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Thailand

**RESPONSE TO questionnaire ON regulatory information for implementation IMT network in Asia-Pacific Region**

**Question 1:**

**Institution/Company Information and Profile**

Name of the institution : The Office of the National Broadcasting and

Telecommunications Commission

Name of contact person : Mr. Supanath JUTHACHAROENWONG   
 Ms. Nareekarn BANG-OR

Mailing Address : 87 Phaholyothin 8, Phayathai, Bangkok 10400 Thailand

Phone : 66-2-2710151-60 ext. 4136

Email Address : [supanath.j@nbtc.go.th](mailto:supanath.j@nbtc.go.th)

[nareekarn.b@nbtc.go.th](mailto:nareekarn.b@nbtc.go.th)

My institution is (please choose): Regulator

**Question 2:**

Which IMT technology being use and will be used or technology neutral in these bands?

Please fill in the frequency bands used for IMT and specify which IMT technology (e.g. WCDMA, HSPA, LTE, LTE-A, TDD-LTE, 3GPP Release 10, …) being used, if not IMT please answer “non-IMT”.

| **Frequency band**  **(MHz)** | **Frequency Block (MHz)** | | **Operator** | **IMT Technology** | **Channel bandwidth (MHz)** |
| --- | --- | --- | --- | --- | --- |
| **Uplink** | **Downlink** |
| 824-839/  869-884 | 824-839 | 869-884 | CAT/True Move H | HSPA | 2x15 |
| 839-849/  884-894 | 839-849 | 884-894 | CAT/  DTAC  To be expired in Sept 2018 | WCDMA | 2x10 |
| 895-915/  940-960 | 895-900 | 940-945 | AWN | Non-IMT (GSM)/  LTE | 2x5 |
| 900-905 | 945-950 | AWN | HSPA/NB-IoT | 2x5 |
| 905-907.5 | 950-952.5 | TUC | Non-IMT (GSM) | 2x2.5 |
| 907.5-912.5 | 952.5-957.5 | TUC | LTE | 2x5 |
| 912.5-915 | 957.5-960 | TUC | Non-IMT (GSM) | 2x2.5 |
| 1710-1785/  1805-1880 | 1710-1715 | 1805-1810 | TUC | Non-IMT (GSM) | 2x5 |
| 1715-1725 | 1810-1820 | TUC | LTE | 2x10 |
| 1725-1740 | 1820-1835 | AWN | LTE | 2x15 |
| 1740-1745.3 | 1835-1840.3 | DTAC | Non-IMT (GSM) | 2x5.3 |
| 1745.3-1760.3 | 1840.3-1855.3 | DTAC | LTE | 2x15 |
| 1760.3-1765.3 | 1855.3-1860.3 | DTAC | GSM | 2x5.3 |
| 1765.3-1785 | 1860.3-1880 | CAT | LTE | 2x20.3 |
| 1920-1980/  2110-2170 | 1920-1930 | 2110-2120 | DTN | HSPA | 2x10 |
| 1930-1935 | 2120-2125 | DTN | LTE | 2x5 |
| 1935-1940 | 2125-2130 | TUC | HSPA | 2x5 |
| 1940-1950 | 2130-2140 | TUC | LTE | 2x10 |
| 1950-1965 | 2140-2155 | AWN | HSPA | 2x15 |
| 1965-1980 | 2155-2170 | TOT | HSPA | 2x15 |
| 2010-2025 | TDD |  |  |  |  |

**Question 3:**

Please provide (or refer to) characteristics, and protection criteria, for implementing the IMT systems/networks in Question 2, and similar information for non-IMT services, within the IMT band and in the neighboring bands.

1. Licensee can select any technologies according to ITU-R Recommendations related to IMT
2. Licensees must coordinate among themselves in order to avoid any interference between different systems.
3. Licensees are required to cooperate with the neighboring countries and follow the agreement in the Joint Technical Committee on Coordination and Assignment of Frequencies along Thailand Common Border Meeting.
4. Licensees shall readjust/retune spectrum use according to the National Broadcasting and Telecommunications Commission’s order to achieve most efficient use of spectrum and highest public benefits.

**Question 4:**

Which case of coexistence as illustrated below and the technical conditions must be applied to each IMT block (e.g power limit, emission mask for spectrum block, pfd limit, …) to support technology neutrality and spectrum efficiency?

| Frequency band (MHz) | Case | Technical condition |
| --- | --- | --- |
| 824-839/869-884 | A | No |
| B | No |
| C | No |
| D | No |
| E | ECC Rec (08)02  • 59 dBuV/m/5MHz @ 0 km (-77dBm/ 5MHz)  • 35 dBuV/m/5MHz @ 9 km (-101dBm/ 5MHz) |
| 895-900/940-945 | A | No |
| B | No |
| C | No |
| D | * 59 dBµV/m/5 MHz at border (-77.6 dBm) f = 925 MHz * 35 dBµV/m/5 MHz at 9 km from border (-101.6 dBm) f = 925 MHz |
| E | * 59 dBµV/m/5 MHz at border (-77.6 dBm) f = 925 MHz * 35 dBµV/m/5 MHz at 9 km from border (-101.6 dBm) f = 925 MHz |
| 905-915/950-960 | A | No |
| B | No |
| C | No |
| D | 35 dBµV/m/5 MHz at 9 km from border (-101.6 dBm) f = 925 MHz |
| E | 35 dBµV/m/5 MHz at 9 km from border (-101.6 dBm) f = 925 MHz |
| 1710-1785/1805-1880 | A | No |
| B | No |
| C | No |
| D | -85 dBm measured at 5km from border and 1.5 meter above ground level with C/I of 9 dB. |
| E | -85 dBm measured at 5km from border and 1.5 meter above ground level with C/I of 9 dB. |
| 1920-1980/2110-2170 | A | No |
| B | No |
| C | No |
| D | No |
| E | ERC Rec.01-01  • 65 dBuV/m/5 MHz @ 0 km (-78.69 dBm/ 5 MHz)  • 37 dBuV/m/5 MHz @ 6 km (-106.69 dBm/ 5 MHz) |



Case A: coexistence between IMT block and IMT in adjacent block in same IMT band

Case B: coexistence between IMT block and non-IMT in adjacent block in same IMT band

Case C: coexistence between IMT block in IMT band and non-IMT block in adjacent band

Case D: coexistence between IMT block and non-IMT block co-channel but adjacent geographical area

Case E: coexistence between IMT block and other IMT block co-channel but adjacent geographical area

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