



# **Framework for the 2600MHz Spectrum Auction for New Broadband Data Services**

## **Consultation with Stakeholders Regarding Potential Parameters for the 2600MHz Auction and Expression of Interest in Participation**

**February 3, 2016**

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## Overview of the 2600MHz Auction Framework: Process & Schedule

MCIT/PTD hereby announces its intent to auction 140MHz of spectrum between 2500MHz and 2690MHz in what is commonly referred to as the '2600MHz band', to companies interested in the provision of broadband data services. The auction is scheduled to take place on March 24, 2016.

MCIT/PTD proposes to auction up to a total of 140MHz for in the 2600MHz band (2500MHz - 2690MHz).

- FDD; 100MHz, comprised of up to 5 licensees of 20MHz each; and,
- TDD; 40MHz, comprised of up to 2 licensees of 20MHz each.

In this consultative document, in order to explain the proposed framework to stakeholders, MCIT/PTD has

- Set out the best practice principles for auction planning,
- Provided the background leading up to the current situation, and
- Set out its 'action items': MCIT/PTD decisions and/or issues for consultation with stakeholders.

This framework contains the proposed auction process and rules, licensing issues and the structuring of the 2600MHz band for the auction process. What is being auctioned?

NFS-(I) licensees are invited to express their interest in participating in the auction and all stakeholders are invited to comment on the proposed framework for the auction.

NFS-(I) licensees will be provided with a 2-week period - starting on Wednesday, February 3, through end of day to February 17<sup>th</sup>, 2016 to indicate their interest in the auction.

All stakeholders – including NFS-(I) licensees, are invited to comment in writing (email, letter, fax, etc.) during the same period on the following auction framework issues:

- a. Eligibility and qualification of potential bidders,
- b. Number of licences to be issued,
- c. Type of licence, and
- d. Conditions of licence.

We note that stakeholders have previously been consulted on the 2600MHz auction – specifically,

- The invitation to current licensees in October 2015 to meet with MCIT/PTD staff and,



- the Public Forum event held at MCIT/PTD on January 28<sup>th</sup>, 2016.

Commentary received during and after the initial October and January 28<sup>th</sup> consultations will be considered along with that received in the current official announcement process before the finalization of the auction rules.

Subsequent to completion of the consultative processes, on February 22<sup>nd</sup> the following information will appear on MCIT/PTD website

- A final auction framework containing auction rules, processes and schedule will be published;
- The amounts of the bid deposit and the reserve price; and,
- A formal invitation to NFS-I licensees in order to solicit their interest in participating in the auction.

NFS-(I) licensees will be invited to submit their financial, ownership and technical information in order to qualify as bidders. Bidders will have until end of day March 7<sup>th</sup> to provide that information. Interested parties will be informed whether they qualify as bidders on March 14<sup>th</sup>. Interested bidders are encouraged to start assembling their information well in advance of the March 7<sup>th</sup> deadline.

In order to assist qualified bidders in preparing for the auction, a Question and Answer (Q&A) session will be held on March 16<sup>th</sup> on site at the Ministry with an Internet video connection provided for those who can not attend. Similarly, a mock auction will be held on March 18<sup>th</sup> on site at the Ministry with an Internet video connection.

The auction event will be held on March 24<sup>th</sup>.



The various auction processes - including consultative, are summarized in the table below:

Figure 12600MHz Auction Process: Consultations, Qualification, Preparation, Event & Post-event

