

# DDN Network Operations/Policy Manual

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South Dakota  
Digital Dakota Network  
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~ *SECTION A* ~

***DIGITAL DAKOTA NETWORK SYSTEM INFORMATION***

***INTRODUCTION ~***

**~ What Is The Digital Dakota Network?**

The Digital Dakota Network is a state-owned interactive video communications system using compressed digital technology to provide a "meeting pipeline" across the state of South Dakota and Nationwide.

The Network is designed to increase access to education and government and enhance the business, education and health care climate in South Dakota. Studios are located in government facilities, public and private universities, technical education institutions, hospitals and high schools and are available to any South Dakota business, school, organization, agency or individual. Some of the Network's uses include education/outreach, training, meetings and presentations.

Benefits of using the DDN include time, travel, and budget savings, increased access to available programs, and removal of geographic boundaries.

**~ How Does It Work?**

Video CODECs (Coder/Decoder) and Digital compression technology provide fully interactive video conference services utilizing a portion of the bandwidth capacity on the State Telecommunications Network (STN).

The DDN has over 300 fully-interactive sites on the network, 14 of which are immediately available to the public for scheduling. Many different conference configurations can be scheduled and occurring simultaneously. For example; 20 conferences can be scheduled to occur at the same time, 5 of which can be point to point (two sites only) 10 other conferences may have five sites each in them and yet 5 other conferences may have 20 to 30 sites participating.

Videoconferencing to other sites off the DDN is common. Any number of on-network sites can be connected to other sites throughout the world. This is typically done using ISDN, a high speed switch telephone line system. A reasonable amount of time is needed to coordinate and test these types of connections prior to the actual conference date.

## ***NETWORK SERVICES ~***

Network rates are determined by the type of user, not the activity that is being transmitted. For example a business, while using the Network to educate its employees would pay the business rate, not the education rate.

Rates for intrastate and interstate terrestrial services are based on time and the number of sites. Rates for the satellite service are based on time used only.

### ***Intrastate Terrestrial Services*** (Two-way video, two way audio)

State Government/Education.....	N/C
Federal Government.....	\$30/site/hour
Non Profit.....	\$30/site/hour
Business.....	\$30/site/hour

### ***Interstate Connectivity Services*** (Two-way video, two-way audio)

First S.D. site.....	\$105/hour + line
Additional S.D. sites.....	Intrastate rates apply (include charges for an additional site for in-state data rate conversion)

These are local charges and do not include charges for other state's fees, access charges and possible conversion charges when crossing between long distance carriers. Charges may also vary depending on the compressed data rate used.

### **Not-for-Profit DDN Use and Fee Waiver**

Not-for-profit entities can seek a fee waiver from DDN for programming they are providing via the DDN. The programming must be free to the participants and be educational or community development/betterment in nature. The not-for-profit entity remains responsible for any local fees assessed by the local DDN site per their site usage policy. To seek this waiver, contact the DDN Office at (605) 773-3333.

### **Satellite Downlink**

Non-Network originated programs can be brought into the Network and distributed to the intrastate terrestrial sites. This provides an opportunity for

statewide wrap-around discussions of timely topics or nationally provided information.

### **Combined Services**

DDN systems can be interconnected to maximize videoconferencing efficiency through increased geographic coverage. For example, a motivational speaker from Japan could be brought in via the interstate system, routed to any of the receive sites. Conversely, a locally originated program could be sent to almost anywhere in the world.

## ***PEOPLE ~***

The DDN team includes management, operations and technical personnel employed by the state, as well as site coordinators at each location who are employees of that particular facility and work with Network staff. It is through this public/private partnership that the Network efficiently and effectively offers multiple services to a diverse customer base.

### **~ Site Coordinator**

These individuals are the front-line contacts for customers. They are designated by each site to be accountable for the site's operations. Site coordinator responsibilities include:

- \* Serve as liaison between users, DDN staff, and other sites.
- \* Arrange for and provide logistical assistance for participants, including receiving advance materials from videoconference organizers, placing it in studios, and returning literature to videoconference organizers (providing a stamped, self-addressed envelope is provided by the organizer).
- \* Provide operational support for the studio such as returning phone calls to customers, ensuring studios are clean and comfortable, etc.
- \* Monitor studio facilities when in operation and report all technical problems using the Incident Report within 24 hours; and any non-technical concerns such as customer comments, to DDN staff.

\* Assist with remote testing and troubleshooting of Network equipment in coordination with Network technical staff.

\* For each videoconference scheduled for the studio, the site coordinator will:

Be present 15 minutes in advance to ensure the studio is properly prepared.

Welcome participants into the studio, acquaint users with the technology and provide information about site capabilities. Minimal training includes camera 1 and "privacy" button functions.

Be present to ensure the conference connects properly.

Provide instructions on how to contact the site coordinator during regular business hours, and post a current list of support personnel and telephone numbers in the studio and inform participants about problem reporting procedures and phone location.

\* Ensure that local site rules are adhered to.

### **~ Digital Dakota Network Staff**

The DDN includes a network administrator, technical and operations staff. administrator supervises the overall functions of the DDN.

