

Technology Plan

2007-2011



<http://isd742.org/techplan.pdf>

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CHECKLIST

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OFFICIAL SUBMISSION CERTIFICATION

This 2008-2011 Technology Plan is the official submission of the

(name of school, school district, regional public library system, or public library).

Signature of Superintendent, School Administrator, or Regional Public Library System Administrator and System Governing Board Chair, or Public Library Director

DATE

I. Planning and Needs Assessment

A. Organization Leadership and Technology Planning Committee

1. Organization

District 742 is located on the banks of the Mississippi River in Central Minnesota. We are the 11th largest district in the state of Minnesota and span parts of three counties. Our student enrollment is approximately 9565 students and we employ 2300 staff members. Staff and students are housed in one of twenty sites: two senior high schools, two alternative learning centers, two junior high schools, eight elementary schools, one early childhood family education center, one community education facility, two support facilities, and a variety of special education satellite facilities. Students are taught a broad and challenging curriculum. Every classroom has access to the world's ideas via our metropolitan-wide area network with the delivery of data, voice and video signals at fiber-optic speeds.

District 742 is committed to technology that enhances teaching and learning. Staff and students use a city and district owned fiber-optic network to share data, voice and video information among 50 servers, 2700 computers, 1932 telephones, 550 televisions, two distance-learning ITV rooms and other technological enhancements to support teaching and learning.

In 1996, District 742, in partnership with the City of St. Cloud, began plans for a joint, state-of-the-art fiber-optic wide area network (WAN). A joint feasibility study was completed and it was determined that both organizations had similar communication needs. By joining forces, both organizations could save considerable money while accomplishing their goals. Installation began during the summer of 1998. The network includes 32 miles of buried fiber-optic cable and connects a total of 31 city and school sites stretching from Clearwater to St. Cloud, Waite Park and St. Joseph, Minnesota.

District Media Services oversees the overall procurement procedure for technical hardware, software, furniture and peripherals which are obtained through district and state regulated guidelines. Staff at District Media Services provides overall design and specifications relating to all technological acquisitions. Computerized requests are received and components and prices are researched. Orders are developed and authorized. Non-consumable equipment is documented in the district's inventory database.

2. Technology Decision Makers

- a. The District Instructional Technology and Media Supervisor is assigned the responsibility of providing and directing support to staff in the

buildings by managing information systems, coordinating Media Services staff in meeting the instructional needs of the District. This individual also is responsible for overseeing the building media specialists in the integration and infusion of technology/media into the instructional process.

- b.** Instructional media is not viewed as a separate curriculum. Instead, media is embedded into all aspects of the curriculum. Media specialists meet monthly as a group to discuss issues and share ideas. These media specialists serve as leaders of media and technology in the schools. Building media specialists have flexible instructional schedules, which provide opportunities to work with classroom teachers in the planning and delivery of instruction. Building media specialists are responsible for the library collection and site technology, as well as the use of these tools in the delivery of instruction. Media specialists chair site technology committees. These committees provide guidance in procuring technology resources and aligning the building technology plan with the district technology plan. Although the make up of the committees varies by site, teaching staff, specialists, special education staff, support staff, students and administrators are typically represented on these committees.
- c.** The technical staff consists of thirteen employees who provide staff development, training, networking/systems design/installation, telephone & communication systems, security, repair, equipment specification, inventory control, asset management and procurement of technology. The technical staff is assigned to building clusters to work one-on-one with the leadership from each site. Weekly meetings with team leaders serve as communication vehicles to the sites and among the Media Services staff. These technicians, as well as the District Instructional Technology and Media Supervisor, serve as resources in the development and implementation of the building technology plans.
- d.** The Computer Services department is responsible for district information systems. Technical Services could be described as the “IT” division and Computer Services could be described as the “IS” division. Four Computer Services staff members provide programming and system support to the many computer programs utilized throughout District 742.
- e.** Technology Related Committees
The superintendent’s cabinet meets weekly to discuss district issues and needs. The Supervisor of Instructional Technology and Media attends these meetings when specific technology and media topics are addressed.

Elementary and secondary principals meet monthly. The Supervisor of Instructional Technology and Media attends each of these meetings once per month.

There are three curriculum committees involving technology and media. The core curriculum team consists of the Curriculum and Assessment Director, Assessment Coordinator, Grant Writer, Academic Achievement Coordinator, Program Improvement Facilitators, SPED supervisor, Career and Technical Education Coordinator, Title I Coordinator, Assistant Director for Staff Development and the Supervisor of Instructional Technology & Media. This group is responsible for delivery of curriculum related projects, staff development and instructional support.

The expanded curriculum team includes the core curriculum team, administrators and teachers. The role of this group is curriculum visioning. This group provides guidance for the core curriculum team.

The Curriculum Advisory Council has representation from the core curriculum team and all site councils (parent membership), and board membership. This group provides feedback on the direction of district curriculum.

All three curriculum committees described above serve as the technology council. Technology and media issues, including technology plan development, are addressed through these curriculum committees. Over the past two years, there has been a district-wide effort to reduce the vast number of district committees. Thus the technology council has been combined into the role of these curriculum committees.

The Supervisor of Instructional Technology and Media chairs district-wide committees that review and resolve issues in the areas of Student/Staff Safety and Security, Data Integrity, Student Information System, Human Resources Software and GraNet Joint Powers Board. These committees meet periodically to make recommendations to district administration.

3. Technology Plan Development

Many individuals have been involved in the development of this technology plan. Staff representing Media Services, Special Education, administration, media specialists and teachers have all collaborated in this planning process. Each individual represents a different segment of our district population. This combined effort enhances the quality and usefulness of this plan.

B. Delivery of Service

1. Physical Environment

The physical location of some of our school sites creates service challenges for our technical staff. Technical staff is dispatched from the Media Services building that is centrally located within St. Cloud. Two district schools are

twenty minutes from this central location. Completion of a service ticket often takes less time than the round trip drive time to these sites.

Two approaches to addressing this challenge are scheduled weekly site time and centralized management. Service tickets are addressed in blocks of technical support time assigned to sites each week. Multiple tickets are addressed during these time blocks. The technician schedule also has flexibility built in for emergency support between these scheduled time blocks. Another approach to addressing this challenge is centralized management. Hardware and software have been installed to allow monitoring, control and maintenance of systems from Media Services. Some of these installations include ZEN.

Centralization of hardware will be examined. Currently, the technical staff is managing 50 Novell servers and 12 NT servers. Updates and maintenance are a constant challenge. Server consolidation or a SAN environment may resolve some of these challenges. Another area of centralized hardware application may be in the area of backing up data. Each server has a tape back up drive and the need for multiple tape usage. Centralizing data back up may reduce cost and staff time utilized in the back up procedure.

2. Demographics

a. Overview

Significant changes in the student demographics of District 742 continue to reflect the growing diversity of our St. Cloud community. Despite our challenging Minnesota climate, refugees who may have first settled in other states, quickly learn that jobs, housing, a strong economy and essential support systems exist in central Minnesota. Our community's strategic location on the I-94 corridor continues to impact growth and provide resources for continual improvement of infrastructures. Demographic comparisons indicate that the central Minnesota area closely aligns with statewide trends and immigration patterns in the other metropolitan areas of Duluth, the Twin Cities and Rochester.

b. Challenges

1. Immigration Creates challenges for District 742. Somali students currently represent the largest group of non-white students in District 742. All school employees are learning quickly that the needs of Somali refugees are both unique and challenging and the need for resources will continue.

As predicted, the number of Hispanic students in our schools continues to increase, though not as dramatically as the number of students from Somalia. Demographical information and metropolitan immigration patterns indicate that this population will continue to grow in Minnesota.

Resources for interpretation and translation are limited, but evolving. Adult Basic Education in our school district provides English classes but the demand outweighs the current availability of learning opportunities. A competitive market is driving up the cost of essential interpretation and translation services. Translation software may be an option for addressing this need.

2. SPED Funding has had a negative impact on the overall budget. Decreased revenue from the state and increasing costs are resulting in budget deficits. Because of location, size and services, St. Cloud serves as a regional SPED service provider. SPED services have become increasingly dependant upon technology. There has been a tendency to try to do more with “less” machines over the past few years. Our SPED department has begun an aggressive computer rotation schedule to address this issue.
3. Non-public schools are abundant within the District 742 boundaries. These non-public schools qualify for many of the Title funds. The administrative fees that we are able to claim through this funding do not cover the overall cost to District 742 for administering this program.

c. Needs Assessment

A variety of tools and strategies are used in assessing the technology needs in District 742. There is not one assessment tool that could provide the information that is needed in planning for technology in the St. Cloud school district. Multiple tools are utilized throughout the planning process. These tools and strategies are described below.

