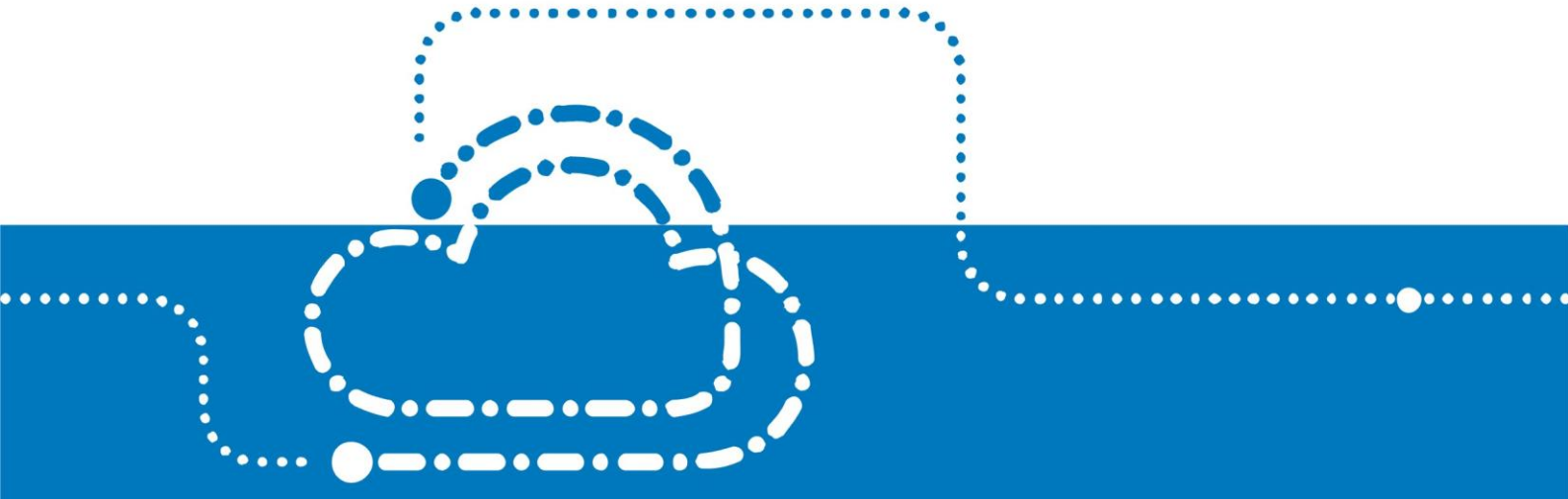
ZTE Response to IDA Consultation



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1 Summary of major points

Dear Sir/Madam,

After thoroughly understanding of the entire contents of IDA consultation paper, ZTE would provide comprehensive comments to the questions listed and some spectrum allocation suggestions based on the rich experience in the LTE.

ZTE states the suggestion for FDD bands at 700MHz, 800MHz and 900MHz, the isolation suggestion with neighboring country for TDD bands at 2500MHz. Besides, ZTE also states the interference mitigation suggestions for inter-TDD networks and between TDD&FDD network.

2 Statement of interest

ZTE Corporation is a globally-leading provider of telecommunications equipment and network solutions. With operations in 160 countries, the company is a leader in technology innovation, delivering superior products and business solutions to clients all over the world. Founded in 1985, ZTE is listed on both the Hong Kong and Shenzhen Stock Exchanges and is China's largest listed telecoms equipment company.

ZTE has the industry's most comprehensive product range and end-to-end solutions, covering virtually every telecommunications sector, including wireless, access & bearer, VAS, terminals and professional services. The company's expertise in these areas allows it to satisfy the demands of global operators and assist them in their pursuit of innovation. ZTE delivers its high-quality, cost-effective products and services to over 500 operators in more than 140 countries around the globe.

As described in the introduction, ZTE would stay neutral to response the consultation. ZTE is thoroughly committed to helping IDA with innovative technologies and rich experience.

3 Comments

3.1 Response to questions

Question 1

The proposed allocation of the 700 MHz band together with other suitable bands for mobile services in the next spectrum allocation exercise; and the mechanism to allow the delay of the commencement date of the 700 MHz spectrum right, and correspondingly, the expiry date as well as the spectrum right payment due date, in the event of a delay in the ASO.