The network

#### ***Technical Staff***

The DDN employs technicians trained in all aspects of compressed digital video, analog satellite and MPEG 1 digital satellite transmissions. perform periodic equipment checks and are on call 24-hours per to problems.

Technicians  
day to respond

#### ***Operations/Marketing Staff***

DDN operations are located in the State Capitol Building in Pierre. The staff provides policy implementation, centralized scheduling, billing, marketing and coordination efforts. This staff also serves as the site the Pierre Capitol Building Site.

training,  
coordinator for

### ***HOW TO CONTACT PEOPLE ~***

~ **Site Coordinators**

Customers are asked to contact site coordinators directly only for a few specific issues, such as room expansion availability, camera operator, or dietary services. In these instances, site coordinator phone numbers are provided by Network staff.

~ **Technical And Operations/Marketing Staff**

DDN staff can be reached from 8 a.m. to 5 p.m. CT Monday through Friday by calling (605) 773-3333 for scheduling or technical assistance. Technical help line is 800-567-8345 and is staffed during all conference hours.

***SITES AND LOCATIONS ~***

~ **Intrastate Terrestrial Sites** See Attachment A.

~ **SECTION B** ~

# DIGITAL DAKOTA NETWORK USER INFORMATION

## *ISSUES TO CONSIDER ~*

### **~ Time Zones**

South Dakota is divided into two time zones. Sites west of the Missouri River are on Mountain Time; sites east of the Missouri River are on Central Time. All scheduling is done in Central Time. The appropriate time zone should always be indicated on registration and marketing materials.

### **~ Guidelines For Number Of Sites And Participants**

As with any face-to-face meeting, the more participants involved, the less chance each has to interact. Likewise, it is often harder to hear the presenter in large meetings due to ambient noise in the room. Such environmental noise impacts audio on the Network in much the same way. Fewer sites and participants can increase interaction and reduce distractions. However, if fewer interactions are required, specific periods are set aside for interaction, or when the network's audio mute (privacy) function is used properly, the quality of interaction increases for larger video conferences.

### **~ Digital Dakota Network Studio Capacity**

Videoconferences must not exceed the listed studio capacities. Overflow or special seating arrangements may be possible at an additional charge from each site. Videoconference organizers will make special seating arrangements directly with each site and can expect to be billed by each site separately. Site coordinators are not required to accommodate last-minute seating requests.

### **~ Room Configurations**

DDN studios are designed in a classroom configuration for maximum videoconferencing quality and room efficiency. Requests by scheduling parties to reconfigure rooms to boardroom style or otherwise will be left to the discretion of each site. The DDN does not mandate that these requests be honored.

~ **Separate fees for room expansion, dietary, facilitator functions**

Video conference organizers can expect to be billed directly from each site for special requests including room expansion, dietary services, faxing, photocopying, or having site staff operate the studio equipment. Rates for these services are set individually by site. Such requests are made by the video conference organizers directly to sites.

~ **Advance Material Mailing Coordination**

Videoconference organizers may mail pertinent meeting materials in advance directly to sites. The mailing should be addressed to the studio (not the site coordinator) and note the videoconference date and confirmation number. Instructions should be included to direct the site coordinator to place the literature in the studio prior to the meeting. Site coordinators will not be responsible for collecting or returning registration fees. All registration fee transactions are between the organizers and the participants. If materials are to be returned, a self addressed stamped envelope must be included in the mailing. Site coordinators are not responsible for copying or faxing documents unless previously coordinated by video conference organizers directly with each site.

~ **Security**

While the DDN intrastate terrestrial network does not offer encryption or "scrambling" capability, there are several security provisions inherent in the system. For a detailed explanation, see **Attachment B**.

The satellite signal is also not encrypted. However, the system is addressable, allowing only sites selected by the video conference organizer to receive a particular program. All other sites are locked out.

~ **Refreshments/Food In The Studios**

While the DDN does not forbid refreshments or food in studios, each site may have local policies regarding this issue. Therefore, refreshment and food policies vary from site to site and will be supported by the Network.

~ **Videotaping An Event**

An event may be videotaped at any of the connected DDN studios provided proper copyright and recording privileges and authority has been secured by the customer. The

customers should provide VCR tapes. Some sites do have tapes for sale. Purchase arrangements must be made directly by the customer.

## **TRAINING ~**

### **~ System Training**

A free one-hour comprehensive training is provided on the Network upon request. These sessions cover Network history, technology, site locations, studio operations, and adapting a current presentation or developing a new one for Network delivery. First-time users and presenters are encouraged to attend. Training manuals are provided.

### **~ Individualized Training**

In the event a videoconference is scheduled and will occur between system-wide training dates, individualized training is available at no charge either through the Network's marketing services or by site coordinators at each site. Prior arrangements to secure studio time for training is required. Training manuals may also be available for individualized training.

### **~ Training Manual**

A training manual is available to any videoconference organizer or interested party. Manuals are typically mailed along with confirmation notices to first-time customers. They are also used during statewide training.