Stakeholder Involvement in the Needs Assessment:

Many individuals have been involved in the development of this plan. A breakdown of this involvement is as follows:

- Technology Survey – administrators, teachers, media specialists and support staff/February, 2007
- Forecast – media specialists/August, 2006
- Network Audit – administrators, teachers, support staff and outside firm/fall 2006.

1. Technology Survey

a. Description

For the purposes of this technology plan, District 742 will be utilizing a survey developed by the Mankato School District. Media specialists, teachers, administrators, support staff and technicians were asked a series of questions. The questions were based upon the organizational role of the responder. These questions were analyzed within five areas: needs of learners,

support of teaching, resources, administration, and infrastructure. Due to time constraints and other district surveys being administered, the technology survey will be administered in the March/April 2007 timeframe. Adjustments will be made in the technology plan upon completion of the technology survey.

2. Forecast

a. Description

The technical staff surveyed the media specialists in emerging technologies in an effort to plan for infrastructure.

3. Network Audit

a. Description

An auditing firm conducted this audit. District 742 staff were interviewed as part of this audit. Systems were checked by the auditors attempting to “hack into” the network.

b. Critical Components

Parts were checked for ability to access and attempts were made to access confidential data. Patch levels were examined. Traffic was analyzed for efficiency of network services.

c. Key Results

Findings and recommendations are as follows:

1. Update firewall/network access rules
2. Update disaster recovery plan
3. Segment core network into smaller subnets
4. Replace or upgrade Novell servers
5. Remove unneeded services from the network
6. Close public FTP service or move it to DMS
7. Encourage all IT department members to interact with peers in the same line of work/industry for knowledge expansion

II. Vision, Goals, Objectives and Strategies for Technology

A. District Mission

1. School Board Vision

The Board of Education, as trustee of public education for citizens residing within St. Cloud Area School District 742 boundaries, has a vision of what it means to develop a successfully educated student. The District's goal is to make excellence a predictable outcome. Citizens can expect that, in return for their support and collaboration with St. Cloud Area Community Schools, they will see the following attributes in District 742 graduates:

- Academic Achievement – students will meet or exceed federal, state and local expectations in all academic areas, and will be ready to move forward to succeed in their own achieved higher education or work experiences.
- Experience in the Arts - students will have had the opportunity to participate in the arts through creation, performance or appreciation experiences.
- Skills for Self-Reliant, Responsible Living – Students will have skills to identify their own strengths, needs and resources so that they can manage their lives in safe, healthy and productive ways.
- Active, Responsible Citizenship - Students will have the knowledge and learning experiences to develop a value for participatory citizenship in their communities.
- Social and Communication Skills - Students will have had the opportunity to experience diversity of gender, age, ethnicity, developmental ability, socioeconomic status and culture. They will have skills to communicate, respect, and work together to achieve common goals.

2. District Mission Statement

The mission of District 742 is to prepare all learners, in partnership with their families and the community, to live and contribute within a changing and diverse world.

3. Vision of Technology Support

District 742's technology program focuses upon what our graduates need to know about technology and what technological skills they must possess to be productive, successful contributors in the twenty-first century.

Students must be provided with the technological expertise to become independent thinkers, problem solvers and productive members of a global society. All students and staff will employ technology as a tool to access, analyze and utilize information as they address the challenges of the future.

B. Vision for Technology

The role of technology within the media program:

- Create and support the technology integrated within the curriculum and instruction of the district.
- Foster independent learners who use media resources in order to select appropriate information.
- Develop and promote communication with information sources in the community, nation and world.
- Provide resources that will promote the understanding of different points of view and respect of other people and cultures.
- Provide resources that support district curriculum.
- Provide information for staff regarding new and existing media resources.
- Provide leadership and in-service training for technology-based teacher and administrative resources.

C. Specific Goals, Objectives and Strategies Based on Needs Assessment

The implementation plan will use the categories from the needs assessment as an organizational strategy for delivery of the plan. These categories are as follows:

- Established infrastructure
- Effective administration
- Extensive resources
- Enhanced teaching
- Empowered learners

D. Strategies for Meeting Minnesota Academic Standards

Our Media Literacy Standards address many aspects of the Minnesota Academic Standards. Information regarding the media literacy standards can be found at http://isd742.org/teachingandlearning/curriculum/K_6MediaOutcomes.pdf.

Expansion into additional curricular areas will follow the infusion of the information literacy standards at the state level.

E. Local Technology Literacy Standards

Our Media Literacy Standards were based on the MEMO model with ISTE elements.

F. ITV

There is a room at each high school that is equipped for ITV. Currently, two classes are utilizing these rooms. One class is advanced psychology and the other is a career exploration course. Both classes use a team teaching approach, with one instructor at each end of the ITV connection.

We are also planning on adding video conferencing connectivity for meetings and conferences.

G. Online Learning

Online learning is currently being explored in District 742. This delivery system could fill a void in the area of “highly qualified” requirements and also serve as an attracter for student enrollment. The district finance committee continues to explore this option.

H. Online Curricular Materials

NWEA, AIMS Web, Plato and Skills Tutor are currently in use. New applications will continue to be examined as these resources become available. Online access to network drives is also being explored.

I. Innovative Initiatives

1. Student Response Systems

Through an E2T2 grant made possible by the Minnesota Department of Education, District 742 has implemented student response systems into third and fifth grade classrooms. Continuation and expansion of the use of these response systems is planned.

2. Science Classrooms

The passage of a bond referendum will enable the upgrade of science classrooms across the district. Multi media equipment will be installed as a part of this upgrade.

3. Keyless Entry

Keyless entry will be added to district sites. Tracking of building access will become automated through this installation.

J. DDDM

District 742 is in the process of implementing the Sagebrush Analytics product for data warehousing. For the past two years building data teams have met to analyze student data using pivot charts and pivot tables. The Sagebrush product should be a valuable tool for the building data teams.

K. Online Assessments

1. AIMS web

AIMS web, a product of Edformation, Inc., is a formative assessment and basic skills improvement system utilized with students in grades K-2 across the district. AIMS web consists of four components: web-based data management and information reporting programs, standard general curriculum assessment materials, training workbooks, and online support. AIMS web organizes and reports the results of formative assessments in reading and mathematics. This formative assessment model informs the instructional process by identifying at-risk students as early as possible and those students who are learning and those who are not progressing satisfactorily.

2. NWEA

NWEA is being used in the junior high, senior high and ALC programs. Students are assessed in math and language arts two times per year. Staff analyzes the test data through the building data teams.

L. Impact From State Testing

To meet the minimum hardware specification, the majority of all district lab computers will need to be replaced. This will involve almost 500 workstations.

M. Communication With Parents

Parent portal has been implemented at one elementary school, one junior high school and one high school. Plans call for continued expansion of the portal. Parents can access demographic, attendance, schedule, daily grade, report card and lunch activity information.

III. Policies and Procedures

The District 742 Board of Education recently adopted Policy Governance. This governing style identifies policy areas through specific ends. Each of the policies and procedures identified in this section will have a reference to a policy title within the adopted policy governance document.

A copy of the Policy Governance can be found at:
<http://isd742.org/schoolboard/PolicyGovernance.pdf>

As a part of the policy governance model, community linkages are established. The Board of Education meets at least two times per year with representatives from the following groups: civic leaders, business and industry leaders, parents, senior citizens, minority groups, staff, students, religious leaders, alumni/recent graduates and the media. These meetings are designed for input to the Board on policy issues.

Parents are updated through information that is sent home. This same information is also posted on the district website and often broadcast over the district cable access channel. Students receive information through classes and instruction. Inservice and building meeting time is used to keep staff abreast of any policy and/or procedure changes.

A. Equitable Access for Students and Library Customers with Exceptional Needs

1. It is the responsibility of District 742 to make technology and other resources available to all students. Student Disability Nondiscrimination (Policy 521) outlines our commitment to providing this equal access.

This policy is available at
<http://isd742.org/schoolboard/policies/bp521.PDF>

Student Disability Nondiscrimination

SECTION 504/AMERICANS WITH DISABILITIES ACT (ADA)

In compliance with its obligations under both Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act, St. Cloud Area School District 742 does not discriminate against otherwise qualified students with disabilities in the provision of its educational programs and activities.

It is the intent of St. Cloud Area School District 742 to provide a free appropriate public education to each Section 504/ADA qualified and eligible disabled student with a disability within its jurisdiction.

It is the further intent of the District to ensure that each student with a disability within the meaning of Section 504 of the Rehabilitation Act of 1973, is identified, evaluated and provided with a free appropriate public education.

Students who because of a disability, need or are believed to need reasonable accommodations, services and/or programs are addressed under this policy. Under this policy, a student with a disability is one who (a) has a physical or mental impairment that substantially limits one or more major life activities, including learning; (b) has a record of such an impairment; or (c) is regarded as having such an impairment.

