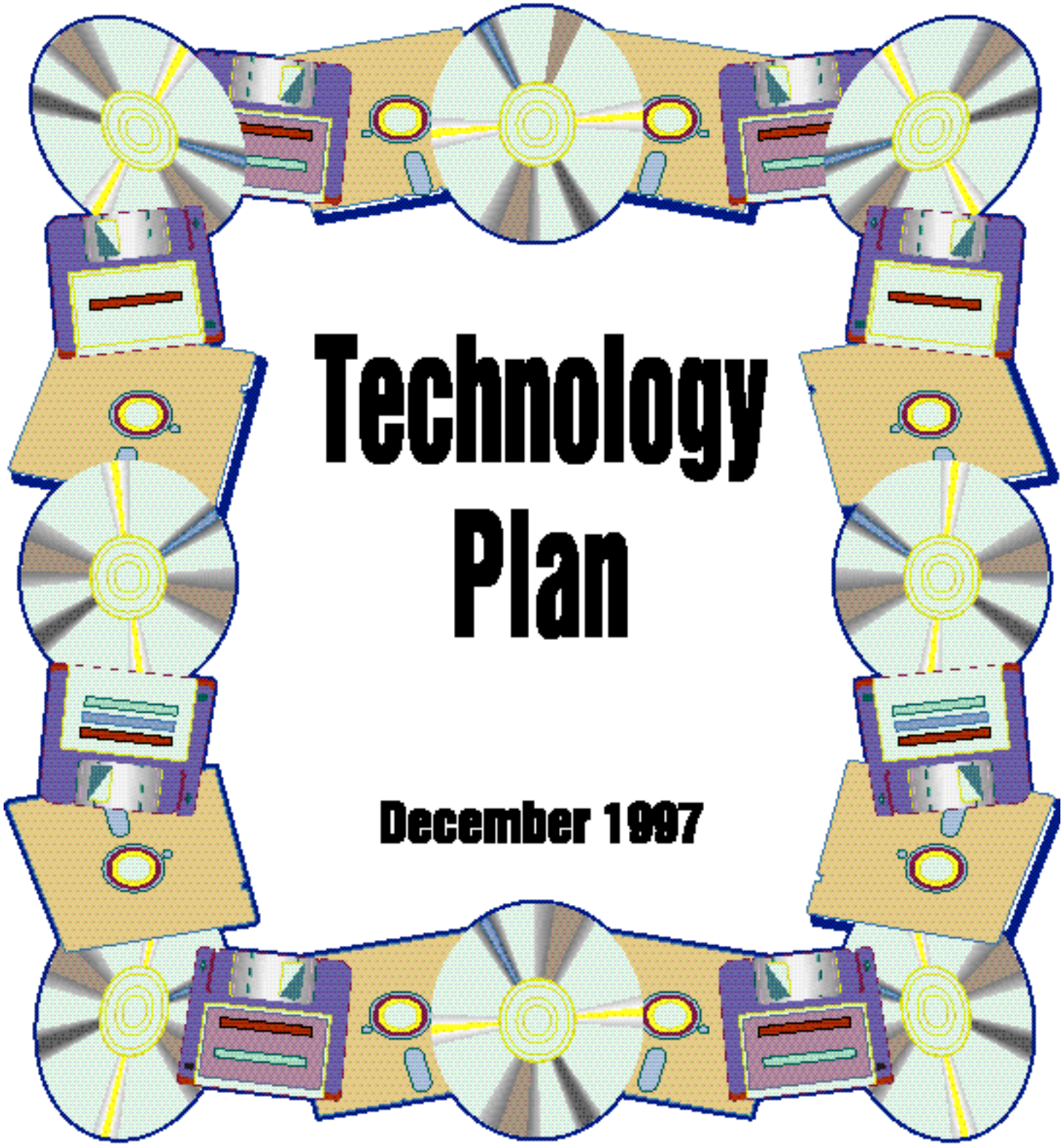
Anoka-Hennepin
Independent School District 11



Technology Plan

December 1997

Supercedes *Educating for the Future* report, March 1994

About this Plan

This document is an outgrowth of the formal technology plan developed by the Anoka-Hennepin School District and presented to the School Board January 11, 1993.

