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Information and Communication Technologies Authority

Decision of 23 June 2017 on Refarming of the 900 MHz Band for implementation of Terrestrial Component of International Mobile Telecommunications (IMT)

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The Information and Communication Technologies Authority in exercise of its statutory functions under the Information and Communication Technologies Act 2001 as amended issues the following Decision pursuant to section 17(3) combined with sections 18(p) and 16 (g) of the said Act. This decision shall come into force with immediate effect.

The Information and Communication Technologies Authority,

considering,

a. that International Mobile Telecommunications (IMT) is the root name, encompassing both IMT-2000 and IMT-Advanced;

b. that the 900 MHz frequency band plan is defined as follows: -

2 x 25 MHz are allocated as Standard or primary GSM 900 Band, P-GSM:

Uplink: 890 MHz to 915 MHz: mobile transmit, base receive;
Downlink: 935 MHz to 960 MHz: base transmit, mobile receive.

Another 2 x 10 MHz are allocated as Extended GSM 900 Band, E-GSM, in total there are 2 x 35 MHz used by GSM900 (Standard GSM and Extended GSM):

Uplink: 880 MHz to 915 MHz: mobile transmit, base receive;
Downlink: 925 MHz to 960 MHz: base transmit, mobile receive.

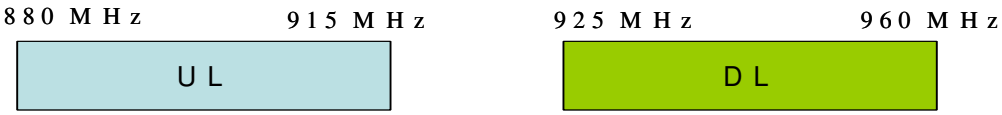

Figure 1: 900 MHz band plan

c. that Resolution 224 (Rev. WRC-15) has invited administrations implementing IMT or planning to implement IMT to make available, based on user demand and other national considerations, additional bands or portions of bands below 1 GHz for the terrestrial component of IMT, including the 900MHz band;

d. that spectrum has been assigned in the 900 MHz frequency band for the operation of the Global System of Mobile Communication (GSM900);

e. that any other technology to be deployed in the 900 MHz band has to demonstrate technical compatibility with technologies operated both in- band and in adjacent bands;

f. that the Authority has to ensure equitable access to spectrum among operators with a view to creating a level playing field;

g. that the ICT Authority has carried out a consultation with all mobile operators pertaining to the refarming of the 900 MHz band;

recognizing

1. that UMTS, Long Term Evolution (L TE) and Worldwide Interoperability for Microwave Access (WiMAX) are technologies of the IMT family which may operate in the 900 MHz band;

2. that according to Electronic Communications Committee Report 82 UMTS systems may coexist with existing technologies in the 900 MHz band subject to implementation of appropriate guard bands between the edges of spectrum blocks assigned to respective operators;

3. that according to CEPT Reports 40 and 41 LTE and WiMAX systems may coexist with existing technologies in the 900 MHz band subject to implementation of appropriate guard bands between the edges of spectrum blocks assigned to respective operators;

DECIDES,

1. that the 900 MHz band shall be made available for the deployment of Frequency Division Duplex (FDD) terrestrial component of IMT;

2. that decides (1) shall not preclude the abovementioned frequency band from being used for GSM900;

3. that current assignees of spectrum in the 900 MHz band may decide to operate IMT within their current assignments;

4. that the refarming process agreed by all mobile operators entails that they will move, in a phased approach, in the 900 MHz band so as to have contiguous frequency slots for operation of their different systems;

5. that the refarming process will commence upon issue of this Decision and Phase 2 will be completed within a maximum timeframe of 3 years, or sooner;

6. that all operators will operate IMT within 5 MHz slots at the time of GSM switch off or earlier, as may be decided;

7. that IMT systems to be deployed in the 900 MHz band shall be of the Radio Interface Technologies specified and shall be subject to technical, regulatory and operational provisions defined at Annex 1;

8. that operators may adopt less stringent provisions to those specified at Annex 1 subject to:
    a. bilateral or multilateral agreements between neighbouring networks, and;
    b. the authorization of the Authority;

9. that each operator will bear its own cost arising from the refarming exercise.

ANNEX I

TECHNICAL, REGULATORY AND OPERATIONAL PROVISIONS FOR COEXISTENCE BETWEEN IMT AND GSM900

The following technical, regulatory and operational provisions shall be applied as an essential component of the conditions necessary to ensure coexistence in the absence of bilateral or multilateral agreements between neighbouring networks, without precluding less stringent technical parameters if agreed among the operators of such networks and the ICT Authority.

IMT Radio Interface Technologies	Technical, Regulatory and Operational Provisions for coexistence
UMTS complying with UMTS Standards, as published by ETSI, in particular EN 301908-1, EN 301908-2, EN 301908-3 and EN 301908-11	1) Carrier separation of 5 MHz or more between two neighbouring UMTS networks. 2) Carrier separation of 2.8 MHz or more between a neighbouring UMTS network and a GSM900 network.
LTE complying with LTE Standards, as published by ETSI, in particular EN 301908-1, EN 301908-13, EN 301908-14, and EN 301908-11	1) A frequency separation of 200 kHz or more between the LTE channel edge and the GSM900 channel edgebetween a neighbouring LTE network and a DCS1800 network. 2) No frequency separation is required between LTE channel edge and the UMTS carrier's channel edge between a neighbouring LTE network and a UMTS network. 3) No frequency separation is required between LTE channel edges between two neighbouring LTE networks.
WiMAX complying with WiMAX Standards, as published by ETSI, in particular EN 301908-1, EN 301908-21 and EN 301908-22	1) A frequency separation of 200 kHz or more between the WiMAX channel edge and the GSM900 carrier's channel edge between a neighbouring WiMAX network and a GSM900 network. 2) No frequency separation is required between the WiMAX channel edge and the UMTS carrier's channel edge between a neighbouring WiMAX network and a UMTS network. 3) No frequency separation is required between WiMAX channel edges between two neighbouring WiMAX networks.