

SOI Asia Project Social Design Challenge for Resiliency in Asia Pacific

Keiko Okawa

Graduate School of Media Design, Keio University, Japan
keiko@kmd.keio.ac.jp

ABSTRACT

School on the Internet Asia (SOI Asia) is an Inter-Universities project designing a resilient society in Asia through joint research and education network (REN). Initiated in 2001 and consisting of 28 universities & research institutes partners from 13 countries/economies. SOI objectives are: (a) *How can we connect the Internet among universities in Asia?* and (b) *How can we share knowledge among universities in Asia over the Internet?* The paper will discuss SOI Asia throughout 5 lenses: shared mission, simple procedure, safe place, technology and challenges.

Keywords: SOI Asia, Internet, Research & Education Network (REN)

INTRODUCTION

School on the Internet Asia is an Inter-Universities project designing a resilient society in Asia through joint research and education network (REN). Initiated in 2001 and consisting of 28 universities & research institutes partners from 13 countries/economies (<https://www.soi.asia/about/>). SOI Asia has conducted 30 graduate level courses (over 300 lectures), and more than 100 real time sessions including conference broadcasting and seminars, which have been shared by more than 3,000 students in Asia.

Platforms for the sharing of higher education are operated by all member universities, enabling sharing of both real time and archived lectures as well as supporting an array of other educational programs that facilitate the development of constructive and cooperative relationships among members. SOI objectives are: (a) ***How can we connect the Internet among universities in Asia?*** and (b) ***How can we share knowledge among universities in Asia over the Internet?***

Throughout its vast experience, SOI has 5 most important lesson learned:

1. Design and share a **shared mission**.
2. Design a **simple procedure** for how to join.
3. Design a **safe place** for the community to share.
4. Design **technology** to support the community's activities.
5. Design joint **challenges!**

This paper will discuss SOI Asia journey and experience throughout these 5 lenses.

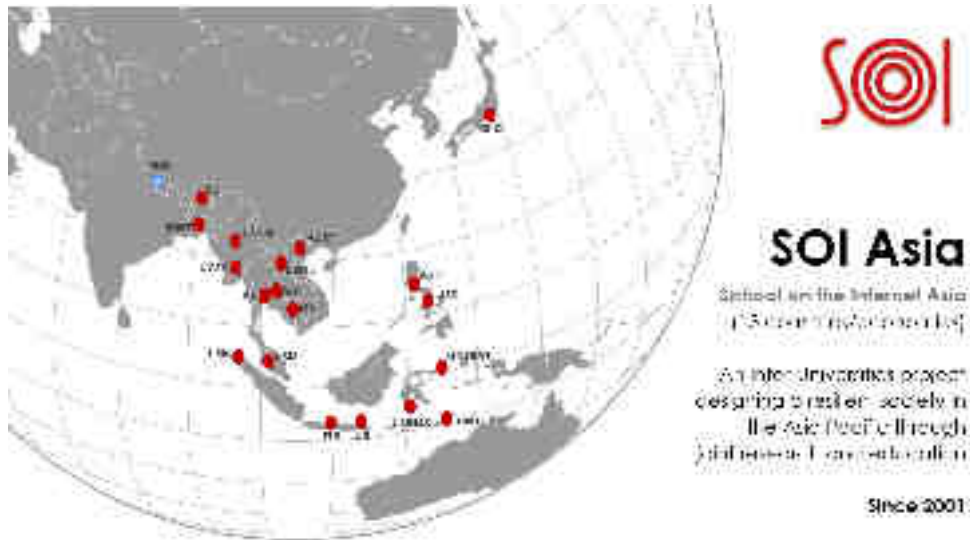


Image 1 SOI Asia Network. (Source: Okawa, 2024)

Sharing Missions

School on the Internet Asia mission statement was formed in Tokyo, 2003. The Mission is: Establish the scheme for sustainable educational collaboration programs utilizing the IT among Asian Universities, with 3 goals:

1. Establish the quality platforms for the education,
2. Deliver the quality courses for students in Asia, and
3. Achieve sustainability including cost model.

In 2008 SOI Asia Summit, it produced the following statement:

'We are creating a common for research and education among partner institutions, where each of us strives for the future of our own nation by utilizing these commons, and we contribute to the world by collaborating with similar initiatives.'

In 2016 SOI Asia Summit held in Bandung, it declared:

'We recognize the significance of Research and Education Networks (RENs) as an infrastructure for universities and research institutes in Asia. We urge all stakeholders to join us to foster RENs and their interconnections for knowledge and wisdom for the future.'



