# REGION 10
## EDUCATION SERVICE CENTER

# Videoconference Network Manual

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# 1    What is Distance Education?

*The application of information technology (and infrastructure) to educational and student-related activities linking teachers and students in differing places. (Or) The student and instructor are physically separated by any distance. All communications are mediated by some type of electronic means in real or delayed time. Location is of no significance.*

United States Distance Learning Association

**Videoconferencing** is simply a mode of delivery of distance learning.

# 2    Network Overview

The Videoconference Network is a service provided to member entities funded by membership fees.

The network provides live and on-demand audio and video communication to members in several north Texas counties. This allows students, teachers, administrators, other stakeholders and Region 10 staff to participate in distance learning, virtual field trips, credit courses, professional development workshops, and administrative meetings.

The network operates in accordance with H.323 (Internet Protocol) videoconference standards. Member sites are bridged and switched by multipoint control units (MCUs) located at Region 10 Education Service Center. Member and nonmember entities may connect to the network by the Internet or a dedicated broadband circuit. Videoconferences may be scheduled as either point-to-point (two sites) or multi-point (three or more sites) conferences.

The Network Operations Center provides services to support the success of the network. These services include videoconference scheduling, recording, network support and maintenance, help desk services, on-site technical service, end-user training and consulting.

# 3 Videoconference Staffing Overview

## 3.1 Event Related Staffing

### 3.1.1 Event Host

The Event Host is responsible for scheduling the event, the content, participant registration and event logistics. This person is normally the "Contact" listed for the event in the Calendar of Events. The host is the only person with authority to modify a videoconference event, i.e. add or delete sites, change times or cancel the event.

### 3.1.2 Presenter

The Presenter is a teacher, content provider or Region 10 staff who will present a lesson or training to one or more videoconferencing sites.

### 3.1.3 Site Content Facilitator (Optional)

It is recommended that the Event Owner designate an Event Site Content Assistant for each site during a videoconference. The Content Assistant can often be a participant who is familiar with the content and can assist with local content related activities. The Event Content Assistant / Facilitator is not responsible for technical support.

### 3.1.4 Participant(s)

Person(s) invited to participate in a videoconference at a specific location. Registration prior the videoconference may be required to attend at a location.

## 3.2 Member Staffing

### 3.2.1 Member VC Manager (Larger Entities)

In an effort to streamline scheduling and support activities, larger multi-point members will provide a single point of contact for all VC related scheduling and maintenance activities. This person is member staff that acts as the liaison between the VC Network staff, Event Hosts and all the member's VC related activities and contacts such as the Site Managers, Alternates and Technology Contact.

### 3.2.2 Site Manager

The Site Manager is a member staff responsible for specific VC equipment. This equipment may be fixed or portable. The Site Manager is the primary contact for the equipment and works with the Help Desk to resolve technical issues.

### 3.2.3 Alternate Site Manager(s)

An Alternate Site Manager acts in place of the Site Manager when that person is unavailable.

### 3.2.4 Member Network Engineering Contact

Someone in the member Information Technology Department and, is a networking specialist with a working understanding of the videoconference connectivity, interface back to the VC Network and the Internet. This person is contacted by the VC Network technology staff to troubleshoot network connectivity issues.

## 3.3 VC Network Staffing

### 3.3.1 VC Network Manager

The Network Manager is responsible for the successful operation of the videoconference network. Responsibilities include network and equipment service, support, maintenance, operation, training, consulting and event scheduling activities.

### 3.3.2 VC Scheduling Assistant

The Scheduling Assistant is responsible for assisting videoconference Site Managers and Region 10 staff with scheduling videoconference events on the Region 10 Calendar of Events. The Scheduling Assistant also provides training on the Calendar of Events and on the network scheduling policies and procedures.

