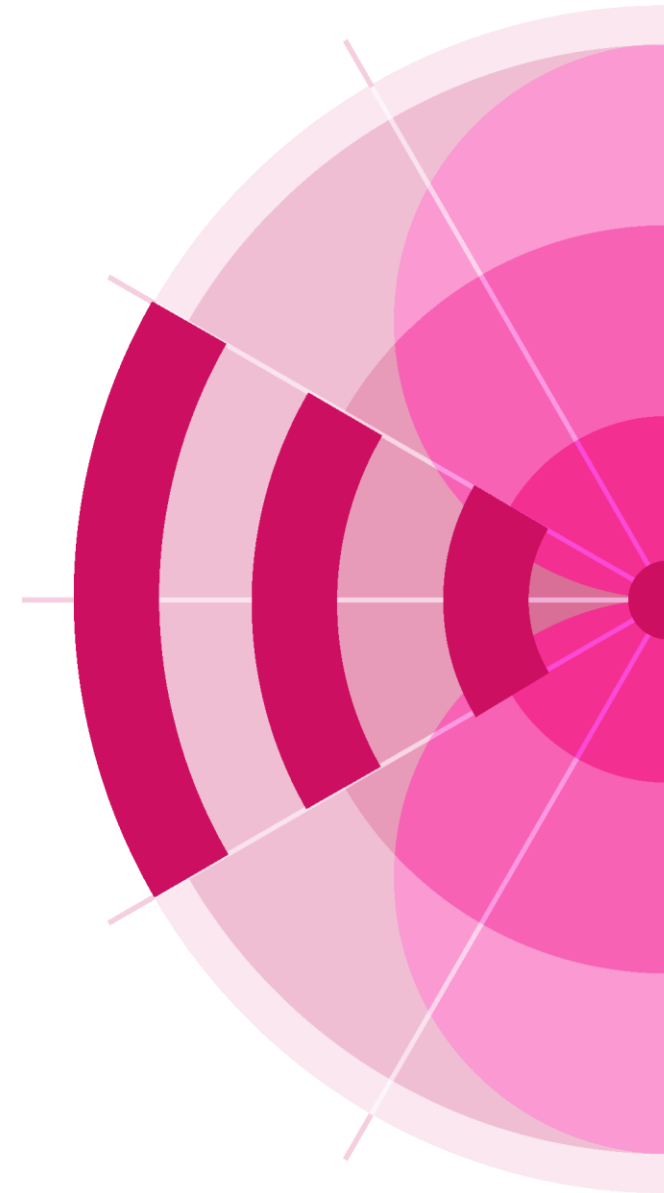
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BR/SGD

[www.itu.int/go/wrs-20](http://www.itu.int/go/wrs-20)

#ITUWRS



# Hot Topics in ITU-R SG 5 (Terrestrial Services)

- Land mobile and amateur service
- Maritime mobile / aeronautical mobile / radiodetermination service
- Fixed wireless systems
- New Recommendation on IMT-2020 / 5G

# ITU-R Handbooks / Guides

- **ITU-R Handbooks** provide a **statement of the current knowledge**, the **present position of studies** or **technical practise** in certain aspects of radiocommunications.
- **“Amateur and amateur-satellite services”**
- **“Land Mobile Handbook”**
  - **Vol. 4: Intelligent Transport Systems (ITS)**
    - Description of wireless communications used in ITS
    - Summary of current and future ITS-applications
    - Explanation of ITS system / communication architecture
- **Guide to the use of ITU-R texts relating to**
  - the land mobile service, including wireless access in the fixed service
  - the amateur and amateur-satellite services



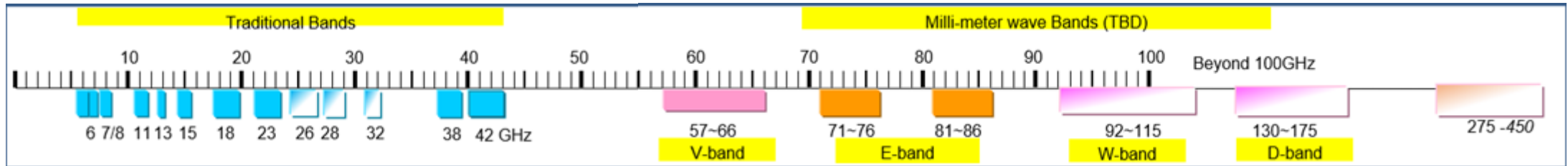
*New, 2020-Version (in 6 languages) available beginning of 2021*

