



## ASEAN Workshop on 5G Spectrum

### Final Agenda

16 August 2019, Melia Hotel, Hanoi

08.30-09.00	Registration and coffee
	<b>OPENING KEYNOTES</b>
09.00 – 09.10	Welcome Remarks H.E. Mr. Nguyen Hong Hai, Vice Minister of MIC Viet Nam
09:10-09:15	Opening Remarks Ms. Hjh Yusrina Binti Haji Mat Yussof- SSM Chair
09.15 – 09.30	Opening Keynote: Global perspective on 5G spectrum Mr. Peng Zhao, Senior Spectrum Director, GSMA
09:30 - 09:45	Keynote: Spectrum roadmap in Vietnam Mr. Le Van Tuan- Deputy Director General- ARFM Viet Nam
09.45 – 10.20	Keynote:5G for ASEAN Mr. Yi Shen Chan, Director, Plum Consulting Mr. Scott Minehane , Managing Director Windsor Place Consulting
10.20– 10.35	<b>COFFEE BREAK</b>
	<b>SESSION I:5G mid-bands: opportunities &amp; solution</b> <i>(Objective: speakers will share on 3.5 GHz band plan: spectrum block sizes, minimum bandwidth per operator; matter of compatibility and sharing between 5G NR vs. FSS earth stations and other radio systems in C-band and in adjacent bands, mitigation techniques, guardbands, adding filters to VSAT, improvement of 5G NR spectrum mask, coordination distances, ... )</i>
10.35 – 10.50	Sharing study and compatibility Mr. Alex Orange, Senior Director, Government Affairs, Qualcomm
10.50 – 12:00	Round table, country case study using C-band Moderator : Mr. Le Van Tuan, Deputy Director General, ARFM <ul style="list-style-type: none"> <li>- 5G in China and Japan using C-band and 4.8-4.99 GHz Mr. Wang Hu, Head of Spectrum, Huawei</li> <li>Mr. Hiroyuki Atarashi, Director Radio System Group, NTT Docomo</li> <li>- Thailand Case study ( Dr. ThirapiroonThongkamwitoon- Office of NBTC Thailand)</li> <li>- ASEAN representatives, Huawei, NTTDocomo</li> </ul>
12.00 – 13.30	Lunch
	<b>SESSION II: MmW bands: Spectrum and Coverage challenges</b> <i>Objective: speakers will share on cell coverage of 5G NR in mW( outdoor, outdoor to indoor) in different weather conditions both in theory (simulations) and practical field test measurements; effect of massive MIMO, ... in order to make clear if mW can be used for</i>



	<i>5G in heavy rain region like South East Asia. Frequency ranges mW should be allocated to 5G, bandwidth per operator should be addressed.</i>
13.30 – 13.45	5G Spectrum and Coverage challenges Mr. Le Ba Tan, Deputy Director General, Viettel Network
13.45– 14.00	APG19-5 results and WRC-19 preparation Mr. Hiroyuki Atarashi, Director Radio System Group, NTT Docomo, APT coordinator for WRC-19 AI 1.13
14.00 – 15.00	Round table, Spectrum and Coverage challenges Moderator : Mr. Cristian Gomez, Director Spectrum Asia , GSMA <ul style="list-style-type: none"> <li>- 5G Spectrum Status – APAC and Globally</li> <li>- Mr.Yoshio Honda, General Manager, Standardization and Regulation, Ericsson Japan</li> <li>- ASEAN representatives</li> <li>- Qualcomm, Ericsson, Viettel</li> </ul>
15.00-15.15	Coffee Break.
	<b>SESSION III:Spectrum licensing</b> <i>(Objective: speakers to share on how 5G spectrum should be licensed, auction or direct allocation; spectrum charges/fees in compare with other mobile bands; any special conditions,... )</i>
15.15 – 15.30	5G use cases Mr. Kai Sahala – Head of 5G Asia pacific Japan , Nokia
15.30 - 15.45	5G Spectrum licensing Best Practice: Mr. Peng Zhao, Senior Spectrum Director, GSMA
15.45 – 16.15	Round table discussion Moderator: Mr. Scott Minehane , Managing Director Windsor Place Consulting <ul style="list-style-type: none"> <li>- ASEAN representatives</li> <li>- Axiata, Nokia, Huawei.</li> </ul>
	<b>SESSION IV:</b> Round table discussions Objectives: to make clear what are possible solutions that ASEAN countries may take to make spectrum available for 5G NR and to perform licensing in earliest time.
16.15 – 17.20	Round table discussion Moderator: Mr. Yi Shen Chan, Director, Plum Consulting  Round table: + ALL ASEAN representatives, Viettel, VNPT
17.20 – 17.30	Conclusion and vote of thanks  Mr. Cristian Gomez, Director Spectrum Asia, GSMA Mr. Le Van Tuan, Deputy Director General, ARFM Vietnam