SOI
School on the Internet

KEIO University

Keiko Okawa

August 11th, 2005

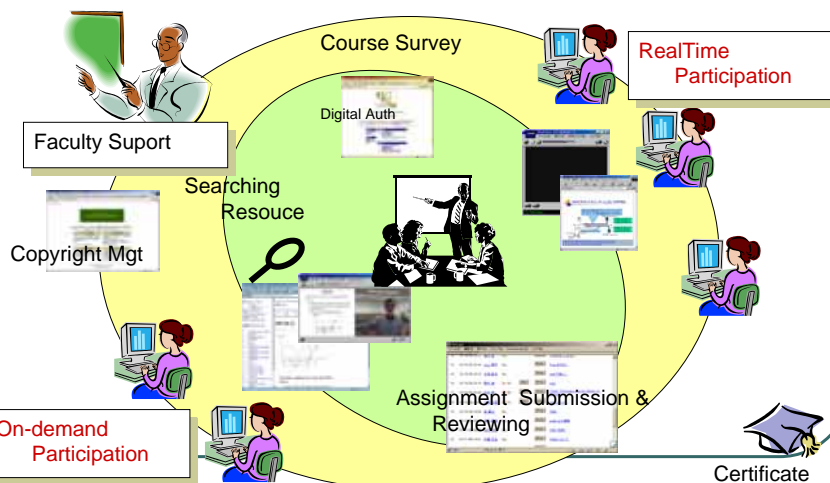## SOI – School on the Internet

- To share the higher educational resources with people *anytime*
  - Researching the method to carry out the educational activities in university on the Internet.

- To share the higher educational opportunity with people *anywhere*
  - Researching the environment and technology to support the real-time educational communication over the Internet.

- To evaluate the concept
  - Using the real university courses and resources
  - Involving ;
    - individuals who want to learn.
    - individuals/parties who are willing to donate the lectures.
    - universities who want to improve their education.
    - individuals/parties who have a motivation to educate people globally.

SOI Missions in WIDE Project

- Contents contribution by WIDE
  - By preserving and sharing the valuable educational resources in WIDE/Internet Community.

- Deployment of the Technology from WIDE
  - By using the technology as experimenter in between "researchers" and "users".
  - By demonstrating the social value of the technology.

- Deployment of Internet culture
  - By promoting the Internet as a vehicle of "Higher Education" to the non-or-little internet culture area.

SOI Site for anytime
Framework for individuals

- Daily used by over 10000 participants by in/out campus

Course Survey

RealTime Participation

Digital Auth

Faculty Suport

Searching Resouce

Copyright Mgt

On-demand Participation

Assignment Submission & Reviewing

Certificate

SOI SITE – Snapshot as of today

- PORTAL SITE
  - SOI SITE: http://www.soi.wide.ad.jp/
  - Since 1997
  - Operated by apache, postgres, realserver, etc.

- USERS
  - Over 18,900 Registered participants
  - From high school students to retired business man
  - adult percentage : 60%

- Contents
  - In 250kbps realvideo and synchronized materials by SMIL technology
  - About 2000 hours of IT related lectures.
    - About 60 University courses.
    - About 100 special lectures and tutorials.

- CONTRIBUTSION
  - About 10 universities
  - Over 60 individual contributors from worldwide.

SOI Global Studio for anywhere

- Prototyping in 2002
  - Maryland, USA
    (Joint effort with FLA)
  - California, USA
    (Joint effort with NTT MCL)

- Standardization and Challenge in 2004-2005
  - California, USA
    (Joint effort with Digital Realty Trust formerly called eXchange)
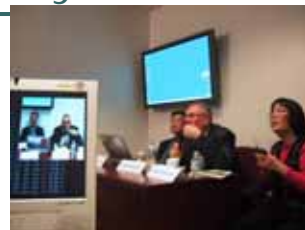
Joint Course development among Universities