## SECTION C

### DIGITAL DAKOTA NETWORK POLICY/PROCEDURE

#### *SCHEDULING ~*

##### **~ Remote Access To Digital Dakota Network Schedule**

Any DDN user may obtain a login and password to gain access to the scheduling software located in Pierre. Although all scheduling is done through central scheduling in Pierre by calling (605) 773-3333, remote users can browse the database for available times as well as other read-only functions. For remote access, DDN central scheduling provides an instruction guide and assigns a login and password.

##### **~ Definition of Events**

###### ***State Educational Event***

Courses and classes that lead to a degree from any accredited degree-granting educational institution. These classes fall under the Board of Regents or Department of Education and Cultural Affairs with regard to the sponsoring Institution being in South Dakota.

###### ***Educational Event***

Courses and classes that lead to a degree from any accredited degree-granting SD supported educational institution, from elementary through post-graduate higher education, without regard to the sponsoring institution being in South Dakota or out-of-state, public or private.

###### ***Non-Educational Event***

Those events not covered in the educational definition, including workshops, seminars, medical education and meetings.

###### ***Government***

Any federal, state, or local government or any organization delivering programming that receives federal, state, or local government dollars

to fund activities that such government or organization is involved in is eligible for the government rate. Any organization providing programming that is government funded may be asked to provide documentation of such funding to the DDN in order to qualify for the government rate.

***Profit***

Any business or organization that receives benefit or gain in any investment, sale, or service provided by such business or organization after all expenses have been met.

***Non-Profit***

Any group or organization that does not benefit or gain in any investment, sale, or service provided by such group or organization after all expenses have been met. Such organization shall submit to the RDT Network, proof of its non-profit status with the Internal Revenue Service upon request.

***SD Sales Tax Exempt***

Any business or organization requesting to be exempt from paying South Dakota sales tax must:

1 - Provide the DDN with a State of South Dakota sales tax exemption certificate with the exemption number.

OR

2 - Be a South Dakota government agency.

OR

3 - Be a public or religious school.

**~ Hours of Operation**

DDN studios are available for use from 8:00 AM to 10:00 PM CST, Monday through Thursday and 8:00 AM to 5:00 PM CST on Friday and Saturday. DDN support is available one hour prior to site availability. The network is closed all other days and times. Requests for usage outside of the standard operating hours will be reviewed on a case by case basis.

Requests to begin at 8 a.m. CT involving west river sites (7 a.m. MT), as well as requests to end at 10 p.m. MT (11 p.m. CT), may be honored pending site coordinator approval.

### **~ Priority Scheduling Windows**

The DDN will provide scheduling windows to SD educational events allowing the opportunity to schedule semester long classes without non educational events reserving needed dates and times. In-state events will be given priority. Out-of-state educational events may be scheduled any time after the final in-state schedule has been received by the DDN.

Educational events identified as dependent on the DDN for the completion of an entire program - from start to finish - will be given priority at each educational scheduling session. (Ex: A proposed Russian 102 course will be given priority if Russian 101 was offered the previous semester; OR, courses that are part of a specific degree program and require DDN access to continue course work within the specific degree program will be given priority, allowing students to complete the program on the network. This priority scheduling does not insure degree completion for students who enter a program after it has begun.

### **~ Scheduling, Ad Hoc**

Any DDN site may refuse to receive an event requested to be scheduled after the time frames described in the advanced scheduling section of this manual. Each site coordinator must receive prior verbal approval before the DDN can schedule such an event. Events scheduled prior to the time frames described in the advanced scheduling section of this manual will be confirmed scheduled by DDN scheduling staff.

### **~ Advanced Scheduling**

***Monday through Friday: 8:00 AM to 5:00 PM CST.*** Any DDN site may refuse to receive an event requested to be scheduled within two business days of the event. Each site coordinator must receive prior verbal approval before the DDN can schedule such an event.

***Monday through Thursday: 5:00 PM to 10:00 PM CST and Saturday : 8:00 AM to 5:00 PM CST.***

Any DDN site may refuse to receive an event requested to be scheduled within five business days of the event. Each site coordinator must receive prior written or email approval before DDN staff can schedule such an event.

#### ***Evenings/Weekends***

DDN studios are available for use from 8:00 AM to 5:00 PM CST on Friday and Saturday. DDN support is available one hour prior to site availability. DDN is closed all Sundays and designated holidays. Requests for usage outside of the standard operating hours will be reviewed and approved on a case by case basis by all participating sites.

### **~ Right of Refusal - Administrative Rule**

No DDN site may refuse to receive a DDN scheduled event provided the event has been scheduled according to the guidelines set forth in this Operations/Policy Manual.

~ **Scheduling Of Non-Digital Dakota Network Events In An DDN Studio**

DDN studios are designed and equipped for networking with other studios and are reserved for scheduling by the DDN within the hours of operation, excluding the Right of Refusal-exempted 48 hours prior to the start of an event - unless preempted by the Governor. Any non-DDN event scheduled prior to the 48 hour Right of Refusal window may be bumped by a DDN scheduled event. The Network administrator may consider non-DDN scheduling of sites based on the disposition of the request to be consistent with the goals of the DDN. Examples: user training, tours, DDN marketing sessions. Sites requiring scheduled non-Network use of a studio may do so without being bumped by 1) paying the minimum connection rate of \$30/hour (1 site); and 2) obtaining consent from the Network administrator of such use.