A student may be a student with a disability under Section 504 and this policy even though the student does not require services pursuant to the Individuals with Disabilities Education Improvement Act (IDEIA). Students who are identified as individuals with exceptional needs according to the IDEIA criteria are not addressed under this policy, as the needs of such students are provided for elsewhere under state and federal law, and the District special education procedures.

Board Policy

Adopted: August 22, 1996

Revised/Updated: August 24, 2000

Revised/Updated: January 10, 2007

Key Components of the Policy

The most critical component of this policy, as it related to technology, is accommodations. Technology can be a very valuable tool in accommodating the special needs of a learner. District 742 takes seriously the responsibility to provide the proper accommodation to meet the specific need.

2. ADA Compliance

District 742 disseminates information through two HTML-based web sites:

- A public web site at <http://isd742.org>
- A staff web site at <http://isd742.org/StaffNET/>

Accessibility concerns have been factored into the development of both sites. We have, for example, consistently avoided frame-based tools such as framed HTML pages or framed Microsoft PowerPoint presentations. Both sites use Cascading Style Sheets (CSS) and are a fixed width design to improve the readability of the content. The site requires no horizontal scrolling for the most popular screen resolutions and window sizes

(800x600, 1024x768). We continue to include the needs of assistive technology users as we update and create new pages.

District 742 staff designed the web sites with three goals in mind. We needed every page to have the same, compact and convenient menu system. We wanted the site to be attractive and progressive in both appearance and function. Yet, we wanted to meet the spirit of Section 508 of the Rehabilitation Act.

The content has been written and formatted to make it accessible. For example:

- sentences are short with the meaning at the beginning
- links use meaningful text
- forms can be navigated using the tab key

To accommodate browsers that may not cope with our menu system, we maintain a text-link based Site Directory. Footer text on most pages directs adaptive browser users to the Site Directory:

© St. Cloud Area School District 742
Page updated January 25, 2007 8:50 AM
webdesign@isd742.org

Best viewed in IE 5.x or newer on a PC
Best viewed in IE 5.1.7 or newer on a Mac
Adaptive browser users: visit our [site directory](#)

To accommodate screen readers, we pay particular attention to images. All images with editorial content have alt tags that allow screen readers to voice, for example, "Photo of Superintendent Bruce Watkins." Non-content images, such as spacers and shims are left with empty alt tags. Most screen readers will, by default, ignore this type of image and voice nothing. We used Macromedia's Dreamweaver 8 to check and fix alt tags on both sites.

We are continually working to improve the quality and accessibility of our web sites. Every effort is made to ensure that it is accessible to the widest number of users. We test pages using WebXACT, a free online service at <http://webxact.watchfire.com> that tests single pages of web content for quality, accessibility, and privacy issues.

B. Data Privacy

Specific policy covering data privacy is Protection and Privacy of Student Records (Policy 515). This policy does not specify data privacy involving electronic records. Instead, the policy is written in generalities so that emerging technologies will be covered under the existing wording. As part of this plan, Protection and Privacy of Student Records will be reviewed yearly to ensure that emerging technologies apply to the current policy. In the case that new wording would be needed, district media staff will work with administration to make these changes.

This policy is available at <http://www.isd742.org/schoolboard/policies/bp515.pdf>

The Protection and Privacy of Student Records

The Board of Education of St. Cloud Area School District 742 recognizes its responsibility in regard to the collection, maintenance and dissemination of student records and the protection of the privacy rights of students as provided in federal law and state statutes.

Board Policy

Adopted: August 24, 2000

Revised: November 14, 2001

Revised: May 26, 2005

Key Components of the Policy

More and more records are stored electronically within the District. Traditional storage and retrieval is changing. Instead of staff accessing a physical record and signing off on a form to document access, this same information is available electronically from the desktop computer. The key components of this policy as it relates to technology is in the area of defining access and notifying staff of data privacy laws. Security to the field has been established in most of our data systems that provide shared access. The Director of Human Resources signs off access requests after the staff member is informed of data privacy laws.

C. Data Security

1. Currently, there is not a policy addressing security. Instead, procedures are in place to ensure security of data systems. This is an area that we would like to enhance over the term of this plan. Possible enhancements include data storage guidelines, archiving guidelines and password guidelines.

A comprehensive approach to security is implemented. Some of the security measures in place include:

- Training of teachers, students and office staff in the proper use of access passwords and computers is ongoing.
- Physical access to devices that store important data and/or configuration is considered.
- Asset management records are kept current with all manufacturer/model/serial and location information in case of equipment loss.
- Basic disaster recovery procedures include hardware repair or replacement, hardware configuration, OS installation and application and data restoration.
- Tape backup systems are used at every site, on every server. Tapes are used in rotation. Copies of critical tapes are stored off-site.
- Documentation exists for hardware, hardware configuration, NOS installation and workstation OS configuration procedures.
- Data is stored on the file servers. Individual workstation data files are not backed up unless the user is doing their own backups.
- Software upgrades are considered based on feature requirements, vendor support and hardware interaction. Staff re-training is also considered when an upgrade is proposed. The District found that the newest software is not always the most reliable. Every attempt is made to balance newest/features with reliability and stability, so as to preserve data integrity.
- LAN/MAN network management methods are improving and are handled by the appropriate personnel. Standard configurations and documentation are helping to provide efficient operations.

Key Components of the Procedure

The key components of this procedure are the system security and disaster recovery. These key components are maximized through the continual monitoring of systems to look for intrusion, lack of security or safeguards that are not being followed. Any of these factors would compromise the integrity of the network and the contents within the network.

2. Security Audit

A security audit was conducted in the fall of 2006. Findings and recommendations are as follows:

- a. Update firewall/network access rules
- b. Update the disaster recovery plan
- c. Segment core network into smaller subnets

- d. Replace or upgrade all Novell servers
- e. Remove unneeded services from the network
- f. Close public FTP service or move it to a DMZ
- g. Encourage all IT department members to interact with peers in the same line of work/industry for knowledge expansion

D. Internet Safety Policy for CIPA Compliance

Acceptable Use

1. As a district, we believe that it is necessary to teach students to be responsible users of networked resources. Students review and sign the Acceptable Use Agreement for networked resources. It is a goal of District 742 that students become responsible and knowledgeable consumers of electronic data.

District 742 also believes that staff has a responsibility to act in an ethical and responsible manner. Acceptable use of networked resources is an expectation of all district staff.

A copy of Technology and Networked Information Resources Acceptable Use policy is available at <http://www.isd742.org/schoolboard/policies/bp524.pdf>

Technology and Networked Information Resources Acceptable Use

The purpose of this policy is to set forth policies and guidelines for access to the school district technology and networked information resources. In making decisions regarding student and staff access to the school district technology and networked information resources, the school district considers its own stated educational mission, goals and objectives. Electronic information research skills are now fundamental to preparation of citizens and future employees. Access to the school district computer system and to the Internet enables students to explore thousands of libraries, databases, bulletin boards and other resources while exchanging messages with people around the world. The school district expects that faculty will blend thoughtful use of the school district computer system and the Internet throughout the curriculum and will provide guidance and instruction to students in their use.

Board Policy

Adopted: November 16, 2000

Key Components of the Policy

The key components to this policy include the filtering, education, monitoring and signing an agreement. All of these components need to be in place for successful implementation of this policy. In District 742, we

continually review the acceptable use policy to ensure that students are protected from content that is harmful to minors. A recent review by media specialists and administrators was conducted to ensure the policy wording addressed social networking sites.

2. Filtering

Currently, District 742 does block offensive material available via the Internet. A product has been purchased to manage this filtering. Since no filtering product is fool proof, District 742 staff utilizes Internet filtering, along with, monitoring student use and the practice of educating students each year about the use and misuse of the Internet. Student's are currently restricted from access to social networking sites. There is an acceptable use agreement that students must sign. Through these safeguards and previous steps that the District has undertaken, District 742 is in compliance with CIPA. There is also software in place to filter e-mail. In the interest of security, specifics on this blocking will not be outlined in this document.

IV. Technology Infrastructure, Management and Support

A. Telecommunications Capacity

1. Overview of Infrastructure

Operating Systems include: Novell NetWare 6.5 District-wide Network Operating System & Server OS providing directory Services function supporting over 12,500 user accounts. Netware 6.5 Enterprise Server, Microsoft NT, MS Windows 2000 Server, MS Windows 2000 Advanced Server, Macintosh version 7.5 through OS X 10.x, Microsoft Windows 95, MS Windows 2000, MS Windows 2000 IIS5 Web server (DPRS), IBM OS2 (Voice mail System), SUSE Linux version 10.2 (Web Server(s)), Novell Border Manager (Firewall and NAT services), Novell GroupWise version 6 (E-Mail and Calendar).

