

5G

Preparation in Thailand

NBTC-5GMF JOINT WORKSHOP ON 5G | 12-13.06.19

OFFICE OF
THE NBTC

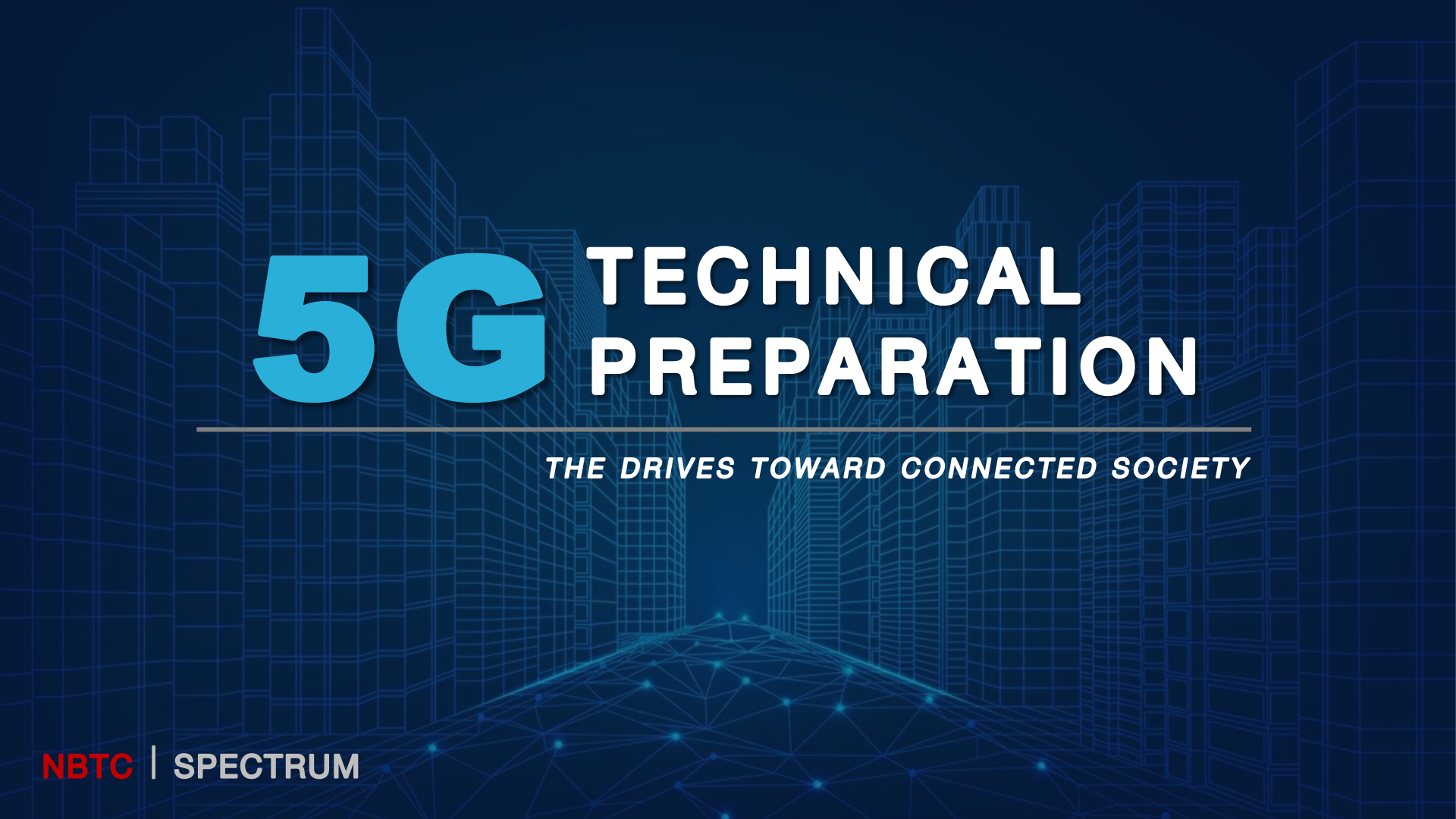


The background is a dark blue wireframe illustration of a city skyline. The buildings are composed of light blue lines forming a grid-like structure. In the foreground, a network of lines and small blue dots connects various points, suggesting a digital or data network. The overall aesthetic is high-tech and futuristic.