***Scheduling on Traditional Holidays***

The DDN will be closed on the following traditional holidays, with actual days of observance dictated by State of South Dakota guidelines.

New Year's Day  
Memorial Day  
Independence Day  
Labor Day  
Thanksgiving  
Christmas

***Scheduling on Non-traditional Holidays***

The DDN will be open on the following non-traditional holidays. However, all events must be scheduled no less than 14 calendar days prior to the holiday.

Martin Luther King Jr. Day  
President's Day  
Native American Day  
Veteran's Day

## ***SITE FEES ~***

### **~ Site Billing Of Site Fees - Administrative Rule**

No DDN site can charge a fee for use of the studio or for coordination of events except in cases of office support, room expansion or operator control that has been requested and contracted by the user. Users will be billed separately by each site performing the excepted services.

### **~ Site Billing For Room Expansion, Operator Control Or Office Support**

DDN studios are self-contained areas of operation and do not require full-time operation by site coordinators. Therefore, any site may charge a fee for expanding the seating capacity, offering technical assistance beyond the minimum DDN requirements or providing office support such as fax, mailing or copying, upon the request of the user. The potential for extra billing will be explained to the user at the time of scheduling with DDN. Added seating or assistance must be taken care of by the user directly with each site. Each site is responsible for billing these services directly to the user.

## ***CANCELLATIONS/ALTERATIONS ~***

### **~ Canceling An Educational Event**

#### ***Educational Cancellation Policy***

When cancellation is made within:

0-6 days before first class.....50% of the cost of the time cancelled

7-13 days before first class.....25% of the cost of the time cancelled

#### ***State Educational Policy***

No cancellation fees apply

### **~ Canceling A Non-Educational Event**

#### ***Non-Educational Cancellation Policy***

When cancellation is made within:

0-3 business days, then 100 percent of portion cancelled will be charged.

4-7 business days, then 50 percent of portion cancelled will be charged.

## **~ BIT Support**

The DDN offers a "complete satisfaction" guarantee to all users. If an event is compromised by the occurrence of technical difficulties, DDN administration will work with the user to reach a satisfactory resolution. Technical support during any scheduled event can be contacted by calling our toll-free help line at 800-567-8345. An on-site technician will be available for questions or troubleshooting during any scheduled conference at SD BOR locations. Non SD BOR site coordinators should report all problems as soon as possible using the DDN Incident Report. This report includes date, time, conference number, problem encountered and disposition of the problem. This report will be emailed to [ddnschedule@state.sd.us](mailto:ddnschedule@state.sd.us) or faxed to 605-773-6581 to DDN technical staff. SD BOR site coordinators will utilize the online DDN Activity Log site.

1. Within five working days of any planned changes, BIT representative will provide written notification, including a thorough explanation of the changes and an associated justification, to a SD BOR representative. The SD BOR representative will disseminate the information to all SD BOR sites and provide feedback to the DDN representative.
2. Endpoint Certification and Quality of Service (QoS)
  - a. Every endpoint added to the DDN goes through a certification process to ensure Quality of Service is in place. This process begins with BIT verifying that all cabling and WAN equipment meet requirements for H.323 videoconferencing; the WAN is configured to support H.323 video the endpoint and then BIT will test the endpoint before it is added to the network scheduling system.
  - b. Quality of Service (QoS) is essential for H.323 videoconferencing. QoS refers to the ability of a network to guarantee that packets in a videoconference stream are delivered to their destination without delay and arrive in the proper sequence. Without QoS, video and data randomly compete for network bandwidth, jeopardizing the quality of H.323 audio and video.

## **~ Inclement Weather Policy/Procedure**

In the event a site becomes unavailable due to inclement weather or at the request of the Governor of South Dakota, that site's coordinator must notify DDN staff as soon as possible. DDN staff will alert site coordinators at all sites with events scheduled at their site during the affected time period, as well as the conference organizers of said scheduled events. It is the responsibility of the conference organizers to notify participants of the site closure. Notifying students of course cancellations is the responsibility of the host institution.

### **~ Preemption By Governor**

The Governor is authorized to preempt scheduled events as well as schedule outside of the regular hours of operation, i.e. Sundays and holidays. Such authority would be exercised in critical times such as tragedies or acts of God that significantly impact the entire state.

## ***TECHNICAL AND MAINTENANCE ~***

### **~ Request For Site Application**

All DDN owned equipment will be maintained by Network staff at the state's expense. However, it is agreed, through the application process, that each site will maintain the studio's environment including: meet ADA requirements for accessibility, meet fire and safety codes, provide for equipment security, maintain insurance for participants, and maintain the site in a safe and efficient operating order. For details, see **Attachment C**, Request for Site Application.

