

# Day5: Realtime Class Operation

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SOI Asia Global E-workshop

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## Realtime Class Components

- Lecture Video & Audio
  - VIC/RAT
  - VideoLAN
- PowerPoint synchronization
  - LivePresenter
- QA Session
  - Internet Relay Chat
  - BBS
- Staff Communication
  - Internet Relay Chat

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## Video/audio streaming applications

- SOI Asia Uses 2 video/audio applications for the realtime class
  - VIC/RAT
    - Receive lecture stream
    - Send classroom stream
    - Interactive session
    - Multi-parties, many senders and many receivers
  - VLC
    - Receive lecture stream only
    - Non-interactive session
    - One sender and many receivers

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## VIC/RAT

- Video Conferencing Tool (VIC for video)
- Robust Audio Tool (RAT for audio)



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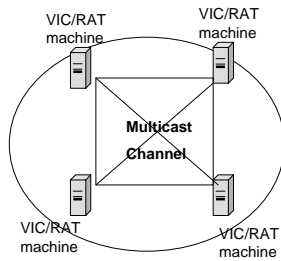
## VIC/RAT model

- Peer to Peer relationship
- Every node is equal
- Every node can receive/send to same multicast address

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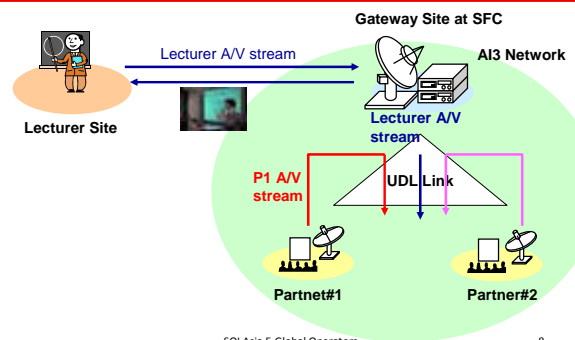
## VIC/RAT



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## VIC/RAT packet flow



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## VLC

- VideoLan Client



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## VLC model

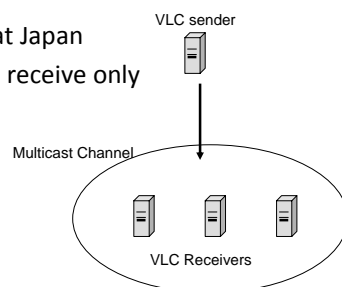
- Sender-receiver relationship
- Sender sends to one multicast address (but not receive)
- Receiver joins to that multicast address (but not send)

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## VLC

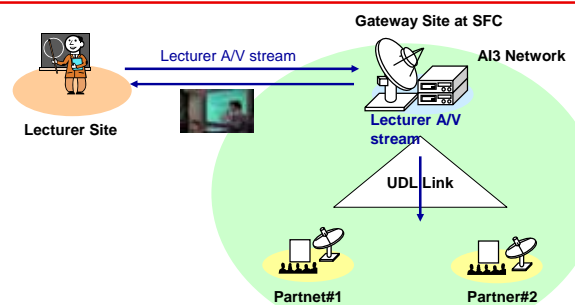
- VLC sender at Japan
- Partners can receive only



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## Real time class (VLC)



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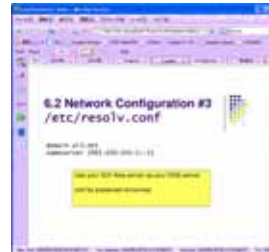
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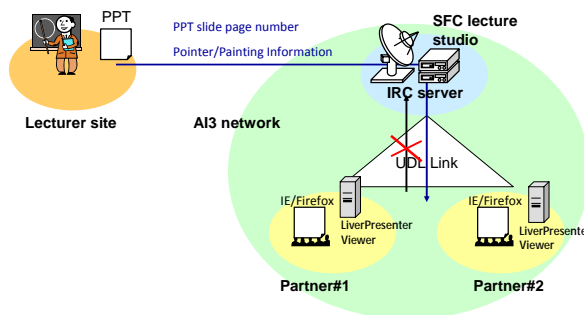
## LivePresenter

- Automatic PowerPoint Slide Synchronization software developed by Achmad Husni Thamrin ☺