OUTLINE

5G TECHNICAL PREPARATION

NBTC POLICY PRIORITY



5G TECHNICAL PREPARATION

THE DRIVES TOWARD CONNECTED SOCIETY

Thailand IMT Spectrum

850/900
MHz
(Total:
2 x 40 MHz)

1800 MHz
(Total: 2 x 75 MHz)

2100 MHz
(Total: 2 x 60 MHz)

2300
MHz
(Total:
60 MHz)

Existing IMT Bands in Thailand

700
MHz
(Total:
2 x 45 MHz)

2600 MHz
(Total: 190 MHz)

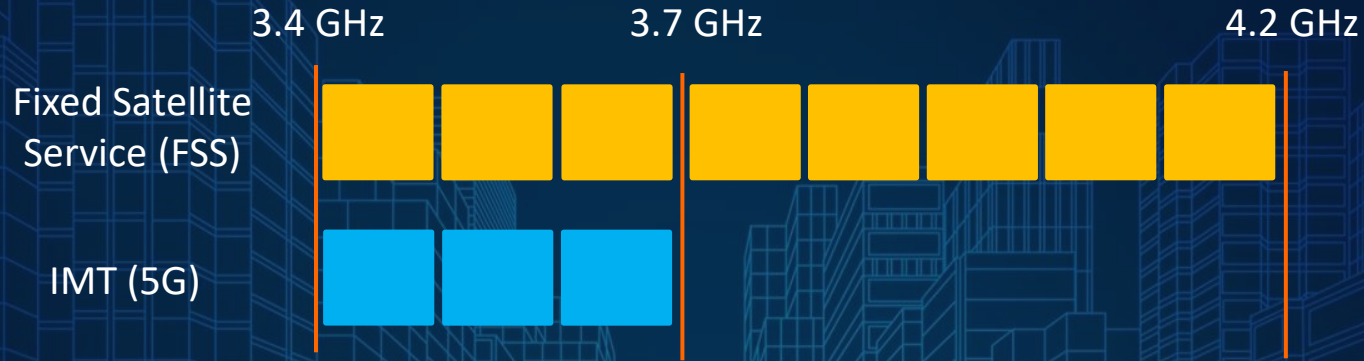
26 GHz
(Total:
2.25 GHz)

28 GHz
(Total: 3 GHz)

Bands soon to be used for IMT

3.4
GHz
(Total:
0.3
GHz)*

5G FIELD TRIALS



Objective: To find the following optimal parameters for sharing and compatibility

- 1 Separation distance between FSS and IMT stations
- 2 Possible guard band
- 3 Possible filter for interference mitigation

REGULATORY SANDBOX

In the sandbox

- Area based regulatory sandbox
- Loosen regulation during the phase of R&D and pre-commercial stage to allow some unexpected outcomes in confined and observed areas
- Manageable interference cases
- Maximum 2 years of license
- With privacy and security compliance

