

NITC 7-403 Scheduling Standard for Synchronous Distance Learning and Videoconferencing

Introduction:

On Tuesday, April 8, staff from ESU 10 in Kearney presented the NITC Technical Panel with a request for waiver from NITC Standard 7-403 on behalf of 38 schools in ESUs 10 and 11. The NITC Technical Panel tabled the request until their May 13, 2008 meeting, pending further information and discussion.

The objective of the 7-403 standard is to “enable all existing and future synchronous distance learning and videoconferencing facilities in Nebraska to achieve interoperability and maintain an acceptable quality of service through scheduled and ad hoc event coordination”. The standard’s technical requirements state that any statewide software system for videoconferencing and video distance learning must include five separate components: 1.1 Hardware Control; 1.2 Event Logging; 1.3 Facilities Coordination; 1.4 People Coordination; and 1.5 Event Clearinghouse. Pursuant to LB 1208 (2006), the State of Nebraska Office of the CIO competitively bid the statewide software scheduling system based on the NITC standard and awarded the statewide contract to the Qwest Corporation/Renovo Software in November of 2006. The Distance Education Council, created by LB 1208, is tasked with the administration of this software for education entities and was allocated over \$1 million by the Legislature to purchase, install and support the system. Support for ongoing maintenance of Renovo software licenses is also provided by the Legislature to the Distance Education Council.

The Renovo software system is currently being used by 92 K-12 entities in northeast Nebraska, approximately 37 K-12 entities in southwest Nebraska, and three community colleges. This request for waiver, if approved, would allow the 38 schools in ESUs 10 and 11 to have partial or full exemption from the standard over a temporary or permanent duration of time. If the waiver is denied, the entities would be required to comply with the standard if A) they use Network Nebraska for Internet or backbone transport; and B) if their new or existing facilities or applications use state funding.

Since this issue of interoperability between codecs and the use of such a clearinghouse and device control system extends far beyond these 38 schools in south-central Nebraska, the NITC Technical Panel is seeking your input and comments prior to a public work session which has been scheduled for Friday, May 2, 9:00am-11:00am, in Lincoln. Entities may respond by e-mail by submitting questions, clarifications, or by providing comments of a pro, con or neutral and informative nature. The comments will be synthesized into a document that will assist the NITC Technical Panel to act on the waiver request at their regularly scheduled meeting on Tuesday, May 13, 2008 at 9:00am.

Responses to this solicitation should be addressed to rick.becker@nebraska.gov and tom.rolfes@nebraska.gov and are due on or before April 28, 2008.

Supporting documents:

ESU 10 Waiver Request http://www.nitc.state.ne.us/tp/meetings/documents/20080408/waiver_7-403_ESU10.pdf
Standard 7-403 http://www.nitc.state.ne.us/standards/video/SchedulingStandards_20060501.pdf
State Contract-Qwest/Renovo [http://www.das.state.ne.us/materiel/purchasing/contracts/pdfs/22707\(o4\)awd.pdf](http://www.das.state.ne.us/materiel/purchasing/contracts/pdfs/22707(o4)awd.pdf)
4/8/08 Technical Panel Meeting Agenda <http://www.nitc.state.ne.us/tp/meetings/agenda/tpagenda20080408.html>

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Background information:

1. 79-1233 The CIO shall bid for such (distance education) equipment and software and shall allow educational entities as defined in section 79-1332 to participate in such statewide leasing or purchasing contracts.
2. 79-1336 The (equipment) reimbursements may include installation costs for such hardware or software. Applications shall be accepted by the department beginning in the first year that the school district or the educational service unit **accesses Network Nebraska** and ending June 30, 2013.
3. 79-1335 The Distance Education Council shall only provide assistance in brokering or scheduling courses to educational entities that have **access to Network Nebraska**.
4. 79-1332 (5) Qualified distance education course means a distance education course...for which all of the participating educational entities are required to have **access to Network Nebraska**;
5. 79-1248 The duties of the Distance Education Council (ESU Coordinating Council, as of 7-1-2008) include: (6) **Compliance with technical standards as set forth by the Nebraska Information Technology Commission** and academic standards as set forth by the State Department of Education related to distance education; (8) Scheduling and prioritization for access to Network Nebraska by educational entities in cooperation with the Chief Information Officer and **using scheduling software or scheduling services which meet any applicable standards established by the commission**;
6. NITC Standard 7-403 includes five components: 1.1 Hardware Control; 1.2 Event Logging; 1.3 Facilities Coordination; 1.4 People Coordination; 1.5 Event Clearinghouse.
7. NITC Standard 7-403 Applicability reads: These standards apply to synchronous distance learning and videoconferencing facilities as follows:
 - A. If utilizing state-owned or state-leased communications networks:
 - a. Any synchronous distance learning facility or videoconferencing application which utilizes state-owned or state-leased communications networks must comply with the scheduling standards listed in Sections 1.1 through 1.5; or
 - b. The entity must provide, or arrange for, coordination on their behalf through some other entity with the stated capability.
 - B. If using state funding:
 - a. All **new** facilities or applications receiving state funding must comply with the scheduling standards listed in Sections 1.1 through 1.5.
 - b. All **existing** facilities or applications receiving state funding for ongoing operations must convert to the standards listed in Sections 1.1 through 1.5 as soon as fiscally prudent or upon renewal of any existing scheduling system service contract, whichever comes first.
8. The Nebraska Legislature, through LB 1208, provided approximately \$1,008,000 to purchase the statewide scheduling software, as administered by the Distance Education Council. This amount was based on the projected cost of three codec licenses, installation, maintenance and hosting services, for every public high school, ESU and public college campus in the State. Additional Legislative disbursements were described in the LB 1208 fiscal note to help pay for ongoing maintenance.