- Keio University
- Nara Advanced Institute of Science and Technology
- Kyoto University
- Waseda University
- Hiroshima City University
- Tokyo Denki University
- JAD in Malaysia
- University of Wisconsin

SOI

SOI-Asia
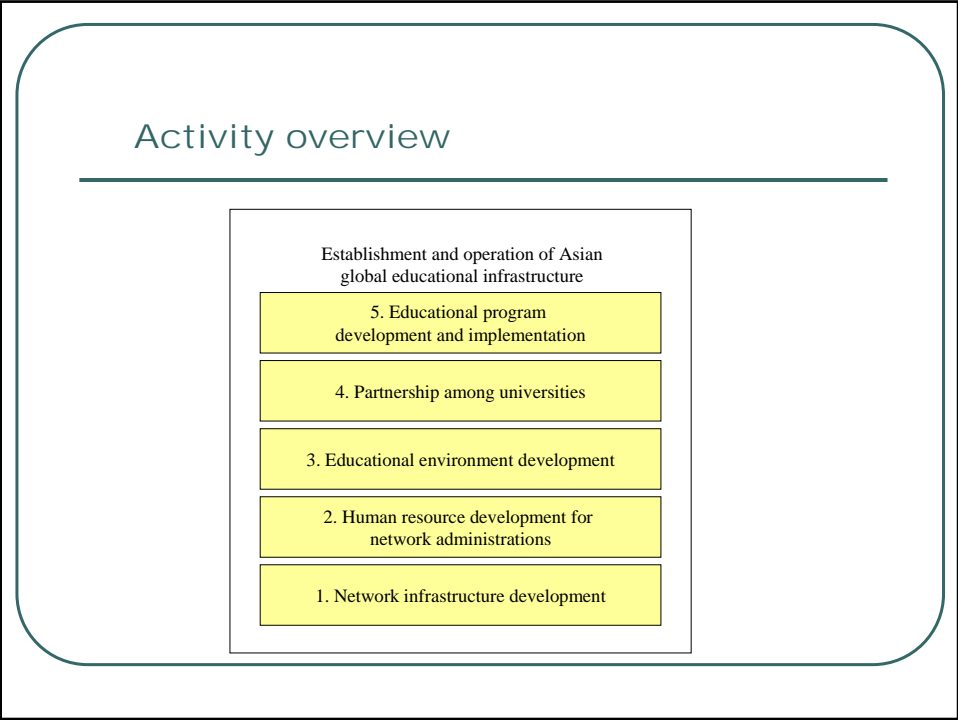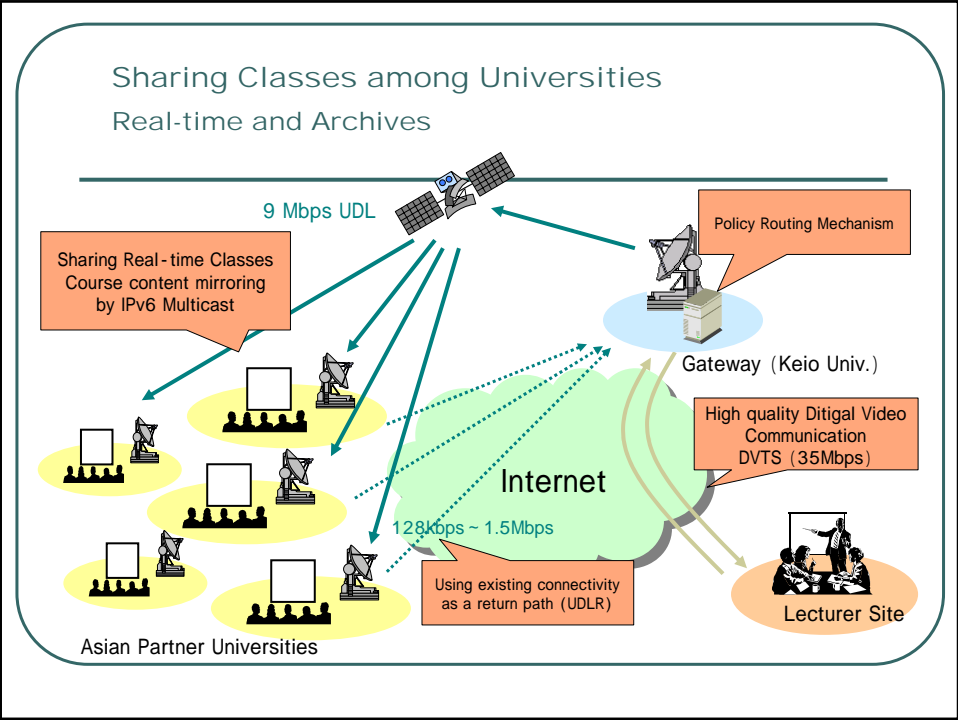**Global Educational Resource Sharing on the Internet**