Outside the sandbox

Typical regulation in force

SANDBOX PROPOSED AREA

Chiang Mai

Khon Kaen

Bangkok

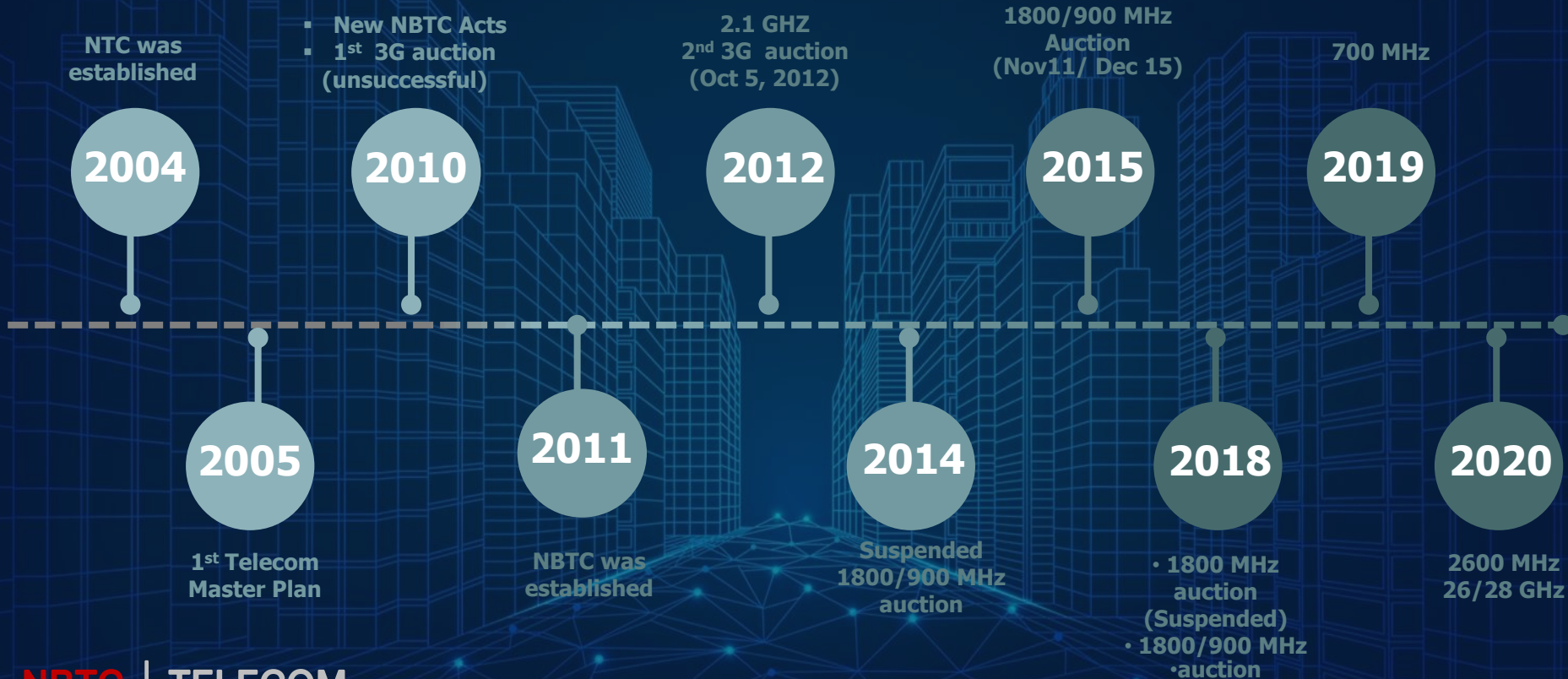
Eastern Economic Corridor (EEC)

Songkhla (Hat Yai)

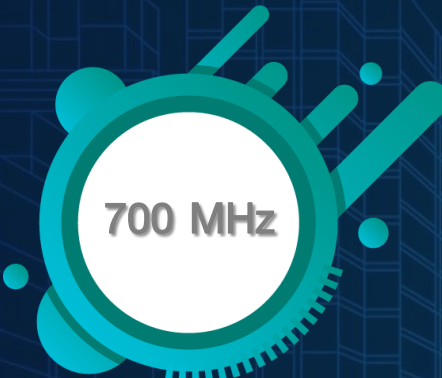
NBTC POLICY PRIORITY

THE DRIVES TOWARD CONNECTED SOCIETY

Regulatory reform



5G: SPECTRUM ALLOCATION

A teal-colored circular graphic with a white center containing the text '700 MHz'. The graphic has several teal lines radiating from the top and right sides, and a small teal dot at the bottom left. The background features a wireframe cityscape.

700 MHz

Expected Use:
1 October 2020

A purple-colored circular graphic with a white center containing the text '2.6 GHz'. The graphic has several purple lines radiating from the top and right sides, and a small purple dot at the bottom left. The background features a wireframe cityscape.

2.6 GHz

A blue-colored circular graphic with a white center containing the text '26 GHz'. The graphic has several blue lines radiating from the top and right sides, and a small blue dot at the bottom left. The background features a wireframe cityscape.