Timeline of Development for Standard 7-403:

1. LB 1208 was introduced on 1-18-06, heard in the Education Committee on 2-13-06, and passed by the Legislature on 4-13-06;
2. The Technical Panel's Statewide Scheduling System work group met all day on 2-3-06 to begin drafting the NITC standard, in response to LB1208 (K-12, higher ed, telehealth, CIO, NET, and military were all represented);
3. A draft of the statewide scheduling standard was presented to the Technical Panel on 3-13-06, put out for 30 days public comment (no comments) and was approved by the NITC on 5-1-06;
4. RFP1683Z1 was released on 10-3-06 and awarded to Qwest/Renovo on 11-20-06. There were four bidders and the DEC Executive Director and two ESU staff were included on the six-member bid evaluation team;
5. Configuration of the Renovo Clearinghouse and codec control system continued through spring 2007;
6. Phase I implementation of Renovo was completed in August 2007 with 97 entities in northeast Nebraska.

Synopsis of arguments presented by ESU 10 for non-compliance with NITC Standard 7-403:

1. The Applicability of the Standard is too broad. There are questions whether it should apply to all of the following devices or clusters of devices :
 - A. Triple-codec configurations (e.g. Cytek, Dascom configurations);
 - B. Single codec with internal MCU (e.g. BNI, Sony GS-70, Lifesize, Polycom 8000/9000);
 - C. Single codec with no internal MCU (e.g. Tandberg, Polycom, Sony);
 - D. Desktop, Laptop videoconferencing (e.g. any of a variety of desktop videoconferencing configurations)
 - E. External MCU or bridge (e.g. Codian, Polycom MGC-100)

NOTE: The Technology Refreshment meeting of 3-18-07 assigned the following tasks:

- a. The Distance Education Council and the Nebraska Department of Education will review the minimum equipment (e.g. codec, laptop) and video viewing requirements (e.g. size of display) to comply with Rule 10 “Simultaneous Presence”: *004.04D1 Synchronous Course Option: Synchronous courses are those multi-site or distance learning courses in which the teacher and student(s) are simultaneously present; can both see and hear one another; and questions may be answered and instructional accommodations made immediately.*
 - b. The NITC Technical Panel will be prepared to review and update the Standard 7-403 (Statewide Scheduling Standard for Synchronous Distance Learning and Videoconferencing), especially in the applicability section: Any synchronous distance learning facility or videoconferencing application which utilizes state-owned or state-leased communications networks must comply with the scheduling standards listed in Sections 1.1 through 1.5.
2. There are additional cost implications. As classroom videoconferencing devices proliferate beyond the three codec licenses allocated and purchased by the Distance Education Council, districts and colleges are having to purchase their own licenses (e.g. \$570/codec, \$103 installation, \$74 ongoing maintenance).

NOTE: The scheduling software costs are not an eligible service under the Federal E-rate program, but they are an allowable cost under the special state aid Technology Allowance provision for equalized schools. Also, high schools that exchange qualified distance education courses are eligible for up to \$1000 for each semester class sent or received under Neb. Rev. Stat. 79-1337.

3. The chosen software company, Renovo, did not have internal MCU codec control capabilities at the start of the 2007-08 year. Through the Technology Refreshment Clause meeting of March 18th, Renovo was asked by the CIO to test and verify that their software can perform this function by July 1, 2008, in time for it to be purchased by Phase I and II entities.