Image 2 2016 SOA Mission: Bandung Declaration. (Source: Okawa, 2024)

SOI Asia latest mission development was made in 2021, which aimed to *design a resilient future in Asia Pacific, with three main focus areas: 1) Community Based Research Framework, 2) Education for Social Resilience, and 3) Education for Internet Infrastructure Resilience.*



Image 3 SOI Asia Mission 2021. (Source: Okawa, 2024)

Simple Procedures

School on the Internet Asia designed a **simple procedure**, consisting of 4 simple steps on how to join:

1. Step 1: Site Survey
 - Designing a site
2. Step 2: Forming a local team
 - Steering Committee
 - Academic Committee
 - Technical Committee
3. Step 3: Setup SOI Asia Site
 - Connectivity
 - Learning environment based on the connectivity
4. Step 4
 - Test Session

The simple procedures aimed for SOI Asia partners to be connected and do learning and research together (see image 5 below):



Image 4 SOI Asia Learning and Research collaboration. (Source: Okawa, 2024)

As a collaboration module SOI Asia developed Asia Pacific Internet Engineering (APIE) program to encourage young people to get involved in improving cyberspace in Asia especially (<https://apie.soi.asia/>). The APIE program aimed to help university students and young people in the Asia Pacific region looking to improve their employability potential and build the network engineering and operation skills needed to meet the global demand for Internet engineers in industry and academia, including research and education networks (REN). This program consists of self-paced online learning components as well as hands-on and community building opportunities in face-to-face projects. The APIE program structure can be seen in the image below:

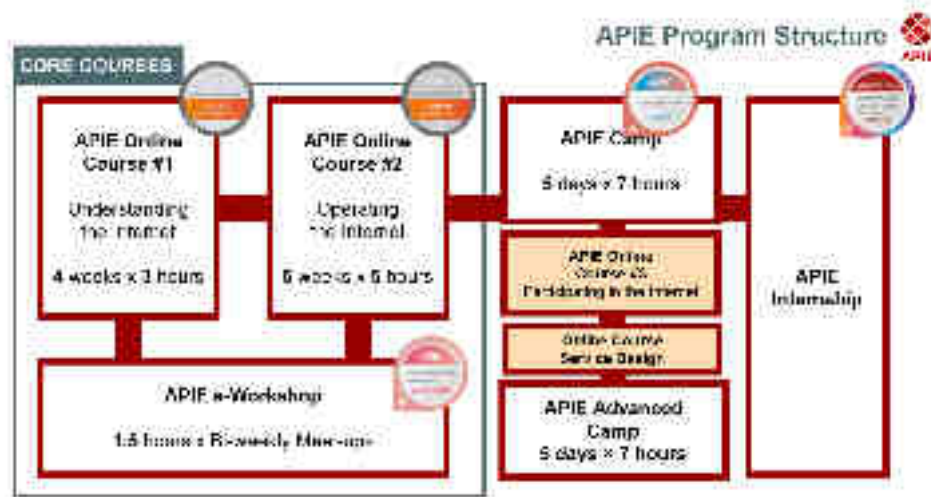


Image 5 SOI Asia – APIE Program Structure. (Source: Okawa, 2024)

The joint Community Based Research (CBR) scheme itself can be funded by AI3/SOI-Asia Project, with aim:

1. For promoting **multi-stakeholder** collaborative research among partners.
2. For encouraging **innovation** to solve the problems in our **community**.
3. For involving **the younger** generation in research activities.
4. Get a substantial benefit from the community asset such as **networks** and **people**.

Safe Place

School on the Internet Asia designed a **safe place** for the community to share. This was achieved through SOI Asia initiatives such as the APIE Camp and Meetings that has already done in Bandung, Philippines, etc., or tackling real world issues through EBA (Evidence Based Approach) (see image below).

EBA project offers a curriculum to foster human resources capable of identifying and tackling issues based on evidence and analysis. EBA provides a digital communication platform where students in different countries can study together on daily basis. In cyberspace, students and faculty members of all partners interactively teach/learn/discuss each other to encourage region-wide collaborative problem-solving. The program also offers fieldworks and Internships in the region, to provide a variety of experiences in the study fields, meeting with people and society in Asia (<https://eba.soi.asia/>).



