Nebraska Information
Technology Commission

STANDARDS AND GUIDELINES

Scheduling Standard for Synchronous Distance Learning and Videoconferencing

Category	**Video Architecture**
Title	**Scheduling Standard for Synchronous Distance Learning and Videoconferencing**
Number	**7-403**

Applicability	☑**State Government Agencies** ☑ All.. **Standard** ☐ Excluding _____ ....**Not Applicable** ☑**State Funded Entities -** All entities receiving state funding for matters covered by this document......................... **Standard** ☑**Other:** Entities using state-owned or state-leased communication networks for synchronous video……….……………..**Standard** **Definitions:** **Standard** - Adherence is required. Certain exceptions and conditions may appear in this document, all other deviations from the standard require prior approval (see Section 3.1). **Guideline** - Adherence is voluntary.

Status	☐Adopted ☑Draft ☐Other:_____
Dates	Version Date: November 4, 2008 Date Adopted by NITC: May 1, 2006 Other: Contact information updated in § 3.1.1 on February 28, 2008.

1.0 Standard

This document consists of a list of five components and accompanying features that must be available in any software system that is developed for use in scheduling of synchronous events using videoconferencing technology.

It is the intent that any and all such scheduling systems defined by the specifications below be accessible either through the Internet or within a defined Intranet as decided upon by the system administrators.

The following sections describe the various levels and types of scheduling or coordination that must be accommodated.

1.1 Hardware control component

When attempting to link two or more sites electronically, a system must have the capability to coordinate the connectivity between/among the sites. This includes controlling the network and endpoint hardware and bandwidth necessary to cause a successful connection.

1.1.1 Standards for hardware control system

A hardware control system must be able to control all hardware in a network and be capable of linking into all the other systems listed in this standard to enable the following:

1.1.1.1   Browser-based access
1.1.1.2   Locate devices by IP address (both static and DHCP)
1.1.1.3   Locate devices by MAC address
1.1.1.4   Facilitate far-end control in endpoint devices with the capability
1.1.1.5   Display a call list that is understood by non-technical staff using plain English site descriptions
1.1.1.6   Hardware and software systems must work such that the scheduling system is available for use at least 99.9% of the time
1.1.1.7   Automatically accumulate log data that may be searched by system administrators using multiple search variables
1.1.1.8   Maintain security in ways that can be defined by system administrators including:
    1.1.1.8.1   Provide an identity management system that allows for multiple levels of user access as defined by system administrators
1.1.1.9   Facilitate various types of events
    1.1.1.9.1   Broadcast to all
    1.1.1.9.2   Broadcast to some
    1.1.1.9.3   2-way point-to-point
    1.1.1.9.4   2-way multipoint

1.2   Event logging component
A system coordinator must have the ability to track information about events. This may include knowing the number of people at a site, the minutes an event runs at any given site, or the number of events a specific organization schedules.

1.2.1 Standards for event logging system
An event logging system must be able to automatically store data and permit reporting and be capable of linking into the all the other systems listed in this standard to include the following:

1.2.1.1	Browser-based access
1.2.1.2	Store data in an ODBC compliant relational database
1.2.1.3	Provide fields for logging various pieces of information
1.2.1.4	Permit system administrator defined fields (no fewer than 64)
1.2.1.5	Local contact and facility arrangement info

1. 3   Facilities coordination component
If an event will include locations for which more than one person/organization has responsibility, then some mechanism must exist for coordinating use of facilities. There may be technical or administrative limits as to the number or types of sites that can participate in any given event. This could be as simple as users coordinating times over the telephone or through e-mail, but for some applications there may be a greater need for pre-scheduling and coordination among multiple administrators.

1.3.1 Standards for facilities coordination system
A facilities coordination system shall enable access to facilities based on defined permissions, resolve conflicts based on pre-determined policies and be capable of linking into all the other systems listed in this standard to include the following:

1.3.1.1	Browser-based access	
1.3.1.2	System editable user access	
	1.3.1.2.1	Building level admin such that the facilities at a specific location can set policies for that site and permit use by others
	1.3.1.2.2	Regional admin (organization / geo-political) such that a group of facilities can set policies for all related sites and permit use by others
	1.3.1.2.3	Sector admin such that groups of groups of facilities can set policies for all related sites and permit use by others

	1.3.1.2.4	User account directory service with definable permissions for each account
1.3.1.3		Facilities information to be posted
	1.3.1.3.1	Identify technology available by site
	1.3.1.3.2	Physical site location
	1.3.1.3.3	Local contact and facility arrangement info
1.3.1.4		Event information to be posted
	1.3.1.4.1	Definable credit type
	1.3.1.4.2	Definable student type
	1.3.1.4.3	Event/course prerequisites
	1.3.1.4.4	Event/course descriptions
	1.3.1.4.5	Teacher / event leader / presenter
	1.3.1.4.6	Materials needed
	1.3.1.4.7	Event coordinator info
	1.3.1.4.8	Target audience

1.4   People coordination component

If a specific location is to be used, this implies that operational support will need to be dedicated to cause successful events. Since there will be a variety of site designs and equipment configurations, then there may be a variety of demands on staff time. Finally, there may be limitations as to the total number of participants allowed.