NOTE: Further discussions with Renovo reveal that software control of Lifesize and Polycom internal MCU codecs will be ready by June 1, 2008, and BNI functionality could be developed by July 1, 2008 if an order for BNI codec licenses is placed.

4. ESU 10 staff contend that the Renovo Hardware Control component is unnecessary; that classroom teachers can manually start classroom conferences on a daily basis simply by using the software and hand-held remote that comes with each codec.

NOTE: Although technically true, the intent of the NITC standard and subsequent software purchase was to unite and integrate course postings and device control into a single system and to interconnect codec devices from all over the State, regardless of manufacturer or location. Senator Stuhr, during floor debate on LB 1208, directly referred to this statewide “connectiveness” as something that was needed to be achieved “between the K-12 school districts, the ESUs, the community colleges, the postsecondary schools, and the universities”.

NITC Technical Panel Options:

1. Deny the waiver request.
Implications: All entities connected to Network Nebraska for the 2008-09 program year and beyond would be required to utilize the Renovo software comprised of all five components (i.e. 1.1 Hardware Control; 1.2 Event Logging; 1.3 Facilities Coordination; 1.4 People Coordination; 1.5 Event Clearinghouse). K-12 districts would presumably have their first three codecs licensed and provided by the Distance Education Council and any codecs over and above the first three would be paid for by the school district. Higher education participation in the Renovo system, with the exception of dual credit origination codecs (which may be funded by the Distance Education Council), would be funded by the higher education entities.
2. Grant a temporary (2008-09) waiver of all five standard components to ESU 10 and ESU 11 area schools.
Implications: More education entities would probably follow with waiver requests of their own. For the 2008-09 school year, this would create an environment where ESU 10/11 school classes are not listed in the clearinghouse and codecs are controlled manually whereas other schools' classes are posted to the Renovo Clearinghouse and their codecs are controlled by the Renovo scheduling software. This may present an impediment to the interregional posting and exchange of courses between groups of schools that are software-scheduled and those that are not.
3. Grant a permanent waiver of all five standard components to ESU 10 and ESU 11 area schools.
Implications: More education entities would probably follow with waiver requests of their own. For the foreseeable future, this would create an environment where ESU 10/11 school classes are not listed in the clearinghouse and codecs are controlled manually whereas other schools' classes are posted to the Renovo Clearinghouse and their codecs are controlled by the Renovo scheduling software. This may present an impediment to the interregional posting and exchange of courses between groups of schools that are software-scheduled and those that are not.
4. Grant a temporary (2008-09) partial waiver of only the hardware control component to ESU 10 and ESU 11 area schools.
Implications: All ESU 10 and ESU 11 area schools would be required to utilize the four components of the Renovo software (i.e. 1.2 Event Logging; 1.3 Facilities Coordination; 1.4 People Coordination; 1.5 Event Clearinghouse) for the 2008-09 year, with the exception of the 1.1 Hardware Control. Other entities would be able to see the classes offered by the ESU 10 and ESU 11 schools in the Clearinghouse; the ESU 10 and ESU 11 schools just wouldn't have their codecs controlled by the Renovo software. In July 2009, the ESU 10 and ESU 11 area schools would be required to comply with the hardware control component.
5. Grant a permanent partial waiver of only the hardware control component to ESU 10 and ESU 11 area schools.
Implications: All ESU 10 and ESU 11 area schools would be required to utilize the four components of the Renovo software (i.e. 1.2 Event Logging; 1.3 Facilities Coordination; 1.4 People Coordination; 1.5 Event Clearinghouse), but not the 1.1 Hardware Control. Other entities would be able to see the classes offered by the ESU 10 and ESU 11 schools in the Clearinghouse; the ESU 10 and ESU 11 area schools just wouldn't have their codecs controlled by the Renovo software.
6. Grant a permanent partial waiver of only the codecs of ESU 10 and ESU 11 area schools that exceed the three per site funded by the DEC.
Implications: Requires full software utilization and licensing of the first three codecs of every school district but removes the standards requirement for the additional codecs and therefore, the fiscal impact.

Possible follow-up Work, depending upon the Technical Panel decision of 5-13-08:

1. Revise the 7-403 Scheduling Standards to apply only to specific codec devices and situations (e.g. recurring course exchange over static IP codecs and not laptop/desktop videoconferencing)
2. Revise the 7-403 Scheduling Standard to include four of the five components but not require the hardware control component.
3. Convert the 7-403 Scheduling Standard to a Guideline.
4. Amend the Scheduling Software contract with Qwest/Renovo to include a deliverable and cost for a Clearinghouse-only product listing.