Image 6 SOI Asia: APIE Program, EBA. (Source: Okawa, 2024)

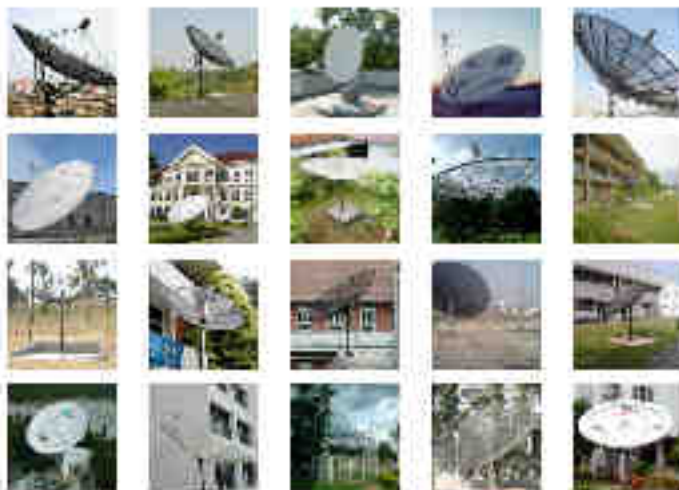
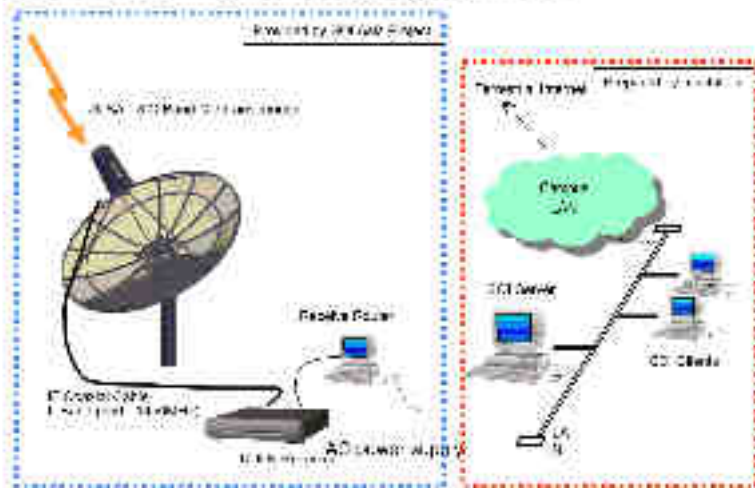
Key skills incorporated in the program:

1. **Information Technology:** Scientific analysis with evidence-based approach.
2. **Social Innovation:** Realizing the solution in society with an innovative way.
3. **Expert Knowledge:** Deep knowledge and problem finding ability.
4. **Global Collaboration Skill:** Discuss across borders to find out the solution.
5. **Cultural Understanding and Actions in The Field.**

Technology

School on the Internet Asia designed **technology** to support the community's activities. The technology provided by a collaboration between the SOI Asia Projects and the University partner as shown in the image below:

2002 - SOI Asia – Site Configuration



**Connectivity
is essential
for
Research &
Education**

2007 (20%)

31

Image 7 SOI Asia-Site Configuration and Technology Implementation. (Source: Okawa, 2024)

The technology was meant to boost and achieving the Research and Education Networks (RENs) amongst its 28 universities and research institution partners, as a SOI Asia Mission statement. It is shown in the image below:



Asia Pacific: RFN community

- | | | |
|--|--|---|
| AARNet - Australian NREN | LERNet - Laos NREN | APAN - Asia Pacific Advanced Network |
| MgREN - Afghanistan NREN | MAFFIN - Japanese Culture Network | IBIN / AsiaConnect - Trans-Indo-Pacific Information Network |
| BDREN - Bangladesh NREN | mmREN - Myanmar NREN | ARTUA-PAC - ASEAN Research and Education Network in Asia-Pacific |
| CamREN - Cambodia NREN | MYREN - Malaysia NREN | WIDE Project - International Research and Education Organization in Asia-Pacific |
| CSINET - China Education and Research Network | NREN - Nepal NREN | |
| CERNET - China Education and Research Network | PERN - Pakistan NREN | |
| Drukenet - Dominican NREN | PHICINET - Philippine NREN | |
| ERDEMNET - Mongolia NREN | RENZANZ - New Zealand NREN | |
| JGN - Japan Education and Research Network | SINET - Singapore NREN | |
| HARNET - Hong Kong NREN | SingAREN - Singaporean NREN | |
| KOREN - Korea NREN | TREN - Taiwan NREN | |
| KREONET - Korea NREN | TWAREN - Taiwanese NREN | |
| IDREN - Indonesia NREN | ThaREN - Thai NREN | |
| LEARN - Sri Lanka NREN | VinaRen - Vietnamese NREN | |

Source: Keiko Okawa, 2024

Image 8 SOI Asia-REN Community. (Source: Okawa, 2024)

Challenges

School on the Internet Asia designed joint **challenges**, amongst its partners. Here are some joint challenges that have been done by the SOI Asia:

1. Global Kids Eclipse – a collaboration to engage more than 500 children from 8 countries in 13 locations to experience and learning the longest total solar eclipse in 2009.

