

SOI Asia Operator Workshop 2005

SOI Asia Realtime Lecture

SOI Asia realtime lecture is an interactive remote learning environment which enables distant lecturer and many groups of students to participate in one virtual classroom.

This document will guide SOI Asia operator to setup and prepare a SOI Asia realtime lecture.

This document is organized as follows.

1. SOI Asia Realtime Lecture overview
2. Hardware and Software Preparation.
3. SOI Asia Realtime Class Procedure
4. SOI Asia Realtime Lecture Setup
 - Receiving/Sending lecture stream
 - Synchronized Presentation
 - Staff communication

Appendix A: SOI ASIA Audio Setup Manual

1. SOI Asia Realtime Class Overview

Typically the SOI Asia realtime lecture is divided into two sessions, lecture session and Q/A session. During the lecture session, students view the realtime lecture video/audio together with a synchronized lecture presentation as shown in figure 1. During Q/A session, lecturer and students are able to interactively discuss questions or some points related to the topic. In addition, there is a webboard-style Q/A system that students can post questions to lecturer during or after the lecture.



Figure 1. SOI Asia realtime classroom

All activities taking place in local classroom are undertaken by SOI Asia operator. An operator has to setup and test hardware, software, audio, video before the lecture begins. During the lecture, operator communicates with other sites especially Japan site to coordinate the event, to report the current status of lecture and to troubleshoot problems that might unintentionally occurs.

2. Hardware and Software Preparation.

Hardware and software needed for SOI Asia realtime are listed in table 1 and 2 respectively. Software is available at the specified sources. The setup instructions in following sections describe when and where you will install these software.

Table 1. Hardware for SOI Asia Standard Network

Hardware	Amount	Specification
PC < stream sending/receiving>	1	-Windows OS (98/ME/2000/NT/XP)- Pentium III 800MHz for CPU - 256M memory - 8G or larger HDD - Sound card (any sound card listed in http://www-mice.cs.ucl.ac.uk/multimedia/software/rat/faq.html#pccards is fine) - Video card (Ospray is recommended) - One Ethernet network card
PC < PowerPoint Synchronization>	1	Windows 2000 + Microsoft PowerPoint 2000 Pentium II 400 or higher - 64M memory 2G HDD - One Ethernet network card
PC <staff communication>	1	- Pentium II 400 or higher - 64M memory - 2G HDD - One Ethernet network card
Straight Ethernet Cable	3	100BASE-TX straight cable
Projector	2	
Video camera	1	- Digital video, 8mm or VHS <SOI group uses SONY: DCR-TRV900>
Video/Audio Cables	1 set	
Speaker	1	
Echo Canceller	1	DSP1124P
Audio Mixer	1	UB1204-PRO
Power Amp	1	
Microphone	2	
Power Surge Protector	1	6 outlets

Power Transformer	2	
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Table 2. Software for SOI Asia Standard Classroom

CD#	Software	Source
CD-11	Realtime class	http://www.soi.wide.ad.jp/soi-asia/staff/download/SOI_Class2005_CD.iso

You can also download software provided in CD-7 from following sources.

Software	Purpose	Source
Window Media Player	Receiving lecture stream	http://www.microsoft.com/windows/windowsmedia/download/default.asp .
VIC/RAT	Send/Receive stream	http://www.soi.wide.ad.jp/project/soi-asia/manual/vic-rat/vic-2.8uc11.1.6-ipv6-xp.exe http://www.soi.wide.ad.jp/project/soi-asia/manual/vic-rat/vic-2.8uc11.1.4-ipv6-win2k.exe http://www.soi.wide.ad.jp/project/soi-asia/manual/vic-rat/rat-4.2.24-ipv6-win2k.exe
RPT	PowerPoint Sync.	http://www.soi.wide.ad.jp/soibeans/index-e.html
MIRC	Staff Comm.	http://www.mirc.com/index.html
MSN	Staff Comm.	http://messenger.msn.com/

3. SOI Asia Realtime Class Procedure

1. New Course Announcement

For each new course, SOI Asia project will announce course outline, course page URL, list of lectures' topics and lecture schedule to partners@asia.soi.wide.ad.jp. Partner make an announcement to students accordingly.