2. Wiring and Cabling

All classrooms in District 742 are wired for phone, network and video. All wire is terminated in wiring closets and equipment is mounted in either a wall or floor mount rack. The wire used for phone installations is a plenum-rated 4 pair category 3; it is terminated on punch blocks. The wire used for networking is a plenum-rated category 5 or level 6; it is terminated on TIA/EIA 568A punch blocks. TIA/EIA 568A connectors are used to terminate in the classroom. One half of the buildings in the district are wired with the category 5; the other half is wired with level 6. Installation of level 6 began in the summer of 1997. 10 GB rated copper LAN cable is currently being installed. The wire used for video is a quad shield RG6 into the classroom with a RG11 trunk.

Computer rooms and wiring closets, security and energy management: one limited access, temperature controlled room houses electronics in all district sites.

3. Data Equipment

The Network consists of two Cisco core routers with fail-over capacity. It is an ATM switched network with each site having one Cisco ATM edge device. The move to 10-gigabit ethernet on the backbone is in the budgeting stage. The districts LANs are funded, maintained and operated by the district and are 10mb switched ethernets, which are built around 3Com switches and hubs. A move to 100mb ethernet is in progress.

4. Telecommunications

Network protocol, bandwidth, and telephone line count: A 8mb data connection to the State of Minnesota Inter-Technologies (Mnet) provides Internet access for the District. The District network backbone is ATM-based dual OC-3 full duplex. LANs are 10mb ethernet that is gradually moving toward 100mb ethernet. Phone lines include two T-1 lines connecting two district sites and twenty-one T-1 lines running over a fiber-optic backbone. Phone lines average 14 per high school, 9 per junior high and 4 per elementary. We currently have 40 fax lines, 44 fire dialers, 22 security lines and 42 modems. Centralized DID trunking of fax lines is in progress.

5. PBX Capacity

Phone capacities include 22 switches, with two containing 128 ports, sixteen containing 256 ports, two that contain 512 ports and one that contains 1024 ports. Direct extension dialing, voice mail, automated attendant and fax services are shared through a central switch. There are approximately 343 feature phones, and 1357 single line phones installed in the District. A centralized voice mail system which hosts 1800 mail boxes supports the entire District. Backup hardware is in stock in case of hardware failure.

6. Web, E-mail, NAT and Firewall, Operating Systems and Hardware Summary

Novell GroupWise version 6.0.4 (E-Mail and Calendar) is installed on one Intel Pentium server per site and one central server with Internet gateway (GWIA), and external tape backup drive, server providing over 2000 e-mail accounts. Spare components are in stock in case of hardware failure. Apache Web Server, GWIA and E-mail (GroupWise) are installed on Intel Pentium servers, separately, supporting a growing number of GroupWise user accounts and Intranet functions. Spare components are stocked in case of hardware failure. HP tape drives are installed for emergency recovery. NAT and Firewall Services are installed on one Intel Pentium server. Using SUSE 10.2 for the teacher web page server on an Intel Pentium server. DPRS (Due Process Reporting System) is run on an Intel 2.4 GHz XEON server with a separate Web server running on an Intel 1Ghz machine.

*Individual printouts on each specific system are available upon request.

7. Capacity Status

The current infrastructure is not meeting our needs. Our network physical layer consists of a fiber-optic system, which connects District 742 sites' data, voice and video. For data, we are running dual OC-3 ATM (full duplex) in the core of the network, with each site connecting via it's own

ATM link. Each site has at least (2) 100mb ports on the edge device (ATM switch) as well as several dual speed ports. Site LANs connect to the edge device via 10/100mb ethernet. Site LANs are running gig ethernet or 100mb to sub closets to provide the needed internal data bandwidth for local site server access. Nodes (computers, printers, servers, etc.) are connecting via 10/100 mb ethernet. One site is utilizing wireless WAN for data, and (Telco) T1 for voice connection for connection into the District network. The core carries data between sites and to the ISP point of presence.

The District's current ISP "POP" is located within St. Cloud City Hall. Bandwidth has been improved by moving the ISP POP due to a wider bandwidth type of network connection than the serial port that was being used. The option to multi-plex over the fiber trunks would free up fiber for other use such as fiber-channel-based central data backup, SAN, and a secondary network, isolated from the main network. The secondary network would provide data connection for the District's Energy Management Systems (equipment/security alarm and monitoring) and other health and safety-related purposes. Currently, video and voice are transported separately to lessen the chance for "single point of failure".

B. Capacity Expansion

Future design changes include high-speed 10GB ethernet in the network core.

1. Phase I

We will purchase (21) twenty-one data switches at an estimated cost of \$8500 each. We will install (1) one each of these at Kennedy, Clearview, Apollo, DAO, Tech, North, South, McKinley & Madison. Each site will have a matching device at DMS. The remaining (3) three will be installed at DMS to support other high-speed central network devices.

2. Phase II

We will roll the (9) nine data switches (installed at DMS) out to the remaining sites (Roosevelt, Westwood, Wilson, Lincoln, Talahi, DSB, Discovery, Oak Hill and the new Saint Joseph school), and purchase a core data switch for installation at DMS. The estimated cost of phase II would be roughly the same as in phase I. The difference is that we would be purchasing a very high-speed core switch to support all of the 10-gigabit links. The cost of this "core" switch can be adjusted somewhat to meet budget limitations if needed.

3. Improvement and Upgrades

Over the next four years, there will be some upgrades and changes that may need to be made in hardware to maximize technical services to support teaching and learning. Server replacement will enable improved accessibility and continued technical support on core systems.

Establishing primary data sources and having these sources populate other systems is a priority. An examination into the network architecture will provide information on efficiency.

Many software changes will occur over the next four years. Data warehousing will provide a tool for data driven decision-making. Online learning will expand the realm of traditional classroom learning.

4. Interoperability

Over the span of this technology plan, there will be steps taken to interface the many software systems in use across the district. The SIF initiative will be considered. The cost of sustaining SIF agents will be weighed with the cost of importing data manually. The need for “real time” data will also be considered.

C. Anticipated Capacity

This plan provides high-speed 10-gigabit connection with layered policy-base routing throughout the core of the network.

D. Student to Internet connected computer ratio

ALC	4.9 to 1
Apollo	6.3 to 1
Clearview	6.1 to 1
Discovery	5.5 to 1
Kennedy	4.2 to 1
Lincoln	7.0 to 1
Madison	6.0 to 1
North	4.5 to 1
Oak Hill	7.5 to 1
South	6.0 to 1
Talahi	6.7 to 1
Tech	7.8 to 1
Westwood	10.3 to 1

These calculations account for lab computers, regular education classroom computers, and student look up stations.

E. Each licensed staff member has an Internet connected computer. This ratio will stay the same but the computers will be updated over the duration of this plan.

F. Labs vs. Classrooms

All classrooms have at least one networked computer. A few classrooms have multiple networked computers. All schools have at least one networked computer lab. Some sites have two or three networked labs

G. Average Age of Equipment

Location	Average Computer Age in Years
ALC	3.3
Apollo	3.9
Clearview	2.1
Discovery	2.5
Kennedy	2.5
Lincoln	1.0
Madison	2.1
North	3.5
Oak Hill	2.6
South	5.1
Talahi	1.8
Tech	4.1
Westwood	1.7

H. Replacement Schedule

Equipment Replacement Schedule

Elementary			
Area	Technology	Recommendations	Comments
Office	Workstations	3 year rotation	
Classroom	Workstations	3 year rotation - 1/3 new each year	Rotate to 2nd lab
Lab 1	Workstations	3 year rotation	Rotate to 2nd lab
Lab 2	Workstations	Replaced from lab and classroom	
Audio Visual	TV	1 per room	
	VCR/DVD combo	1 per classroom as necessary	
	TV Mount	1 per classroom of appropriate size	
	Video Projector	1 per building	
	Furniture	Appropriate per student	
	Scanner	3 per building	
	Digital Camera	1 per 200 users	
	Digital Video Camera	1 per 200 users	
Printer	B & W Laser	1 per 100 users	
	Color Laser	1 per building	

	Ink Jet	Special circumstances only	
Software		To support curriculum & hardware	
Secondary			
Area	Technology	Recommendations	Comments
Office	Workstations	3 year rotation - power users early	
Classroom	Workstations	3 year rotation - power users early	Rotate to 2nd lab
Lab 1	Workstations	2 year rotation	Rotate to 2nd lab
Lab 2	Workstations	3 - 4 year rotation	
Lab 3	Workstations	5 - 6 year rotation	
Audio Visual	TV	1 per room	
	VCR/DVD combo	1 per classroom as necessary	
	TV Mount	1 per classroom of appropriate size	
	Video Projector	1 per building	
	Furniture	Appropriate per student	
	Scanner	3 per building	
	Digital Camera	1 per 200 users	
	Digital Video Camera	1 per 200 users	
Printer	B & W Laser	1 per 100 users	
	Color Laser	1 per 500 users	
	Ink Jet	Special circumstances only	
Software		To support curriculum & hardware	
SPED/Student Services			
Area	Technology	Recommendations	Comments
Office	Workstations	4 year rotation	
Speech	Workstations	4 year rotation	
LD	Workstations	4 year rotation	
Inclusion	Workstations	4 year rotation	
EBD	Workstations	4 year rotation	
Mini-labs	Workstations	4 year rotation	
SW/Psy/MHF	Workstations	4 year rotation	