Global Kids Eclipse 2009. 7. 22

More than
500 children
from 8 countries
in 13 locations.



Image 9 SOI Asia-Challenges: Global Kids Eclipse. (Source: Okawa, 2024)

2. CONNECTivity – as the largest online ecology seminar involving 2592 participants achieved by UNESCO Jakarta & Connect Asia in 2011.

CONNECTivity with UNESCO

- 2011. 11. 25
- On Project World Heritage
Climate Change
The largest online
seminar in the world
reached **2,592**
participants worldwide
achieved by UNESCO
Jakarta & CONNECT
Asia
In Jakarta, Indonesia on
25 November 2011.



Image 10 SOI Asia-Challenges: CONNECTivity w/ UNESCO. (Source: Okawa, 2024)

3. ODIA (On Day in Asia) – connecting 8 heritage sites in Asia: Patan Durbar Square (Nepal), Shwedagon Pagoda (Myanmar), Angklung (Indonesia), Melaka & George Town (Malaysia), Kamakura (Japan), Uam Historical Park (South Korea), and Sydney Opera House (Australia) in 2012.

One Day in Asia – 2012. 11.01



Image 11 SOI Asia-Challenges: ODIA. (Source: Okawa, 2024)

4. Hinotori Surgical Robot System – an 5000 km distance surgery operation done by National University Singapore (NUS) and Fujita Health University, Japan.

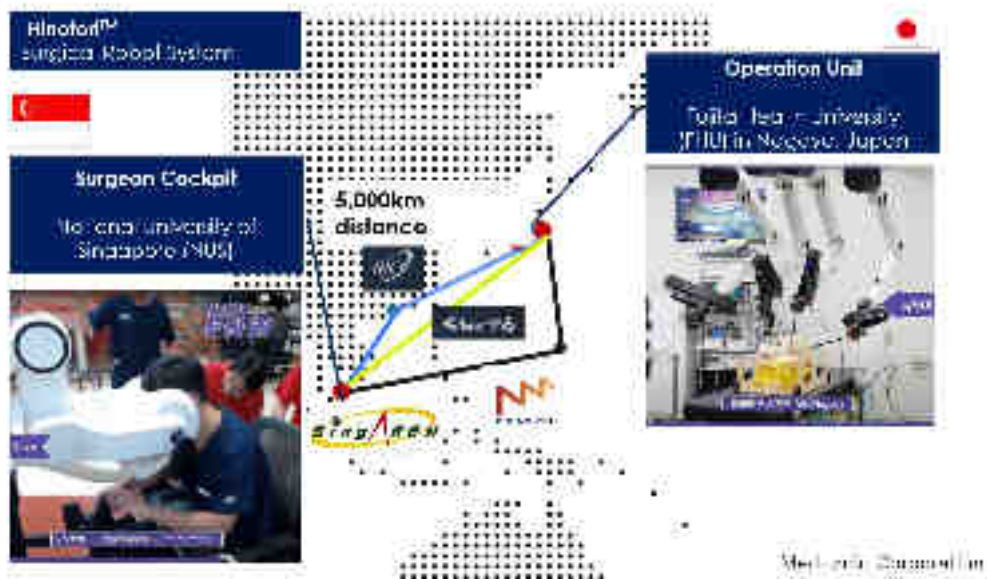


Image 12 SOI Asia-Challenges: Hinotori Surgical Robot Syst. (Source: Okawa, 2024)

5. Open Science Project - Develop an Open Science Infrastructure (OSI) specifically tailored for the digital humanities (DH) and cultural heritage domain in the Asia-Pacific region, acknowledging a significant gap in applying Open Science approaches within the arts and humanities.

Open Science Project

Community-Centric Open Science Infrastructure for Digital Humanities in the Asia-Pacific



Develop an Open Science Infrastructure (OSI) specifically tailored for the digital humanities (DH) and cultural heritage domain in the Asia-Pacific region, acknowledging a significant gap in applying Open Science approaches within the area of humanities.

Enhance DH resource visibility and accessibility in historically under-resourced regions



Image 13 SOI Asia-Challenges: Open Science Project. (Source: Okawa, 2024)

REFERENCES

<https://www.soi.asia/about/>

<https://apie.soi.asia/>

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