Many of the recommendations in the original document have been implemented, however, due to financial constraints, full implementation of the original plan was not possible.

This new plan follows the format outlined by the Minnesota Department of Children, Families and Learning.

This plan is intended to be a living document. It will be reviewed annually by the Technology Steering Committee and updated as needed.

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- Technology Steering Committee

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Foreword

Anoka-Hennepin School District 11 has always prided itself on providing students with a sound, comprehensive education that enriches their lives and prepares them for their future, whether it be a job, family, the military, a technical college, community college, or university.

The dramatic changes in technology have created dramatic changes in the workplace. While the number of jobs open to unskilled workers dwindles, the number of jobs available for people who possess excellent technical skills grows by leaps and bounds. The job opportunities today's kindergartners will find when they are ready to leave school will be vastly different from today. Thus the need for well-prepared students is greater now than ever before.

In addition to a sound background in traditional academics, today's students must be competent in using a range of technology in a variety of settings. Today, even entry level jobs require the use of computers, robotics, and other technology. In short, students must be as comfortable using a computer or other technology as they would using a pencil and paper. Students must have access to technology on a regular basis so that they can become proficient in using it in many ways. They must learn to use technology as a tool to access information and to efficiently develop dynamic, effective projects.

Teachers are the key to developing technology literacy in students. Therefore, they must have access to up-to-date technology and the appropriate training and technical support to take advantage of it. Technology a tool to assist teachers in many ways – from presenting lessons in new, dynamic ways, to assessing individual student needs and monitoring student progress. And, teachers must be able to prepare students by teaching the concepts and skills needed for them to understand and use technology effectively.

Technology is equally important to administrators and support staff in the school district. In these times of increasing demands on limited financial resources, it is essential that all staff have access to technology and the skills to use it to its best advantage. With this, staff at all levels can be more productive and efficient.

A brief history of technology implementation in Anoka-Hennepin Schools

Anoka-Hennepin Schools have used technology in the classroom for more than two decades. Classroom use began with terminals and timeshare access over modems in math classrooms. Today every regular classroom in the district is equipped with a large video monitor and computer workstation connected to a district network and internet access. In addition, each school in the district has a minimum of one classroom-sized microcomputer lab. Teachers and students are taking advantage of a wide variety of software packages to enhance and extend many curricular areas.

The early years

Early use of remote access computing, facilitated first by TIES and later by MECC, allowed the district to purchase access time on mainframe computers. This made it possible to teach programming at junior and senior high levels through the math curriculum.

By 1980, the first personal computers were introduced in the high schools. These Apple II computers (4K with no disk drives) laid the foundation for personal computing in Anoka-Hennepin schools.

Initial plan developed

With funding assistance from the Minnesota Department of Education, the district hired a full-time instructional technology consultant in 1982-83 to plan for the future of micro computing in the district. The result was a five-year plan for instructional technology. At the same time the district, again with state grant money, developed a plan to provide staff development and technical support. A mobile technology lab created from a converted transit bus brought training to schools throughout the district. This project, known as IN-TECH, also served several other school districts adjoining Anoka-Hennepin.

A task force composed of teachers, administrators and parents determined that the district should strive for a ratio of one computer for every 20 students and one computer for every 10 teachers. By fall of 1984 computer labs of 36 machines were placed in each junior high school to support a 20-day computer literacy curriculum through the math department.

At this time the district received a Model Schools Grant from IBM. This provided computer labs in two elementary buildings, one junior high, and one high school as well as a professional development center for staff training.

Computers were added more slowly in the elementary schools. By fall of 1988, each elementary building had a minimum of 30 computers that most used to form a “lab,” and keyboarding was implemented districtwide in the elementary curriculum.

Recognizing the need for technology support, the superintendent created two "special assignment" positions in 1987 to provide assistance to staff at the schools. These two positions eventually led to a full-time instructional technology coordinator and two technology consultants who oversaw the use of technology in school offices and classrooms. In addition, these positions were responsible for the "train the trainer" concept. Under this approach, each school had a designated computer coordinator or contact person who delivered on-site support. This person received additional training opportunities from the district staff.

