

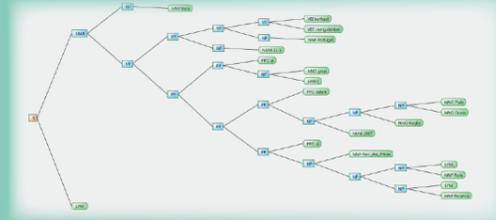
# Some past ASEAN IVO Projects

## Open Collaboration for Developing and Using Asian Language Treebank (2016)

Italy have defeated Portugal 31-5 in Pool C of the 2007 Rugby World Cup at Parc des Princes, Paris, France.  
 Italia berhasil mengalahkan Portugal 31-5 di grup C dalam Piala Dunia Rugby 2007 di Parc des Princes, Paris, Perancis.  
 フランスのバリエ・バルク・デ・フランスで行われた2007年ラグビーワールドカップのグループCで、イタリアは31対5でポルトガルを下した。  
 இலத்தீன் மொழியில் 31-5 புள்ளி வேறுபாட்டில் இத்தாலியும் 2007 லை ஆசிய மொழி வங்கி  
 Itali telah mengalahkan Portugal 31-5 dalam Pool C pada Piala Dunia Ragbi 2007 di Parc des Princes, Paris, Perancis.  
 ලිට්ටානියාව 31-5 ලකුණින් පරාජය කළ 2007 ටර්නමේන්ට් ලෝක කුසලානේ පොල් පොළේ  
 Ý đã đánh bại Bồ Đào Nha với tỉ số 31-5 ở Bảng C Giải vô địch Rugby thế giới 2007 tại Parc des Princes, Pari, Pháp.  
 இலத்தீன் மொழியில் 31-5 புள்ளி வேறுபாட்டில் இத்தாலியும் 2007 லை ஆசிய மொழி வங்கி  
 Natalo ng Italya ang Portugal sa puntos na 31-5 sa Grupong C noong 2007 sa Pandaigdigang laro ng Ragbi sa Parc des Princes, Paris, France.

**Leader:** NICT (Japan)  
**Members:** BPPT (Indonesia), I2R (Singapore), IOIT (Vietnam), UET(Vietnam), NIPTICT (Cambodia), UCSY (Myanmar), NECTEC(Thailand), PUP(Philippines)

**Award-winning publication:**  
 Chenchen Ding, Vichet Chea, Masao Utiyama, Eiichiro Sumita, Sethserey Sam, Sopheap Seng: *Statistical Khmer Name Romanization*. PACLING, 2017 Best Paper Award.



## NAPC: Networked ASEAN Peat Swamp Forest Communities (2018)



**Leader:** UPM(Malaysia)  
**Members:** NICT(Japan), MIMOS(Malaysia), Bogor Agricultural University (Indonesia), UTB(Brunei), BPPT (Indonesia)

**Project impact:**  
 Enable connectivity for IoT-based monitoring system in peat swamp forest areas in three ASEAN countries  
 Enable forest management community and researchers to further understand peat swamp forest ecosystem by analyzing the collected micro climate data  
 Serve as a peat swamp forest fire monitoring system for immediate human and automated interventions via FDRS

## Research and development on short distance communication and imaging for applications in ASEAN region (2016)



**Leader:** PTIT (Vietnam)  
**Members:** LIPI(Indonesia), TI(Indonesia), CU(Thailand), HCMC-DIC(Vietnam), UTM(Malaysia), TMRD(Malaysia), NICT(Japan), CMU(Thailand), RFD(Vietnam), SUT(Thailand)

The research project has provided basic guidelines for: Design of photonic integrated devices; Millimeter-wave propagation, channelization, and its availability; Device evaluation technique; Feasibility of short-distance communication by both optical and radio technology in access networks numerically and experimentally; Feasibility of short-distance imaging by optical and radio, and their combination techniques; New hardware implementations for short-distance communication and imaging based on radio-over-fiber and its related technologies.

Collaboration among ASEAN institutes including universities, manufacturers, operators and government: Increasing the number of research scientists, engineers in the field of the convergence of radio and optical technologies for realization of 5G networks. Enhancing civil security and safety by imaging as well as to increase user experiences in future networks.