2. Course Enrollment

Some SOI Asia course requires enrollment, SOI Asia project will include enrollment information in course announcement. Interested student can make an enrollment from course page URL.

3. Lecture Announcement

For each lecture, SOI Asia project will make an announcement to partners@asia.soi.wide.ad.jp one day before the lecture day stating the lecture date/time, lecture topic, lecture page URL , staff page URL and other details.

4. Lecture Material Announcement

For each lecture, SOI Asia will try to distribute material files to SOI servers in advance so that it takes less time in lecture preparation step for each site. A mail informing file distribution will be sent to operator@asia.soi.wide.ad.jp. If materials cannot be provided in advance, operator can find it ready on course's staff page in the lecture day.

5. Lecture Preparation

On the lecture day, operator should setup lecture environment and perform audio/video quality test with Japan site 30 minutes before the lecture time.

6. Operating Realtime Lecture session

Typically the SOI Asia realtime lecture is divided into two sessions, lecture session and Q/A session. During lecture, operator's tasks are to

- Operate audio/video conferencing system
- Operate powerpoint synchronization system
- Join staff communication channel

7. Operating Q/A session

After lecturer finishes his/her lecture, there will be a short break for each site to gather students' questions. Operator assists students to ask question by any of the following means. At lecturer site, there will be a Q/A session moderator who manages queue for questions from all means and all sites.

- Audio/Video Q/A

Operator have to inform to staff communication channel to get a queue from moderator and then manage student to ask his/her question to lecturer accordingly. If it is the case that lecturer cannot catch student voice clearly, operator should help to type student's question onto staff communication channel.

- BBS Q/A

BBS is a web board for students to post questions. Moderator will read these questions to lecturer during Q/A session.

8. Lecture report

For each lecture, send you site report as follows to operator@asia.soi.wide.ad.jp.

o is mandatory item, + is optional item.

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SOI ASIA COURSE SITE REPORT

o Site Name (univ name): _____

o Date of lecture: _____

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Participants:

o Number of participants at your site : _____

o Printed Material prepared for participants? Yes / No

+ Any comments from your participants (if any)

Operation:

o Number of Support Staff : _____

o Start time you (support staff) started preparation : _____

o Applications you used : vic/rat | wmt

o Video/Audio Quality : bad | fair | good

+ Problems you encountered and how you solved : _____

+ tips for classroom operation you found (if any) : _____

+ Requests for enhancement / improvement (if any) : _____

+ Classroom Pictures (if possible):

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4. SOI Asia Realtime Lecture Setup

(STEP 1) Receiving/Sending Lecture and Class Video/Audio stream

There are two alternative applications in SOI Asia system, VIC/RAT and Window media. VIC/RAT application can receive lecture stream and send classroom stream, it is suitable for partner that want to have interactive session with lecturer. Window media can only receive lecture stream, it cannot send classroom stream to lecturer, it is suitable for partner that doesn't plan to have interactive session or special lecture that doesn't have Q/A session.

Windows Media Player Installation

Window Media Player is used to receive video stream in window media format.

- Get program from SOI Realtime class CD or download Window Media Player program from the following URL and install to the PC

<http://www.microsoft.com/windows/windowsmedia/download/default.asp>

- Download the lecture's .asx and .nsc files from the following URL to the same directory on the PC.

<http://www.soi.wide.ad.jp/soi-asia/wmt/>

Stream 1 is for testing purpose. Test stream will be running upon request.

Stream 2 is for realtime lecture.

- During the lecture, click on the .asx file, Window Media Player will launch up to receive a lecture stream.

VIC/RAT

VIC/RAT is a multi-party video conferencing tool. It is capable of sending and receiving both audio and video stream among many parties.

