Information & Communication Technologies Authority

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DECISION OF 22 DECEMBER 2025 ON THE OPENING OF THE 700 MHZ FREQUENCY BANDS FOR TESTING AND OPERATION OF IMT NETWORKS, INCLUDING 5G

22 DECEMBER 2025

1.0 BACKGROUND

5G is the 5th generation of wireless networks, a significant evolution of the 4G LTE networks. 5G has been designed to meet the very large growth in data and connectivity of today's modern society, the Internet of things (IoT) with billions of connected devices and tomorrow's innovations. The 5G wireless network enables high-speed data transmission with ultra-low latency.

The World Radiocommunication Conference 2012 (WRC-12) decided to allocate the frequency band 694-790 MHz in the ITU Region 1 to the mobile, except aeronautical mobile, service on a primary basis and identified this band for International Mobile Telecommunications (IMT). This allocation became effective immediately after WRC-15 in November 2015.

The ICT Authority recognizes the importance of harmonized frequency arrangements for Mobile Communications Networks and the need for common technical conditions for Public Land Mobile Network (PLMN) operators in the band 694-790 MHz, based on international best practices. A licensed PLMN operator with the ICT Authority shall be referred to as Mobile Network Operator (MNO) in this document.

The technical parameters and limits for operation within the 700 MHz frequency band are being specified in this Decision so as to enable the operation of terrestrial IMT Systems including 5G New Radio (5G NR).

2.0 DECISION ON THE INTRODUCTION OF IMT SERVICES IN THE 694 – 790 MHZ FREQUENCY BAND

The ICT Authority,

Considering,

a) that WRC-12 allocated the frequency band 694-790 MHz in the ITU Region 1 to the mobile, except aeronautical mobile, service on a primary basis and identified the band for IMT, with this allocation being effective immediately after WRC-15;
b) that the frequency band 694-790 MHz is also allocated in the ITU Region 1 to the broadcasting service on a primary basis;
c) that in Mauritius the broadcasting service has already vacated the 694-790 MHz frequency band;
d) that the protection of the broadcasting service below 694 MHz from MNOs requires appropriate technical measures including guard bands and emission limits;
e) that the ICT Authority has adopted a technology neutral approach and supports the deployment of mobile technologies that can technically co-exist within the international regionally harmonised mobile bands;
f) that the ICT Authority supports an equitable access to spectrum approach for all MNOs with a view to create a level playing field;

g) that harmonized technical conditions (including a harmonized frequency arrangement) will support the implementation of MNOs in this band and facilitate global roaming, economies of scale, and availability of low-cost equipment;

h) that in Recommendation ITU-R M.1036, the 2x30 MHz frequency arrangement (703-733 / 758-788 MHz) is as per channelling arrangement A7. The said frequency arrangement and is also contained in 3GPP specifications as part of operating band 28;

i) that coexistence with potential 800 MHz band deployment is achieved by placing the 700 MHz downlink band (using conventional duplex arrangement) adjacent to potential 800 MHz downlink band;

j) that radio equipment under the scope of this Decision shall comply with applicable national type approval requirements and international standards.

Decides,

i. that the frequency band 694-790 MHz be made available to MNOs for testing, and upon successful outcome, operation of terrestrial IMT systems, including 5G New Radio as per frequency arrangement specified in Table 1 below;

Table 1

Frequency Range (MHz)	**694-703**	**703-733**	**733-758**	**758-788**	**788-791**
Designation	Guard Band	Uplink (FDD)	Duplex Spacing	Downlink (FDD)	Guard Band
Bandwidth	9 MHz	30 MHz	25 MHz	30 MHz	3 MHz

ii. that the assigned block sizes shall be in multiples of 5 MHz;

iii. that Mobile Network Operators: -

a. shall comply with the technical parameters and standardisation requirements as specified in Annex 1, and Annex 2 of this document;

b. shall comply with the technical parameters as specified in Annex 3 for operation in the 791-821 MHz frequency band;

c. shall comply with all applicable licensing requirements and type approval procedures as determined by the ICT Authority;

d. may apply for a test licence and shall carry out tests as per the methodology at Annex 4;

e. shall communicate their testing plans to the ICT Authority in accordance with their licence conditions;

f. shall bear their own costs for the purposes of implementing this Decision;

iv. that, following a successful testing phase, the ICT Authority shall invite MNOs to apply for network spectrum licence in the 700 MHz frequency band;

v. that this Decision comes into force on 22 December 2025 for testing of terrestrial IMT systems, including 5G New Radio in the 700 MHz frequency band.