The site is responsible for maintaining any equipment provided by the site for studio operation and ensuring that any problems with this equipment will not prohibit operation of the standard Network equipment.

### **~ Digital Dakota Network Helpline**

Technical support during any scheduled event can be summoned by calling our toll-free help line number at **800-567-8345**. A technician will be available for questions or problems during any scheduled conference.

### **~ Reporting An Incident**

Site coordinators should report all problems as soon as possible using the DDN Incident Report. This report includes date, time, conference number, problem encountered and disposition of the problem. This report should be e-mailed or faxed to DDN technical staff at (605) 773-6581.

# **ATTACHMENTS**

A - TERRESTRIAL INTRASTATE SITE LIST

B - PROGRAM SECURITY WHEN USING THE  
DIGITAL DAKOTA NETWORK

C - REQUEST FOR SITE APPLICATION

## ATTACHMENT A - TERRESTRIAL INTRASTATE SITE LIST

### **Aberdeen - Northern State University**

Site Coordinator: Michael Carter, Technical Coordinator: Jeremy Iverson  
Beulah Williams Library - Rm. 117, 1200 S. Jay Street  
PO Box 859, Aberdeen, SD 57401  
Studio Capacity: 18 Phone: (605) 626-2496 Fax: (605) 626-2503

### **Brookings - South Dakota State University**

Site Coordinator: Bob Hoines  
8th & Medary, Pugsley Hall-Rms. 203/205, PO Box 2218A, Brookings, SD 57007  
Studio I (Rm. 203) & II (Rm. 205) Capacities: 24(each) Phone: (605) 688-4424 Fax: 688-6313

### **Madison - Dakota State University**

Site Coordinator: Susan Eykamp, Technical Coordinator: Brent VanAartsen  
Kennedy Center Room 112, 820 N. Washington, Madison, SD 57042  
Studio Capacity: 32 Phone: (605) 256-5048 (SC)/256-5049 (TC) Fax: (605) 256-5208

### **Mitchell - Mitchell Technical Institute**

Site Coordinator: Tammy Hanson, Technical Coordinator: John Sieverding,  
1800 E. Spruce St, PO Box 7760, Mitchell, SD 57301  
Studio Capacity: 22/20/100 Phone: (605) 995-3065 Fax: (605) 995-3067

### **Pierre - Capital University Center**

Site Coordinator: Freda Lumby  
809 East Dakota, Pierre, SD 57501  
Studio Capacity: 24/45 Phone: (605) 773.2160 Fax: (605) 773-3020

### **Pierre - State Capitol**

Site Coordinator: B. Rose Rose  
500 East Capitol - Rm. B12, Pierre, SD 57501  
Capacities: Studio A: 18/35 - Studio B: 12 Phone: (605) 773-3333 Fax: (605) 773-6581

### **Rapid City Rapid City Regional Hospital**

Site Coordinator: Tom Berg  
353 Fairmont Boulevard, Rapid City, SD 57701  
Studio Capacity: 20 Phone: (605) 399-4315/341-8015 (Educ. Office) Fax: (605) 399-4318

### **Rapid City - School of Mines & Technology**

Site Coordinator: Dane Finnesand  
501 East Saint Joseph Street, Classroom Building-Rm. 107, Rapid City, SD 57701-3995  
Studio Capacity: 24 Phone: (605) 394-1958 Fax: (605) 399-4318

### **Sioux Falls – University Center**

Site Coordinator: Jill Toland Technical Coordinator: Stephanie Baatz  
2205 Career Place room 282, Sioux Falls, SD 57107  
Studio Capacity: 27/18 Phone: (605) 201.4887 Fax: (605) 367-5643

### **Spearfish - Black Hills State University**

08/07/2014

Site Coordinator: Sheila Aaker, Technical Coordinator: Terry Hupp  
E. Y. Library - Rm. L020, 1200 University Station, USB #9508 Spearfish, SD 57799-9508  
Studio Capacity: 28 Phone: (605) 642-6407(SC) 642-6052(TC) Fax: (605) 642-6031

**Vermillion - University of South Dakota**

Contact Person: Derek Vine  
Ratingen Street, Center for Continuing Ed. - Rm. 118, 414 East Clark, Vermillion, SD 57069  
Studio Capacity: 25 Phone: (605) 677-5042 Fax: (605) 677-6118

**Watertown - Lake Area Technical Institute**

Site Coordinator: Dennis Heller,  
230 11th St. NE, Main Building - Rm. 125, PO Box 730, Watertown, SD 57201  
Studio Capacity: 27 Phone: (605) 882-5284, SC Ext. 271, TC Ext. 354 Fax: (605) 882-6299

## ATTACHMENT B

### PROGRAM SECURITY WHEN USING THE DIGITAL DAKOTA NETWORK

The Digital Dakota Network offers three levels of security to users who wish to have their programs protected from unauthorized monitoring or copying.

Level I: The first level of security is provided via the integrity of the staff at the DDN in Pierre in a non-encrypted mode. Staff control scheduling of all conferences and input sites which are connected and which sites are locked out. This is done as a normal part of each day's operations. Even if full technical security - encryption - were to be provided, it would still need to be done by a person in the DDN offices in Pierre.

