5G Dynamic Spectrum Management Based on D2D Communication

Training Programme
by
Faculty of Engineering
Multimedia University

Overview

Why 5G? Why D2D ? Fifth generation (5G) is an upcoming standard for wireless communications that coexists with the current LTE-A network to provide higher throughput. In 5G, a Device-to-device (D2D) communication becomes an important concept which promises the overall performance enhancement by allowing direct communication between the devices which are in proximity. The idea of implementing in-band and out-band spectrums together in a D2D assisted mobile users will be relevant to the landscape of the 5G networks today. In this workshop, the participants will learn more about efficient dynamic spectrum that utilize the licensed and unlicensed bands, based on the distance between the D2D link, in such a way that it selects the best band for establishing the D2D links in the network.The participants will learn practically about the distance between the D2D link, where it selects the most efficient band that reduces the interference of the D2D connection and maximizes the network throughput. At the end of the program, participants will familiarize more on the 5G dynamic spectrum to achieve a higher network performance compared with other static spectrums. This workshop is useful in Telco in Malaysia for service satisfaction.

Objective

This workshop is expected to provide a good solid fundamental of 5G Dynamic Spectrum Management Based on D2D Communication which is demanded by Telco.

Target Audience

UG student, PG student, researcher, technician, engineer.

Prerequisite

None.

Training Methodology

Virtual Training.

Course Duration

2 days only.

Content/Outline

1.Device to device Communication

2.LTE, LTE-A, and 5G

3.Interference management

4.Mobility management

5.Performance analysis

6.Extensive knowledge involved and what is implemented currently?

7.Tentative: Morning (Theory and Concept), Afternoon (Hands-on and Practical)

Course Instructors

Assoc.Prof.Dr.Mardeni Bin Roslee

Mardeni Bin Roslee is an Associate Professor under the Faculty of Engineering, Multimedia University, Cyberjaya. He is a registered Chartered Engineer with Engineering Council United Kingdom, and Senior Member with The Institution of Engineering and Technology (IET), UK. As a Chartered Engineer, he brings a diversified range of engineering experience in design & development and engineering management. His experiences include the consultation, professional institution and academic sectors. His current research interests are 5G/6G telecommunication, satellite, Internet of Things and radar communication. He is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), USA and served in various leadership roles in the IEEE. He is a Chairman of Malaysia Institute of Electrical, Electronic Engineering (IEEE) in Communication Society and Vehicular Technology Society Joint Chapter and serves as Vice Chair of Malaysian Radar & Navigations Interest Group (MyRaN ig) which is under Malaysian Society for Engineering & Technology (MY SET). He is also the Chief Executive Officer (CEO), Founder of Armada Spin off company. In Multimedia University, he has been appointed as a President of Multimedia University Staff Association

and Chairman of Centre for Wireless Technology. He served as a Visiting Professor at Istanbul Technical University, Turkey and SASTRA University, India and served as keynote speaker for IEEE ICECCE Turkey, IEEE SOFTT Indonesia, I3CPE India and MyTENS16 Malaysia. Dr.Mardeni contributions to academics and the engineering profession over the years have earned him recognition nationally and internationally, he has awarded more than 35 international/local awards and been awarded the University Excellent Researcher Award for 2016 and 2018, respectively. He is also the recipient of Prestigious European Award for year 2018 and World Invention Prestigious Award 2019, which is the only one from Malaysia.

Administrative Details

Programme Logistics

Duration: 2 days

Date:
Please refer to the updated dates at https://www.mmu.edu.my/foe/short-courses/

Registration deadline:
Please refer to the updated dates at https://www.mmu.edu.my/foe/short-courses/

Your Investment

Condition		Price per Pax
Regular Fee	Students / MMU Alumni/ IEEE Students	RM500
	Public	RM800
	Public (Group >5 pax)	RM600
	IEEE Members	RM700
Early Bird Fee	Students / MMU Alumni/ IEEE Students	RM300
	Public	RM600
	Public (Group >5 pax)	N/A
	IEEE Members	RM500

Method of Payment

Local Participants:
Please make payment via bank transfer only. Account details is as below:

Account name: Unitele Multimedia Sdn Bhd
Account number: 86-0090180-2
Bank: CIMB Islamic Bank Berhad

Payment must be made by the registration deadline.

International Participants:

Please make payment via Flywire, as shown in the image below.

Type of Payment	Method	Details
International Payment / Payment outside Malaysia	Online payment with Flywire	• To get started, go to mmulanding.flywire.com; or scan the QR code to begin the payment process: SCAN ME • Choose Conference for Non-students related • Minimum payment RM 50

Refund and Cancellation

Any refunds will be processed in 60 days. Should there be any cancellation, it may be due to the organizer not getting the minimum participants or the participant failing to attend the workshop due to unavoidable reason.

Disclaimer

Faculty of Engineering, Multimedia University reserves the right to change the instructors, date and to vary/cancel the programme should unavoidable circumstances arise. All effort will be taken to inform participants of the changes. Upon submission of the registration form, you are deemed to have read and accepted the terms.

Enquiries

Dr. Zubaida Yusoff: zubaida@mmu.edu.my

Dr. Katrina D. Dambul: katrina@mmu.edu.my

Registration Form

To register, please visit this link: https://forms.gle/3UX6sLnkzQKn6itL7