1.4.1 Standards for people coordination system

A people coordination system must enable interaction of people based on policies set by system administrators and be capable of linking into all the other systems listed in this standard to include the following:

1.4.1.1		Browser-based access
1.4.1.2		Allow for multiple permission levels
	1.4.1.2.1	View schedules
	1.4.1.2.2	Request systems/facilities
	1.4.1.2.3	Approve systems/facilities use
1.4.1.3		Provide information about instructor/facilitator and their availability
1.4.1.4		Allow for predetermined maximum number of attendees
1.4.1.5		Track and display count of committed and remaining attendees
1.4.1.6		Allow for predetermined maximum number of sites
1.4.1.7		Track and display count of committed and remaining sites

1.5   Event clearinghouse component

As system users see a need for pre-scheduled events coordinated among a large number of facilities and administrators, the concept of a virtual location for brokering of events becomes attractive. Such a clearinghouse should serve as a way that event

coordinators might let others know the specifics of events they are planning (e.g. a certain class with a specific sort of content will be offered on a certain schedule for a certain period of time or a specific event will happen one time on a specific day at a specific time).

Such an event clearinghouse should also serve as a way for interested parties to find events that meet their specific needs (e.g. a school administrator has a certain number of students who need a specific class that is not offered locally). Availability might also include information about participant or site number limitations (the total seats/sites in the class/event, the number requested/registered so far and the number remaining of the total).

1.5.1 Standards for an event clearinghouse system
An event clearinghouse system must enable online interaction for publishing of event information and be capable of linking into all the other systems listed in this standard to include the following:

1.5.1.1	Browser-based access
1.5.1.2	Posting of one-time single events
1.5.1.3	Posting of sequenced or cyclical events
1.5.1.4	Posting of costs to participate in an event
1.5.1.5	Permit system administrator defined fields (no less than 256)
1.5.1.6	Provide for automated multiple time zone accommodation
1.5.1.7	Use an ODBC compliant relational database
1.5.1.8	User defined search/reporting capability
1.5.1.9	Provide for automated email notification of site requests/confirmations

2.0 Purpose and Objectives
The purpose of this standard is to establish and define the needs for scheduling to be addressed when purchasing and maintaining scheduling coordination systems.

2.1 Objective
The objective of this standard is to enable all existing and future synchronous distance learning and videoconferencing facilities in Nebraska to achieve interoperability and maintain an acceptable scheduling of services through recurring and ad hoc event coordination.

3.0 Applicability

These standards apply to the purchase and maintenance of synchronous distance learning and videoconferencing software systems.

General Statement on Applicability
The Governing board or chief administrative officer of each organization is responsible for selecting and using a synchronous distance learning and videoconferencing software system that is in compliance with these standards. The NITC will consider adherence to technical standards as part of its evaluation and prioritization of funding requests.

It is the intent of the Technical Panel and NITC that the guidelines and policies for usage of such scheduling and clearinghouse systems be determined by the administrative entities that oversee such distance learning and videoconferencing.

- These standards **do not apply** to the following entities:

  o University of Nebraska (relating to the university's academic research mission)
  o Any entity which applies for, and receives, an exemption.

3.1 Exemption
Exemptions may be granted by the NITC Technical Panel upon request by an agency or other entity.

3.1.1 Exemption Process
Any agency or other entity may request an exemption from this standard by submitting a "Request for Exemption" to the NITC Technical Panel. Requests should state the reason for the exemption. Reasons for an exemption include, but are not limited to: statutory exclusion; federal government requirements; or financial hardship. Requests may be submitted to the Office of the NITC via e-mail (ocio.nitc@nebraska.gov) or letter (Office of the NITC, 501 S. 14th Street, Lincoln, NE 68509). The NITC Technical Panel will consider the request and grant or deny the exemption. A denial of an exemption by the NITC Technical Panel may be appealed to the NITC.

4.0 Responsibility

An effective program for scheduling standards compliance involves cooperation of many different entities. Major participants and their responsibilities include:

4.1 <u>Nebraska Information Technology Commission</u>. The NITC provides strategic direction for state agencies and educational institutions in the area of information technology. The NITC also has statutory responsibility to adopt minimum technical standards and guidelines for acceptable and cost-effective use of information technology. Implicit in these requirements is the responsibility to promote adequate quality of service and uniformity for information systems through adoption of policies, standards, and guidelines.

4.2 <u>Technical Panel Statewide Synchronous Video Work Group</u>. The NITC Technical Panel, with advice from the Statewide Synchronous Video Work Group, has responsibility for recommending scheduling standard policies and guidelines and making available best practices to operational entities.

4.3 <u>Educational Service Unit Coordinating Council</u>. By statute 79-1248, the ESUCC has multiple responsibilities involving the coordination of distance education, including (3) Facilitation of scheduling for qualified distance education courses.

4.4 <u>Agency and Institutional Heads</u>. The highest authority within an agency or institution is responsible for interoperability of information resources that are consistent with this policy. The authority may delegate this responsibility but delegation does not remove the accountability.

4.5 <u>Information Technology Staff</u>. Technical staff must be aware of the opportunities and responsibility to meet the goals of interoperability of information systems.

5.0 Related Documents

5.1 Statewide Synchronous Video Work Group Charter:
http://www.nitc.state.ne.us/tp/workgroups/video/charter.pdf

5.2 Glossary of Terms
http://www.nitc.state.ne.us/standards/1-101.html