# AP-VWP150 Smart IP Video Wall PAD

High Performance IP Video Wall PAD Solution

#### Video Conference Call Service





**AddPac Technology** 

2015, Sales and Marketing

### Contents

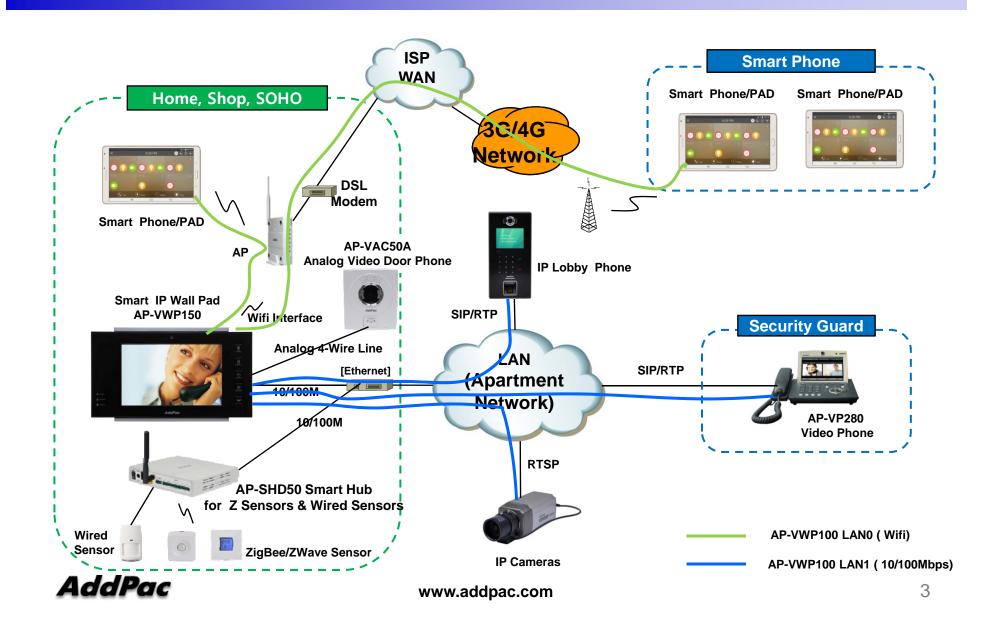
- Smart Home Application Network Diagram
- Normal Video Call Model (Point-to-Point)
- Video Conference Call Model
- Call Manager + MCU Protocols
- IP Video MCU (Ex: AP-MC2000)
- Video MCU Service Features