PowerPoint material is converted to flash format to be shared on Firefox/IE

## Realtime Class Components (2)



## Realtime Class Components

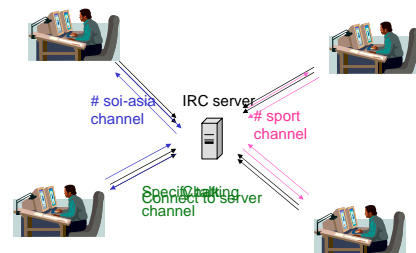
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## IRC (Internet Relay Chat)

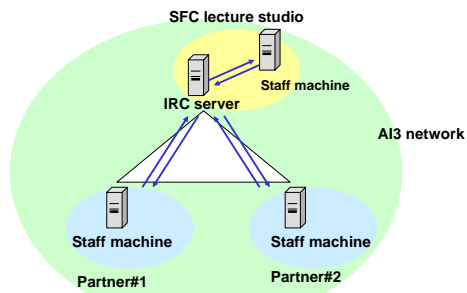
- Text-based realtime chatting system
- Use IRC not to disturb the lecture



## IRC (Internet Relay Chat)



## Real time class : IRC



## BBS (Bulletin Board System)

- Online BBS for each class



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## SOI Asia A/V setting

- Prevent Echo
- Better Audio Quality

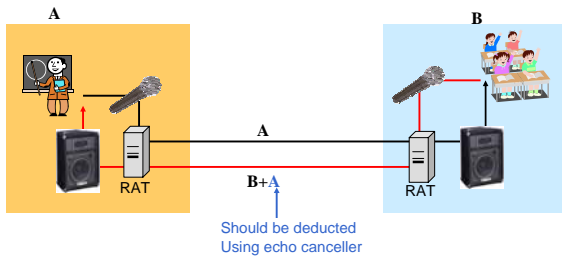
## Echo Loop



## Echo Loop

- Always **TURN OFF** your microphone when you are not talking
- Do not select talk on RAT if not talking
- Cannot avoid during Q/A

### Echo loop



### SOI Asia A/V set

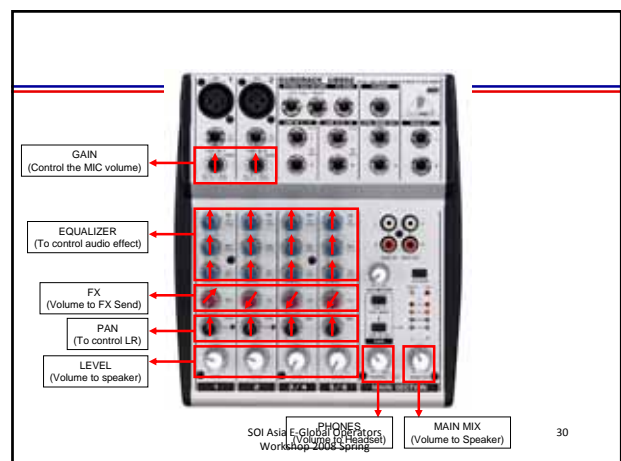
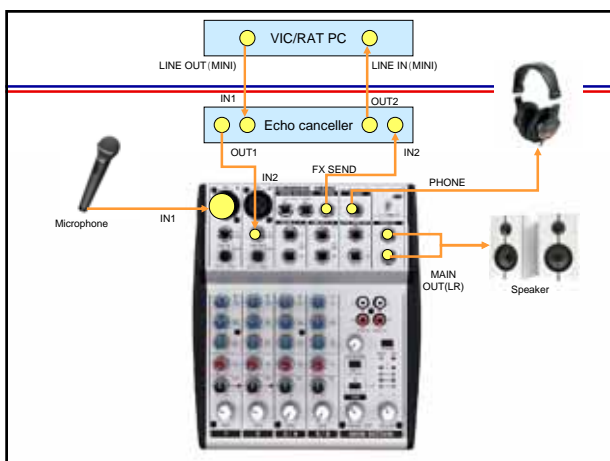
- Echo Canceller
  - To reduce the echo
- Mixer
  - To control the audio level