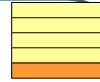**in Asia**

SOI Asia goal and mission

- Goal
  - Establish the scheme for sustainable educational collaboration programs utilizing the IT among Asian Universities
- Mission
  - Establish the quality and stable platforms for the education
  - Deliver the quality courses for students in Asia
  - Achieve sustainability including cost model
- Technology
  - Satellite Internet over C-band (AI3)
  - RO satellite and UDLR technology (UDLR)
  - Multicast technology
  - Multicast streaming
  - IPv6
- Started from 2001 August

SOI Asia Partners
20 partners in 11 countries
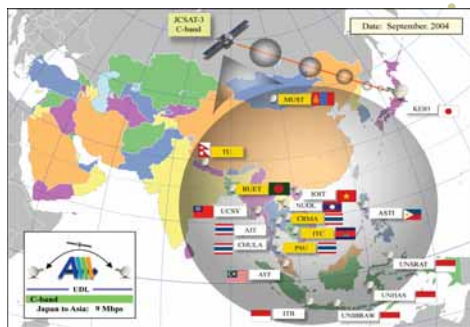
- Indonesia
  - Brawijaya University
  - Sam Ratulangi University
  - Hsanuddin University
  - Institut Teknologi bandung
  - Univesitas Syiah Kuala(*)
- Thailand
  - Chulalongkorn Univeristy
  - Asia Institute of Technology
  - Chulachomklao Royal Military Academy
  - Pricen of Songkla University

Laos
  - National University of Laos

Myanmar
  - University of Computer Studies, Yangon

Malaysia
  - Asian Youth Fellowship
  - University Science Malaysia

Vietnam
  - Institute of Information Technology

Philippines
  - Advanced Science and Technology Institute
  - University San Carlos

Mongolia
  - Mongolian University of Science and Technology

Cambodia
  - Institute of Technology of Cambodia

Bangladesh
  - Bangladesh University of Engineering

- Nepal
  - Tribhuvan University

Sharing Classes among Universities
Real-time and Archives

9 Mbps UDL

Policy Routing Mechanism

Sharing Real- time Classes
Course content mirroring
by IPv6 Multicast

Gateway   Keio Univ.

High quality Ditigal Video
Communication
DVTS   35Mbps

Internet

128kbps   1.5Mbps

Using existing connectivity
as a return path (UDLR)

Lecturer Site

Asian Partner Universities

Activity overview

Establishment and operation of Asian
global educational infrastructure

5. Educational program
development and implementation

4. Partnership among universities

3. Educational environment development

2. Human resource development for
network administrations

1. Network infrastructure development

1. Network infrastructure development

- Achievement
  - Establishing the broad band Internet environment in by utilizing receive only satellite equipment and UDLR technology.
    - 9 Mbps downlink shared by RO sites
    - IPv4/IPv6 multicast enable to the RO sites

  - Implementing the sites in low coat and in short period
    - About $1000 for setting up for 1 site.
    - About 3 months for everything.

  - Standard setup for better administration
    - Documentation
    - Equipment standardization
    - Network monitoring tools
    - 6 partners installation done in 2004.