### 3.3.3 VC Help Desk Technician

The Help Desk Technician is responsible for scheduling videoconference events on the VC Network MCUs, assisting videoconference Site Managers and Event Owners and participants with videoconference technical related issues. They also routinely monitoring videoconference events and, maintain and support videoconference remote and hub equipment

and software. They are also responsible for room setup and access for Region 10 internal videoconference resources.

### 3.3.4 VC Field Technician

The Field Service Technician is responsible for assisting videoconference Site Managers, Event Owners and participants with videoconference technical related issues and servicing, maintaining and supporting videoconference remote and hub equipment and software.  Field technicians are dispatched to locations to resolve an issue that cannot be addressed by telephone or remote access.

### 3.3.5 VC Network Engineer

The Network Engineer works directly with Member network specialists to engineer, configure and provision equipment to effectively provide connectivity between the Member network and the VC Network.

# 4 Member Notifications

## 4.1 Calendar of Events - Event Notifications

Site Managers / VC Managers will be notified by email from the Calendar of Events on any activity related to their enterprise or site.  These activities include new, changes to or cancellation of events.

## 4.2 Tandberg Management Suite - System Notifications

If listed as an owner of a videoconference system in TMS, a notification, via email, will be sent to you on any activity related to that VC system.

## 4.3 Work Order Notifications

Site Managers / VC Managers listed on work orders will be updated regularly, via email, on all activities related to that workorder and may add activities or notes to open work orders.

# 5 Member Responsibilities

## 5.1 Site Managers

The Site Managers are essential to the successful daily operation of the videoconference network. It is the Site Manager's responsibility is to provide routine updates to the VC Network Staff regarding any changes to Member VC personnel assignments along with all pertinent contact information.

It is also the responsibility of the Site Manager to keep current records regarding VC equipment locations, makes, models, IP addresses, E-164 alias address and other important information regarding the Member videoconference environment and, supply that to the VC Network as appropriate and required.

The operation of videoconference equipment is a shared responsibility of the Site Managers and the Network Operations Staff. The Site Manager initiates, monitors and assists with videoconference events and operations at each location within their enterprise. They also report any operational concerns to the Region 10 Help Desk.

All Site Managers receive training on basic system operation, scheduling of events and, the policies governing the network. The various duties are described below.

### 5.1.1 Schedule & Scheduling

The schedule for videoconferences is available at all times at: http://events.ednet10.net/fe2production.nsf

All on-network conferences must be scheduled a minimum of two working days in advance, except under special circumstances. Events cannot be scheduled beyond twelve (12) months in advance.

All off-network events must be scheduled a minimum of 7 working days in advance, except under special circumstances. This is due to a required test with off-network entities prior to the production event to confirm connectivity.

If for any reason, the Site Manager is unable to prepare a site for a scheduled event, please notify the

Region 10 Help Desk as soon as possible. The participants who attend conferences at the site(s) are relying your support.

It is critical that Site Managers review the web-based scheduling system every morning to identify if there a change or addition at the site/s.

### 5.1.2    Attend Initial and Ongoing Training

The Region 10 VC staff will provide training to Site Managers and VC Managers as required or requested. Training will include basic equipment operation, equipment troubleshooting procedures and event scheduling procedures.

### 5.1.3    Attend Scheduled Manager Meetings

VC Network staff will schedule periodic site manager meetings to disseminate information and get feedback from the Site Managers and System Managers. The Site Managers and System Mangers are encouraged to attend these meetings to stay up to date on network activities and technologies and, provide feedback for the continued success of the network.

### 5.1.4    Member Hosted Event Scheduling

The designated Enterprise or Site Manager will act as the single point of contact for the member enterprise/site for scheduling events. The Site Manager becomes the "Host" for events initiated and coordinated by the member enterprise. The Site Manager works directly with member staff and acts as the conduit between the Member Enterprise, the Region 10 Calendar of Events and Network Operations and takes those responsibilities defined under Section 4.1.1 above.

### 5.1.5    Daily Activities - Site Managers

- Check your email regularly for messages regarding site-scheduling updates, changes or cancellations and, site use requests from Event Owners / Managers.