Key Tasks	Period	Notes
<b>1. Consultative Events</b>		
i. Consultative Meetings on Potential Auction Framework – at MCIT	October 14 <sup>th</sup> & 15 <sup>th</sup> 2015	Current Licensees: Operators, Broadcasters, Government Services targeted for consultation
ii. Consultative Open Forum on Potential Auction Framework, Qualification Process, Conditions of Licence – at MCIT	January 28 <sup>th</sup> 2016	All stakeholders invited
iii. Auction Announcement (on line)	February 3 <sup>rd</sup>	
a. Invitation for Expression of Interest		NFS (I) licensees
Auction Announcement:		
b. Commentary on Auction Framework		All stakeholders invited
c. Deadline for submission of Expression of Interest	February 17 <sup>th</sup>	NFS (I) licensees
d. Deadline for Commentary on Auction Framework		
<b>2. Publication of Final auction framework</b>	February 22 <sup>nd</sup>	Auction rules, processes and schedule; All stakeholders
<b>3. Publication of Bid deposit and the Reserve price</b>		All stakeholders
<b>4. Invitation to Potential Bidders to Qualify</b>		Financial, Ownership, Technical Information
i. Deadline for Potential Bidders to Submit Documentation	March 7 <sup>th</sup>	NFS (I) licensees
ii. Announcement of Qualified Bidders	March 14 <sup>th</sup>	All stakeholders
<b>5. Preparation of Bidders for Auction Process</b>		
i. Question & Answer Session	March 16 <sup>th</sup>	Qualified bidders
ii Mock Auction	March 18 <sup>th</sup>	
<b>6. Auction Event</b>		
i. Auction Event	March 24 <sup>th</sup> & 25 <sup>th</sup> (March 26 <sup>th</sup> if necessary)	Qualified bidders
ii. Public Announcement of Auction Winners	March 25 <sup>th</sup> (March 26 <sup>th</sup> if necessary)	All stakeholders
iii. Publication of Auction Audit Report	March 25 <sup>th</sup>	All stakeholders



## Refarming & Structuring the 2600MHz Band for the Auction

### Principles

MCIT/PTD – the Regulator, has the responsibility for efficient spectrum management

- Provide licensees sufficient spectrum to meet current and future demands;
- Develop a competitive telecoms services market that offering the people of Myanmar a choice of providers and services; and,
- Foster the development of innovative new services at an affordable cost for consumers.
- Treat all bidders according to the same rules;

In conformity with best international practices in spectrum management, the 2600MHz band needs to be arranged efficiently in order to minimize interference and maximize spectrum availability for broadband applications. The current structuring and utilization of spectrum in 2600MHz band are inefficient.

### Actions

MCIT/PTD has decided to

- Refarm underutilized spectrum in the 2600MHz into higher economic use;
- Formalize the spectrum authorization process by adopting an auction process and by issuing licences to the winners of the auction process;and,
- Adopt ITU Option 1 as the most efficient configuration for re-structuring the 2600 MHz band plan as shown in the figure below:

Figure 2: ITU Option 1: Mixed FDD & TDD

FDD1	2500-2505 MHz
FDD2	2505-2510 MHz
FDD3	2510-2515 MHz
FDD4	2515-2520 MHz
FDD5	2520-2525 MHz
FDD6	2525-2530 MHz
FDD7	2530-2535 MHz
FDD8	2535-2540 MHz
FDD9	2540-2545 MHz
FDD10	2545-2550 MHz
FDD11	2550-2555 MHz
FDD12	2555-2560 MHz
FDD13	2560-2565 MHz
FDD14	2565-2570 MHz
<b>TDD1</b>	<b>2570-2575 MHz</b>
TDD2	2575-2580 MHz
TDD3	2580-2585 MHz
TDD4	2585-2590 MHz
TDD5	2590-2595 MHz
TDD6	2595-2600 MHz
TDD7	2600-2605 MHz
TDD8	2605-2610 MHz
TDD9	2610-2615 MHz
<b>TDD10</b>	<b>2615-2620 MHz</b>
FDD1	2620-2625 MHz
FDD2	2625-2630 MHz
FDD3	2630-2635 MHz
FDD4	2635-2640 MHz
FDD5	2640-2645 MHz
FDD6	2645-2650 MHz
FDD7	2650-2655 MHz
FDD8	2655-2660 MHz
FDD9	2660-2665 MHz
FDD10	2665-2670 MHz
FDD11	2670-2675 MHz
FDD12	2675-2680 MHz
FDD13	2680-2685 MHz
FDD14	2685-2690 MHz



## Proposed Structure of the 2600MHz Band for the 2600MHz Auction

Coincident with the adoption of ITU Option 1, MCIT/PTD has decided on a specific structure the 2600MHz spectrum band including the following parameters: designated band type: FDD or TDD, number of licences, bandwidth of each licence.