School offices standardized on equipment and software for student management. A Professional Staff Development Center was developed to provide a facility where staff can receive training on a wide variety of software and hardware.

New "state of the art school" becomes technology model
When Oxbow Creek Elementary School opened its doors in 1987, it lived up to its billing as a "state of the art" technology school. Each classroom contained a computer/printer/phone system plus a 27" color RGB monitor that could project the computer signal. The school also included a fully-equipped 31-station computer lab, a five station mini-lab, a teacher project area with high quality printing, a video studio, editing suite and a building-wide video and computer network. This became the "unofficial" model for other buildings. The district administration set a goal of upgrading technology in all schools throughout the district so that every student and staff member would have access to the state of the art technology available at Oxbow Creek.

Technology study committee develops new plan
Beginning in February 1992, the district began a comprehensive study of technology use and developed a plan to guide both administrative and instructional use of technology. A task force of staff members worked with IBM through a study process known as the Application Transfer Study (ATS). The process resulted in development of the report, *Educating for the Future: Report of the Technology Study Committee*, which was presented to the Anoka-Hennepin School Board January 11, 1993.

The district has made great strides in meeting many of the goals set forth in the study report. Much of this was made possible thanks to citizen approval in June 1994 of a large bond issue that included $8.8 million to address technology needs.

With the passage of a bond referendum in June 1994 and an additional operating levy in fall 1995, the district had the financial resources to begin implementing some of the recommendations contained in the Technology Study Committee report. A major investment in hardware and software allowed the district to install a local area network (LAN) at all district sites and provide a computer in each classroom. Each building administrative

area was connected to the local area networks and all LANs were connected to the district WAN. This set in place an infrastructure that allows effective communication and sharing of information throughout the district. In addition to the bond initiative, office equipment was upgraded to the new standard established in the report in each school as well as the Educational Service Center and the Learning Center/Distribution Complex sites. Funding provided by the referendum as well as general funding allowed for additional staffing at the district level to support the operating requirements of WAN and LAN networks. The staffing consisted of four LAN coordinators and one WAN coordinator. Each school also identified one or more employees to serve as Technology Coordinators.

But even before the passage of the bond, the district was systematically expanding access to technology for staff and students. The district replaced outdated labs in all of the middle schools and three of the four high schools. In 1993, the district began the design and implementation of a wide area network (WAN). The WAN provided the infrastructure to connect all district sites and improve district communication with the implementation of districtwide e-mail software. This was funded with capital equipment dollars. Also, due to a reorganization of the district administrative structure, four technology facilitators were hired to help with instructional technology issues including building technical support, curriculum integration of technology and staff inservice.

Many schools also allocated their own funds and/or raised money to update and buy additional equipment – entire computer labs in some cases. Some schools also hired additional personnel – paraprofessionals and/or teachers – to help maintain equipment and provide inservice training for staff.

Funds from the 1994 bond issue had the greatest impact on extending technology throughout the district. The main objective of the bond issue revenue was to bring the level of technology in every classroom up to the level of the district's newest (at the time) and best-equipped school: Champlin Park High School. All regular classrooms are networked and equipped with a teaching station and large monitor. Each school has a video network with broadcast capabilities and all media centers have electronic checkout and card catalogs. All of the goals of the bond issue have been met. As a result of this and previous work, the district has addressed many issues identified as problems in the original ATS report.

New phone system enhances communication

In the spring of 1996, the district began implementing a new phone system districtwide at an estimated cost of $2.9 million dollars. The system provides a telephone in each classroom and access to voice mail by the district employees and parents. Currently there are 4,000 telephones on the system as well as 5,500 active voice mail accounts. As the system was installed, the staff in the district's Communications Technology department was increased to provide adequate support for the new phone and voice mail systems, e-mail and group calendaring.

Administrative Technology

Office personal computing began in earnest between 1983 and 1985 when IBM PCs (256K) were placed in each school office. These were used to facilitate word processing tasks and provide a simple database of student information downloaded from TIES. The single source of both software and support came from the TIES Coordinator. During this period, Apple II+ computers were used along with card readers to record student attendance electronically at all secondary schools. Now each school takes attendance electronically. All of the secondary and elementary sites use networks to share commonly-used data including discipline, scheduling, health and more. In addition, the district has a common pool of word processing, database, spreadsheet, desktop publishing, and telecommunications software to use on the Macintosh and MS Windows platforms.