- Check the Region 10 Calendar of Events for any last minute changes for your site.

### 5.1.6 Before A Scheduled Conference At Your Site - Site Manager

#### 5.1.6.1 Room Preparation

- Arrive thirty (30) minutes before the scheduled production event start time.

- Unlock the room, turn on the lights and power up the videoconference equipment.

- Check that the system will switch to all video input devices by selecting each one on the user interface, i.e. remote control, touch panel, keyboard or tablet.

- Check that there are no open microphones active in the room.

- Make sure there are ample sign-in and evaluation sheets available for participants.  These forms can be downloaded here: http://www.region10.org/EdNet10_Videoconf/VCForms.html

#### 5.1.6.2 Event Connection

- All events connect 15 minutes before the scheduled event production start time. This 15 minute period provides a window to help test the equipment in a conference and troubleshoot any issues.

- In most cases, the MCU is scheduled to dial all videoconference sites.

- For those sites required to dial into the MCU, dial the MCU fifteen (15) minutes prior to the beginning of the production event start time.

- For those sites dialed by MCU, be sure the MCU connects to your site fifteen (15) minutes prior to the beginning of the production event start time.

- If your site does not connect, call the VC Help Desk immediately for assistance.

- Once connected, interact with the VC Help Desk to be sure both audio and video is being telecast and received from and to your site.

### 5.1.6.3 Participants and/or Presenter

- Greet participants and acclimate them to the room, microphone usage and equipment operation and as required.

- Remind them to sign in on the sign-in sheet. Inform participants on how to contact you and the Region 10 Help Desk in case of technical difficulties. (This may be accomplished by posting contact numbers near the room telephone and/or FAX machine)

- Briefly discuss proper videoconference etiquette with the participants.

- If a presenter is at the site, acclimate them to the videoconference system and show them how to mute and un-mute the microphone. Also, show them how to switch between the various video sources. Provide them with contact information so they can reach you in case of an issue.

- Stay in the room for the first few minutes of the event to address any last minute questions from the presenter, participants or other sites.

### 5.1.7 After The Last Event

- Turn off the videoconference equipment as required (Most sites require that only the TVs, PC monitor and document camera be turned off)

- If at all possible leave the other videoconference equipment powered on so we are able to monitor it from the Network Operations Center.

- Collect and FAX sign in sheets, evaluations and other documents collected to the Event Host or Network Operations at 972 348-1018.

### 5.1.8 Monthly

- Check the microphone presets and make camera-framing adjustments if applicable and necessary.

- Check the remote controls.  If it makes a beeping sound when pressed, replace batteries.

- Check inventory of sign-in sheets, evaluations, and waiver forms.  Request more if needed.

- Check the lighting.  Follow district procedure for light bulb replacement.

- Check the equipment in general.  Report all problems.

## 5.2 Event Owner / Manager

### 5.2.1 Event Scheduling

The Event Owner is responsible for scheduling the date, time and sites included in an event or series of events.  It is suggested that the Host personally contact all Site Managers at the selected sites to insure the resource is available for use.  This will shorten the approval turn around time for your site selections.

The Event Owner will be responsible to personally approve and requests to edit the event.  The Network Operations Center will not modify an event without this approval.

The Event Owner arranges for a presenter, organizes the content and, provides and arranges for delivery of any materials required for the event. The Host is responsible for the dissemination or delivery of content materials to each participating site including any special sign-in or evaluation materials.

# 6 Network Connection Types

## 6.1 Videoconference Connection Types

### 6.1.1 Point-to-point Connections

Point-to-point connections are defined as a single site directly dialing another single site without utilizing a MCU for bridging purposes.

### 6.1.2 Multipoint (Bridged) Connections

Multipoint connections are defined as bridged connections between videoconference sites. Bridged connections can include three or more sites.