### Principles

In determining the structure of the spectrum to be offered for licensing, MCIT/PTD must weigh the following supply and demand factors:

- Potential demand for by consumers of services provided by service providers in various categories;
- Potential utilization of spectrum by licensees;
- Financial capacity of a range of licensees in order to attract a diversity of potential bidders; and,
- Allow for potential future auction process(es) upon demonstration by licensees that the spectrum is fully and efficiently utilized.

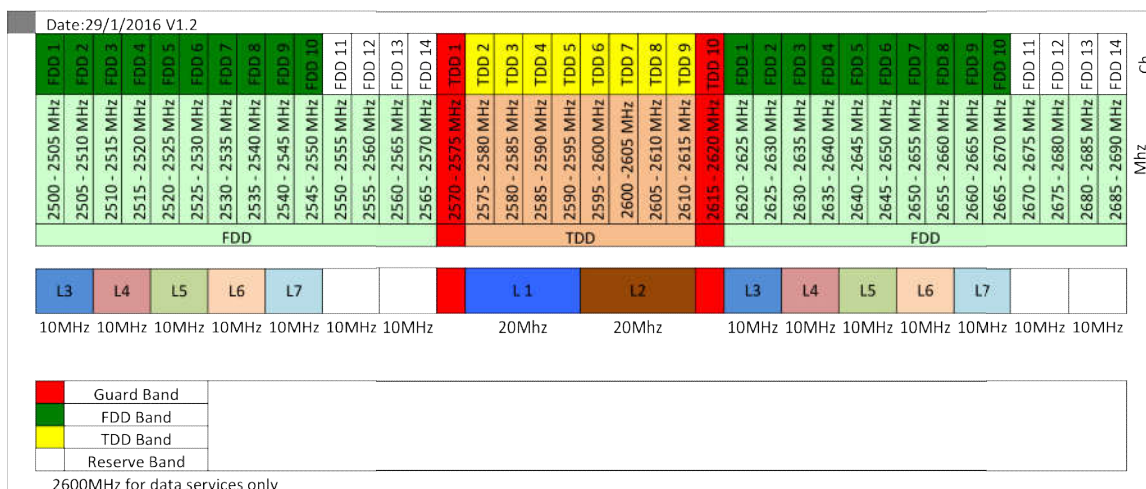
### Proposal

MCIT/PTD proposes to auction a total of 140MHz for Broadband Data Services in the 2600MHz band (2500MHz -2690MHz).

- Up to 100MHz in FDD, separated into up to 5 licences of 20MHz each.
- Up to 40MHz in TDD, separated into up to 2 licences of 20MHz each.
- There will be 2\*5MHz allotments designated as guard bands.

The structure is summarized in the figure below:

Figure 3: Proposed Structure of the 2600MHz Band for the Auction





### **Potential Questions**

Broadband Data Licences:

- In consideration of market demand, financial viability, etc., are the parameters for the IMT licences right: up to 7 new licences of 20MHz each for a total of 140MHz?
  - If not, why not?
- What alternatives would you propose and provide justification for your proposal

Bandwidth:

- Total bandwidth for each licence 20MHz.
  - Up to 2 TDD licences of 20MHz for a total of 40MHz
  - Up to 5 FDD licences of 20MHz each for a total of 100MHz.
  - If not, why not?
- What alternative would you propose and provide justification for your proposal
- What network configuration and equipment would you consider for the provision of new broadband data services in FDD or TDD?
- Does your company have a preference for a specific lot in FDD (2\*10MHz) or TDD (20MHz)?
- Would your company consider procuring LTE equipment for these services?

## **Bidder Qualification**

### **Non-Affiliation**

#### **Principle**

The objective of the auction is to promote the addition of fixed and mobile providers of data services and to promote competition.

#### **Proposal**

1. In order to qualify as potential bidders, interested companies will be limited to companies currently holding a Network Facilities Service (I) Individual Licenses and demonstrate that they are independent, non-affiliated companies. Thus, the bidding entity can not share ownership, supply or procurement agreements with any other bidder.
2. Companies that wish to affiliate prior to the auction will only be permitted to bid as a single bidder for one 20MHz Broadband Data Licence. Once bidders are qualified, bidders are not allowed to communicate with each other with respect to the auction.