At the Educational Service Center, 10 years ago fewer than 15 staff had personal computers on their desks. Now virtually every staff member in the central offices has a personal computer and every department has invested in computerized applications for their specific areas.

In the fall of 1995, the district began implementation of a districtwide financial system that provides each site with access to its financial information stored on the TIES mainframe at Roseville, MN. The system, which is supported by TIES and operates on both the MS Windows and the Macintosh platforms, includes the areas of accounts payable, accounts receivable, warehouse and inventory, general ledger and purchasing. With the implementation of this system, major changes to the staffing model in the business services area were implemented to ensure the most effective delivery of support needed for such a system. As of June of 1997, there were over 300 crossplatform stations on line using the financial system within the district.

Additional equipment and communication abilities were provided for the Transportation Department in 1996. This allowed the district's transportation contractor to access the district's transportation software and WAN to facilitate improved route planning and communication.

Upgrades to the payroll and human resources systems were implemented in 1997. Although these upgrades brought improvement to these systems at the district level, they have not been approved for district-wide access as of June 1997.

With the installation of the WANs and LANs, access to the district's student system was provided to the building sites.

During the 1997 fiscal year, the district began piloting new student administrative software. The purpose of the pilot is to find a student software package that will provide the district with a comprehensive system to manage student information, including census data, test data, attendance data and other student information. This information will form one database that will be accessible at each school as well as at the district level. It is intended that the student software will also be able to manage student data as required by the new Minnesota Graduation Standards.

Staff Development / Technical Support
Through the first years of the district's experience with technology, support and training were provided on a relatively unorganized basis. During the 1986-87 school year, staff development funds were allocated to individual schools which provided a technology training plan. As a result, a large number of staff became familiar with and began using technology in a wide variety of tasks.

A 1994 bond approved by voters brought increased technology to classrooms. The new equipment was phased in over a two-year period. During this time, training was offered to staff during and after the school day as well as on Saturdays and during summer vacation. More than 100 classes were held, training over 1500 staff in multiple applications and utilities. In addition, staff participated in over 1000 classes through the TIES workshop catalog.

Since the 1994-95 school year, staff development dollars were allocated to schools through a competitive "exemplary grant" process. Nine of 20 grants funded for that year first year went to technology-related projects. The following school year, 21 of the 41 grants were related to technology, and during the 1996-97 school year, 30 of 61 grants funded concentrated on technology. Most recently, 48 Staff Development Exemplary Grants were awarded within the district; 16 of these grants involved technology.

Section 1 Executive Leadership and Involvement

Leadership

Superintendent Dr. Roger Giroux and the School Board provide overall leadership for technology in the Anoka-Hennepin School District.

Patrick Plant, Director of Technology, coordinates all activities related to planning and implementing technology use. He reports to Dr. Lelia Redin, Associate Superintendent for Instructional Support.

See Section 11 for more details.

Organization

The Anoka-Hennepin School District serves a population of 186,775 living in all or parts of 13 municipalities in Anoka and Hennepin counties:

- Andover
- Anoka (all)
- Blaine
- Brooklyn Center
- Brooklyn Park
- Burns Township
- Champlin (all)
- Coon Rapids (all)
- Dayton
- Fridley
- Ham Lake
- Oak Grove Township
- Ramsey

The district enrolls more than 39,300 students in kindergarten through grade 12 plus an additional 500 students in pre-kindergarten programs for students with special needs. The district operates:

- 2 kindergarten centers
- 27 elementary schools (K-5)
- 7 middle schools (6-8)
- 4 comprehensive high schools (9-12)
- 3 alternative high school programs
- 3 centers for students (K-12) with special needs

The district is divided into four geographic clusters, each consisting of one high school and the middle and elementary schools that feed into it. Each cluster is served by a team that consists of an associate superintendent, two instructional facilitators, one technology facilitator, one community education representative, and one special education consultant.