Level II: Encrypted Mode - Security is supported through tangible means, including the central location of the scheduling system, password-controlled access restrictions to the scheduling system, audible alarms that warn of encroachment by other network sites, and most importantly, the DDN staff.

Level III: Security is supported through technological means: the compressed digital nature of the system, the dedicated lines and hardware assigned to each remote site, and most importantly again, the DDN staff's ability and credibility in offering the technology.

In each level of security, the primary factor is the integrity of the DDN scheduling support staff located in Pierre. Because the scheduling center and conference switching device are located in one central location - the state Capitol building - network staff control and verify the technical connectivity aspects of all conference activity. This is done as a normal part of each day's operations.

To understand the many security features of the DDN you need an elementary working knowledge of the way the network operates:

The DDN consists of leased fiber optic and copper lines carrying digitized signals across the state. A conference is initiated when two or more sites are connected via these communication lines. A signal leaving a remote site is first digitized and compressed in a CODEC (compressor / decompressor) and then travels through a digital circuit, typically fiber and copper wire, to the States core networking equipment.

From there it is directed, again over fiber optic lines to the phone company central office in Pierre. From there it is directed, again over fiber optic line, to the Capitol building where each individual network studio line comes together with all other lines in the “demarcation” room in the basement of the Capitol.

In the demark room the light waves of the fiber are converted back to electric signals which are then moved over copper wire through a series of equipment and finally into the DDN’s conference switching device, the Multipoint Control Unit (MCU).

For example: If a conference involving Pierre, Aberdeen and Vermillion is scheduled, the MCU will make the line connections to allow that to happen.

A CODEC at each participating site in the conference decompresses the signal, returning the digital signal to its original form. a picture.

The MCU is driven by a computer -- the network scheduler -- in the DDN main office. Data for each conference, like time and date, required sites, etc., is entered into the Network Scheduler. At the scheduled date and time, the scheduler directs the MCU to configure the conference.

By understanding this sequence of events, it is easier to explain the tangible and technical means for providing DDN security.

Although the scheduling center and MCU can be accessed over the web, access is restricted by passwords. A tangible means of aiding security is that scheduler passwords are changed bi-monthly. Thus it remains the DDN staff who has control over which sites are connected.

The technical application of passwords aid in providing security to conferences.

“Restrictions” in the scheduler are determined by the DDN Director and administered by the operations staff. This process involves indicating on a computer form which functions of the scheduler a certain password user may access. In the DDN scheduler, these access areas are called “permissions.”

The only two ways to get into a conference without authorization are: 1) by making a tap on the line: 2) by wiring a cross connection; or 3) by changing information in the scheduler.

The likelihood of a line tap is very remote. The only place in South Dakota where all the network studio lines come together in a manner that would allow taping is in the Pierre office here in the Capitol.

Both of these sites have controlled equipment access. In addition US West equipment that makes the phone signals compatible can recognize and report changes in transmission rates - changes that would likely occur in the event of a phone tap.

Wiring a cross connect would require on-site manipulation of a complex circuitry or cables. That activity would be realized very rapidly. In addition, an electronic access key is required for entry into the demarcation room where the cabling is located.

The third way to breach DDN security, manipulating the scheduler, involves password security permissions already explained addresses this issue.

Finally, a login audit log is available to verify who accessed the scheduler at any time. User logins also display who makes any configuration changes in the scheduler.

Full encryption is a technical means of providing maximum security for programs being transmitted over the network through U.S. Department of Defense scrambling codes.

While these have not been broken, neither are they the highest security used by military organizations.

The DDN does not offer full encryption because it is labor intensive and the charge for a fully encrypted conference will reflect those increased labor costs. Also, because no encryption code is 100 percent fail-safe and a DDN staff person must enter the codes, the success of this technical means of providing security would still rely on the integrity of staff.

The nature of the DDN's transmissions - compressed digital - also lends to system security. Simply taping into a line is not enough. The intruding party would also need to decompress the digital signal to hear and see the information.

The fact still remains, however, that staff integrity is the first line of security and the most important. While there is mechanical and software protection available, it is still delivered by the DDN staff.

There are a few remaining considerations relating to security, namely the unique design and operation of DDN remote studios.

DDN studio sites are designed to be self-operated and users desiring privacy at these sites can clear the studio rooms and obtain reasonable security.

## **ATTACHMENT C**

### **REQUEST FOR SITE APPLICATION**

This Request For Site Application includes:

- (A) Review of the DDN Function.
- (B) Summary of DDN Activity to Date.
- (C) Detail of Site Application Requirements.
- (D) Guidelines for Proposal.
- (E) Contractual Notice.
- (F) Checklist of Site Application Requirements.
- (G) Site Coordinator's Responsibilities.

## **(A) REVIEW OF DIGITAL DAKOTA NETWORK FUNCTION**

The DDN is a state-wide video conference communications network designed to improve access to education and government and enhance the business and health care climate in South Dakota. It is a major step toward eliminating the state's geographic barriers.