Low Incidence	Workstations	4 year rotation	
Audio Visual	TV	1 per room	Self contained EBD & Inclusion
	VCR/DVD combo	1 per room	Self contained EBD & Inclusion
	TV Mount	1 per room	Self contained EBD & Inclusion
	Overhead	1 per direct instruction area	
	Furniture		Appropriate per student
Printer	B & W Laser	Shared in confidential area	
	Ink Jet	Special circumstances	Not recommended
Software	MSO	1 per workstation	
	Curriculum	As determined by district	
	Title		
Devices	Touch Screen	As required by hardware, software, & OS	

A new equipment rotation plan is in development. The new plan will probably identify computers assigned to organizational roles. There will be a rotation schedule that will be covered under district funding. All other computer purchases would be covered out of building funding. The building would also be responsible for the infrastructure and software for the building purchased computers. The computer rotation schedule under this plan is projected to be four to five years.

I. Technology Platform

District wide, 67% of the computers are PCs and 33% are Macintosh. All of the administrative computers are PCs. Schools choose the instructional platform based upon building need.

Of the PCs, a small portion is utilizing Windows 95. The remainder of the PC's operates with Windows 2000 and Windows XP. On the Macintosh computers, some computers are utilizing a version of OS9 with the majority of computers operating in a version of OSX.

J. Level of Technology Support Staff

1. Positions

There are thirteen technical services (IT) support staff positions. There are four computer services (IS) support staff positions. All of these positions are dispatched from the Media Services Building. Three additional staff from the materials and graphics department provides a portion of technical support. There are also eleven licensed media specialists assigned to district schools. Each school determines the level of building support staff.

The following are general descriptions of duties as they apply to staff positions.

a. Technical Systems Coordinator

Responsible for Project Management of technical systems within District 742. Provide guidance in future systems planning. The technical systems coordinator provides systems training to all technical staff. Reports to the District Instructional Technology and Media Supervisor.

b. Dispatcher

Process in-coming service requests, evaluating priority level and coordinating technician schedules. Provide help desk support to end-users as a first level of help and determines if second level support is needed. The dispatcher forwards requests, as needed to the site support technical teams.

c. Order Processing Representative

Responsible for processing of equipment supply orders, equipment profiles and inventory records.

d. District Support Technicians

Provide site-based technical support for electronic equipment. District Support Technicians are assigned to a cluster of sites to provide for efficient servicing of familiar systems. Responsible for assisting the technical system coordinator in the design, installation and maintenance of electronic equipment. The support technicians also provide help desk support.

e. Inter-Department Technicians

The Materials Support Specialist provides support specific to site-based library automation systems. The Materials Support

Specialist provides help desk support to media specialists and assistants specific to the library automation systems.

f. Graphics Design Technicians
Creates, publish and update district web pages and provide for video production

g. Computer Programmers and Computer Services Clerical
Provide support and maintenance for student information system, finance system, HR system, lunch system and data warehouse. These staff members also work with interoperability issues.

2. Areas of Specialization and Related Tasks

In areas where specialized skills are required, there are primary and secondary technicians trained internally or by outside sources to provide for redundant support of critical systems.

a. Common areas of expertise, all technicians, desktop OS/applications, general A/V equipment repair:
Daily tasks include PC set up and configuration, LAN support and electronic equipment repair.

b. Telephone systems & voice mail design installation and maintenance:
Daily tasks include telephone adds, moves and changes, database backup, PBX programming, voice mail and automated attendant maintenance.

c. Security Systems, intrusion and observation, design installation and maintenance:
Daily tasks include system checks, log and archive analysis.

d. Network Operating System (NOS), Groupware (mail, calendar):
Daily tasks include checking backup tapes, system stability checks, user account adds, moves and changes and log file analysis.

e. Data networking, LAN, MAN, WAN, Cisco, 3Com, remote network access, GraNET:
Standard tasks include daily system checks, traffic management analysis and configuration changes, system design and installation.

f. Energy management systems:
The site-building engineers primarily operate energy management systems with technical support from the Technical Services department at District Media Services.

- g. Internet mail and web services, Apache, Novell Web Services (mail, web, GWIA):**
Novell-based mail and web services daily tasks include user account adds, moves and changes and log file analysis.
- h. Special Education adaptations:**
Standard tasks include modification of standard equipment to meet special needs and repair of related devices.
- i. CATV, CTV, CCTV design, installation and maintenance:**
Standard tasks include engineering of RF and base-band distribution systems over copper and fiber-optic cabling including head-end electronics design and installation.
- j. Cabling layout, estimating, specification and installation:**
Standard tasks include cable plant layout and installation of coaxial, fiber-optic and twisted pair cabling systems.
- k. Television broadcast switching and facilities design:**
Standard tasks include design, installation and maintenance of A/V signal switches, modulators, fiber-optic devices and audio equipment.
- l. Library holdings and circulation systems:**
Tasks include in-service training of media specialists and assistants, and technical support on the “Spectrum” library automation software.

K. Adequate Staffing

There is currently sufficient staff to perform these described duties.

L. Assistive Technologies

Assistive technology equipment is available through a preview center, district inventory and new purchases. Staff, students and parents have the ability to test hardware, software and devices through the preview center. IEP teams make recommendation for use and acquisition of equipment. Technical staff assists in the installation and maintenance of software and hardware.

The preview center is a joint venture with United Cerebral Palsy and St. Cloud State University. This center is open to the community to preview software and equipment, as well as, receive training. This preview center emerged from an E2T2 grant sponsored by the Minnesota Department of Education.

M. Necessary Training

Training is examined each year, typically during the budget planning process. Despite reductions in the technical training budget, training continues to be a high priority in the building of the Media Services and district technology budget.

N. Technician Training Provided

Training and staff development is addressed at various levels with consideration to an on-going needs assessment process. Various methods are employed including internal exchange of skills and information by the use of e-mail, department meetings and shared access to “Tech-Tips” documents. When off-site training is required, the technical staff share knowledge gained with other department staff. This train the trainer model has been quite successful.

O. Challenges in Maintaining and Upgrading Technology Infrastructure

1. One of the greatest challenges in the maintenance and upgrading of the infrastructure is scheduling network or system “down time”. The staff has become very dependent upon technology. To take technology away for even a short period of time impacts the workflow across the district.
2. Virus and SPAM have significantly increased the workload of the technical staff. Both the proactive and reactive tasks have changed the delivery of services.
3. Providing redundant expertise in each area of technical support has become a challenge. As technology changes and expands, having more than one staff member with expertise in some technical areas is not possible. In these situations, services have been outsourced.
4. Budget is a constant challenge. Balancing the infrastructure needs with the workstation and software needs in the schools is delicate. This balancing requires continual review and adjustment of spending priorities.

V. Role of School Media Center/Library and Regional Public Library System or Public Library

A. School Media Centers

1. Overview

Twelve of the schools in District 742 have media centers and are serviced by media specialists. The Early Childhood Center, ALC and Children's Home are in the process of building a library collection. Media specialist staffing totals 9.6 FTE's.

2. Collection Size

Clearview Elementary	25,464
Discovery Elementary	58,462
Kennedy Elementary	25,067
Lincoln Elementary	27,886
Madison Elementary	29,135
Oak Hill Elementary	42,226
Talahi Elementary	68,170
Westwood Elementary	24,909
North Junior High	16,323
South Junior High	13,864
Tech High School	43,111
Apollo High School	31,758
Media Services	<u>12,935</u>
	419,310

B. Technology Plan Involvement

A group of three media specialists represented their peer group in the technology guide development process. These three represent elementary, junior high and high school. The media specialists as a whole will be involved in the final document review and the updating of the plan over the next four years. The curriculum team will also be involved in ongoing technology plan development.

C. Programming

1. Flexible Scheduling

Flexible scheduling for media specialists to free up time for training and troubleshooting. Technology-curriculum integration is advanced, as more of the media specialist's day is available for training and troubleshooting. Team planning, team teaching and one-on-one assistance become more common as the media specialist is freed from providing teacher prep-time coverage and allowed to work with teachers during their prep times. An effective flexible media program evolves within the regular school curriculum. Monthly media specialists' meetings will continue to provide opportunities for sharing, networking and training. Semiannual assessments will determine the type of training needed and desired.

