

**ICT Virtual Organization of ASEAN Institutes and NICT
ASEAN IVO Forum 2016**

Program

Date: Nov. 24 (Thu), 2016
Venue: Pacific 1 & 2, Pan Pacific Hanoi, Hanoi, Vietnam

08:00 **Registration**

09:00 **Welcome Address**

Dr. Vu Van San
President of PTIT

Opening Address

Dr. Fumihiko Tomita
NICT Vice President and Forum Organizer

09:10 **Invited Talk**

Dr. Nguyen Thanh Tuyen
Deputy General Director of IT Department,
Ministry of Information and Communications, Vietnam

09:30 **Session 1: Report of ASEAN IVO 2016 Projects**

Chair: Nguyen Ngoc BINH, VNU-IFI, Vietnam

Open Collaboration for Developing and Using Asian Language Treebank
Project Leader: Masao Utiyama, NICT, Japan

ASEAN Language Speech Translation thru' U-STAR
Project Leader: Li Haizhou, I²R, Singapore

Mobile IoT
Project Leader: Sun Sumei, I²R, Singapore

ASEAN forum for Software Defined System on Disaster Mitigation and Smart Cities
Project Leader: ONG Hong Hoe, MIMOS, Malaysia

10:10 **Session 2: Report of ASEAN IVO 2016 Projects**

Chair: Woroindah Widiastuti, MCIT, Indonesia

IoT Open Innovation Platform
Project Leader: Boon Choong Foo, MIMOS, Malaysia

Cambodia NerveNet Field Testing (Operation Management and Content Development to
Promote Connectedness of Cambodia Rural Area)
Project Leader: Meas Chamnan, NIPTICT, Cambodia

TV White Space (TVWS) Experimental for Application in Remote Area
Project Leader: Hafizal Mohamad, MIMOS, Malaysia

Research and development on short distance communication and imaging for applications in
ASEAN region
Project Leader: Vo Nguyen Quoc Bao, PTIT, Malaysia

10:50 **Break**

11:00 **Session 3: Cyber-Security and its applications.**
Chair: HOANG Dang Hai, PTIT, Vietnam

A Security Framework for IoT Networks
Hoang Dang Hai
PTIT, Vietnam

The National Framework of Information Security Governance on National Cyber Physical Systems
Ahmad Budi Setiawan, Aries Syamsuddin, Ashwin Sasongko Sastrosubroto
MCIT, Indonesia

Proposed Framework for Root Kit Analysis and Cyber Forensics for Cyber Security
Mie Mie Su Thwin, Ms. Cho Cho San, Tin Maung Maung, Naing Linn Htun
UCSY, Myanmar

The Development of an Internet of Things (IoT) Monitoring and Detecting System based on NICTER/DAEDALUS
Chalee Vorakulpipat, Ekkachan Rattanagerdnusorn, Visut Savangsuk, Sineenat Tienkouw
NECTEC, Thailand

Introduction of the NICTER Project
Daisuke Inoue, Tao Ban, Takeshi Takahashi, Takahiro Kasama, Koei Suzuki, Yaichiro Takagi, Mio Suzuki, Ryoichi Isawa
NICT, Japan

11:50 **Lunch**

13:00 **Session 4: Smart Community 1**
Chair: Boon Choong Foo, MIMOS, Malaysia

IoT-based Pulmonary Tuberculosis Diagnostics System
Mohd Noor Norliza Ahmad Robiah, Bani Nurul Aini, Abd Jalil Siti Zura, Mohd Aris Siti Armiza, Mad Kaidi Hazilah, Syed Abdul Rahman, Sharifah Alwiah, Mohd Rijal Omar
UTM, Malaysia

Transient wearable OS for healthcare solutions: ‘Towards active healthy lifestyle
SMN Aroscha Senanayake*, Abdul Ghani Naim*, Daphne Teck Ching Lai*, Owais A Malik*, Danish Zaheer**
*UBD, Brunei, **SMRC, Brunei

Online Risk Assessment Using Hand Grip Strength Measurement
Mohd Noor Norliza, Mohd Aris Siti Armiza, Abd. Jalil Siti Zura, Abdullah Haslaile, Syed Abdul Rahaman, Sharipah Alwiah, Ishak Ruzana
UTM, Malaysia