The DDN was developed in two distinct phases:

- First, several communities and facilities were selected to host fully interactive studio sites that are interconnected through an intrastate fiber optic network.
- Second, additional sites were added to the Network through satellite downlinks. By connecting the fully interactive sites to a satellite uplink these downlink sites can receive information from any of the first phase fully interactive sites as one way-video, two-way audio.

During the initial phases DDN provided equipment for the selected studio sites on the Network. The basic DDN package of equipment inventoried and installed during the first phase of the fully interactive sites is owned and maintained by DDN.

The satellite downlink equipment established at (85) locations across the State during the second phase is owned by DDN, but operated and maintained by the Mitchell Technical Institute.

Each site is responsible for establishing the physical design; the construction costs of the studio as well as complying with site requirements detailed by the DDN.

Additional equipment that is site owned and added to the DDN studio must be on line compatible to the DDN system. It is the responsibility of the site to install and maintain site owned equipment. However, sites do have the option to contract the DDN staff to install and maintain site owned equipment at the two-way fully interactive site locations. A letter of agreement must be approved and signed by the Commissioner of the Bureau of Information and Telecommunications (BIT) and the responsible person(s) at the specific site to contract the DDN staff to install and maintain site owned equipment.

Future fully interactive studio sites that are added to the DDN will have equipment that is owned and maintained by the site. Exceptions to this will be the DDN owned equipment that is relocated to a new site location. Equipment owned by the DDN that is relocated to a new site will be installed and maintained by the DDN staff.

All site equipment that is connected to the DDN must be compliant to the existing DDN system. Video CODEC equipment must be on line compatible to the DDN Compression Labs Rembrandt VP/II CODEC using the CLI CTX Plus or equivalent algorithm.

New satellite downlink equipment that is to be added to the Network will be coordinated by the Mitchell Technical Institute in accordance with the Joint Powers Agreement between the DDN, Bureau of Information and Telecommunications (BIT) and the Mitchell Technical Institute.

**(B) SUMMARY OF DIGITAL DAKOTA NETWORK ACTIVITY**

In developing the DDN, a number of fully interactive sites throughout South Dakota have been established. Sites that currently operate as fully interactive DDN studios are listed as follows:

<u>City</u>	<u>Location</u>
Aberdeen	Northern State University
Brookings	South Dakota State University (2 studios)
Madison	Dakota State University
Mitchell	Mitchell Technical Institute
Pierre	State Capitol Building (2 studios)
Pierre	Capital University Center/St. Mary's Hospital
Rapid City	Rapid City Regional Hospital
Rapid City	School of Mines and Technology
Sioux Falls	University Center
Spearfish	Black Hills State University
Vermillion	University of South Dakota (2 studios)
Watertown	Lake Area Technical Institute

Unlike many other states, South Dakota's DDN is available for use by all citizens. The DDN revenue stream is based on user fees and three user categories are employed for structuring the hourly rates charged for use of the network:

- 1) Education
- 2) Non-profit
- 3) Business

Hourly rates for using the fully interactive system are established as follows:

### Hourly Rates

<u>User Category</u>	<u>Cost Per Hour</u>	<u>Per 2-Way Conference</u>	<u>Each Additional Site</u>
Education	\$ 30	\$60/hour	\$30
Non Profit	\$ 30	\$60/hour	\$30
Business	\$ 30	\$60/hour	\$30

### (C) SITE APPLICATION REQUIREMENTS

The South Dakota DDN staff under the direction of the State Telecommunications Director shall review and evaluate site applications based on the following criteria:

1. **Financial ability:**
  - a) The application verifies capability of the studio site to be financially self-sustaining.
  
2. **Appropriateness of the site:**
  - a) The site serves all levels of education.
  - b) The application includes a marketing plan outlining how the site will market Network use.
  - c) The application includes a plan to accommodate the needs of education, government, private business and health care.
  
3. **Programming to be offered:**
  - a) The application contains a matrix of courses and programs available from area educational institutions *and other entities*, the target audience for each program or course, the date each course or program will be available to the consumer.
  - b) The application includes an agreement to keep the studio available for use as a Network studio when a Network program is scheduled for the site and to accommodate scheduled Network use of the studio.
  - c) The application includes an agreement to maintain the site in the proper setup for videoconferences and to work with Network staff to ensure adequate room layout for videoconferencing by various size groups.

**4. Site accessibility and safety:**

- a) The application includes a commitment to meet all applicable fire and safety codes, meet or exceed Americans with Disabilities Act of 1990 requirements for accessibility, and assure equal access to the site as provided by requirements of local, state, and federal civil right laws.
- b) The applicant agrees to hold the Network harmless for any and all accidents that occur within the site but are not related to the Network or its equipment.

**5. Technical expertise:**

- a) The application includes assurances that the site will provide necessary staff to operate the site; provide a site coordinator to work with Network staff for scheduling and testing the studio and assist Network staff with problem resolution. (Reference Section (G) for Site Coordinator Responsibilities)
- b) The application verifies the ability to provide adequate lighting, acoustics, electrical service, heating, air conditioning, ventilation, and humidity control for the studio.
- c) The application verifies the ability to provide a minimum of three and an optimum of four phone lines for the studio.