2. Information Literacy and Technology Standards

Media is an integral part of the curriculum. Outcomes in the media area differ from outcomes in other curricular areas. Media outcomes are embedded into these other curricular areas in order to bring the information literacy skills to the point of instruction.

Media specialists and classroom teachers have developed media literacy standards based on the MEMO standards for information literacy. Media specialists work in conjunction with classroom teachers in the delivery of these standards. These teams strive to deliver the standards within various curricular areas at the point of instruction.

D. Role of Media Centers in Assisting Teachers

1. Role of Staff

Schools are staffed in a manner to free media specialists of prep time responsibilities. This type of staffing allows for classroom teachers and media specialists to plan, prepare and deliver instruction as a team. Media programs designed in this flexible schedule have evolved over years of successful practice. The following will better define specific roles:

- a. **Media Specialist** – meets frequently with teachers to plan and prepare instruction. Instruction is delivered in both large and small groups, in a variety of team teaching configurations.
- b. **Classroom Teacher** – communicates upcoming instruction with the media specialist. Together the teacher and media specialist plan and prepare for instruction, schedule facilities and resources and deliver instruction.

- c. **Principal** – advocates and promotes the joint planning of the media specialist and the teacher. The principal also monitors the schedule to ensure students are provided access to the media area and that the media/technology skills are taught in an integrated manner and correlated with the actual teaching and learning-taking place in the classroom.
- d. **Media Center Schedule** – provides flexible access to the facility. The media center and computer labs should be scheduled in a manner allowing a class to utilize the facility at various times throughout the day or week. A set schedule of a specific time and day for each class to use the facility does not allow media to be embedded at the point of instruction.

2. **Role of Program**

The media program will:

- a. Develop a love of reading for information and pleasure by offering a rich collection of current print materials.
- b. Create and support the technology integrated within the curriculum and instruction of the district.
- c. Foster independent learners who use media resources in order to select appropriate information.
- d. Develop and promote communication with information sources in the community, nation and world.
- e. Provide resources that will promote the understanding of different points of view and respect of other people and cultures.
- f. Provide resources that support district curriculum.
- g. Provide information for staff regarding new and existing media resources.
- h. Provide leadership and inservice training for technology-based teachers and administrative resources.

E. **Impact of Budget Cuts**

Reductions in all district budgets have taken place over the past three years. The impact on media and technology has occurred in staffing, materials and resources, training, equipment and implementation of some of the initiatives outlined in the 2004 Technology Plan.

- 1. Building media specialist staffing has gone from 11.5 to 9.6 FTEs. (All of the media specialists are licensed.) This is a sixteen percent reduction. Support staff at the building level has been drastically reduced. District level technology support has also reduced by eight percent. Training and overtime pay for technical staff has also been further reduced.

2. At the building level, book and software budgets have been reduced. There has also been a noticeable reduction of requests for media production services from the sites.
3. Summer technology classes are no longer offered to the staff. Media specialist meeting time has been reduced by 30 percent.
4. District technology allocations have stayed constant or declined each of the past three years.

F. Partnerships in Support

1. City of St. Cloud

The partnership that was established with the City of St. Cloud in 1996 has enhanced our efficiency and expertise. A joint powers agreement was established to define this partnership. We continue to nurture our partnership with the City of St. Cloud and share in many technology projects:

- a. The city shares the use of their Council Chambers so we may broadcast our school board meetings; live, informing the public of district issues. City and district staff share, on a monthly basis, the operation of audio-visual equipment for nine city and one school district meetings.
- b. A joint fiber-optic budget is operated by both the city and District 742 for continued maintenance and upgrades of the joint fiber plant and electronics. New data electronics, servers, test equipment, etc. are purchased and shared on a regular basis.
- c. The city provides guidance and expertise on issues related to insurance, locates and right away with the fiber plant.
- d. The city provides legal and administrative guidance with the fiber plant.

2. Other Partnerships

The district also partners with other organizations in the immediate St. Cloud area.

- a. As part of the city and school fiber partnership, InfoTel and Lakedale Telephone joined us as partners for sharing the costs of fiber locates. Our billings are split four ways, saving the city and district thousands of dollars each year.
- b. Partnerships with the Central Minnesota Research and Development Council (CMERDC) involve copy machine service, administrative computing services involving finance, payroll and human resource systems. On the instructional side, CMERDC provides support for the student information system, IEP software, and the electronic report card.

- c. The district also works with Resource Training and Solutions (formerly the ECSU) on joint training and purchasing in technology. A recent training involved clerical staff in the migration to Microsoft Office.
- d. District media staff partner with Information Media staff at St. Cloud State University in planning and visioning.
- e. The district partners with the Boys & Girls Club to provide after school computer lab access.
- f. District technical staff is in the process of developing a network of technical contacts with school districts that have technical systems similar to St. Cloud. The goal is to set up a support system to assist with technical problems, development and planning.
- g. District 742 is an organizational member of MEMO. Staff participates in MEMO functions, Memo Technology SID meetings and MEMO Network and Desktop SIG meetings.

G. Electronic Library of Minnesota (ELM) Resources

District 742 takes advantage of the ELM resources. In addition we currently subscribe to the Grolier Online resources. Students receive instruction in the use of online resources throughout their K-12 experience.

VI. Staff Development and Training

A. Staff Development Plan

1. Nontenured Staff

Newly hired staff participates in a 2-1/2 hour district technology training session.

Key software systems are presented. Further training takes place at the at the individual schools. Building procedures and applications are in-serviced at the building level.

2. Tenured Staff

Each year, tenured staff set and works towards goals. Every five years, these staff members are in a formal review process. During this review year, staff periodically establishes goals related to technology that requires training and staff development opportunities.

3. Other Staff Development Opportunities

The St. Cloud Area School District has been integrating technology into curriculum and teaching strategies in a variety of areas. These opportunities include:

a. Q-Comp:

The district Q-Comp goal is literacy. Teaching staff work within professional learning communities on some aspect of this literacy goal. Some PLC's have incorporated technology into these PLC's. Examples include blogs, presentation tools and technology support.

b. Data Teams:

Each school has an established data team. The data teams meet periodically throughout the year to analyze various assessment information. These teams work with the staff using Excel, along with pivot tables and pivot charts to build relationships within this data.

c. Student Response Systems:

District 742 has been working with the Sartell and Sauk Rapids School District on an E2T2 grant sponsored by the Minnesota Department of Education. Third and fifth grade teachers have been working in the area of mathematics to infuse student response systems into the instruction. The grant has enabled ample staff development opportunities for third and fifth grade math teachers.

- d. Atomic Learning:**
The district continues to subscribe to Atomic Learning to provide staff and students with individualized computer software application training.
- e. In-service Training:**
For the past several years there has been at least a half-day of district in-service time dedicated to technology training. This takes on many forms as buildings and individual teachers have differing needs. The time is “flexed” throughout the school year so the training can be provided in a timely manner. This includes report cards, standards and assessments and computer program updates.
- f. DATA Control and Analysis:**
Administrators are provided training to work with the data systems they must access for student and teacher reports. This includes state assessment data, SASI, MARSS, etc.
- g. General Curriculum and Classroom:**
As an area introduces new resources, the directing committee is trained to assist the rest of the staff to use the resources. Media specialists assist in this process. We also ask teachers to “pilot” new products on a regular basis. This includes information sources, web sites, as well as software. Curriculum leaders, technology staff and media specialists provide specialized support on an on-going and as-needed basis.
- h. Teacher Web Page Development:**
The media specialists will be extremely involved in training the building teaching staff on web page development. Currently, three web-authoring tools are available to address multiple web development skill levels.
- i. Flexible Scheduling:**
Technology-curriculum integration will be advanced, as more of the media specialist’s day is available for training and troubleshooting. Team planning, team teaching and one-on-one assistance become more common as the media specialist is freed from providing teacher prep-time coverage and allowed to work with teachers during their prep times. An effective flexible media program evolves within the regular school curriculum. Monthly media specialists’ meetings will continue to provide opportunities for sharing, networking and training. Semiannual assessments will determine the type of training needed and desired.

j. Assistive Technology:

The assistive technology team offers a variety of training opportunities for licensed and non-licensed staff in the area of assistive technology. The AT team often teams with United Cerebral Palsy and St. Cloud State University on these trainings.

B. Technology Standards

District 742 media specialists and teachers developed media literacy standards and a scope and sequence to support these standards. The media library standards were formulated using the MEMO standards for information literacy. Schools are in the third year of delivering instruction based on these standards. The scope and sequence can be found at: <http://isd742.org/staffNET/TandL/Media/index.html>.

C. Technology Literacy Requirements

Currently, we do not have a technology literacy requirement for teachers or administrative staff.