*Answer: The 2*45MHz bandwidth can provide the basic coverage of LTE network, also*

can bear the VoIP service. Meanwhile, it can deploy CA with FDD 1800MHz, FDD 2100MHz and TDD 2.3MHz.

Question 2

a) The proposed 800 MHz band plan based on the 3GPP band 26, or a combination of 3GPP band 27 and band 5 (excluding the EGSM band), including views on the possible phased approach and timeline to migrate existing users of the band; and

Answer: By replacing the GSM, 800MHz becomes one of the main LTE band. And Move the Trunk and SRD service to LTE network to increase spectrum efficiency.

b) The impact to existing users (i.e., Trunked radio and SRD) of the 800 MHz band plan based on the 3GPP band 26, or a combination of 3GPP band 27 and band 5 (excluding the EGSM band).

No comments

Question 3

The allocation of the short-term spectrum rights for the EGSM band, including the approach to extend the short-term spectrum right.

Answer: ZTE suggests move the EGSM band to right, employing 900MHz to bear HSR data. Also, the magic radio solution from ZTE can increase decent efficiency for the GL co-network.

Question 4

a) The proposed re-allocation of the L-band for wireless broadband in Singapore in the longer term; and

b) The allocation of the L-band for trial, temporary use, and/or commercial services in the interim period.

No comments

Question 5

a) The proposed approach for local operators to coordinate with neighboring countries' operators to address potential co-channel interference in the use of the 2.5 GHz band;

Answer: As illustrated below in table1, the typical subframe configuration of global commercial TD-LTE network is format 2, which can best match the throughput of DL and UL. ZTE suggests that IDA can negotiate with neighboring countries operators to employ same subframe configuration and GPS synchronization. In this condition, base station only need satisfy the normal isolation requirements.

Table1. Frame structure of Subframe format 2

DL-UL Configuration	Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
2	5 ms	D	S	U	D	D	D	S	U	D	D

b) The use of the proposed 5 MHz guard band in the 2.5 GHz band to prevent interference between TDD and FDD systems operating in adjacent bands, versus the imposition of suitable mitigation measures to prevent interference; and

No comments

Answer: According to the requirement of the base station equipment from 3GPP and the ZTE's deploying experience all over the world, ZTE suggests IDA employ 5MHz guard band to prevent the interference between TDD and FDD systems.

c) The possible adoption and/or suitable restriction levels for Block Edge Mask, synchronization of TDD networks and any other suitable mitigation measures to prevent co-channel or adjacent channel interference between different TDD systems or between TDD and FDD systems.

Answer: ZTE suggests that each carrier has transmit power lower than 46dBm.

Question 6

The proposed allocation of the spectrum bands in the next allocation exercise, including on the proposed uses and spectrum right durations of the spectrum bands, the proposed 'Clock Plus' auction format, as well as the appropriate spectrum caps and regulatory obligations to ensure the optimal use of the spectrum.

No comments

Question 7

The proposed facilitation framework for the new MNO, including on the set-aside spectrum, the reserve price for the set-aside spectrum, the auction format, and the regulatory obligations on the new MNO.

No comments

Question 8

The proposed negotiation principles to facilitate wholesale access negotiations between "thick" MVNOs and MNOs.

No comments

3.2 Other suggestions from ZTE:

ZTE suggests that IDA accelerate the research and deployment of the TDD spectrum, TDD spectrum is the main factor of the 5G spectrum expansion. As the main aspect of 5G technologies, TDD technology like beamforming and massive MIMO will be upgraded and deployed in 5G. Hence, accelerating the research and deployment of TDD network can contribute the evolution to the 5G network. Also, the expansion of TDD spectrum can benefit the construction of the Smart Nation.

ZTE suggests IDA reserve 20MHz for Smart Nation. For the wide utilities range on public safety and administration of Smart Nation, it should provide backhaul network of mass sensors, wireless camera. The bandwidth of 20MHz should be preferred.

4 Conclusion

To conclude, author gave a brief introduction of ZTE Corporation, some responses to the question listed in the consultation paper and suggestions of the spectrum allocation for future evolution.