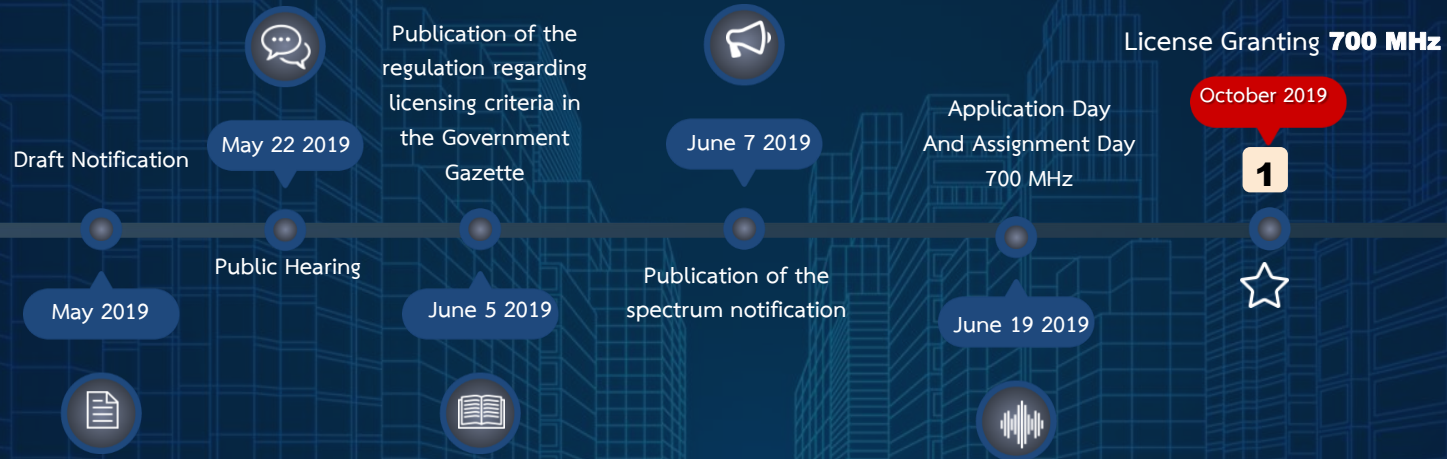
26 GHz

A light blue-colored circular graphic with a white center containing the text '28 GHz'. The graphic has several light blue lines radiating from the top and right sides, and a small light blue dot at the bottom left. The background features a wireframe cityscape.