### **Potential Questions**

- Do you agree with the principle of non-affiliation?
  - If not, why not?
  - What alternative would you propose?
  - Please justify your proposal





## Demonstration of Financial and Technical Capacity

### Principles

1. It is in the public interest as well as the interests of investors that - in order to qualify for the auction process, potential bidders be able demonstrate their financial and technical capacity to establish and subsequently operate a new broadband data service in the 2600MHz band.
2. The demonstration process should take into account financial and technical information already filed with MCIT/PTD for their current NFS (I) licences.

### Proposed Actions

1. Financial capacity:
  - I. In order to qualify as a bidder, interested NFS (I) licensees will be required to demonstrate their financial capacity - including their access to capital (debt and equity) for the new service including: build out of the 2600MHz network, launch of new services, ability to sustain operational losses in the initial years, etc.
  - II. Interested NFS (I) parties will be required to produce audited financial statements for the bidding entity as well as that of the holding company(ies).
2. Ownership Structure:
  - I. interested NFS (I) licensees will be required to provide the ownership structure (common shares, voting rights) of the entity bidding for the spectrum as well that of the holding company(ies).
3. Technical Capacity:
  - I. Interested NFS (I) licensees will be required to provide an organization chart for the to the new 2600MHz entity (company/subsidiary)
  - II. Interested NFS (I) licensees will be required to demonstrate the experience and technical expertise of their proposed senior management team in operating an advanced broadband data network in Myanmar and/or in jurisdictions with similar characteristics to the Myanmar market.

### Potential Questions

- Are the proposed financial criteria and information requirements reasonable?
  - If not what alternative(s) would you propose & why?
- Are the proposed Ownership criteria and information requirements reasonable?
  - If not what alternative(s) would you propose & why?
- Are the proposed Technical criteria and information requirements reasonable?
  - If not what alternative(s) would you propose & why?



## Type and Conditions of Licence

### Commercial & Spectrum Licences

#### Principles

The licence will reflect both the modification to the existing commercial operating licence and the issuance of a new spectrum licence in order to reflect the activities of the licensee.

#### Actions

1. MCIT/PTD will first modify the auction winner's existing commercial operators licence as required, and subsequently issue a spectrum licence.

### Licence Period

#### Principle

Globally, regulators have granted extended licensing periods in recognition of the significant capital investments required to build out the networks and commensurate financial risks involved. 15-year licensing periods are now common.

#### Action

MCIT/PTD proposes a 15-year licence period

#### Potential Questions

- Do you agree with the proposed licence period?
- If not, what alternative would you propose and why?

### Payment of the Auction Fee

#### Principle

Winning bidders should have the financial capacity to pay their licence fee to Treasury in a relatively short period after the conclusion of the auction while taking into account the time required for companies to marshal financial resources in an orderly fashion

#### Proposal

MCIT proposes that winning bidders be required to pay its licence fee in totality within 240 days of auction closure as follows: one half of the licence fee within 60 days of winning spectrum; a further 25% within the following 90 days and the final 25% within the following 90 days.

#### Potential Questions

- Do you agree with the proposed requirements for payment of the licence fee?
  - If not, what alternative would you propose and why?



## Roll out Requirements

### Principle

Globally, regulators require licensees to service in specific periods, pre-determined percentages of the population and/or geographic coverage

These requirements must balance the financial viability of the operator along with the needs of citizens in all regions to receive enhanced broadband services

Typically, services are rolled out progressively from the main urban areas to secondary towns and finally less populated rural areas.

This recognizes the higher costs of serving less densely populated centres as well as the need for operators to capture market share in major populated areas in order to ensure viability.

### Proposals

MCIT proposes that new Mobile Data licensees be required to provide coverage to 75% of the population within 5 years of receiving their licences as follows: 40% of the population in the 1<sup>st</sup> year, 50% in the 2<sup>nd</sup>, 60% in the 3<sup>rd</sup>, 70% in the 4<sup>th</sup> and 75% in the 5<sup>th</sup> year.