D. Level of School Staff Training

Through involvement within the district curriculum teams, staff will continue to assess the needs of staff in the area of technology training. Surveys have proven to be a valuable tool in extracting the training needs of staff.

E. Level of Administrative Training

District administrators have formed an in-service committee that has identified areas of possible growth in the use of technology. These administrators have identified, using technology to make data driven decisions, as a need. Data warehousing and the research on using data to improve achievement are of particular interest to these administrators.

Overall, most of the district administrators are fairly comfortable with technology. Many use PDAs as an administrative tool. E-mail and electronic transmission of information is encouraged and modeled by a majority of the administrators. Staff evaluations have been computerized. Each school has a posted web site that provides valuable site information.

F. Challenges

Over the years, there has been less time available for staff development and more training needed for school staff. Technology has gone from four to eight hours available for staff training each year to two to three hours. District 742 continues to strive for creative ways to provide technology training within the limited time.

VII. Budget for Technology

UFARS OBJECT CODE	CATEGORY	ITEM(S) DESCRIPTION	FY2008 BUDGET	FY2009 BUDGET	FY2010 BUDGET	FY2011 BUDGET
100	Salaries & Wages for Technology staff	16 Staff (Technical & Computer Services)	755,150	770,250	785,650	801,370
200	Fringe Benefits for Technology Staff	16 Staff (Technical & Computer Services)	136,000	139,000	141,500	144,500
300	Purchased Technology Services					
305	Consultant Services		950	950	950	950
321	Communications (telephone, Internet access)	Telephone, cellular, long distance, internet access	165,800	165,800	165,800	165,800
316	Computer & System Services	Data Processing	202,500	202,500	202,500	202,500
366	Technology Staff Development		2,500	2,500	2,500	2,500
366	Technology Workshops & Conferences		13,580	13,580	13,580	13,580
	Technology Leases & Rentals					
350	Purchased Technology Services	Miscellaneous Repairs	50,850	50,850	50,850	50,850
400	Supplies & Materials (computer software (instructional & non-inst)	Supplies, Software, Miscellaneous	94,000	94,000	94,000	94,000
500	Capital Expenditures (telephone equipment)	Computers & Equipment	694,000	694,000	694,000	694,000
800	Other Expenditures					
TOTALS			2,115,330	2,133,430	2,151,330	2,170,050

VIII. Implementation Plan

A. Needs of Learners

1. Strategy – Science Classroom Updates

a. Tasks

1. Perform site visits
2. Perform needs assessments
3. Identify equipment/costs
4. Procure equipment
5. Install equipment
6. Train on equipment use

b. Estimated Completion August, 2008

2. Strategy – Student Response Systems

a. Tasks

1. Evaluate progress of E2T2 grant
2. Identify possible uses and applications
3. Budget for additional equipment
4. Procure equipment
5. Install equipment
6. Train on equipment

b. Estimated Completion October, 2008

3. Strategy – Translation Software

a. Tasks

1. Identify needed languages
2. Identify possible products
3. Test products
4. Report to ELL committee

b. Estimated completion December 2007

4. Strategy – Assistive Technology

a. Tasks

1. Enter inventory in a circulation system
2. Identify needs
3. Recommend purchase to SPED leadership team
4. Continue maintenance of equipment
5. Assist with staff training
6. Continue to assist with software installation and testing

b. Estimated completion – Ongoing

5. Strategy – Streaming Applications

a. Tasks

1. Identify type of content
2. Ensure proper infrastructure
3. Examine access without compromising security
4. Enable access
5. Monitors age

b. Estimated completion - Ongoing

6. Strategy – Multi-Platform Workstation Use

a. Tasks

1. Identify applications
2. Identify possible hardware
3. Test hardware
4. Procure hardware
5. Install hardware

b. Estimate completion – Spring, 2008

B. Support of Teaching

1. Strategy – Role of Media Specialists

a. Tasks

1. Work with district administration to clarify responsibilities
2. Work with building administration of program delivery
3. Collaborate with media specialists on day-to-day operation
4. Provide support to building media programs

a. Estimate completion – Ongoing

2. Strategy – Staff Development

a. Tasks

1. Develop questions related to technology on annual staff development
2. Implement needs identified in survey in SPRE and teacher induction process
3. Training on new technologies

b. Estimated completion – Summer, 2008

3. Strategy – Grade books

a. Tasks

1. Identify need for elementary grade book
2. Procure elementary grade book
3. Interface elementary grade book with parent portal
4. Train staff on use of elementary grade book

5. Identify need for secondary grade book
6. Procure secondary grade book
7. Interface secondary grade book with parent portal
8. Train staff on use of secondary grade book

b. Estimated completion – September 2009

4. Strategy – Parent Portal

a. Tasks

1. Continue to add north side schools to portal
2. Develop and implement a plan for south side schools to become a part of the portal
3. Continue to develop interfaces for delivery of information
4. Maintain system

b. Estimated completion – November, 2009

5. Strategy – Online Learning

a. Tasks

1. Committees to examine needs and possibilities
2. Site visits
3. Develop a recommendation
4. Report back to finance committee

b. Estimated completion – December, 2008

C. Resources

1. Strategy – Circulation System Centralization

a. Tasks

1. Pilot Media Services and Roosevelt
2. Develop an implementation schedule
3. Implement upgrade
4. In-service staff

b. Estimated completion – September, 2007

2. Strategy - Hardware Replacement

a. Tasks

1. Develop a modified computer rotation cycle
2. Identify required or district supported computers based on organizational role of user
3. Budget based upon modified rotation plan

b. Estimated completion – January, 2008

3. Strategy – Software Replacement

a. Tasks

1. Form a taskforce to examine software use

2. Align resources with curriculum
3. Make recommendations for purchase
4. Budget for acquisitions
5. Procure software
6. Train for software

b. Estimated completion – September 2008

4. Strategy – SPED Rotation Plan

a. Tasks

1. Develop a plan that allows for SPED student computers within the building LAN
2. Budget for acquisition

b. Estimated completion – January, 2008

5. Strategy - ITV

a. Tasks

1. Examine use of the ITV rooms
2. Collaborate with high school staff on possible uses

b. Estimated completion – Ongoing

6. Strategy – Video Conferencing

a. Tasks

1. Create a multipoint video conferencing facility
2. Train staff on use
3. Schedule conferences

b. Estimated completion – Spring, 2007

7. Strategy – Vista/Microsoft Office Upgrades

a. Tasks

1. Test applications
2. Develop an implementation plan
3. Train staff
4. Implement

b. Estimated completion – Spring, 2008

D. Administration

1. Strategy – Surveillance Cameras

a. Tasks

1. Review building needs assessments
2. Work with district/building administration on an upgrade plan
3. Procure equipment
4. Install equipment

5. Train on equipment use
- b. Estimated completion – August, 2008**
2. **Strategy – SMART Systems**
 - a. Tasks**
 1. Form a taskforce to examine status of current HR and finance systems
 2. Develop project plan for continuing with new system or changing systems
 3. Implement project plan
 - b. Estimated completion – Spring, 2009**
3. **Strategy – Data Warehouse**
 - a. Tasks**
 1. Complete project plan
 2. Form a project team
 3. Implement project plan
 - b. Estimated completion – January, 2009**
4. **Strategy – Password Plan**
 - a. Tasks**
 1. Identify password access by organizational role
 2. Develop a schedule for changing passwords
 3. Implement schedule
 - b. Estimate completion – August 2007**
5. **Strategy – Credit Card Payment**
 - a. Tasks**
 1. Identify credit card payment service
 2. Implement by site through the lunch system
 3. Add activities payment
 - b. Estimated completion – Spring, 2009**
6. **Strategy – SIF (School Interoperability Framework)**
 - a. Tasks**
 1. Examine the long-term cost of SIF for each system
 2. Examine other strategies to have each system interoperable
 3. Develop a plan for interoperability
 - b. Estimated completion – Ongoing**
7. **Strategy – Partnerships With Other School Districts**
 - a. Tasks**

1. Technical staff participates in quarterly meetings
 2. Technical staff reports back to department staff
 3. Networking of technical staff with other school districts
 4. Continue working with Sauk Rapids/Sartell on cooperative projects
 - b. Estimated completion – August, 2007**
- 8. Strategy – Remote Access**
 - a. Tasks**
 1. Provide access to home folders from outside of the school district
 2. Train end users
 - b. Estimated completion – Spring, 2008**
- 9. Strategy – Updating Workstation Images**
 - a. Tasks**
 1. Update images to original operating system and Microsoft Office configuration
 2. Develop a plan to update workstations district-wide
 3. Implement plan
 - b. Estimated completion – Ongoing**
- 10. Strategy – Digital Imaging**
 - a. Tasks**
 1. Define data to be imaged
 2. Budget with the impacted department
 3. Develop a project plan with department
 4. Implement project plan
 - b. Estimated completion – June, 2011**
- 11. Strategy – Building Security**
 - a. Tasks**
 1. Update all security equipment
 2. Zone all sites
 3. Document contacts/motions
 4. Interface with energy management system
 - b. Estimated completion – December, 2010**
- 12. Strategy – Proximity Card Access**
 - a. Tasks**
 1. Identify access points at each site
 2. Procure an enterprise access system
 3. Develop a project plan