Brawijaya University, Indonesia

Hasanuddin University, Indonesia

Sam Ratulangi University, Indonesia

Asian Institute of Technology, Thailand

National University of Laos, Laos

Advanced Science and Technology Institute, Philippines

University of Computer Studies, Yangon, Myanmar

Asian Youth Fellowship, Malaysia

Chulalonkorn University, Thailand

Institute of Technology, Bandung, Indonesia

Institute of Information Technology, Viet Nam

USM Malaysia

Mongol University of Science and Technology Mongolia

Prince of Songklang University Thailand

Chulachomklao Royal Military Academy Thailand

Keio University Shonan Fujisawa Campus,Japan

Bangladesh University of Engineering and Technology Bangladesh

Institute of Technology of Cambodia, Cambodia

Tribhuvan University Nepal

2. Human resource development for network administrations

- Achievement
  - SOI Asia Operators Workshop
    - Sep 2002 in Keio/Japan (21 participants)
    - Frb 2003 in AIT/Thailand (21 participants)
    - Aug 2004 in AIT/Thailand (14 participants)
    - Aug 2004 in ITB/Indonesia (13 participants)
  - APNIC Tutorial in Feb 2005
  - Monthly Operators Tutorial
- Future
  - Workshops in 2005 August @ Indonesia

3. Educational environment development

- Designing learning environment
  - Portable lecturer site
  - Scalable student site
  - Flexible Gateway site
- Tools
  - MTM – Multicast tree mirroring system
  - Student site monitoring system
  - Activity report system

Activity Report

Attendance

Personal activity Report

Assignment

Q/A and Communication

Student site monitoring system

Stopping

Buffering

4. Partnership among universities

Establishment of multi-lateral partnership and self-operating organization

- Achievement
  - Steering committee meeting twice a year, tele-conference when needed
  - Procedure to share the curriculum
    - Gathering requests for educational contents
    - Agreement on schedules
  - New site policy
  - Steering Committee, Academic Committee, Operators Committee, Research Committee
- Working
  - Accreditation

SOI Asia Countries – West to East

Country	TLD	University	Abbr.	Time
NEPAL	.np	Tribhuvan University	TU	GMT+5h45m
~~BANGLADESH~~	~~.bd~~	~~Bangladesh University of Engineering and Technology~~	~~BUET~~	~~GMT+6h~~
MYANMAR	.mm	University of Computer Studies, Yangon	USCY	GMT+6h30m
THAILAND	.th	Asian Institute of Technology	AIT	GMT+7h
		Chulachomklao Royal Military Academy	CRMA	
		Chulalongkorn University	CU	
		Prince of Songkla University	PSU	
CAMBODIA	.kh	Institute of Technology of Cambodia	ITC	
LAOS	.la	National University of Laos	NUOL	
VIETNAM	.vn	Institute Of Information Technology	IOIT	
INDONESIA	.id	Institut Teknologi Bandung	ITB	
		Brawijaya University	UNIBRAW	
		Hasanuddin University	UNHAS	GMT+8h
		Sam Ratulangi University	UNSRAT	
MALAYSIA	.my	Asian Youth Fellowship	AYF	
MONGOLEA	.mn	Mongolian University of Science and Technology	MUST	
PHILIPPINES	.ph	Advanced Science and Technology Institute	ASTI	
JAPAN	.jp	KEIO University	KEIO	GMT+9h
		Tokyo University of Marine Science and Technology	TUMST	
		Tohoku University	TOHOKU	
		Japan Advanced Institute of Science and Technology	JAIST	