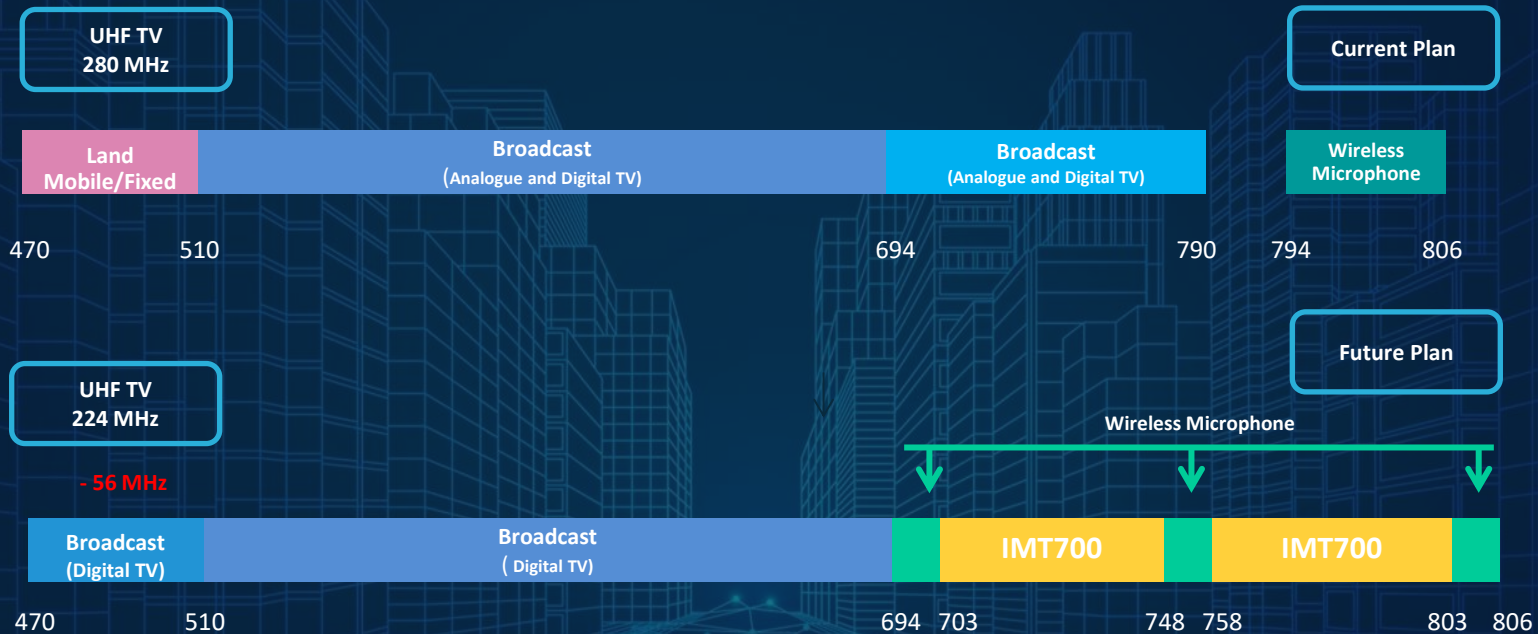
28 GHz

Expected Use:
Q1 of 2020

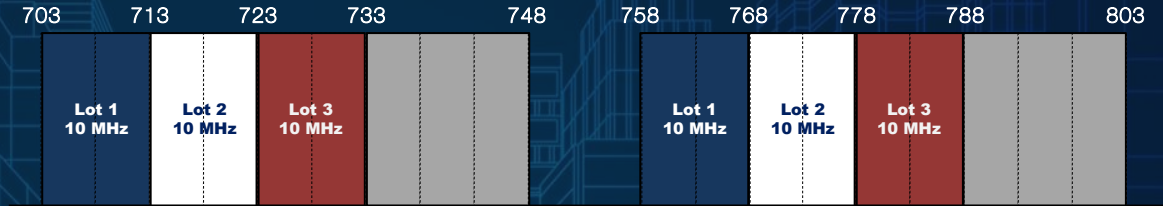
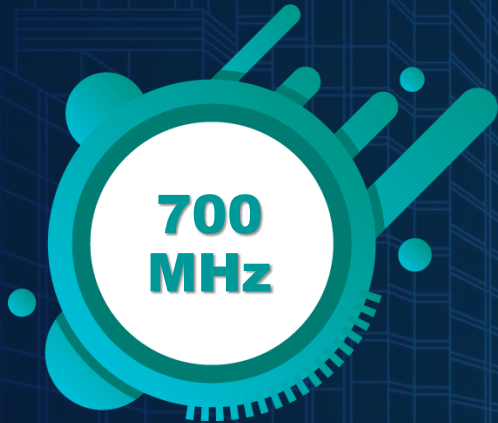
Timeframe 700 MHz



700MHz SPECTRUM BAND PLAN



5G: SPECTRUM ALLOCATION



Total spectrum : 3 Lots (2x10 MHz per lot)