IoT based platform for personal health care applications for smart communities.
Dzung Van Dinh
VNU-ITI, Vietnam

Safety Monitoring for Vulnerable Citizen Using Ubiquitous Location Tracking System
David Chieng*, Alvin Ting*, Seh Chun Ng*, Trung Kien Dao**, Huan-Bang Li***
*MIMOS Berhad, Malaysia, **HUST-MICA, Vietnam, ***NICT, Japan

13:50 **Session 5: Smart Community 2**
Chair: Supot Tiarawut, Chulalongkorn U., Thailand

Energy Efficient Next Generation Passive Optical Network (NG-PON) for Sustainable Green ASEAN Communication Network Infrastructure

Sevia M. Idrus, Nadiatulhuda Zulkifli, Abu Sahmah M. Supaat, Osamu Mikami, Sumiaty Ambran, Azura Hamzah, Cheimi Fujikawa, Tetsuya Kawanishi, Toshi Umezawa, Atsushi Kanno, Romli Mohamad, Mohd. Shahril Salleh, Ferdian Yunazar, Yusuf Nur Wijayanto, Adhi Purwoko, Adhi Susanto, Wayan Mustika
UTM, Malaysia. Tokai U, Japan, Waseda U, Japan, NICT, Japan, TM R&D Malaysia, LIPI, Indonesia, UGM, Indonesia.

Air Quality Monitoring

Ahmad Robiah, Mohd Noor Norliza, Harun Ahmad Nizar, Mat Ibrahim, Mohamed Norliza, Ahmad Norulhusna
UTM, Malaysia, MIMOS Berhad, Malaysia

Towards Green Cloud Computing in Heterogeneous Network Infrastructures

Nguyen Huu Thanh, Pham Ngoc Nam, Hoang Dang Hai, Tran Manh Nam, Truong Thu Huong, Nguyen Tai Hung
HUST, Vietnam, PTIT, Vietnam

Distributed Device-to-Device Wireless Networks to Enable Smart Community

Huan-Bang Li, Lin Shan, Ryu Miura, Fumihide Kojima
NICT, Japan

Recent advance of speech and language processing technologies in Thailand

Chai Wutiwiwatchai, Thepchai Supnithi
NECTEC, Thailand

ASEAN Language Treebank (ALT) Project in Indonesia

Teduh Uliniansyah
BPPT, Indonesia

14:50 **Break**

15:00 **Session 6: Smart Community 3**
Chair: Myint Myint Sein, UCSY, Myanmar

On the Cogitation of Primary User Reappearance in Reliable Video Transmission over Cognitive Radio Network for Emergency Communications

Hafizal Mohammad*, Nordin Ramli*, Osamu Takyu**, Hezerul Abdul Karim***, Aduwati Sali****

*MIMOS Berhad, Malaysia, **Shinshu U, Japan, ***MMU, Malaysia, ****UPM, Malaysia

Effective Emergency Respond System

Myint Myint Sein, K-zin Phyo, Thida Aung, Myat Thiri Khine, Thin Lai Lai Thein
UCSY, Myanmar

Flood Warning System for Middle Region of Myanmar

Phyo Pa Pa Tun, Myint Myint Sein, Thida Aung, Thuzar Hsan
UCSY, Myanmar

Appropriate Electronics and Communication for Smart Utilities under Disaster Situation

Jittiwut Suwatthikul, Udom Lewlompaisarl, Rangsarit Vanijjirattikhan, Kumpee Suksomboon,

Jasada Kudtongngam, Unpong Supakchukul
NECTEC, Thailand

Fault-tolerant connectivity in wireless sensor networks to protect communities from hazards and mitigate the effects of disaster.