5. Educational program development and implementation

- Courses since Oct 2004
  - 2004 Sep Oct Tokyo Marince Science and technology Advanced Marine Science and technology
    - 96 enrolled 40 Certificate
  - 2005 Jan Mar Tohoku University 16 lectures of Bio Technology
    - 115 enrolled 43 certificate – accredited in 2 Indonesian Universities
  - 2004 Sep 2005 Mar WIDE Project Advanced IT Course
    - 185 enrolled 62 Certificate
  - 2005 Mar JAIST Object Oriented Software Development
    - 160 enrolled 76 certificate - accredited in 1 Myanmar University
- Events since Oct 2004
  - Special Lectures by Nobel Lecturers from AIT
    - Dec 2004 ~ March 2005 (about 10 lecs)
  - Rice Research Conference in Nov 4-7.
  - AYF session November 1st.
  - APNIC Tutorial
  - Tsunami Symposium on Feb 24
- Plan in 2005
  - 5 faculty meetings, 6 university courses, 1 Operators Workshop , 2 special courses and 3 special events are planning
  - Tsunami Special Lecture Series contributed by several academic societies.
  - Medical Course from University of Pierre – Marie Curie to Universite des Sciences de la Sante du Cambodge

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SOI ASIA Project

SOI Asia Sharing Knowledge Across Borders
- Tsunami: Lessons Learned and Universities' Role –

Date & Time

Feb 24, 2005 16:30- 20:30(JST)

Program

16:30- 17:00 Keynote - Prof. Jun Murai
17:00- 17:30 Report from Japan(1)
17:30- 18:00 Reports from Thailand
18:10- 18:40 Report from Japan (2)
18:40- 19:10 Report from Indonesia (1)
19:10- 19:20 Report from Indonesia (2)
19:20- 20:10 Panel Discussion
20:10- 20:30 Closing

Panelist Sites

- Keio University, Japan
- Tohoku University, Japan
- Asian Institute of Technology (AIT), Thailand
  (by Dr. Anat in Chulalongkorn University
- Institut Teknologi Bandung (ITB), Indonesia
- Brawijaya University, Indonesia

Multicast on Satellite Link (9Mbps)

Tohoku Univ

DV

Keio

DVTS (35Mbps)

Keio Univ

(128kbps 1.5Mbps)

AIT

- Panelist site
- Partner sites

ITB

UNIBRAW

Damaged Area by Tsunami

Other SOI ASIA Partner Sites (Total: 11countries 17sites)

Chulalongkorn University (Thailand)	University of Computer Studies, Yangon (Myanmar)	Institute of Technology of Cambodia (Cambodia)
Prince of Songkla University (Thailand)	Sam Ratulangi University (Indonesia)	Bangladesh University of Engineering
Chulachomklao Royal Military Academy (Thailand)	Hasanuddin University (Indonesia)	and Technology (Bangladesh)
	Institute Of Information Technology (Vietnam)	Mongolian University of Science and Technology (Mongolia)
National University of Laos (Laos)	Advanced Science and Technology Institute (Philippines)	Tribhuvan University (Nepal)
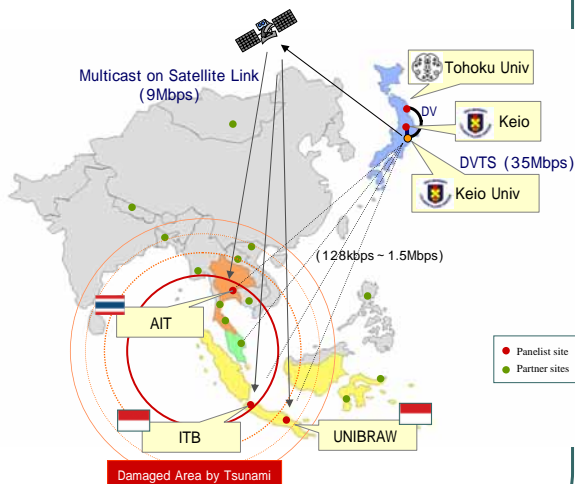
SOI Asia Special Symposium
Sharing Knowledge Across Borders
-Tsunami: Lessons Learned and Universities' Role -

SOI - School on the Interne
Project Web Sites

- soi@wide.ad.jp
- SOI --- http://www.soi.wide.ad.jp/
- SOI Asia --- http://www.soi.wide.ad.jp/soi-asia/