

ICT Virtual Organization of ASEAN Institutes and NICT
ASEAN IVO Forum 2016
Call for Presentations

Submission and Registration Form

I. Title—Title of presentation:

Appropriate Electronics and Communication for Smart Utilities under Disaster Situation

II. Author(s)—Full name (First name family name):

Jittiwut Suwatthikul
Udom Lewlomphaisarl
Rangsarit Vanijjirattikhan
Kumpee Suksomboon
Jasada Kudtongngam
Unpong Supakchukul

III. Organization(s):

National Electronics and Computer Technology Center (NECTEC), Thailand

IV. Topic selection:

Smart Society – Smart Community

IV. Abstract:

Modern electronics and communication have been applied to various remote data monitoring applications such as agriculture, the industry and public utilities/services. The data can be acquired remotely and in a real-time manner to achieve better analysis and services.

NECTEC as a statutory government organization has its main responsibilities of under taking, supporting and promoting the research and development of electronics and computer technologies in Thailand as well as establishing collaborations among ASEAN countries. Previous projects related to smart utilities conducted by NECTEC such as Distribution Automation System for Metropolitan Electricity Authority (MEA), Water Distribution Automation System for Metropolitan Waterworks Authority (MWA), and Dam Safety Remote Monitoring System for Electricity Generating Authority of Thailand (EGAT) were aimed at minimizing the service disruption and ensuring safety of these major utilities. However, the design and implementation of the communication and electronic systems in such projects have not yet concerned system redundancy, availability or resilience under conditions such as major accidents or disaster.

The purpose of this project is to demonstrate the application of various ICT technologies to the utilities' monitoring systems, taking into account system availability under disaster circumstances such as flood. Proposed by National Institute of Information and Communications Technology (NICT) Japan and recently included in the IEEE 802.15.4g/4e standard, Wireless and Smart Utility Networks so-called Wi-SUN is considered as one of the promising technologies. Appropriateness and limitations of a testbed composed of wired, wireless and low-power ICT equipment when used in such condition

will be evaluated, discussed and reported to the ASEAN countries. Further applications can be demonstrated in the CMLV countries having similar climates, environments and requirements, especially Department of Information Technology, Lao PDR which already has bilateral collaboration with NECTEC.

V. Speaker information:

Full name: Jittiwut Suwatthikul
Institute: National Electronics and Computer Technology Center
Address: 112 Thailand Science Park, Phahonyothin Road, Khlong Nueng,
Khlong Luang District, Pathumthani 12120, Thailand.
Telephone: (+66) 02-564-6900
E-mail: jittiwut.suwatthikul@nectec.or.th

VI. Support for speaker—circle or underline any that you wish to request:

- Round trip fare at discount economy class
- Accommodation