ANNEX 1
TECHNICAL PARAMETERS FOR OPERATION OF IMT SYSTEMS IN THE 694 – 790 MHz FREQUENY BAND[1]

A1.1 BASE STATION

The following technical parameters for base stations called block edge mask (BEM) are an essential component of conditions necessary to ensure coexistence between neighbouring networks, in the absence of bilateral or multilateral agreements between operators of such neighbouring networks. Less stringent technical parameters, if agreed among the operators of such networks, may also be used.

A BEM is an emission mask that is defined, as a function of frequency, relative to the edge of a block of spectrum that is licensed to an operator. It consists of in-block and out-of-block components which specify the permitted emission levels over frequencies inside and outside the licensed block of spectrum respectively. In-block power limit is used for the block assigned to the operator. The out-of-block component of the BEM itself consists of a baseline level and, where applicable, intermediate (transition) levels which describe the transition from the in-block level to the baseline level as a function of frequency.

Table 1.1

BEM element	Definition
In-block	Block for which the BEM is derived.
Baseline	Spectrum used for MNOs UL and DL, for Digital Terrestrial Television (DTT), for MNOs above 790 MHz (UL and DL)
Transitional region	The transitional region applies from 0 to 10 MHz below and above the block assigned to the MNO, except from in the uplink region of 700 MHz IMT band (703-733 MHz)
Guard bands	Spectrum between the DTT allocation below 694 MHz and the lower edge of the 700MHz IMT band uplink (694-703 MHz); Spectrum between the upper edge of 700 MHz IMT band downlink below 788 MHz and the lower edge of 800 MHz IMT band downlink (788-791 MHz). In case of overlap between transitional regions and guard bands, transitional power limits are used.
Duplex Spacing	Spectrum in the FDD duplex separation 733 – 758 MHz

[1] ADAPTED FROM ECC Decision (15)01

Power limits for operation of Base Stations in the 700 MHz frequency band are given in Table 1.2.

Table 1.2

Frequency Range	Maximum mean e.i.r.p.	Measurement Bandwidth
Block assigned to the operator	64 dBm/5 MHz per antenna	5 MHz
Uplink frequencies in the range 698-743 MHz	-50 dBm per cell*	5 MHz
Uplink frequencies in the range 832-862 MHz	-49 dBm per cell*	5 MHz
Downlink frequencies in the range 738-791 MHz	16 dBm per antenna	5 MHz
Downlink frequencies in the range 791-821 MHz	16 dBm per antenna	5 MHz
Mobile Base Station transition requirements in the range 733-788 MHz		
–10 to –5 MHz from lower block edge	18 dBm per antenna	5 MHz
–5 to 0 MHz from lower block edge	22 dBm per antenna	5 MHz
0 to +5 MHz from upper block edge	22 dBm per antenna	5 MHz
+5 to +10 MHz from upper block edge	18 dBm per antenna	5 MHz
Mobile Base Station transition requirements above 788 MHz		
791-796 MHz for block with upper edge at 788 MHz	19 dBm per antenna	5 MHz
791-796 MHz for block with upper edge at 783 MHz	17 dBm per antenna	5 MHz
796-801 MHz for block with upper edge at 788 MHz	17 dBm per antenna	5 MHz

Mobile Base Station Requirements for the FDD duplex gap		
-10 to 0 MHz offset from DL lower band edge	16 dBm per antenna	5 MHz
More than 10 MHz offset from DL lower band edge	-4 dBm per antenna	-4 dBm per antenna
Mobile Base Station Requirements for spectrum in guard bands		
Spectrum between broadcasting band edge and FDD uplink lower band edge (694-703 MHz)	-32 dBm per cell*	1 MHz
Spectrum between downlink upper band edge and downlink of 800 MHz IMT band (788-791 MHz)	14 dBm per antenna	3 MHz
Mobile Base Station Baseline requirements for DTT spectrum		
For DTT frequencies below 694 MHz where broadcasting is protected	-23 dBm per cell*	8 MHz

(*) In a multi sector site "cell" refers to one of the sectors.

A1.2 TERMINAL STATION

For the terminal station, BEM consists of an in-block maximum power level of 23 dBm and further requirements as specified in relevant ETSI Standard.

ANNEX 2
STANDARDISATION REQUIREMENTS

The base stations and terminal stations shall comply with ETSI standards as specified in Table A2.1 below.