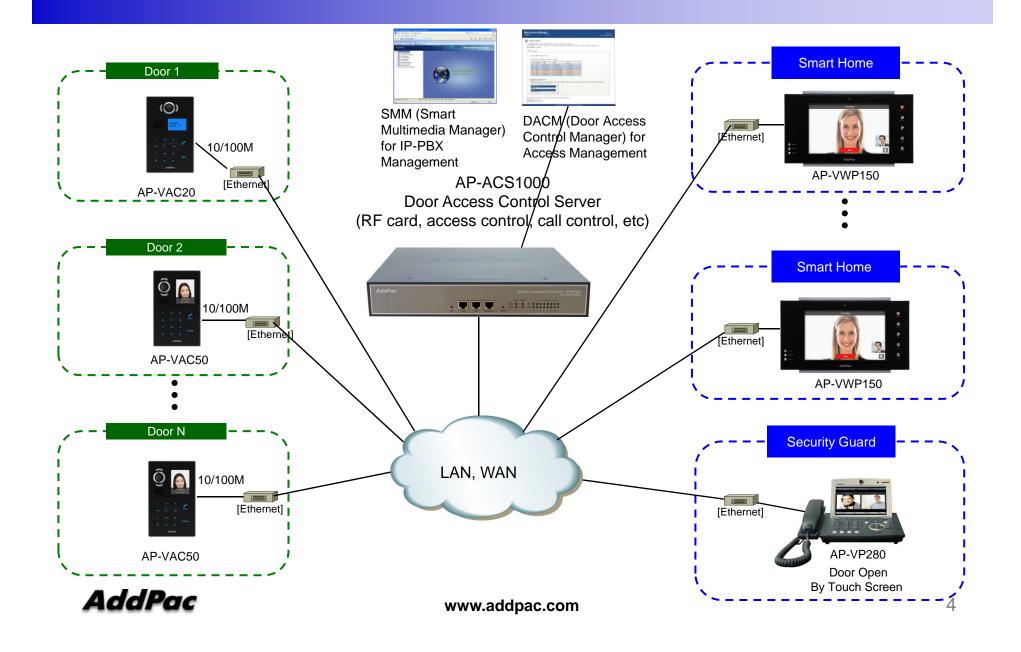




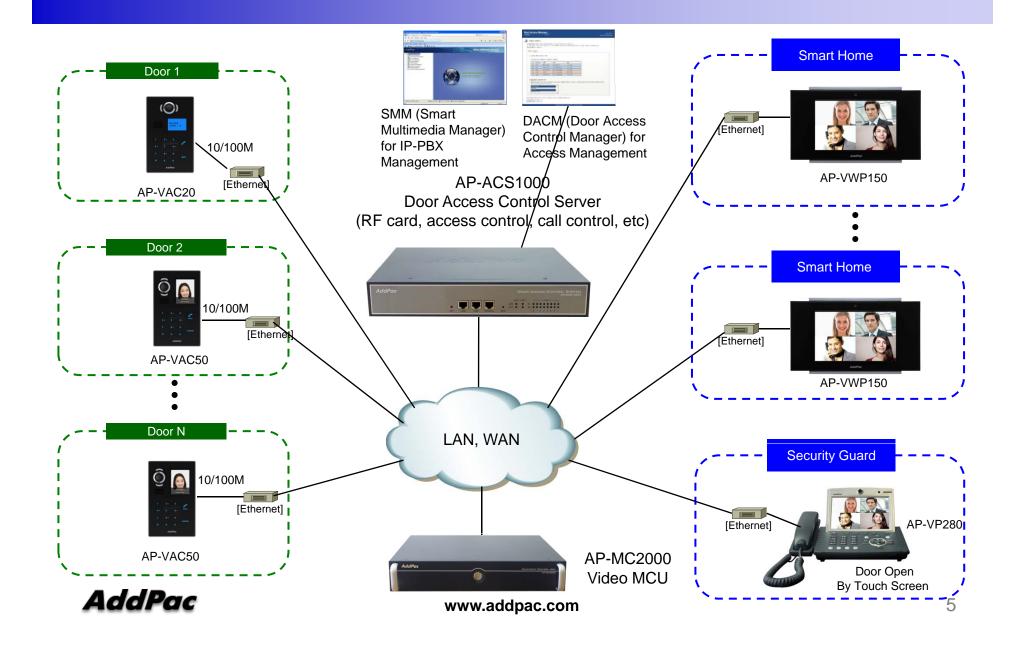
## **Smart Home Application**



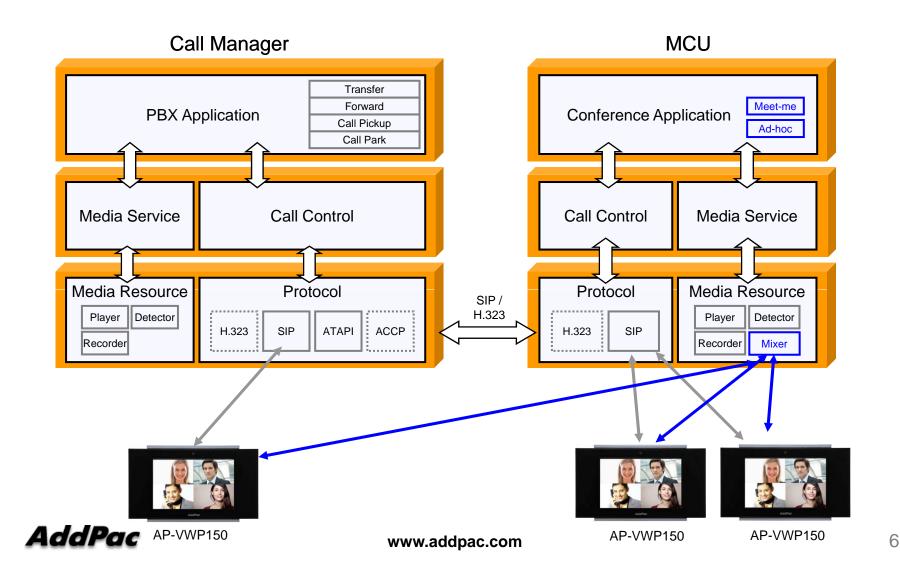
### Normal Point-to-Point Video Call Model



### Video Conference Call Model

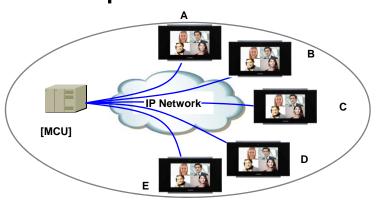


### Call Manager + MCU Interworking Protocol Stack

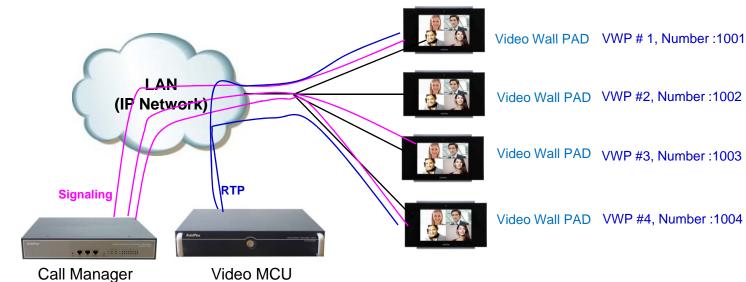


### Signaling and RTP Flow for Group Video Call Model

### Multipoint Video Service



RTP Flow
Signaling Flow



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# AP-MC2000 IP Video MCU



### Main Features

#### AP-MC2000 IP Video MCU

- IP based Multipoint Audio/Video Mixing Solution
- Support Various Conference System Model(Add-Hoc, Dial-Out, Meet Me)
- Multi-User/Multi-Session Video Conference Support
- Up to 16-Party Video Conference Mode Support
- H.263, MPEG4, H.264 Video Codec Support
- G.722/G.711/G.726/G.729/G.723,etc Voice Codec Support
- H.323/SIP VoIP Signaling Support
- H.323 GateKeeper Internal Support
- External SIP Proxy Server Interworking Support
- Scalability and Flexibility
- High-performance Video, Audio, and Voice Service
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Audio/Video Privacy Protection



## Hardware Specification

AP-MC2000 IP Video MCU

- High Performance Computing Power
- Programmable Hardware Architecture
- Main Chassis
  - Network Interface
    - One(1) 10/100/1000Mbps Gigabit Ethernet
    - One(1) RS-232C Console (RJ45)





# Hardware Specification

AP-MC2000 Video MCU





# Video MCU Service Features



12

### Contents

- Video Display Layout
- Dynamic Session Management
- Personal Feature
- Video Conference Signaling
- MCU Management (SMM)
- OSD (Video Phone, Video Terminal, etc)
- Media Class
- Conference Room
  - Speaking Mode
  - Voice Switching
- Active Conference
- Conference Scheduling



## Video Display Layout

### Various Layout

- 31 types (Symmetric Layout, Asymmetric Layout)
  - Symmetric Layout : same participant picture size
  - Asymmetric Layout : asymmetric participant picture size
- Auto, Manually : can choice a specific video layout when a conference is started

### Dynamic control

- Dynamic layout change
- Dynamic participant movement

#### Floor

- Can distinguish a participant by using the concept of the right of a speaking participant
- Floor to full screen

### Name display

Display or hide the name of a participant dynamically

#### Border

 Three kind of a participant picture border : empty border, a participant boarder, a speaker boarder

### Personal Feature\*

- Individual (Per Connection) Rate Control for Down Stream
  - Codec, Picture Size, etc
- Personal Layout
  - Example, Zooming for Detailed View



## Video Conference Signaling

- Dial-in
  - Even in Dial-out started Video Conference, a participant can join the Video Conference if a participant knows the conference room number in outside.
- Mic off of invisible participant
  - Can turn off MIC of a invisible participant.
- Forced Mute (audio, video)
  - Can mute Audio/Video Capability of a participant via SMM or in Chair, Operator Terminal (Video Phone).
- Virtual Audience
  - Broadcasting solution
  - Can monitor the video conference via inter-working with AddPac Broadcasting Server.
- H323 Support \*
  - Floor control(H.243)
  - Dual Video (H.239)