## A Hybrid Security Framework for IoT Networks (2017)

**Leader:** PTIT (Vietnam)  
**Members:** NECTEC (Thailand), MIMOS (Malaysia), HUST (Vietnam), NUCE (Vietnam), NICT (Japan), NES (Japan)

**Award-winning publications:**  
 Dang Hai Hoang, Ha Duong Nguyen: *A PCA-based Method for IoT Network Traffic Anomaly Detection*. Proc. of IEEE ICAC, Korea, Feb. 2018. Best paper Award.  
 Chalee Vorakulpipat, Ekkachan Rattanalerdnorn, Phithak Thaenkaew, Hoang Dang Hai: *Recent Challenges, Trends and Concerns related to IoT security: An evolutionary study*. Proc. of IEEE ICAC, Korea, Feb. 2018. Best paper Award.

## For more information



ASEAN IVO Secretariat:  
[http://www.nict.go.jp/en/asean\\_ivo/](http://www.nict.go.jp/en/asean_ivo/)  
[asean\\_ivo\\_sc\\_nict@ml.nict.go.jp](mailto:asean_ivo_sc_nict@ml.nict.go.jp)

# ICT Virtual Organization of ASEAN institutes and NICT



## About ASEAN IVO

“ICT Virtual Organization of ASEAN Institutes and NICT” (ASEAN IVO) is a global alliance of institutes and universities in the ASEAN region and Japan focused on ICT research and development.

The mission of ASEAN IVO is to seek and identify strategic ICT research areas in the ASEAN region and support collaborative projects in them, promoting the international alliance amongst universities and research institutes in the ASEAN region and Japan.

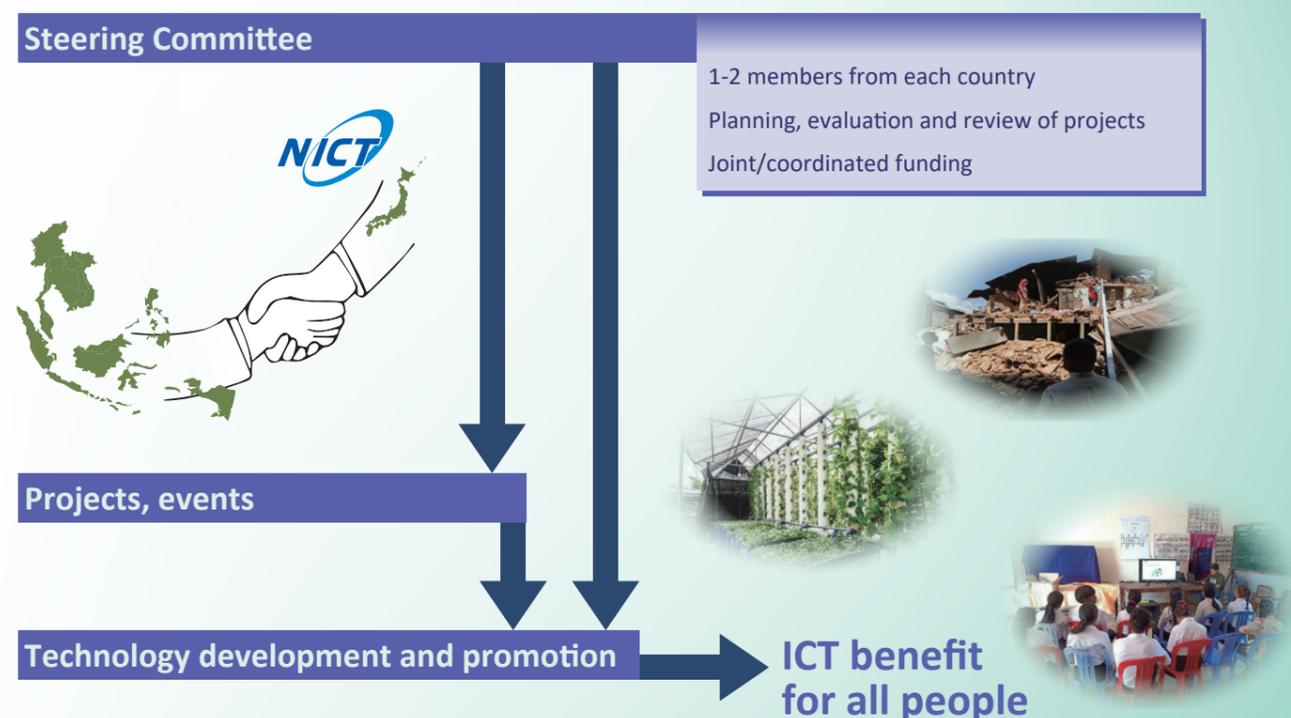
Collaborative projects aim to address common challenges such as communication limitations in rural areas and disaster situations, language barriers, network security, energy, infrastructure, agriculture, and more.