Table 2.1

	Base Station Equipment	**Terminal Station Equipment**
Spectrum 5G NR	ETSI EN 301 908-23	ETSI EN 301 908-25
	ETSI EN 301 908-24	
Spectrum LTE	ETSI EN 301 908-14	ETSI EN 301 908-13
EMC	ETSI EN 301 489-1	ETSI EN 301 489-1
	ETSI EN 301 489-50	ETSI EN 301 489-52
Safety	EN 62368-1	EN 62368-1
EMF safety		EN 50360 (applicable to mobile phones)

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ANNEX 3

ADDITIONAL TECHNICAL PARAMETERS FOR OPERATION OF IMT SYSTEMS IN THE 791 – 821 MHz FREQUENY BAND[2]

Table 3.1

Frequency range of out-of-block emissions	Maximum mean out-of-block EIRP	Measurement bandwidth
–10 to –5 MHz from lower block edge of a block of spectrum that is licensed to an operator	18 dBm	5 MHz
–5 to 0 MHz from lower block edge of a block of spectrum that is licensed to an operator	22 dBm	5 MHz

[2] ADAPTED FROM ECC Decision (09)03

ANNEX 4

Test Methodology

1. Pre-requisite

1.1 The main objective of this testing exercise is to assess the impact of mobile broadband services in the 700 MHz frequency band on the Digital Terrestrial Television (DTT) operating in the 470 – 694 MHz frequency band.

1.2 The ICT Authority is proposing a prudent approach to the conduct of this testing exercise to ensure minimal disruption to DTT services and to protect consumer interests.

1.3 Licensed MNOs are invited to participate actively in the testing phases.

1.4 MNOs shall be required to apply for and take out a test licence from the ICT Authority prior to the start of the testing exercise.

1.5 Each participating MNO shall:

a. Conduct a public communication campaign through TV and radio, among other media channels, 7 days prior to the conduct of the test and shall continue until the testing exercise has been completed.

b. Establish and operate a dedicated hotline to register complaints from the public during the testing period.

c. Appoint installers to attend to the complaints arising from the tests and to install appropriate filters where necessary. The ICT Authority shall validate the technical specifications of the filters prior to testing.

1.6 MNOs shall inform the general public of:

- the start and purpose of the tests,
- all test locations,
- possible issues that may be experienced and
- the dedicated hotline for reporting purposes.

1.7 MNOs shall submit reports to the ICT Authority on the complaint and resolution statistics on a weekly basis in an agreed format.

1.8 All costs associated with the communication campaign, hotline operation and installation of filters shall be fully borne by the participating MNOs.

2. **Test Location**

2.1 The test locations shall be determined in collaboration with all parties.

2.2 The ICT Authority may require MNOs to perform tests at specific locations identified by the Authority to capture potential areas of interference or service degradation.

2.3 The identified test regions as per clause 2.2 shall be guided by the following criteria:

a. The DTTB received field strength must be within acceptable levels as per ITU Report ITU-R BT.2383-5.
b. The height of MNO base stations installations.
c. The environment (Urban, Suburban, Rural).

3. Testing

3.1 All MNOs shall perform tests on such frequencies and locations specified in the temporary test licence.

3.2 All tests shall be carried out during daytime hours, preferably during off-peak broadcasting hours to minimise disruption to the general public.

3.3 MNOs, MCML and ICTA shall monitor the impact of mobile broadband services in the 700 MHz frequency band on the digital terrestrial television (DTT) operating in the 470 – 694 MHz frequency band at all identified test locations.

3.4 The DTTB field strength measurements shall be taken out at a height of 10 m above ground level in accordance with the Geneva 06 (GE06) agreement.

3.5 The MNOs shall perform tests at multiple antenna heights and at different EIRP levels. In the event that cavity filters are being installed, the operators shall inform the Authority of the characteristics of the filters installed at specific locations. During testing, 100% traffic load shall be simulated to assess worst case impact on DTTB reception.

4. Complaints Management

4.1 When a complaint is registered via the dedicated hotline:

a. the MNO shall immediately inform the certified installer with a copy to MCML, ICTA.
b. the certified installer shall ascertain that the reported complaint is due to the test.
c. If in the affirmative, the certified installer shall assist the complainant by installing the necessary filter and shall resolve the issue within 72 hours of complaint registration.

5. Reporting

4.1 MNOs shall report to the ICT Authority the following parameters:

- Location details
- Date and time of test
- BTS EIRP level
- BTS antenna height
- Use of cavity filter, if any
- Complaints and resolution statistics

4.2 At the end of tests, a consolidated statistical report for the different locations tested by the MNO shall then be submitted to the ICTA for evaluation