Anoka-Hennepin is the third largest school district in Minnesota in terms of student enrollment. It operates the largest Community Education program in Minnesota.

Partnerships and Collaborations

Partnerships with other school districts

The district collaborates with Anoka County and with the school districts located within the county in a shared electronic data system. This collaboration facilitates communication between the county, schools and health care providers for families who need medical intervention, including immunization or referrals to a permanent health care provider. This collaboration is in its initial stages. It is anticipated that there will be further sharing of applications and data to facilitate the service to children with needs from both county and school services.

Currently, seven school districts in Anoka County use computer linkages for CARE Clinic scheduling. This enables quick and easy scheduling of appointments for immunizations and physical exams for children through the preschool screening office. In addition, the Anoka Area Interagency Early Intervention Committee is implementing procedures that allow school districts to share service plans, assessments and other information with all agencies serving a family.

Partnerships with parents

The Anoka-Hennepin School District considers parents as important partners in many areas, including technology.

Parents as partners in technology in the interest of student learning
Parents are important partners with the school district in providing computer learning opportunities. Everyday throughout the district, parents assist students in classrooms and labs, helping students improve their technological skills and basic skills of reading, math, history and writing through the use of the computer. Parents provide valuable input into district- and building-level technology planning processes, as members of technology or leadership teams.

Local parent groups have been indispensable partners in acquiring hardware and software for schools. As technology has grown in importance as an educational tool, the financial support of parent groups has grown. Parents often have expertise and experience in the workplace that helps them understand how crucial technological competence is to students' future work.

Parents as partners in the interest of adult learning
Some schools have made special efforts to open up their labs to parents during and after school, with assistance available, to encourage computer skills development, and also to demonstrate how computers are useful learning tools for students. Several schools also provide links on web sites to provide parents with valuable information about the Minnesota Graduation Rule and homework resources. The Parent Involvement Group is working on plans to provide parents a listing of resources to help with parenting questions and issues.

Parents as partners in the interest of a well informed public
The district and individual schools, sometimes with the help of parents, create and maintain internet webpages that provide information to parents as well as opportunities to connect with other related webpages. Various parent groups throughout the district are exploring the potential communication power of the web to share leadership strategies and experiences. Parents also communicate with school staff through e-mail. Parents' overriding concern with the district is that communication should continue to be improved. Technology holds many possibilities for enhancement of parents' one-to-one and group communication.

Partnership with Community

Adult Community Education provides a variety of MS Windows and Macintosh computer classes to the citizens, parents, and staff of the Anoka-Hennepin School District. More than 60 classes are offered each year, with a total enrollment of approximately 500. Along with basic computer skills classes, the Community Education department also offers computer classes for the deaf and hard-of-hearing, computer classes for seniors, and staff development classes.

In addition, Anoka-Hennepin Community Education sponsors both a Macintosh and MS Windows user group open to staff and the general public. Each group conducts monthly meetings which generally consist of a special focus topic planned by the group and a question-and-answer session regarding problem-solving, hints and tips.

A few ways that various schools in our district use technology in partnership with our communities include:

- Oxbow Creek elementary produces a weekly video on local cable regarding various projects in the classrooms. The presentation ties the projects directly to the Minnesota Grad Rules.
- Third grade students at McKinley Elementary have created a web page for the city of Ham Lake, Minnesota.
- The kindergarten classes at L.O. Jacob Elementary prepare a slide show for monthly parent nights.
- Students at Champlin Elementary regularly use the Internet to communicate with veterans at the local vets hospital.

Partnerships with other agencies

A number of Anoka-Hennepin schools have developed partnerships with agencies and businesses. Coon Rapids High School, for example, has been working with the Minnesota Department of Natural Resources (DNR) on several projects.

Beginning in 1994, the high school introduced Internet programming to students in grades 9 through 12 who took an elective computer programming course. To give students an opportunity to use their new skills on a "real life" project, the instructor requested state park brochures from the DNR. More than 90 students scripted text and converted graphics to develop web pages for each of the 68 Minnesota state parks. Impressed with the students' work, the DNR formed a partnership with the high school to publish the pages on Internet. The DNR introduced the web pages during the 1996 Minnesota State Fair. In the fall of 1996, a group of 45 students scripted the DNR nature store catalog for Internet. Another 50 students are now working with the DNR on ProjectWET. These projects can be viewed by visiting the *Student Projects* option on the Coon Rapids High School Internet site.

