



Site Coordinator Training IP-Based Videoconferencing Services

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Administration

Agenda

- Introductions
- H.323 Technical Overview
- Customer/site responsibilities
- Intertech Responsibilities (Multi-Point)
- Class/Conference Scheduling
- Troubleshooting
- Network Support Services
- Q & A

Interactive Video Communications

■ **Videoconferencing/ITV**

- *two-way, real-time interactive communication over TDM, ISDN, IP networks using ITU H.320 and H.323*
- *two-way, real-time interactive communication over fiber, wireless or coax networks using non-telephony based video transmission technologies (MPEG, JPEG, FM video, etc.)*

IP Streaming Media Technology

- *one-way (primarily) multimedia communication for viewing audio/video/data content on an IP data network*
- *either on-demand viewing (like a VCR or DVD) or almost-real-time viewing of live events*

Satellite-based Videoconferencing

- *one-way video communication for distributing audio/video/data content to many sites over a large geographic area.*

RSVP-323 Videoconferencing Services

- InterTech's "product name" for a Quality of Service (QoS), IP-based videoconferencing service for InterTech's router service customers using the state wide area network (MNet)
- These services:
 - Support H.323 standards for videoconferencing over packet-based networks
 - Support the Resource Reservation Protocol (RSVP) for QoS on routed IP wide area networks

RSVP-323 Videoconferencing Services Benefits

- Leverages data network infrastructure to deliver videoconference applications support at a lower incremental cost than the TDM network used for H.320
- Supports user-initiated dialing.
- Uses “real-world” E.164 numbering which can be enabled to support direct-dialing to and from PSTN (ISDN/H.320) sites via customer gateways.
- Supports Dynamic Bandwidth Allocation – allows “video” bandwidth to be used by “data” when there are no video calls
- Multiple video codecs can be deployed with out additional subscription cost as long as sites manage QoS bandwidth needs.
- Converting 300+ sites in 24 months

Videoconference Infrastructure

- Single or multiple monitor displays, microphone, speakers
- “roll-about” or set-top systems
- custom classrooms, boardrooms
- Built-in audio system with codec or custom audio system
- Codec connects to LAN that connects to Router (WAN) that typically uses a T-1 to connect to backbone network

Customer Site Responsibilities

- Follow Site Best Practices – per the ITG/Customer Service Agreement
- Certification/Maintenance (MAC)
- Class/Conference Scheduling
- Conference Preparation **Set-up Procedures**

Event Set-up Procedures

Routinely following system start-up procedures will greatly improve the performance of every video event. Be aware of the various functions used routinely in your video room and make sure they are in the normal operating capacity to ensure satisfied participants.

Event Set-up Procedures

- In custom rooms check:
 - Outgoing audio levels, (mixer)
 - Microphone placement
 - Incoming audio volume control
 - Video source selection
 - (Main, Student, Document Cameras, VCR, etc).

Pre-Conference Test Time

- Use it wisely – it helps ensure successful video events.
- Host site roles
 - Complete a roll call of sites
 - Manage the audio check
 - Determine next steps if problems exist
- Participating site roles
 - Announce your presence in the event.
 - Stand-by to help host site
 - Contact host site if problems exist – by video or by telephone

Pre-Conference Test Time

- 30 minutes recommended for classes and mission critical meetings
 - Longer for large, complex and/or high profile sessions.
- 10 minute minimum for multipoint or gateway events.
 - Recommended for any routine point-to-point connection so that meetings start on-time.
- Most problems can be easily eliminated before your conference start time.

System Start-up Procedures

- Codec should be powered-on as soon as possible prior to events, can be left on all day or more.
- Codec should be powered-down when not in use for longer periods of time
 - Power protection recommended
 - Unplug in the event of electrical storms, if possible!
- #1 problem for delayed starts of video events is not having equipment powered-on at one of the sites!

Audio System Checks

- New systems typically automatically complete an echo cancellation and constantly 'train' the room. If echo, speak for 10 to 15 seconds and it should go away.
- If echo persists,
 - adjust incoming level to comfortable listening level and have other site(s) do the same,
 - check placement of microphones – too close to speakers?

Outgoing audio levels

- On custom rooms should be set to the state network recommended -10 dBm.
 - *Most video site levels are pre-set and calibrated upon installation.*
- Your regional coordinator or vendor should be able to help you with this process. If unsure about who to contact or if problems arise, contact Intertech Video Support through the NOC.