4. Implement plan

b. **Estimated completion – December 2007**

E. Infrastructure

1. Strategy - Centralization

a. Tasks

1. Identify servers that could be consolidated/centralized
2. Upgrade infrastructure (switches) to 10 Gig
3. Develop a project plan
4. Implement plan

b. **Estimated completion – June, 2011**

2. Strategy – Back-Ups

a. Tasks

1. Centralize servers
2. Identify servers that can back-up centrally
3. Procure centralized back-up system
4. Implement centralized back-up system

b. **Estimated completion – June 2010**

3. Strategy – Disaster Recovery

a. Tasks

1. Identify/define current plan
2. Identify needed changes
3. Develop project plan
4. Implement project plan

b. **Estimated completion – December, 2007**

4. Strategy - Wireless

a. Tasks

1. Identify security risks
2. Develop a plan for addressing security risks
3. Identify and map out access points
4. Develop a procurement plan
5. Install access points

b. **Estimated completion – August 2008**

IX. Evaluation Plan

A. Summary of Results of Evaluation of Previous Three-Year Plan

1. Process

A group of media specialists and teachers reviewed and evaluated the progress of the current technology plan. This group targeted the initiatives set forth in the plan. A brief review follows of each goal.

- a. Access
- b. Learning & instructional strategies
- c. Staff development
- d. Communication
- e. Operations
- f. District support & coordination
- g. Safety

2. Evaluation

a. Access

1. Explore technology-based alternative learning opportunities through online learning.

We have a SPED supervisor on the state online learning board. There currently is exploration in the curriculum department on possible use of application.

2. Increase student use of online resources.

Using district and state resources well. Continue to inform new students and staff of available help.

3. Provide hardware and software to enhance instruction

Hardware and software saw no increases until 2007 with district and Microsoft dollars.

4. Ideal learning replacement

Skills Tutor was purchased and implemented in the spring of 2006.

5. ITV facility

Increased number of sections in same course offering (one course only).

- 6. Wireless technology**
One building increased/added. We need to resolve security issues.
- 7. Business partnerships**
The partnership with the City of St. Cloud has evolved into sharing of facilities, spare equipment and technical expertise.
- 8. After school labs**
Sustained in many buildings through various funding sources.

b. Learning and Instructional Strategies

- 1. Systems to manage data**
AIM's web K-2. Staff trained for data analysis.
- 2. Data warehousing**
A product has been purchased and a project plan is currently being developed.
- 3. NCLB assessment**
NWEA – being utilized at all secondary sites.
- 4. Student information system**
SASI maintained and upgraded as needed. Still do have PDA access for administrators.
- 5. Team planning**
Ongoing in all buildings. Q-comp has helped with this.
- 6. Team teaching**
Each site has a process for their own building.
- 7. On-site training**
Media Specialists continue to provide.
- 8. Electronic help desk**
Maintain ASAP program and call-in access.
- 9. Resources classroom teachers**
Recent upgrades to OS require more updates. It is even more necessary to have open communication with curriculum planning teams.

10. Assistive technology

The preview center continues to survey the students and families of the greater St. Cloud area. No immediate plans for upgrades or sustainability.

c. Staff Development

1. Software & emerging technologies

Happens as needed in buildings.

2. Data retreats

Amount of data has increased – what is needed are resource people to prepare analysis reports for staff as needed.

3. Training through SPRE (teacher induction)

Technology and media area now allocated two and a half hours of the eight-hour induction day. Scope of services and basic navigation of essential computer systems are addressed through this induction.

d. Communication

1. EEPR

Successful implementation
Web access from home.

2. Secondary grade book

Different needs in each building.
Continue to look at options.

3. NCLB assessment

NWEA

4. Staff web pages

Tool in place.
All staff trained.

5. Handhelds

Administrators using – curriculum staff also.

6. Parent portal

Implemented in three schools.
Need it to work with Grade book.

7. Weather forecasting

Weatherbug at Oak Hill, Apollo & Kennedy.

8. Web calendaring

ICal available.
Used extensively.

9. Translation

Progress has been slow due to the lack of availability of the most needed language – Somali. Discussions are taking place with a company that has been working on a federal grant for development of a Somali module.

e. Operations

1. Centralized phone trunking

This initiative is on hold at the current time. Redundancy may be more important than efficiency in this area.

2. Remote access

No progress in access to files from outside the district. E-mail access is still available. Progress is some areas of access by parents to records and accounts.

3. Intranet

StaffNet – consolidated staff and administration networks.

4. SMART Payroll

Implemented and updated as appropriate.

5. SMART HR

Continue to have issues with functionality and features.

6. SIF

Due to the reoccurring costs involved with this initiative, we continue to explore exporting/importing to/from systems. Most data can be transferred after hours due to lack of need for “real time” data.

7. Anti-Spam

Anti-spam device installed. Moved from software-based system to hardware based. Updated as needed.

8. Microsoft Office

Standardized on Office district-wide. Work on updating to newest version.

9. Digital imaging

Human Resources have conducted product demonstrations and plan to budget for this initiative during the term of the next technology plan (2007-2011).

10. Alternative facility use

Five facilities were closed and all programming was relocated to other facilities.

f. District Support and Coordination

1. Simplified technical assistance

Team approach implemented. Grant access to technical support groups. Allow cross training. "Ownership" of buildings has suffered.

2. Software management

ZEN not living up to expectations. Progress being made to insure licensing of software. Need plan for keeping software updated.

3. Partnerships

Technical staff has been encouraged to attend quarterly meetings with technical staff from other districts. More work needs to take place in this area so that this networking is embraced as a department.

4. Electronic timecards

This initiative was discontinued with the change of district leadership.

5. Energy management

A separate network has been established for computerized management of school energy systems. A staggered rollout is in place.

6. Tape back-ups

Take back-ups are building based. Tapes are rotated as necessary to conform to district back-up rotation.

7. Windows 2000

District standardized on Windows 2000. Need to move towards Windows XP. Vista research necessary.

8. OSX

All new Mac's purchased, have OSX. Older OS9 machines are being phased out.

9. **Netware 6**
District-wide upgraded to WW 6.1. Continue to research into newer versions of Netware.
 10. **Filtering**
Maintained filtering system. Updated as needed. Media specialists work with staff to monitor filters.
 11. **Spectrum circulation systems**
Spectrum system maintained. Research into new versions was done. Check into Spectrum's plan as to upgrades.
 12. **Continuous improvement & replacement**
Administration and School Board see a need for this, but no plan has been discussed to maintain and upgrade hardware and software.
- g. **Safety**
1. **Camera surveillance**
Current system is maintained. Systems in place do not meet the needs of the sites. Quality and coverage issues need addressing.
 2. **Building security**
All sites have updated (common) equipment installed. Audible alarms were added. Centralized monitoring was initiated as a budget reduction measure.
 3. **Card Access**
Card access researched and implemented as appropriate.
 4. **Pool monitoring**
This initiative was discontinued due to budget constraints.

B. Evaluation Strategy for 2007-2011 Technology Plan

1. **Process**
Three instruments will be used throughout the duration of this technology plan to evaluate and measure the progress of the plan. These three instruments are the technology survey, the technology forecast and the network audit.
2. **Evaluation Instruments**
 - a. **Technology Survey**

The technology survey will be administered to the staff every two years. The Assessment Coordinator will work with the Supervisor of Instructional Technology & Media in the development of the survey. The survey will stay as true as possible to the original instrument so progress can be measured. The data will be shared with all three-curriculum committees for guidance and direction in technology plan adjustments.

b. Technology Forecast

The forecast will be repeated with the media specialists on an annual basis. The technical staff under the guidance of the Supervisor of Instructional Technology and Media will generate instrument items. The purpose of this forecast is for the technical staff to get the “pulse” of instructional technology needs and visions. Technical staff will use data from the forecast at their weekly planning meetings to provide support for the instructional programs.

c. Network Audit

The network audit will be repeated at least once during the duration of this technology plan. The purpose of this audit is to measure progress in addressing the needs identified in the previous audit and to identify any new network security risks. The Supervisor of Instructional Technology and Media will work with the business director and comptroller in conducting the network audit as a part of the district financial audit.

3. Documentation

The Supervisor of Instructional Technology and Media will document all modifications and changes to this technology plan. These modifications and changes may be the result of budget adjustments, emerging technologies and/or results from the previously described evaluation instruments.