Huynh Thi Thanh Binh*, Ngo Quynh Thu*, Ernest Kurniawan**, Yew Soon Ong***, Supavadee Aramvith****, Robiah Ahmad*****

*HUST, Vietnam, **IPR, Singapore, ***NTU, Singapore, ****Chualalongkorn U, Thailand, ***** UTM, Malaysia

Analyzing Damage region of 3D Historic Pagodas Images after the Earthquake

Thida Aung*, Myint Myint Sein*, K-zin Phyoo*, Myat Thiri Khine*, Thae Maung Maung**

*UCSY, Myanmar, **MAEU, Myanmar

16:00

Session 7: Smart City 1

Chair: Sarun Sumriddetchkajorn, NECTEC, Thailand

Smart Spaces: Activity Recognition

Somnuk Phon-Amnuaisuk, Idham M. Mashud, Peter David Shannon, Muhd Khairul Fadhli Bin Sani, Muhammad Fadhil Hamdan

UTB, Brunei

Phuket smart city

Supakorn Siddhichai, Ubolwan Khamkaew, Kalaya Udomvitid, Theerawat Wongsrisang, Monsak Socharoentum, Suwat Sopitpan, Opas Trithaveesak, Panita Pongpaibool, Wasin Sinthupinyo, Koonlachat Meesublak, Naiyana Sahavechaphan, Wasan Pattara-atikom, Seksun Sartsatit, Sarun Sumriddetchkajorn

NECTEC, Thailand

NerveNet Never Die Network in Thailand

Kultida Rojviboonchai*, Masugi Inoue**, Kulit Na Nakorn*

*Chulalongkorn U, Thailand, **NICT, Japan

Management Optimization of Power Consumption for Autonomous Wireless Sensor Networks used in Smart Buildings

Trung-Kien Dao*, Thanh-Huong Nguyen*, Viet-Tung Nguyen*, David Chieng**

*HUST-MICA, Vietnam, **MIMOS Berhad, Malaysia

Emphasizing FoE UNHAS Smart Campus Roles for Creating the Neighboring Smart Societies
ELYAS PALANTEI,

Universitas Hasanuddin (UNHAS) , Indonesia

16:50

Break

17:00

Session 8: Smart City 2

Chair: Daphne Lai Teck Ching, UBD, Brunei

Guiding Location and Transportation Services for Yangon Metropolitan Area

Myat Thiri Khine, Myint Myint Sein, K-zin Phyoo,

UCSY, Myanmar

Traffic and Road Monitoring and Management System for Smart City Environment

Cyrel Manlises, Alejandro Ballado Jr., Febus Reidj Cruz, Ramon Garcia, Jessie Jaye Balbin, Jesus Martinez Jr., Janette Fausto, Carlos Hotrinela IV, Julius Sese, etc.

Mapua Institute of Technology, Philippines

Wireless Sensor Network Test-Bed for Environmental Monitoring
Aung Htain Maw, Khin Than Mya
UCSY, Myanmar

Toward a universal all-optical wavelength converter for future metropolitan area optical information networks
Hung Nguyen Tan*, Takashi Inoue**, and Shu Namiki**
*DUT, Vietnam, **AIST, Japan

IoT Mobile Micropayment to Support Government Related Services for SmartCity: A Case Study in City Parking
Nadiatulhuda Zulkifli*, Sevia M. Idrus*, Sahrul Hilmi Ibrahim**, Hazim Ahmadi***
*UTM, Malaysia, **Telekom Malaysia, ***Telekom Indonesia

17:50

Session 9: Smart Village

Chair: Sopheap SENG, NIPTICT, Cambodia

Presentation and Collaboration Management Platform
Khong Neng, Choong, Gin Xian, Kok, Danial Naghshbandi, Muhammad Hilmi Mohd Shariff
MIMOS Berhad, Malaysia

ICT for Marginalized Area
Kitti Wongthavarawat, Aswin Hongsingthong, Pattanun Nownaisin, Kobsak Sriprapha, Parichat Muangaram
NECTEC, Thailand

E-village Project in Ancient City Bagan
Myat Thiri Khine*, Myint Myint Sein*, K-zin Phyo*, Thae Maung Maung**
*UCSY, Myanmar, **MAEU, Myanmar

IoT based Home Energy Management system for Rural Area in Myanmar
Hlaing Thida Oo, Khin Than Mya, Nyain Nyain Lwin
UCSY, Myanmar

18:30

Closing Remark