Call Status Menu

- Most systems offer quick access to a graphic with:
 - Active Call status or network statistics
 - Tx/Rx Rate = 384k,
 - Audio and video protocols used for each system
- Know how to get to this graphic for some trouble shooting scenerios

Conference/Class Set-up –

Making connections

- Host site dials-out in point to point
 - Ten-digit E.164 number to enable QoS
 - Dialing an IP address will not enable QoS
- For multipoint or gateway calls
 - Dial-in to scheduled classes/conferences using
 - 800 for ITG's MCU/Gateway,
 - 877 for METNET's IP only MCU

Troubleshooting –

- If you experience trouble, go back through the necessary set-up steps to see if you can resolve the issue on-site.
- If you are the host site and still having difficulty, contact a remote site in your conference to explain situation before calling the NOC.

Troubleshooting

- Host site roles
 - Complete a roll call of sites
 - Manage the audio check
 - Determine next steps if problems exist
- Participating site roles
 - Contact host site if problems exist by video or by telephone, explain situation and call NOC

Please - before calling the NOC

- You can often fix connection problems faster, yourself -- but don't hesitate to call the NOC!
- Refer to the basic operational checklist.
- Is the codec device plugged in and powered on? Is there a local picture? If not verify power to the TV.
- Did you make a telephone call to the far end site coordinator to verify their system is on and prepared to answer the call?
- Are you dialing the correct E.164 number? (Point to Point calls)
- Are you dialing the correct MCU prefix if calling into a bridge/gateway? (800 or 877).

Operational check list – intermediate tasks

- Is there a steady green and a flashing amber LED on the LAN connection jack?
- Is the codec set for 100Mbps full duplex?
- Is the ethernet switch port set for 100Mbps full duplex?
- Reboot the codec. Verify boot up (chimes)
- After rebooting do you get an indicator that the system registers with the gatekeeper?

Advanced Troubleshooting

- Verify the units programming for correct programming of:
 - IP address of the codec interface
 - Subnet mask,
 - Default GW,
 - Gatekeeper
 - E.164 number and DNS servers.
- Can you ping the unit's IP from your PC (if not check cables and/or contact local LAN admin)?
- WEB browser interface available?

Audio Troubleshooting

- *Two audio components – microphones and speakers*
- No audio from speakers –
 - Are the far-end microphones in “mute”
 - Two audio volume controls:
 - Check volume level on local TV monitor
 - Check volume level on video codec controller (I.e. remote control)
 - Custom audio systems:
 - Check the power to the audio mixer and audio levels at local and remote site(s).
 - Check the audio amplifier to ensure that speakers are on and volume level is turned up.

Audio but no video from remote site –

- Check power to the monitors, ask remote site to check video source selected. (main, auxiliary, document camera, VCR, etc.), ask remote site to check video/audio internal routing (if applicable), check transmission speed (384k)
- *Other equipment problems* - check the power to equipment at each site, check basic room set-up for any changes.
 - Call NOC!

Maintenance Tips

- Re-Test all connections with the NOC if LAN or video equipment is moved or altered
- **keep a videoconferencing operations log in ITV room to document changes or performance problems**

HELP!!! What to do and Who to call???

- **Attempt to troubleshoot at your site.
(Refer to your video room set-up procedures checklist)**
- **If you are unable to resolve a problem, contact the instructor or technical coordinator at the host site.**
- **Host site contact will notify other conference participants, as needed.**

Network Operations Center (NOC)

- 7:00 AM to 11:00 PM
- (651) 297-1111 X1
 - FAX (651) 297-5788
 - TTY/TDD (651) 296-3931

Working with the NOC

- **Identify yourself, the site/location/phone number you are calling from and be prepared to provide the following information:**
 - **Conference ID Number, actual start time of conference/class/event for scheduled events**
 - **If not a scheduled event, please let the NOC know this.**
 - **A basic description of the problem you are experiencing**
 - **All troubleshooting efforts attempted prior to calling the NOC.**
 - **A list of the other sites included in the conference**

Problem Reporting

If you proceed with a video event with known problems:

- Customers can report all unresolved problems to the NOC after these events
- InterTech will work to either recreate the problem, or identify issues that may have affected the video event.
 - this will eliminate confusion and/or multiple problem reports for the same event
 - allow time to diagnose and/or resolve network issues prior to the next event
 - help NOC personnel expedite problems that need to be handled by the video equipment vendor

Intertech Responsibilities

- Document key reporting information
 - Caller's name, phone number, time of call and location.
- Issuing a trouble ticket for a problem at the customer request
 - Note: Trouble tickets are routinely issued for problems that affect the event start time or number of participating sites in an event.

Video Site Coordinator Training

- Thanks for joining the network of sites
- Questions?
- See you on TV!