**(D) GUIDELINES FOR PROPOSAL**

I.) Prepare a written presentation in which you state your case for being a site. Include a marketing plan that includes, but is not limited to, the following:

How your site will market Network use, both short and long term

A plan creating a community resource group(s)

How you will market to each of the following:

- \* education
- \* government
- \* private business
- \* health care

A means to identify Network user groups

How you will define a Network audience

Courses or programs your site might offer/host

How you will determine if your site is successful

II.) The written presentation should also include what distinguishes your site and plans from other interested parties in your locale.

The narrative portion of each proposal must be TYPED and NOT OVER FIVE PAGES in length.

If you wish to make a personal presentation please contact the DDN Administrator to schedule.

**(E) DIGITAL DAKOTA NETWORK SITE CONTRACT NOTICE**

A contract will be made between the DDN Network and Bureau of Information and Telecommunications and each location selected as a DDN site. The contract will include that each site will adhere to all site criteria and requirements. Contracts will automatically renew annually unless canceled through written notice at least 30 days before expiration.

Failure to comply with the contractual agreement may result in terminating a studio site.

**(F) SITE REQUIREMENT CHECKLIST**

III.) The Site Requirement Checklist must be completed, including a written explanation of any items you disagree with and how your organization could meet the requirements despite the point of disagreement. This document will be made an attachment to the contract between the site and DDN/Bureau of Information Telecommunications (BIT).

Site Name:

Address:

As a site for a Digital Dakota Network studio, we agree we will:

<u>ITEM</u>	<u>AGREE</u>	<u>DISAGREE</u>
Assure the studio site will be financially self-sustaining after the capital investment from the DDN.	_____	_____
Provide a site coordinator to work with DDN staff for scheduling and testing of this studio and for providing support to each videoconference as outlined in this document.	_____	_____
Provide a DDN-trained technical coordinator to assist DDN staff with problem resolution. (Can be same person as site coordinator.)	_____	_____
Adhere to and follow DDN procedures and policies outlined in DDN policy manual.	_____	_____
Meet or exceed Americans with Disabilities Act of 1990 requirements for accessibility.	_____	_____

Meet all applicable fire and safety codes.  
Provide security for the studio and limit access to studio and equipment.

\_\_\_\_\_

**ITEM**

**AGREE**

**DISAGREE**

Keep the room available for use as a Network studio, providing for Network programming to be the priority activity for the studio.

\_\_\_\_\_

Maintain site in the proper setup for video conferences.

\_\_\_\_\_

Maintain site in safe and efficient operating order.

\_\_\_\_\_

Work with DDN technical staff to provide adequate lighting, acoustics, electrical service, heating, air conditioning, ventilation, phone lines and humidity control.

\_\_\_\_\_

Work with DDN staff to assure adequate room layout for videoconferences of various size.

\_\_\_\_\_

Provide for a minimum of three Public Switched Telephone lines into studio. (Voice Coordination, FAX, Network Management for Video CODEC).

\_\_\_\_\_

Provide janitorial services as required for a studio site. Assure that items such as food and drink are not available at or near equipment areas.

\_\_\_\_\_

\_\_\_\_\_

Assure equal access to the site as provided by requirement of local, state and federal civil rights laws.

\_\_\_\_\_

Hold the DDN harmless for any and all accidents that occur within your site but are not related to the DDN or its equipment.

\_\_\_\_\_

Provide adequate insurance for your site and people attending your site's functions.

\_\_\_\_\_

## **(G) SITE COORDINATOR RESPONSIBILITIES**

The following list explains the responsibilities that are associated with the local site coordinator position. This position provides a key link among the various users of the network. The Site Coordinator handles the local arrangements for interactive classes and other events held in the Digital Dakota Network (DDN) studio.

Although the Coordinator is responsible for a variety of tasks, he/she may arrange for other people to perform some of the functions. These responsibilities generally include:

- \* Serve as a contact for scheduling the local DDN studio and provide assistance to conference organizers.
- \* Serve as liaison between users, DDN staff, and other sites.
- \* Arrange for and provide logistical assistance for DDN participation.
- \* Provide operational support for the DDN studio.
- \* Monitor studio facilities when in operation and report all malfunctions to system manager.
- \* Assist with remote testing and troubleshooting of Network equipment in coordination with the telecommunications specialist.
- \* Ensure that the DDN Studio is operational 15 minutes in advance of each event.
- \* Be present to ensure the conference gets connected properly and that all participating sites are accounted for.
- \* Welcome participants into the conference room, acquaint them with the technology and provide information about site capabilities. Utilize this time to "sell" your site and invite participants to an expanded tour of your facilities.
- \* Maintain DDN Log.
- \* Post current lists of support personnel and telephone numbers in the studio and inform participants about problem reporting procedures.
- \* Ensure that site rules are adhered to; i.e. no food, drink, or smoking allowed in the studio.