- Connecting Audio/Video devices

You can simply connect a camera, a microphone and a speaker directly to the VIC/RAT machine or you can refer to Appendix A, to setup a more complex audio/video system for better quality audio/video. In case that some equipments<e.g. echo canceller and mixer> are sent from Japan and the power voltage is different from your country, put equipment's power cable to power transformer before going directly to power line. All equipments which need power should be connect to power surge protector before going directly to power line to prevent damage in accidental power cut.

- Get program from SOI Realtime class CD or download programs from following URLs and install both of them to the PC. The default installation directory is C:\Program Files\Mbone.

<http://www.soi.wide.ad.jp/project/soi-asia/manual/vic-rat/vic-2.8ucl1.1.6-ipv6-xp.exe>

<http://www.soi.wide.ad.jp/project/soi-asia/manual/vic-rat/rat-4.2.24-ipv6-win2k.exe>

- Start VIC using SOI ASIA specific address and port

C:\Program Files\Mbone>vic.exe 233.18.109.3/6666

- If no one is sending video, you will see a waiting for video message. If there are some sending videos, you should see video/audio of them.
 - To send a video stream, click Menu button in VIC program. Click the Device button and choose your video card. Then, enable the transmit checkbox at the upper-left corner to start sending the video. To stop sending a video, click the release button.
- Start RAT using SOI ASIA specific address and port

C:\Program Files\Mbone>rat.exe 233.18.109.4/7777

- Go to option -> audio category and Make Silence Suppression OFF
- To start send an audio stream, check the Talk button in the RAT main window.

(STEP 2) Synchronized Presentation

In SOI Asia lecture environment, a PowerPoint presentation is displayed together with the lecture video stream. The slide changing is not statically controlled by SOI operator but is done automatically through a system called RPT. RPT synchronizes the slide changing on the lecturer's laptop with those on partners' machine.

- Get program from SOI Realtime class CD or download RPT program from <http://www.soi.wide.ad.jp/soibean/index-e.html> to a PC, which the PowerPoint presentation will be displayed to the class by another projector.

- Unzip the file and put RPTHook.dll at "C:\WINNT\system32" <WIN95,98,2000> or "C:\WINDOWS\system32" <WINXP>

- Get a Power Point file which is distributed by MTM program from your SOI server (JP staff will notify when the file is ready on you SOI server).

- Open the Power Point file

- Start RPT by click RPT.exe

** It is important in window 95 to start powerpoint before RPT, else there will be an error.

- You will get a pop up window "Connect IRC Server", configure as below. Please use IRC channel #soiasia-rpt for VIC/RAT and #soiasia-rpt2 for Windows Media Player

Server : par.sfc.wide.ad.jp

Port : 4641

Channel : #soiasia-rpt

Nickname : your name

Password : karaage

Don't select URL and Send Message

select [connect]

- Click PPT Start, it will switch to the PowerPoint window.
- Click Start, PowerPoint goes into slide show mode and the slide changes are synchronized with the one in lecturer's machine.

(STEP 3) Staff communication

In SOI Asia environment, Internet Relay Chat(IRC) is the main staff communication system. All Operator will connect to a specific IRC channel to discuss the ongoing activities. In case of having problem with IRC, MSN messenger is used as a backup system.

Internet Relay Chat(IRC)

- Download and install IRC client, you may choose mIRC or CHOCOA from the below URLs.

mIRC : <http://www.mirc.com/index.html> <Also provided in SOI Realtime class CD >

CHOCOA : <http://www.labs.fujitsu.com/free/chocoa/en/>

MIRC

- When open the program, MIRC will ask you to input your personal information. Please input your information.
- On the left pane, click "Server" and click "Add" button and put in following information.

Description: soi

Server : par.sfc.wide.ad.jp

Port : 4641

Group:

Password: karaage

- Click add to submit the configuration.
- Click "Connect to server"
- When it is connected, it will ask for a channel name, please input "#soi-asia"
- You will be joining to soi-asia channel, the right pane shows members of the channel.
- Type message and press enter to send it to everyone.