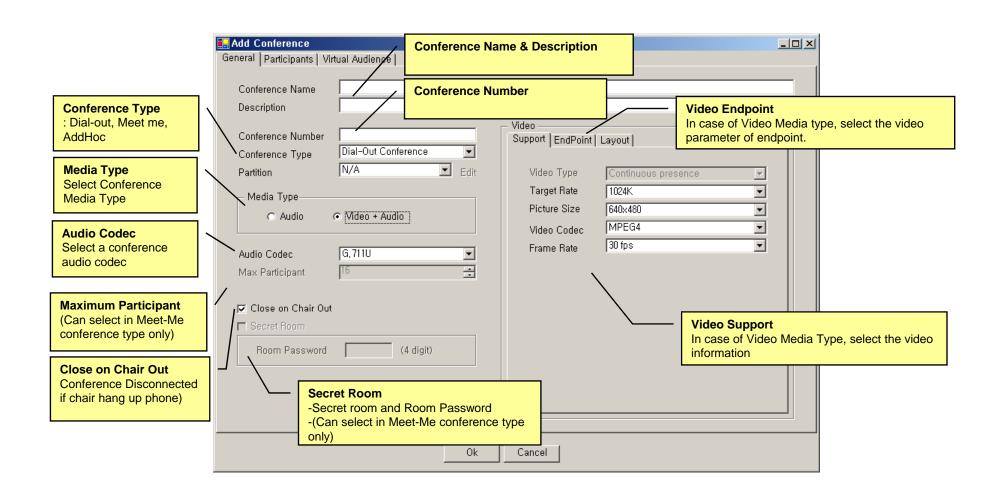
### MCU Management (SMM)

#### **Smart Multimedia Management**

- Initial Setting
  - Video Layout Setting
  - User class
    - Chair, Operator, Participant, Audience
  - Initial position
- Active Monitoring
  - Monitoring
    - Snapshot
  - Control
    - Layout
    - Move party
    - Floor
    - Mute
- Video Conference Scheduling\*
  - Scheduled Dial-Out Conference