### Potential Questions

- Do you agree with the proposed roll out requirements?
  - If not, what alternative would you propose and why?



## Selection of Appropriate Auction Rules & Processes

### Principles

The auction processes and rules for the 2600MHz auction event must necessarily reflect the objectives of the MCIT/PTD for this event as part of its overall best practice goals for spectrum management.

### Auction Processes Prior to the Start of the Auction

#### Bid Deposit

The Auction Manager will set the Bid Deposit amount for participation in the auction and announce this to the qualified bidders.

- a. Bidders will be required to pay a Bid Deposit to participate in the auction.
- b. In setting the Bid Deposit amount, the Auction Manager will balance the following considerations:
  - a. Financial resources of potential bidders
  - b. encourage bidders to demonstrate they have the financial resources to back their participation in the auction and in the bigger picture, enable the orderly conduct of the auction

The amount of the Bid Deposit will be announced February 22<sup>nd</sup>.

#### Reserve Price

The auction manager will set the Reserve Price for the lots to be auctioned.

The reserve price represents an estimate of the lower end of the market value for the spectrum and the particular lots to be auctioned.

The reserve price takes into account:

- The results of similar auction events in other countries and,
- The particular characteristics of the Myanmar marketplace, the particular auction process, potential bidders' profiles and the objectives of MCIT/PTD for the auction event.

The reserve price will potentially differentiate between FDD and TDD lots.

All bidders must bid the reserve price in the initial round in order to participate in the auction.

The amount of the Reserve Price will be announced on February 22<sup>nd</sup>.

### Auction Rules & Processes During the Auction

- The auction format will be a simultaneous, multiple round auction (SMRA)
- Bidders will be required to be present on site at the auction venue.
- Bidders will submit their bids - simultaneously on a round-by-round basis, in a sealed envelope.
- In the BWA auction:
  - In the scenario of 10 or 20MHz licences, bidders would be able to bid on any one 20MHz license or 2\*10MHz being auctioned in each round
  - Bidders would be allowed to switch between FDD and TDD-designated lots as well as between individual lots.



- When the bidding for the round has concluded, round results will be posted to bidders but not to the general public.
- The SMRA auction bidding will be anonymous in order to encourage truthful bidding and avoid potential gaming. Thus, the information posted on a round-by- round basis, will limited to the following:
  - The total number of lots for which there were bids;
  - The total number of bidders;
  - Whether there is excess demand for any particular lot; and,
  - The standing high bid for the particular lot.
- Bidders will be legally and financially responsible for all their bids in each round.
  - In an extreme example, where Bidder X has been designated as the high bidder for a specific lot in a round. Subsequently, Bidder Y is designated as the high bidder for that lot at close of auction but does not have the financial resources to pay for the licence, and Bidder X's bid is the next highest bid to that of Bidder Y. In that case, Bidder X could be financially liable for its bid for that particular lot.
- Where there is more than one bidder for a particular lot during the auction, the legal 'high bidder' will be designated based on selection from a random number table.
- Bid Increments
  - Following the posting the round results, the auction manager will set a predetermined bid increment (such as 5% or 10%) applied to the previous round results for all lots where there is excess demand.
  - In the case where there are lots with no excess demand (1 bidder, 1 lot and demand equals supply), the bid price will not increase on a round-by-round basis.
  - However, if more than one bidder decides to bid on a lot for which previously there had been no excess demand, then the lot will again become subject to bid increments on a round-by-round basis.
- All licenses will continue to be for sale until there are none left or there are no buyers i.e. until there is no excess demand in any of the lots.
- The amount that winning bidders actually pay on a lot by lot basis is determined by the amount bid for the individual lot by the second highest bidder for that particular lot (the 'second price' rule).

### **Please provide your comments in writing to MCIT/PTD:**

- **email:** [spectrumresource.ptd@gmail.com](mailto:spectrumresource.ptd@gmail.com), or
- **letter:** Ministry of Communications and Information Technology (MCIT) Office, Building #2, YaZaHtarNi Street, Special Economic Development Zone, Nay Pyi tauw, Myanmar Att: Director General, PTD and mention: Spectrum Auction Process.