## 6.2 Protocols & Network Services

### 6.2.1 IP (H.323) Connections

It is highly recommended that members use the Internet connection to access the videoconference network. Dedicated T1 circuit connections may be installed at district expense and pay reoccurring costs, not required when using the Internet.

#### 6.2.1.1 On-network

The majority of the network members utilize H.323 IP based Ethernet protocol for connectivity to the VC Network. This protocol allows the network to attach directly to member endpoints or, to them through the member's Ethernet network. If the Member has multiple endpoints, it is required that the VC network integrate with the Member's Ethernet network.

Direct access to an endpoint is established by running cable directly from the VC Network edge router, located on the campus where the equipment is housed, directly to the videoconference device.

By connecting to the member's Ethernet network backbone, access to multiple endpoints within the member's network is available. This connection is established by connecting the edge router to a member's Ethernet network device giving access to the

VC Network from anywhere within the member's network.

Standard connection speed is 384 Kbps.

#### 6.2.1.2 Off-network

Connectivity to a H.323 off-network site is available via the Commodity Internet as long as the site will accept calls from the Commodity Internet. Since quality of service standards are not available on the Commodity Internet, the VC Network does not take responsibility for video or audio quality for sites utilizing this type of connection. However, recent improvements to H.323 equipment and software have made the Commodity Internet a much more consistent and viable videoconference transport means.

Standard connection speed is 384 Kbps.

### 6.2.2 ISDN (H.320) Connections

#### 6.2.2.1 On-network

The VC Network no longer advocates or recommends utilizing H.320 connections due to the cost of circuits and/or ISDN calls to the Network.

#### 6.2.2.2 Off-network

The network offers ISDN service to allow ISDN calls to entities outside of the network. ISDN calls are billed back to the Event Host. Calls made within the continental United States are billed to the 1/4 hour at $60.00 per hour. There is an $15.00 setup fee for each individual event, which is used for testing with off-network entities prior to each production event.

Standard connection speed is 384 Kbps.

### 6.2.3 TETN Network Connections

The Texas Education Telecommunications Network (TETN) facilitates communications among educational entities throughout Texas via an effective

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telecommunications network that ties Regional Service Centers and the TEA together. TETN membership is a consortium of twenty-one (21) entities, the Texas Education Agency (TEA) and the twenty Texas Education Service Centers (ESCs). TETN has installed a videoconference site at each of the 20 Regional Service Centers and at the Texas Education Agency. The Network provides connectivity to both the TETN rooms and Regional Education Service Center Networks. For information regarding the use of or, scheduling events on the TETN network, contact the Region 10 Help Desk or the TETN Site Manager.

Standard connection speed is 384 Kbps.

### 6.2.3.1 TETN Member Service Centers & Site Contacts

For a complete list of member sites and contacts, please see this web page:

http://www.tetn.net/regional.aspx

### 6.2.3.2 Connection Modes

Mode A - TETN Room Only

Mode B - TETN & Regional Network rooms

Mode E - Regional Network rooms only

Internet2 Access

# 7 Room Scheduling & Event Times

Videoconferencing sites are managed by the enterprise housing them. The Site Managers have the right to refuse use of their resource. It is highly recommended that Event Owner call the Site Manager of each site they would like involved in their event to verify use of the system(s). ALL videoconference events MUST require pre-registration of participants. If a site does not have any participants 48 hours prior to the event, it is the responsibility of the Event Owner to remove the site or sites without participants from the event. Remember, Site Managers are depending on this information to be able to properly manage their resources.

Videoconference sites will be connected 15 minutes prior to the conference start time and will disconnect at the prescribed stop time. Please watch the clock. A videoconference should begin as close as possible to the actual start time. A roll call of sites may begin prior to the start time. This will allow time to report problems. Once the conference is over, it will not be restarted. A warning tone is sounded 10 minutes prior to the scheduled stop time.

## 7.1 Event Activity Windows

Monday - Thursday:  7:00 a.m. - 10:00 p.m.