MSN Messenger

- Get program from SOI Realtime class CD or download and install MSN messenger, from following URL.

<http://messenger.msn.com/>

- If you don't have the .NET passport account, please register for a new one and used it for MSN messenger login.

- Add the email accounts of persons who are in charge of operation in the table below.

Contact Name	Signin ID
Noriatsu Kudo	n_kudo@hotmail.com
Shoko Mikawa	funyafunya@hotmail.com
Keiko Okawa	russianblueao@hotmail.com
Patcharee Basu	yoobasu@hotmail.com

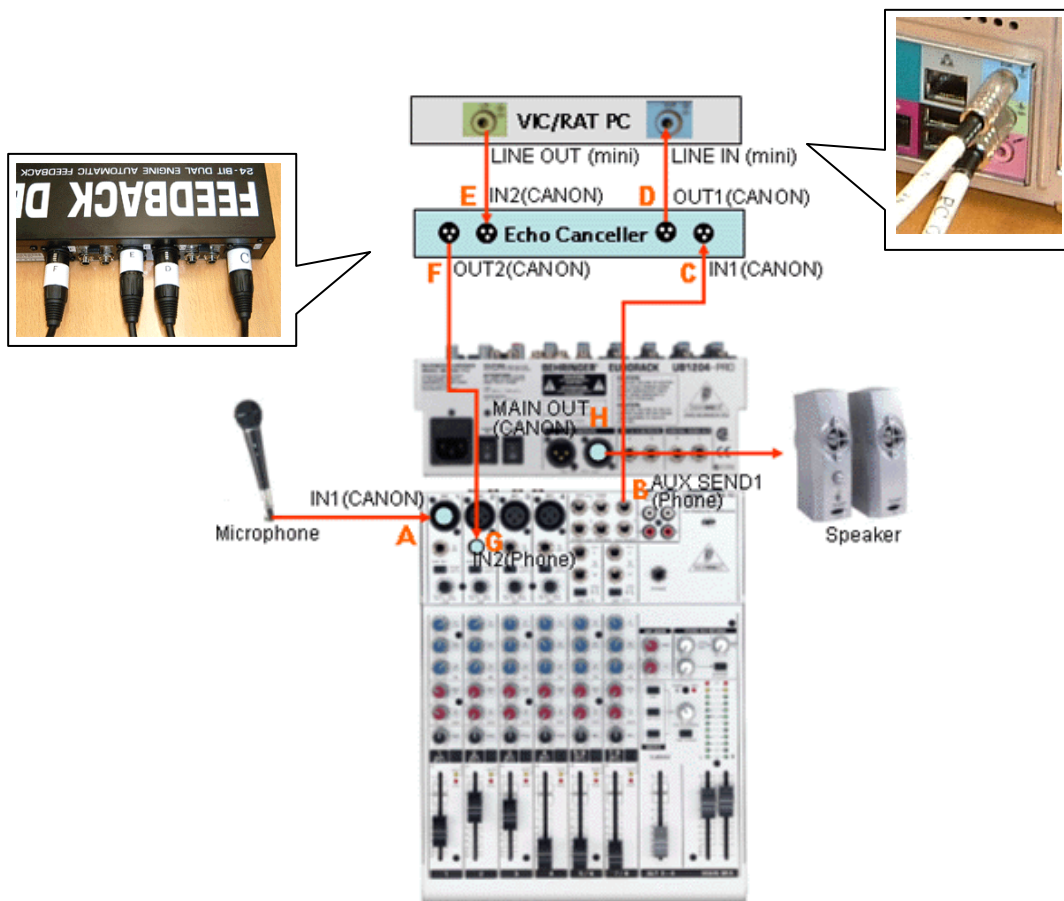
Appendix A: SOI ASIA Audio Setup Manual

1. Audio Equipments

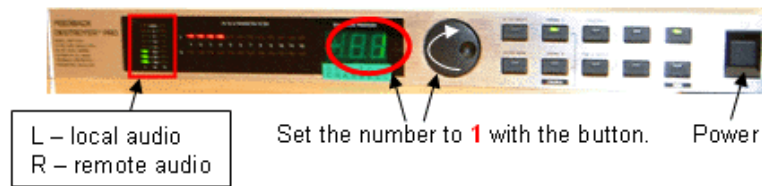


CAUTION: Don't plug these equipments to 220-240V power supply.
(Use the SOI ASIA table tap with the transformer to 100V.)