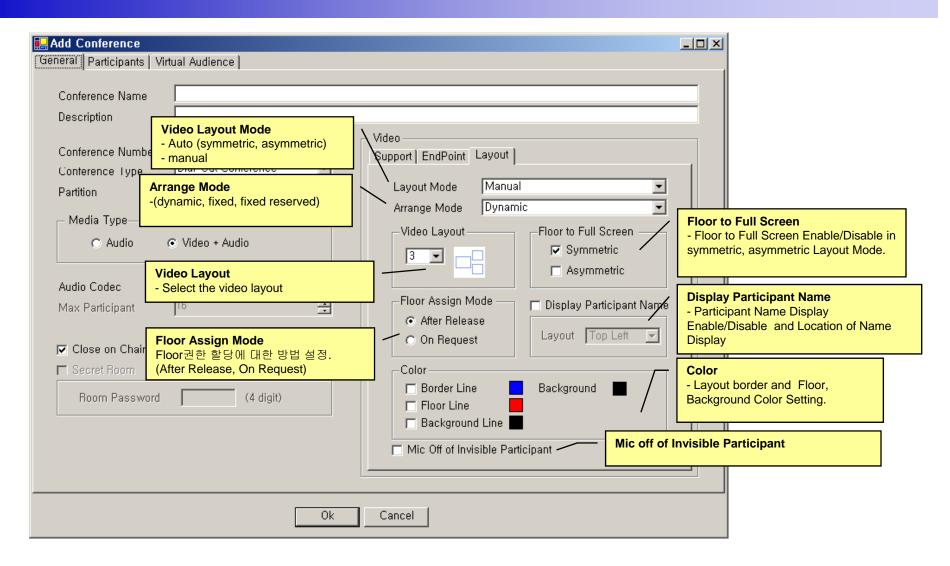


### Conference Room



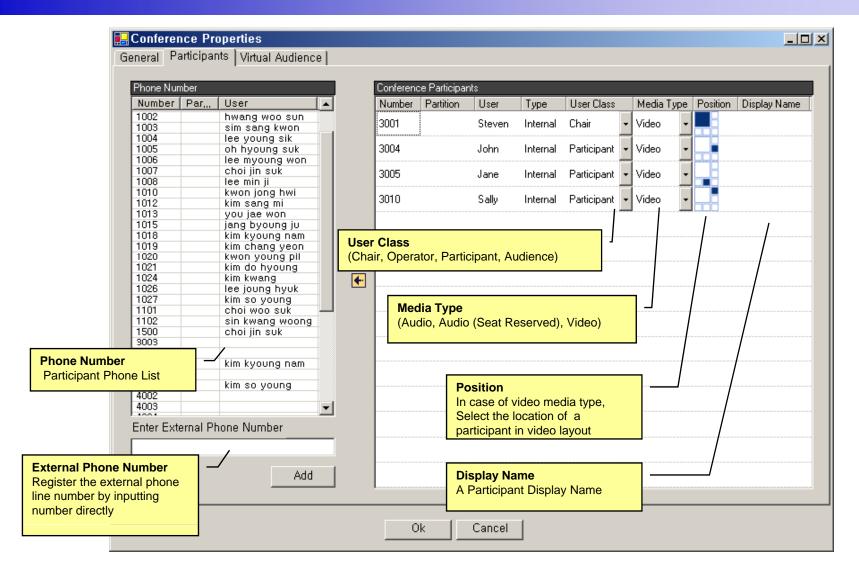


## Conference - Layout



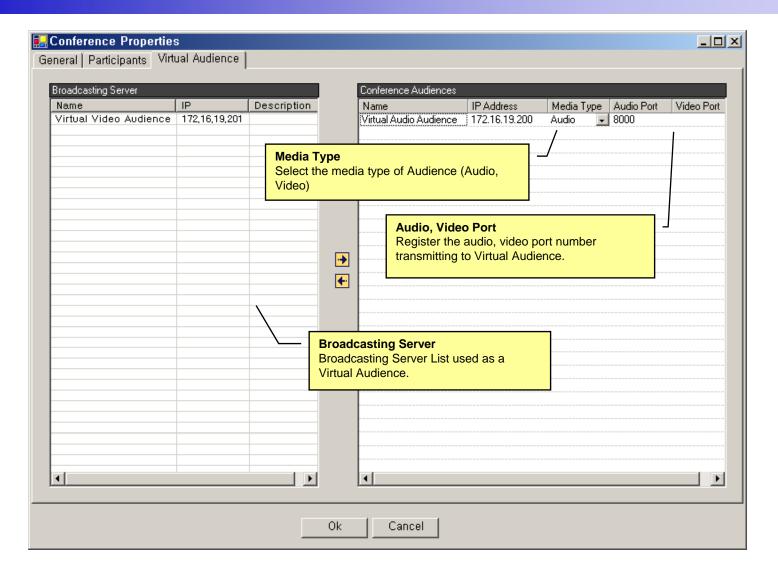


## Conference - Participants



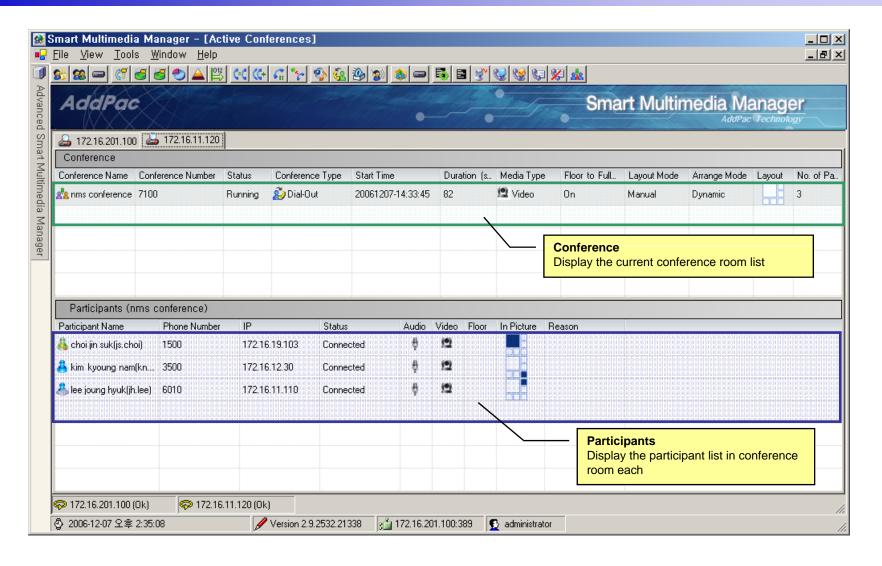


### Conference – Virtual Audience



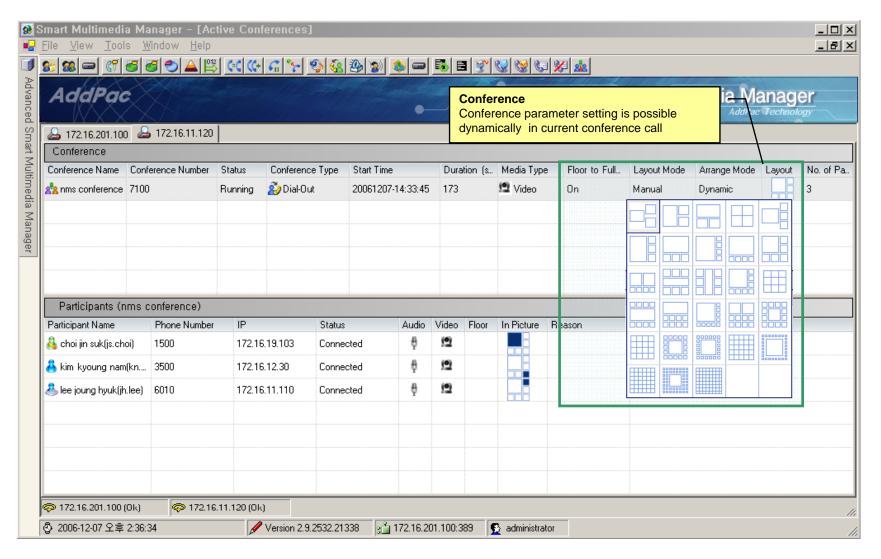


## Active Conference (1)





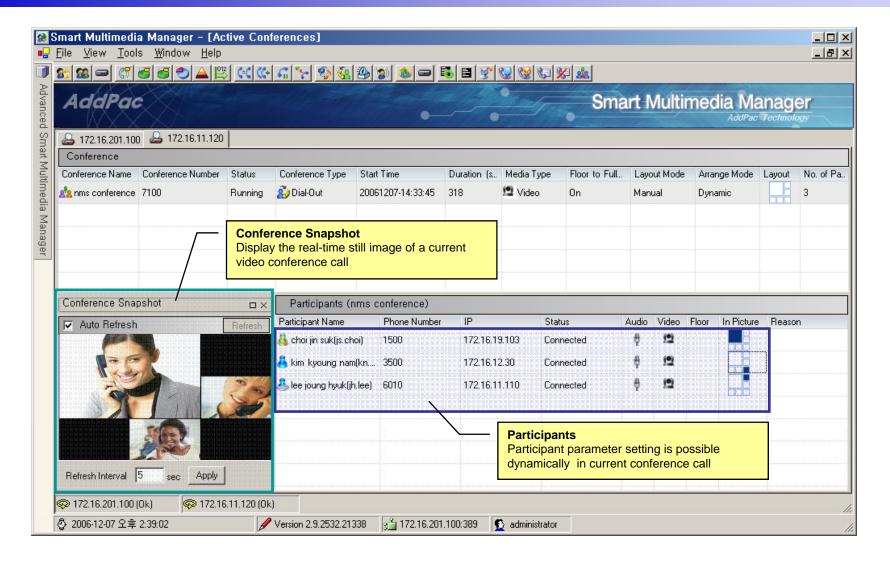
## Active Conference (2)





23

## Active Conference (3)





### OSD (Video Phone, Video Terminal, etc)

- Conference Management (Chair, Operator)
  - Layout
  - Move party
  - Floor
  - Mute
- Indicator
- Floor





### Conference Room

Application >> Conference Room



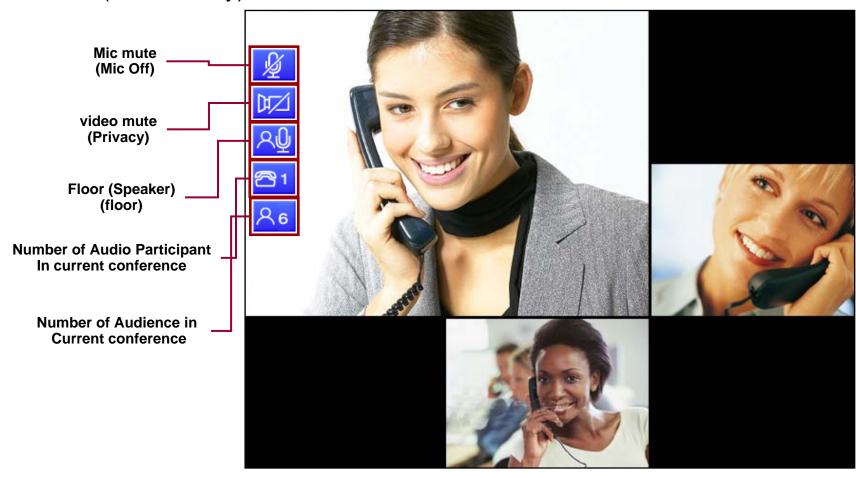
## Conference Open

- Conference open
  - OK or Send Key in Conference Room List
  - Dialing using Conference Room List



