Performance and Current State for 5 G Spectrum in Myanmar

Introduction

There are many sample evidence that mobile telecommunications can drive public socio–economic development. With the development of technology, mobile communication technology and the Internet have greatly supported to the Fourth Industry Revolution.

Although Myanmar started mobile communication in 1996, expiration of First Generation Mobile and it has been working to bring the Second Generation and Third Generation in line with internationally technological advances.

Laws, regulations and procedural restrictions were amended to make **Communication to All** has been described as one of the fastest growing sectors in the world. President Obama praised the use of mobile phones by citizens during his visit to Myanmar. This speech was contributing to international recognition. There is no doubt that there is a lot to learn from international experience, as Myanmar's telecommunications development is a leapfrog.

Myanmar has always maintained good relations with the international community in the field of telecommunications such as ITU and APT. In the service sector, it cooperates with the World Trade Organization and ASEAN and also with the World Bank and regional programs in the financial sector.

For the first time in 20 years, Myanmar has sent its first women telecommunications officer to the World Radio Conference to discuss about Fourth Generation Mobile 5G networks and demonstrate gender equality in 2019.

5G is still at an early stage but initial steps have been made in Asia and Europe. It has been tested in Korea,Japan, Singapore, Thailand and some ASEAN countries in this year. In Myanmar, the Spectrum Roadmap is being developed depending on market demand and is making Stakeholder Consultation from telecommunications companies to allocate spectrum.

According to the "Spectrum Roadmap (2020): Facilitate the sustainable growth of Industry (Draft)" which is already published in 10th November,2020, discussions are underway to introduce the 2600MHz band in urban areas with high market demand and the millimeter wave band commonly used in the United States , adequate bandwidth is available for all telecommunications service providers, and although the spectrum allowed is suitable for regional operators, there is an opportunity for Nationwide operators. Stakeholder Consultation is expected to respond to requirements and timelines.

Sub 700MHz, C–Band and Millimeter wave are expected to be used for 5G networks internationally, and are all included in the Spectrum Roadmap. Myanmar will work with C–Band to balance mobile and satellite systems.

Current Performance summary of Posts and Telecommunications Department

Currently, Ministry of Transports and Communications, Posts and Telecommunications Department (PTD) already assigned IMT (International Mobile Telecommunications) spectrum to four mobile operators and three 2600 MHz Wireless Broadband Operators as follows:

Sr.	Frequency Band	Frequency (MHz)	Bandwidth (MHz)	Remark
1.	450MHz	453.35–457.10/463.35–467.10	7.5	Nationwide Mobile Operators
2.	850MHz	825–827.5/870–872.5 and 828.75–832.50/873.75–877.5	12.5	
3.	900MHz	882.8–915/ 927.8–960	64.4	
4.	1800MHz	1710 – 1785/ 1805 –1880	150	
5.	2100MHz	1920 – 1980/ 2110 –2170	120	
6.	2600MHz	2575–2595 and 2595–2615	40	2600 MHz Wireless Broadband Operators (Regionwide)
Total			**394.4**	

Moreover, in order to meet the spectrum needs for the advanced communications technologies such as 5G, IoT, PPDR (Public Protection and Disaster Relief) system, the Spectrum Roadmap which was already published in 4th April, 2016 was reviewed by the department and published the Consultation Paper for Myanmar's IMT and 5G Spectrum Roadmap preliminary positions in 25th June, 2019.

Taking into account of all suggestions from the industry on that Consultation Paper, PTD reviewed the draft of Spectrum Roadmap (2020) and published “Spectrum Roadmap (2020): Facilitate the sustainable growth of Industry (Draft)” on Posts and Telecommunications Department’s website in 10th November, 2020. And all interested parties can give the comments on that Spectrum Roadmap (Draft) before 31th December, 2020.

According to the tentative timeline which was mentioned in the draft of “Spectrum Roadmap (2020), the spectrum will be released as follows:

No.	Spectrum Band	Tentative Timeline	Remarks
1.	Regionwide release of 2.6 GHz and mmWave	2021	For the purpose of allocatingfurther 2600 MHz spectrum for Regional Operator including NFS(I) Licensee in 2021.
2.	Nationwide release of 700 MHz, 2.3 GHz ,3.5 GHz and mmWave	2022	To allocatethe spectrum by the multi–band approach depend on the demand of users.
3.	Release of 1500 MHz and 2.6 GHz (2022 if demand)	2023	If demand implementing in 2022
4.	850 MHz / EGSM 900 replanning2024 and possible release of further 3.5 GHz spectrum (depends on Guard band) 2025 (if demand in 2024)	2025	If demand to allocate the 3.5 GHz Spectrum depend on the Guard band.
5.	Other 5 G spectrum (4.8 GHz) 2025	2025	
6.	Release of 600 MHz 2025+	2025+	