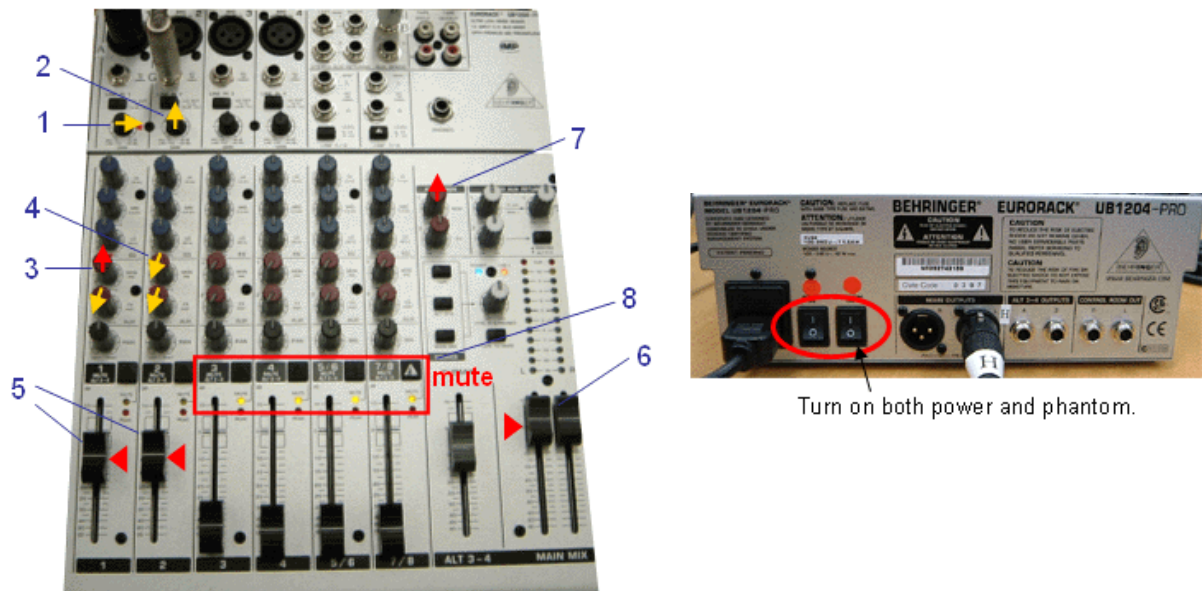
2. Wiring of Audio Equipments



3. Echo Canceller Configuration



4. Mixer Configuration



- Set the **gain volume** as the figure --- **1, 2**
- Set the **aux send volume** as the figure --- **3, 4, 7**
CAUTION: Be sure that 4 is set to $-\infty$. (left-most)
 (Otherwise, the echo goes back to lecturer's site)
- Set the **main mix volume** as the figure --- **5, 6**
- Mute audio of input 3-8 --- **8**

5. Volume Control

- When your sending audio is **TOO LOUD**:
 (If you see the red lamp on RAT "Talk" volume meter, the audio is too loud.)
 1. Change the volume on **1**. (not smaller than +4)
 2. Change the volume on **3**.
 3. Change the volume on **7**.
- When the audio that you hear in your classroom is **TOO SMALL**:
 1. Change the volume on **6**.
 2. Change the volume on **5**.
 - Left (IN1) is for your local voice volume.
 - Right (IN2) is for the remote audio volume.