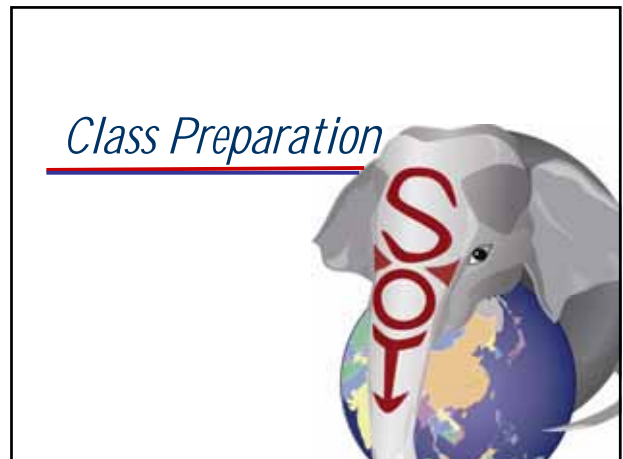
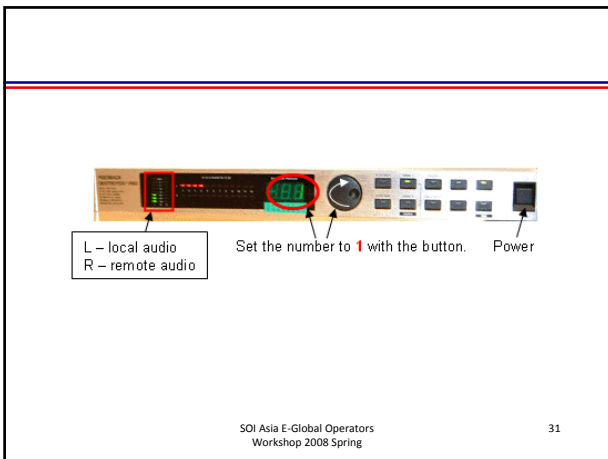
### Echo canceller

- 2 inputs
  - Local sound (Voice from Microphone+Remote Sound fed to the microphone)
  - Remote sound (Output from RAT)
  - Compare and deduct repeated sound
- 2 outputs
  - Local sound (Only voice from Microphone)
  - Remote sound (Output from RAT)

### Mixer

- Sound Redirection
- Better Audio Quality





## Lecture operation

- Lecture announcement - 1month before
- Before lecture
  - Help push the professor to gather participants
  - Support participants to enroll to the course from the web
  - Register to MTM
- 1 day before lecture
  - Prepare lecture material that has been distributed to your local SOI servers
- Lecture day
  - Application/audio test 30 minutes before the lecture starts
  - During lecture, login to IRC to communicate with SFC staff/TA
  - Send the lecture report after the lecture

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## Please join the ML

- E-mail list:
  - <http://www.soi.wide.ad.jp/soi-asia/staff/mail-list.html>
- The daily operation information / lecture related information are posted to the ML
  - [partners@asia.soi.wide.ad.jp](mailto:partners@asia.soi.wide.ad.jp)
  - [operator@asia.soi.wide.ad.jp](mailto:operator@asia.soi.wide.ad.jp)
- Partner specific information are posted to
  - [\[partner\\_name\]@asia.soi.wide.ad.jp](mailto:[partner_name]@asia.soi.wide.ad.jp)
  - Ex: [usm@asia.soi.wide.ad.jp](mailto:usm@asia.soi.wide.ad.jp)
- E-mail to [jp-staff@asia.soi.wide.ad.jp](mailto:jp-staff@asia.soi.wide.ad.jp) to join the ML

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## Staff information

- All the SOI Asia operator related information are on the web:
  - <http://www.soi.wide.ad.jp/soi-asia/staff/>

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## Internship

*We are always waiting for applications from you!  
Especially for Joint Researcher position*

See below for more information  
<http://www.soi.wide.ad.jp/soi-asia/hrd/>

*Break - 30min*



## Exercises

- EX1: Confirm the IPv6 installation and Firewall disabled
- EX2: VIC/RAT
  - 2-1: Installation of VIC/RAT
  - 2-2: Operating VIC
  - 2-3: Operating RAT
  - 2-4: Operating RAT – Confirm the differences
  - 2-5: Operating RAT – Muting other sites
- EX3: Live Presenter
- EX4: VideoLAN
- EX5: Staff communication using IRC

*Discussion*

*What are the problems  
you face during the lecture?*