Friday:  7:00 a.m. - 5:00 p.m.

Saturday - By Request

# 8    Member Training

## 8.1    Policies & Procedures

The VC Network will hold scheduled training sessions on the videoconference policies and procedures described in this document.  These training sessions are advertised via the R10 Videoconference Network List Serve and on the Calendar of Events.  It is recommended that Site Managers attend these training sessions to be updated on the latest changes to the VC Network activities, policies and procedures.

## 8.2    System Training

Due to the wide variety of systems deployed, hands on videoconference equipment training will be provided upon request.  A VC Network Field Technician will visit the Member Site and work directly with the Site Manager(s) to train them on the use, maintenance and troubleshooting their specific equipment.  It is recommended that training be requested when refresher information is needed, equipment has been changed or new Member personnel have take responsibility for the equipment.  The Site Manager is responsible for training member staff within the enterprise.

## 8.3    Scheduling on the Calendar of Events

The VC Network will hold scheduled training sessions on creating and managing events on the Calendar of Events.  These training sessions will be advertised via the R10 Videoconference Network List Serve and on the Calendar of Events.  It is recommended that Member Mangers attend these training sessions to get updated on the latest changes to the Calendar and introduce new Site Managers to scheduling policies and procedures.

# 9 System Testing & Equipment Use Practice

The Region 10 Help Desk will assist the Site Manager with routine testing. The Help Desk staff will assist the Site Manager test all equipment and functionality. Similarly, the Help Desk will put an endpoint into an ad-hoc call to allow Member Staff to practice with the equipment. The Site Manager simply has to call the Help Desk and ask to be placed into an ad-hoc call.

# 10 Videoconference Network Contacts

## 10.1 Scheduling Assistance - 972.348.1164

Ms. Vickie Sullivan
Direct Phone - 972.348.1164
Email - vickie.sullivan@region10.org

## 10.2 Help Desk - 972.348.1234

Mr. Chuck McCarley - Videoconference Help Desk Technician
Direct Phone - 972.348.1420
Email - chuck.mccarley@region10.org

Mr. Danny Scott - Videoconference Network Engineer
Direct Phone - 972.348.1682
Email - danny.scott@region10.org

## 10.3 Videoconference Field Services - 972.348.1670

Mr. Tim Freeman - Videoconference Field Technician
Direct Phone - 972.348.1708
Email - tim.freeman@region10.org

Mr. Wayne Green - Videoconference Field Technician
Direct Phone - 972.348.1496
Email - wayne.green@region10.org

## 10.4 VC Network Ops, Management, Project Planning & Consulting

Mr. Bob Barnes - Videoconference Network Manager
Direct Phone - 972-348-1610
Email - bob.barnes@region10.org

# 11    Quick Links

## 11.1    Videoconference Collaboration List Serve

The Region 10 VC Network has established a Listserv to facilitate collaboration efforts and disseminate information to the videoconference stakeholders that opt to join the service.  To ask to be added to the service simply go to the following link, fill out the information and select the "Region 10 Videoconference" list.  Once added, you will be notified via email and begin to receive the videoconference information.
http://www.region10.org/mailingLists/index.html

## 11.2    Region 10 Videoconference Home Page

http://www.region10.org/EdNet10_Videoconf/VCHomepage.html

## 11.3    VC Services & Fees

http://www.region10.org/EdNet10_Videoconf/services.html

## 11.4    Virtual Field Trips

http://www.region10.org/EdNet10_Videoconf/VFT.html

http://www.cilc.org/

## 11.5    On-Network Videoconference Sites

http://www.region10.org/EdNet10_Videoconf/SiteLocations.html

## 11.6    Digital Recording & Streaming Video

http://www.region10.org/EdNet10_Videoconf/VCvideostream.html

## 11.7    Forms

http://www.region10.org/EdNet10_Videoconf/VCForms.html

## 11.8    TETN Network Information

http://www.region10.org/EdNet10_Videoconf/TETNVC.html