# Maritime mobile / aeronautical mobile / radiodetermination service

- **Kaleidoscope of topics from recent and current work**
  - Increasing of **safety and efficiency of maritime and aviation** by the introduction of digital technology (**Rec. M.2092**)
  - **Broadband on board** (**Rec. M.2085**)
  - Expanding **coverage by satellite** (**Rep. M.2435**)
  - Introduction of **e-navigation** and work on **enhancing GMDSS, GADSS** (e.g. **Rep. M.2459**)
  - Regulatory framework for **unmanned transport** (**Rec. M.2135**) and **suborbital flights** (**Rep. M.2477**)

# Fixed wireless systems

Trend: Wider carrier bandwidth to provide high-capacity traffic and increased use of high frequencies



Traditional bands  
Provide of wider channels (BW = 110 to 220 MHz) :

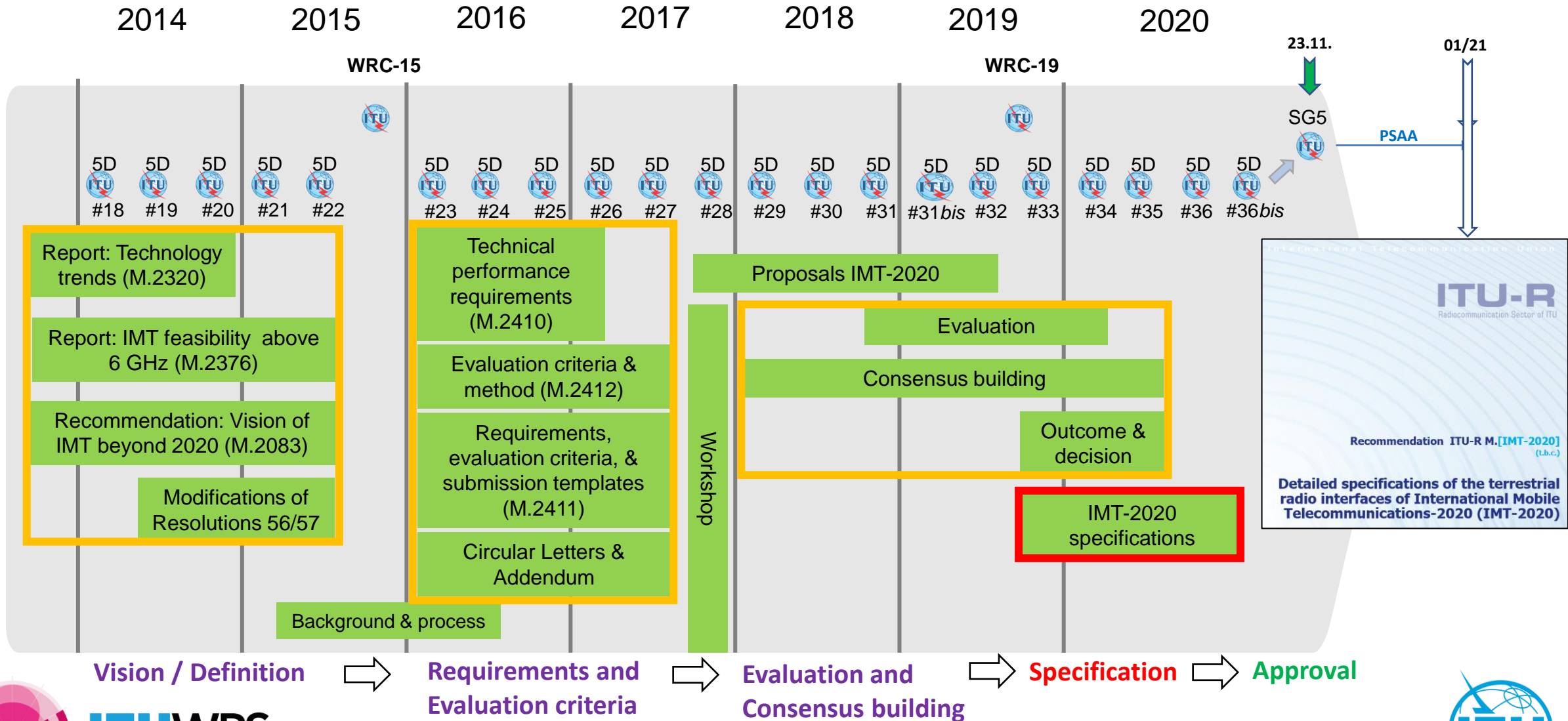
Rec. ITU-R	Frequency (GHz)	Max channel BW (MHz)	status
F.383-9	5.925 - 6.425	56	approval
F-387	10.7-11.7	56, 112	approved
F.634	14.4-15.35	112	approved
F.595	17.7-19.7	220	ongoing
F.637	21.2-23.6	112	ongoing
F.1520	31.8-33.4	224	ongoing
F.749	36-40.5	112	ongoing
F.2005	40.5 to 43.5	224	ongoing