### Indicators

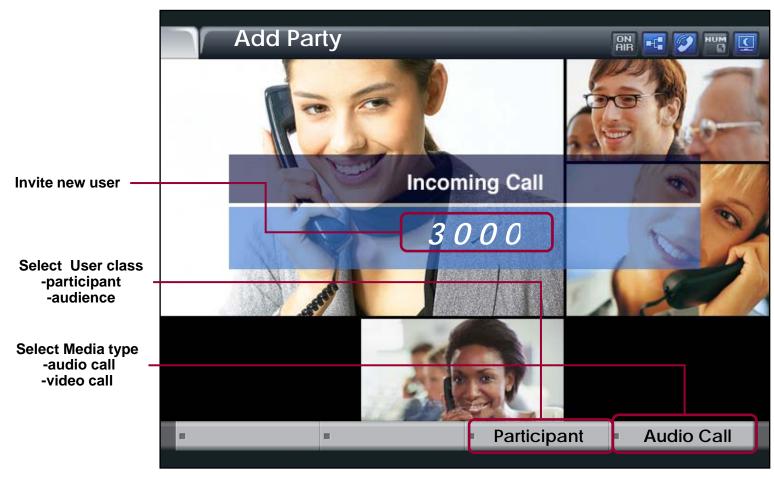
 User conference status information (function key)





## Add Party

New User Invite in Current Conference





## Layout

Video Layout Change in current conference





## Floor To Full Screen

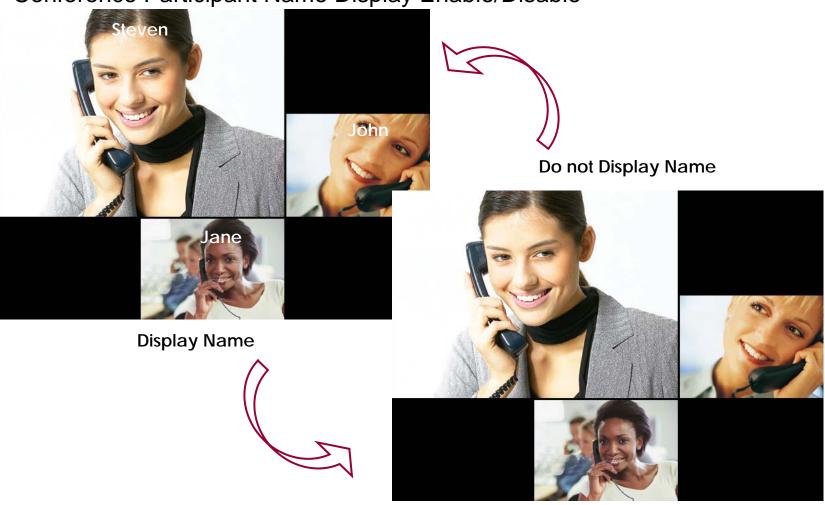
Large view display mode : Floor Participant





# Display Name

Conference Participant Name Display Enable/Disable





## Accept

- User unregistered want to join the conference
  - User can join the conference by Chair or Operator's Permission,



### Participant info

### Party Info

- Simple Participant info list View/Modification
- Chair, Operator can modify the status of participant
- Participant, Audience can read only the status of participant

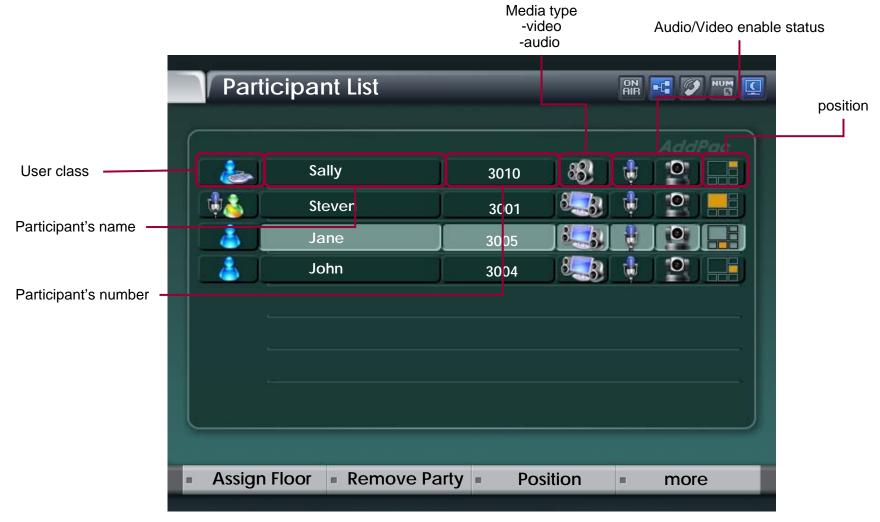






## Detail participant list

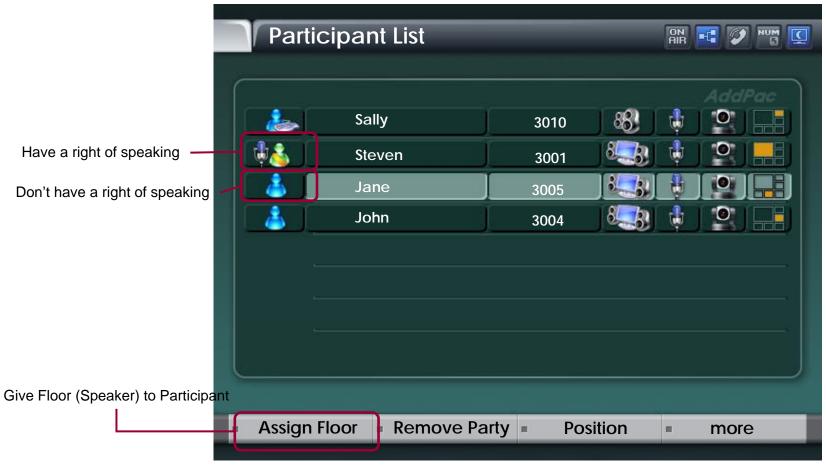
Can view the status information of member In conference