## History of ASEAN IVO

The initial idea was mentioned at the “International Roundtable on ICT R&D Collaboration in the ASEAN Region” held in 2013 by NICT. A proposal to establish the Organization was given by NICT in the second Round Table in 2015, and approved by the Round Table members.

ASEAN IVO began in 2015 with 23 members from 8 ASEAN countries as well as Japan. Now membership includes all ASEAN countries, with 54 members as of April 2019 and new members regularly joining.

## How it works



## Why join ASEAN IVO?

ASEAN IVO members can apply to make presentations on their research activities at ASEAN IVO forum, with the possibility of receiving support for travel expenses. Additionally, member universities and public research institutes from ASEAN countries are eligible to receive financial support for collaborative projects.



## Membership

Membership is open to universities, institutes and companies located in the ASEAN region. Depending on the type of organization, the following conditions may apply:

1. Organizations applying for membership should be involved in research and development in the ICT field.
2. Organizations from non-ICT sectors can be accepted as member if their membership purpose is ICT applications for their field.
3. Private companies are welcome to apply for membership if the company applying provides matching funds for ASEAN IVO joint projects. No financial support will be provided to the company.

## Activities

ASEAN IVO conducts and supports various activities for the promotion of international research collaboration, including the following:

1. Developing common technologies in wide areas based on common considerations
2. Forming multinational collaborative projects for research, field trials, etc. to address common regional needs
3. Promoting collaborative research by mutual researcher exchange
4. Sharing knowledge through international joint workshops and other academic events

To encourage and facilitate these activities, a call will periodically be made to ASEAN IVO members for proposals related to the above, financial support to be offered by NICT.

## Steering Committee

A Steering Committee is established from the ASEAN IVO Members, and is formed of NICT plus one or two representatives for each ASEAN country. The Steering Committee is responsible for overseeing and operating the ASEAN IVO activities.

The Steering Committee carry out activities including: Selecting proposals for collaborative projects; Reviewing ongoing projects and providing feedback; Promoting ASEAN IVO with relevant ministries and organizations and identifying sources of support for ASEAN IVO activities; Reviewing and deciding overall ASEAN IVO policy and administrative matters.



### Past Steering Committee meetings:

- 2019** March 12, Bangkok, Thailand
- 2018** November 27-28, Jakarta, Indonesia  
March 6, Bangkok, Thailand
- 2017** November 23-24, Bandar Seri Begawan, Brunei Darussalam  
March 7, Bangkok, Thailand
- 2016** November 24, Hanoi, Vietnam  
March 11, Phnom Penh, Cambodia
- 2015** November 26, Kuala Lumpur, Malaysia

## ASEAN IVO Forum

ASEAN IVO Forum is an annual event providing an opportunity for all ASEAN IVO members to exchange ideas, discuss R&D topics and coordinate projects. Each year, the ideas exchanged lead to new project teams forming in time for the following Call for Proposals.

### Past Forum events:

- 2018** November 27-28, Jakarta, Indonesia
- 2017** November 23-24, Bandar Seri Begawan, Brunei Darussalam
- 2016** November 24, Hanoi, Vietnam
- 2015** November 26, Kuala Lumpur, Malaysia



ASEAN IVO Forum 2018 in Jakarta

## Research collaboration

New collaborative projects are selected for support through an annual call for proposals. All projects are required to include participant institutions from at least two different ASEAN countries. Proposals from all technical fields are welcome and are evaluated on the potential benefit of output.

### Past Call topics:

#### 2019

1. ICT Solutions from Farm to Meal
2. ICT for Environment Protection and Disaster Prevention
3. Secure and Sustainable Connected Society

#### 2018

1. Smart-Agriculture / Aquaculture / Farming
2. Smart Tourism
3. Smart Environment Protection
4. Information Reliability for Smart Society

#### 2017

1. Cyber-Security and its applications
2. Smart Society: ICT applications for community and environment

#### 2016

1. ICT Solutions to the Challenges surrounding Urbanization
2. Social Renovation in Rural Areas and/or Urban Areas