High Frequency I bands  
71-76 and 81-86 GHz : Use increasing  
92-174.8 GHz : standards development ongoing  
Above 275 GHz : studies ongoing

Rec.	Frequency (GHz)	Channel BW (MHz)	status
F.2006	71-76 /81-86	250 or multiples	approved
F-[W band]	92-94 GHz, 94.1-100 GHz, 102-109.5 GHz and 111.8 114.25	250 or multiples	ongoing
F-[D band]	130-134 GHz, 141-148.5 GHz, 151.5-164 GHz and 167-174.8	250 or multiples	ongoing

Frequency bands 275 – 450 GHz : Report F. 2416 available, revision ongoing

# Timeline for IMT-2020



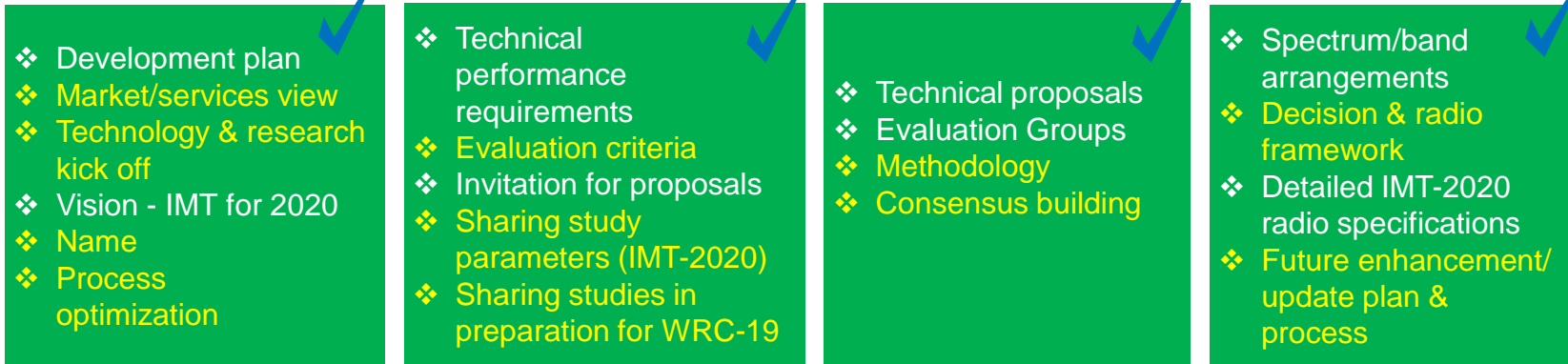
Note: Meeting #36bis was a focused meeting (technology) for finalization of Step 8 of the IMT-2020 process and completing draft new Recommendation ITU-R M.[IMT-2020.SPECS]

(ITU-R WP 5D)



# IMT-2020 / 5G Process

## IMT-2020 radio interface standardization process



### New Report

ITU-R M.[**IMT.FUTURE TECHNOLOGY TRENDS TOWARDS 2030 AND BEYOND**]

- ❖ future technical aspects of terrestrial IMT systems considering the time frame up to 2030 and beyond.

## IMT-2020 spectrum allocation process



2012-2015

2016-2017

2018-2019

2019-2020

Setting the stage for the future:  
vision, spectrum, and technology views

Defining the technology,  
Allocate the spectrum

WP5D #36bis  
17.-19.11.20

WP5D #38  
06/2021

WP5D #39  
10/2021

Input requested from  
External Organisations  
(WP5D #36, 10/2020)

(ITU-R WP 5D)



ITU – Radiocommunication Bureau

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