## Assign floor

- Give floor (Right of Speaking) to Participant selected in List
  - The ICON of Participant having Floor is changed as MIC ICON

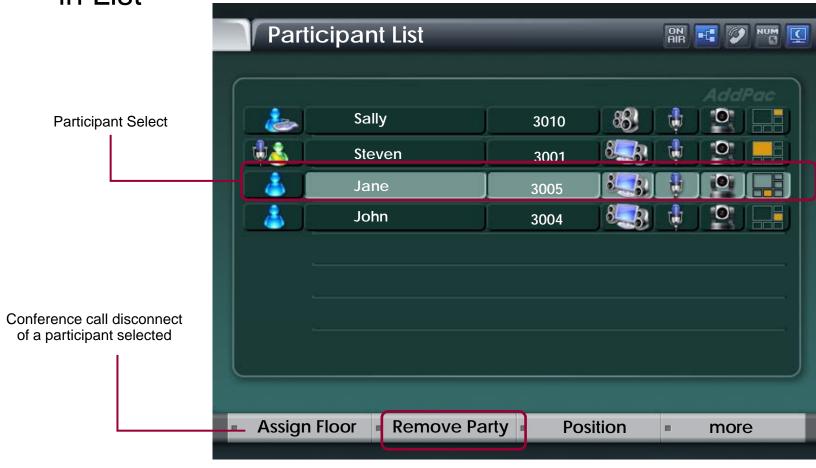




#### Remove Party

Conference Call Disconnect of a Participant selected







#### **Position**

- Participant Location Change In Conference View Layout
- Display the Position List in current conference view layout





#### **User Class**

- Change the Right of Participant selected in List
- User class icon change





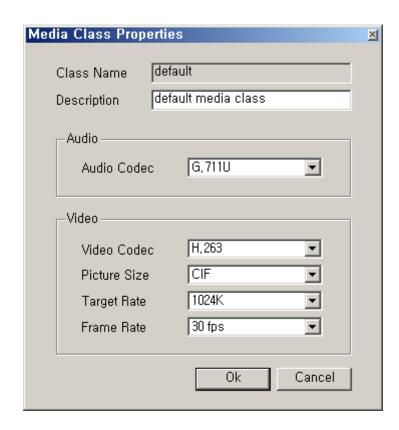
#### Audio/Video Mute

audio, video mute enable/disable Audio Video Mute/Enable Mute/Enable Participant List Sally 3010 Steven 3001 Jane 3005 John 3004 Audio, video mute/ enable **User Class** Audio Enable **Video Mute** more



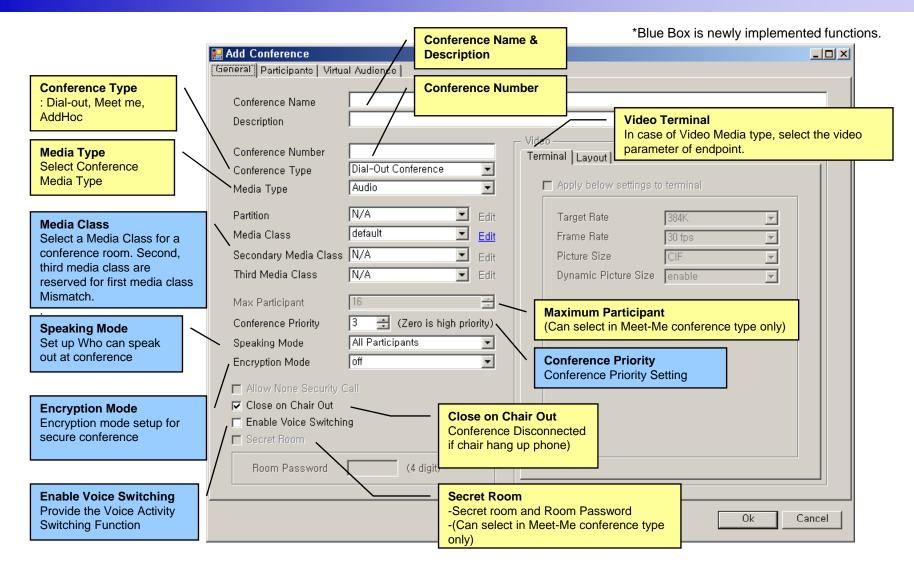
### Media Class (New)

• Media Class represents the profile information about Audio, Video Codecs, and is used for configuration at conference setup





#### Conference Room

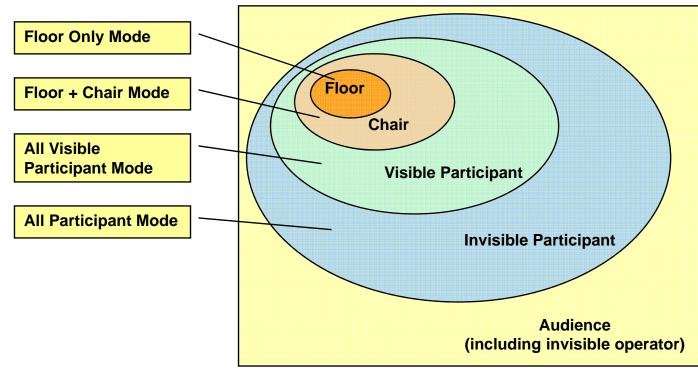




### Speaking Mode (New)

#### Speaking Mode

 Determine the scope of participant who can speak out at conference.