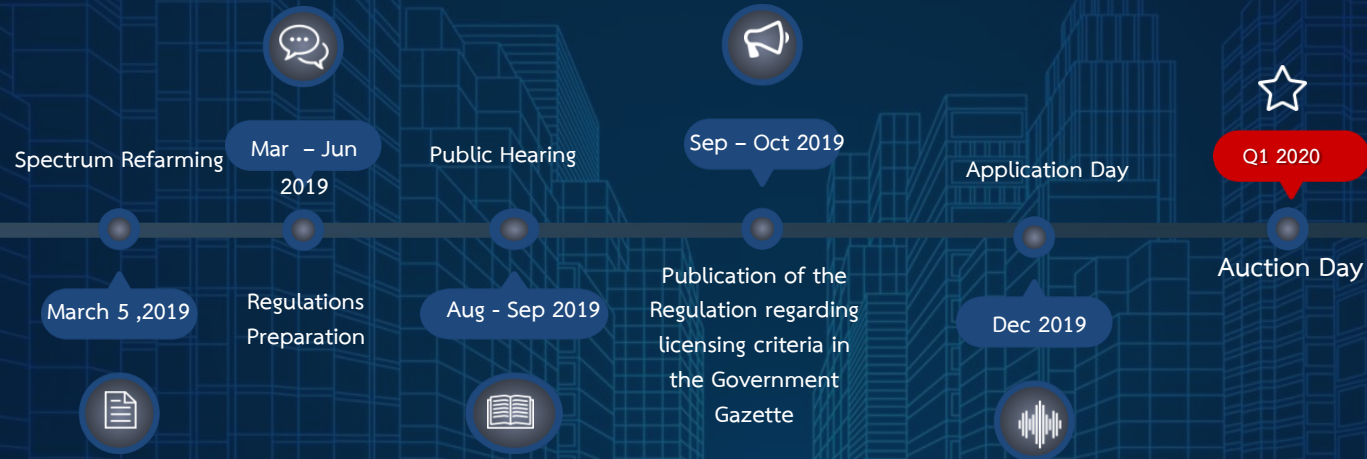
Lot 1 703 – 713 MHz / 758 – 768 MHz

Lot 2 713 – 723 MHz / 768 – 778 MHz

Lot 3 723 – 733 MHz / 778 – 788 MHz

License duration	15 years
License granting	October 1, 2019
Spectrum price	17,584 million baht
Guarantee	880 million baht
Term of payment	10 installments

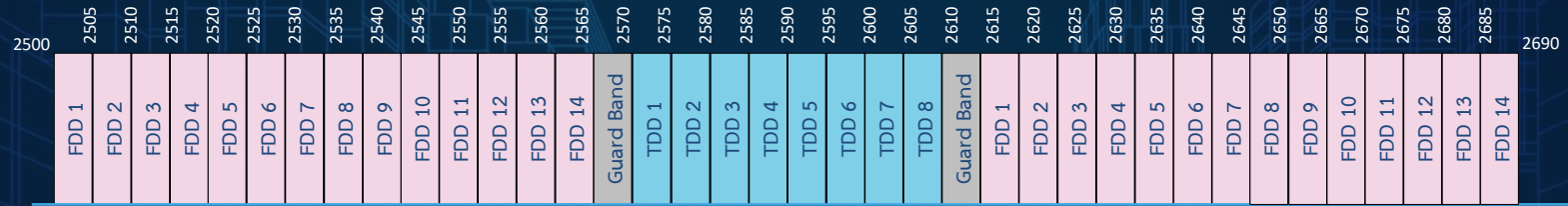
Timeframe 2600 MHz



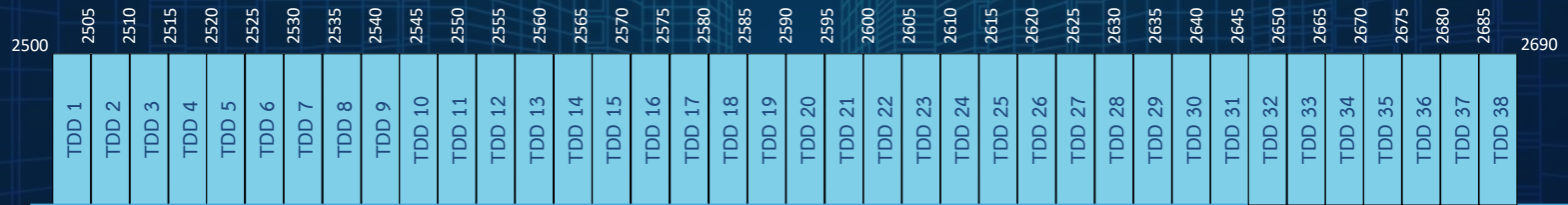
2.6GHz SPECTRUM BAND PLAN

FDD & TDD

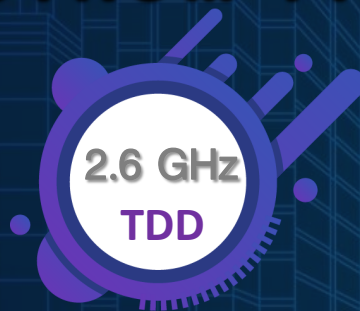
According to Notification on Broadband Wireless Access (BWA) on 2500 -2690 MHz Band (2009)



TDD Band Plan



MULTIBAND AUCTION 2.6GHz & 26/28GHz SPECTRUM PACKAGES



190 MHz
(2500 - 2690 MHz)



2250 MHz
(24.25 - 26.5 GHz)



3000 MHz
(26.5 - 29.5 GHz)

National licenses

Specific area licenses

CONCEPT OF SERVICE AREA DIVISION



The background is a dark blue gradient. It features a wireframe cityscape with several tall, rectangular buildings on both sides, receding into the distance. The floor of the city is represented by a complex network of glowing blue lines and dots, creating a perspective that draws the eye towards the center. The text "Thank You" is centered in the middle of the image.

Thank You