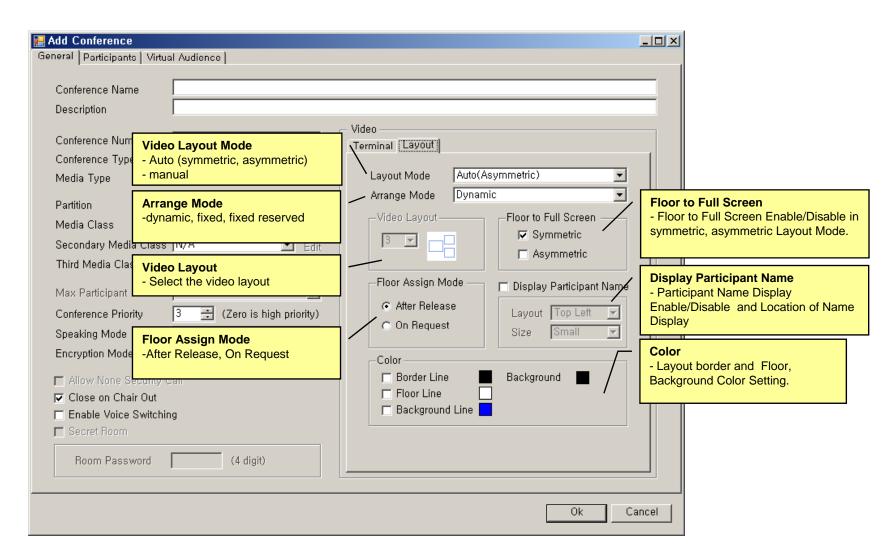
#### Voice Switching(New)

#### Voice Switching

- Voice Activity Switching or Voice Detect Switching
- Detect the Voice Activity of participants during video conference,
   and dynamically change the MCU display layout mode to display a participant who is speaking out currently
- If one participant obtains Floor, Voice Switching is inactive automatically till Floor is released.
- Display Priority Control
  - Floor > Voice Switching > Chair

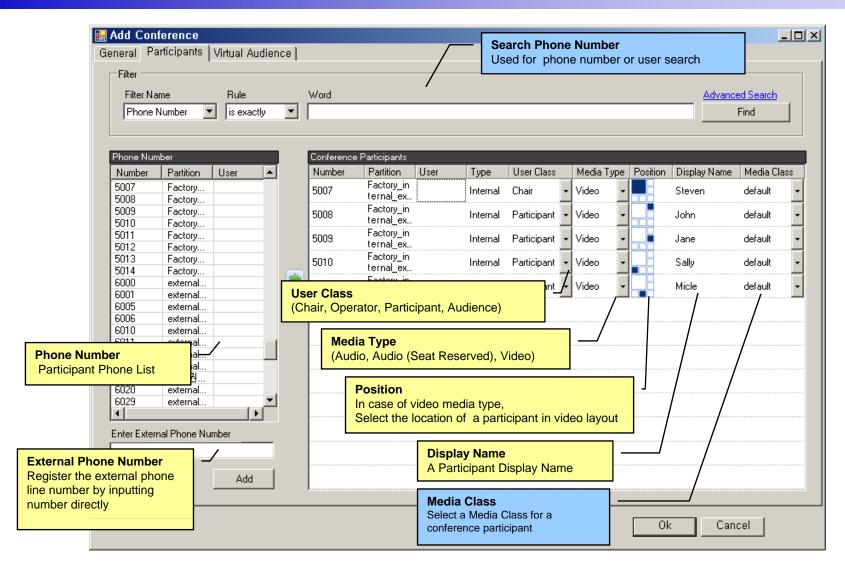


#### Conference Room - Layout



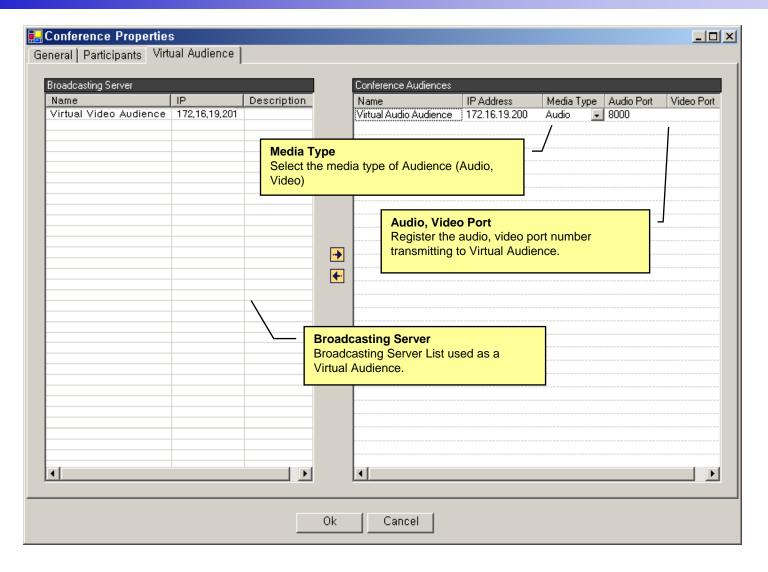


#### Conference Room - Participants



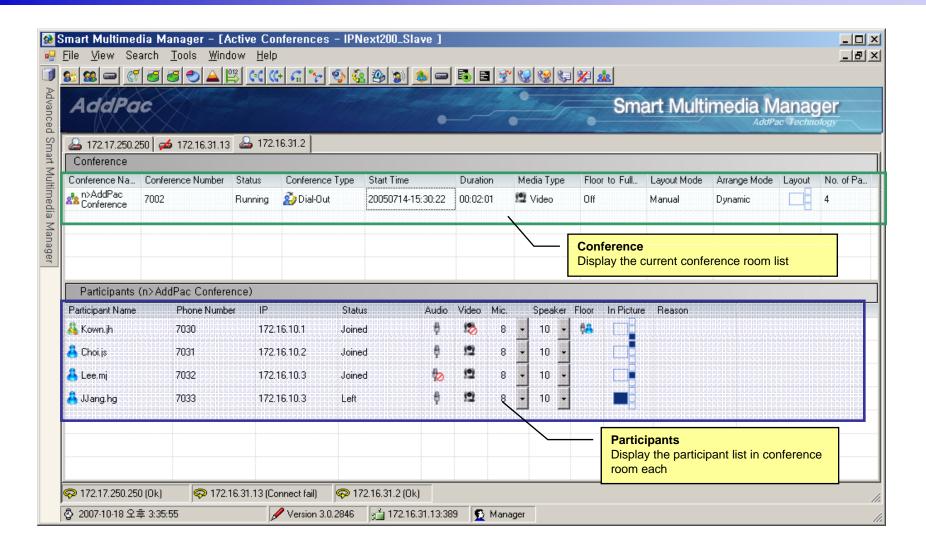


#### Conference Room – Virtual Audience



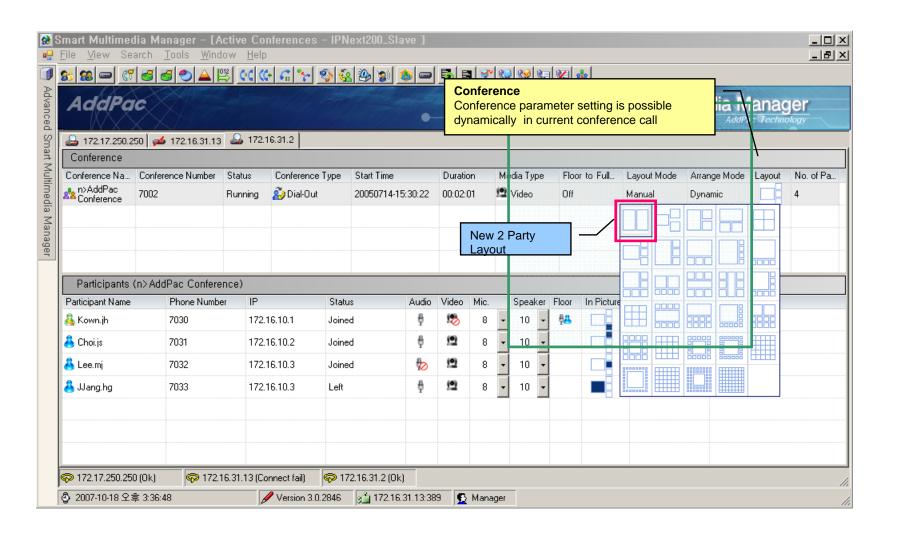


### Active Conference (1)



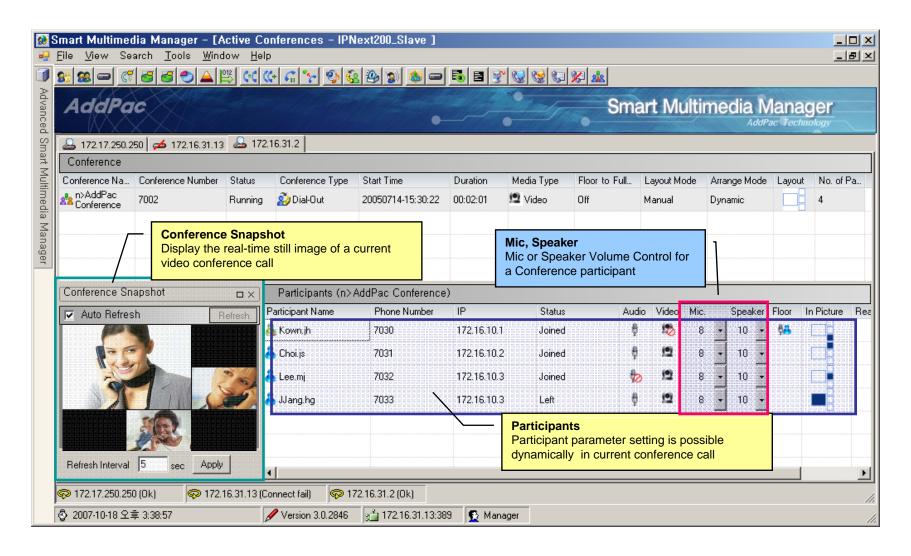


#### Active Conference (2)





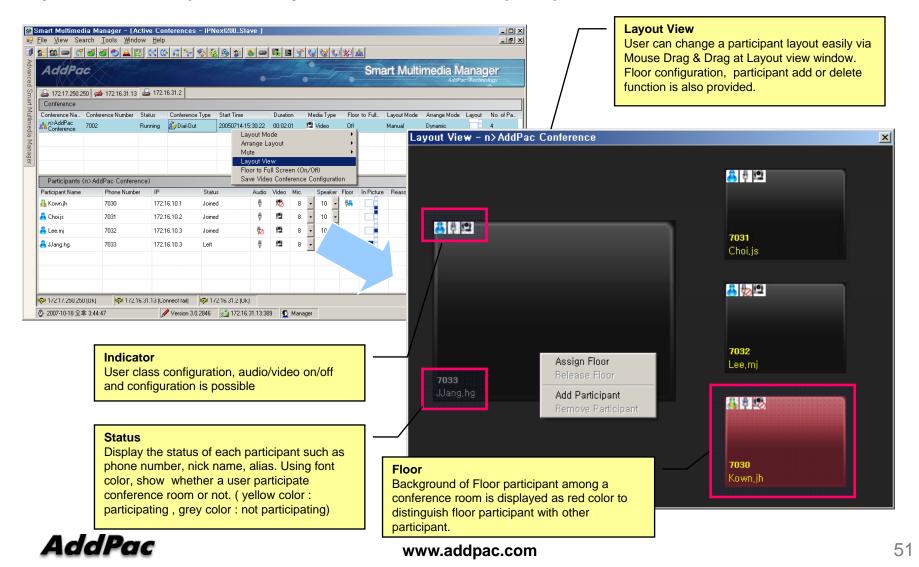
#### Active Conference (3)





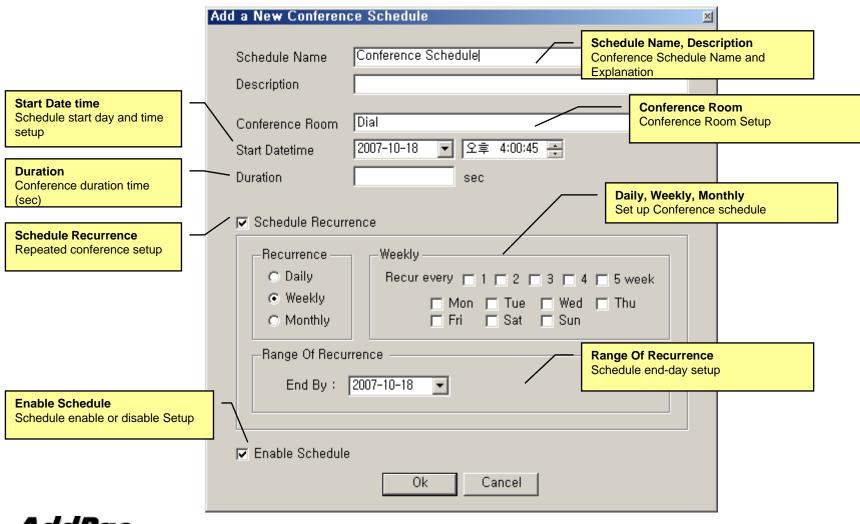
#### Active Conference (4)

#### Layout view function provide the layout status of a conference participant



#### Conference Schedule

Conference scheduling is used for configuration of repeated conference or a specific day conference



## Thank you!

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