Section 2 Technology Planning Steering Committee

Technology Steering Committee Members

- Patrick Plant, Director of Technology, Chairperson
- Jill Bourman, Network Services Supervisor
- David Buck, Director of Business Services
- Bill Burk, Technology Facilitator, Anoka Cluster
- Dennis Carlson, Director of Community Education
- Joe DeMuth, Technology Facilitator, Blaine Cluster
- Tom Durand, Director of Administraive Services
- Jim Fennick, Principal, Sand Creek Elementary
- Linda Fenwick, Human Resources Manager
- Gordy Grant, Technology Facilitator, Coon Rapids Cluster
- Diane Hewitt, Technology Facilitator, Champlin Park Cluster
- Joe Karulak, Assistant Principal, Coon Rapids High School
- Cherie Peterson, Special Education Technology Consultant
- Lelia Redin, Associate Superintendent of Instructional Support
- Lee Whitcraft, Assistant Executive Director, TIES, and Anoka-Hennepin parent

Section 3 Overall Mission and Technology Vision Statement

The following mission statement was adopted by the Anoka-Hennepin School Board on March 13, 1995.

The mission of the Anoka-Hennepin School District is . . .

To provide all learners with equal opportunity for lifelong success by effectively using all District resources in providing a safe, respectful and challenging environment and by involving the entire community.

To provide all learners . . .

The District is committed to serving the needs of all learners.

. . . with equal opportunity . . .

Providing an equal opportunity for learning includes equitable access to the entire spectrum of District activities, including curriculum and instruction, extracurricular activities, facilities, and materials.

. . . for lifelong success . . .

The District is committed to meeting learners' current and future needs and implementing programs that help learners maximize their potential to succeed. This requires all engaged in the learning process to model global respect and lifelong learning.

. . . by effectively using all District resources . . .

The District recognizes that all resources must be used effectively to achieve the desired success of learners and to insure the future of the District.

. . . in providing a safe, respectful and challenging environment . . .

The role of the District and all participants engaged in the learning process is to create and maintain a safe, respectful, and challenging environment that provides learners with the best possible opportunity for achieving academic success.

. . . and by actively involving the entire community.

The collaborative partnership in the educational process includes the involvement of community at large, families, educators, and students who actively participate in ongoing, the effective communication and share the responsibility for increasing student achievement.

Definition of Technology

Technology encompasses the generation and distribution of information via voice, data, or video communications, including but not limited to:

- Interactive telecommunications equipment
- Computers and related materials
- Copying machines and other non-instructional equipment
- Assistive technology or equipment for instructional programs

The district's vision statement for technology is based on the following beliefs:

- Anoka-Hennepin strives to provide students with a comprehensive education that enriches their lives and prepares them for their future.
- Dramatic changes in the workplace and in the role technology plays in our lives make it essential that students become competent in using a range of technology in a variety of settings.
- Students must have access to technology on a regular basis so that they can become proficient in using it.
- Teachers are the key to developing technology literacy in students. Therefore, they must have access to up-to-date technology and the appropriate training and technical support to take advantage of it.
- Technology is equally important to administrative and support staff in the school district. In these times of increasing demands on limited financial resources, it is essential that all staff have access to technology and the skills to use it to its best advantage.
- The use of technology links district personnel to each other and to information they need to carry out their work efficiently and effectively.
- The use of technology meets a wide range of learner interests, abilities and learning styles and helps them access, analyze and use information to create quality products.
- The use of technology links students, staff and community to each other and to information, thus building communication and partnerships between the school, home, community and the world.
- Technology must be used appropriately and effectively in order to maintain a safe, respectful and productive environment.

The Anoka-Hennepin School District vision statement for technology is . . .

To provide equitable and effective use of existing and emerging technology to engage, challenge and nurture diverse learners in preparation for global citizenship in an increasingly complex information society.

Section 4 Needs Assessment to Meet the Technology Vision Statement

The items listed below were identified as needs in the 1993 technology plan. These needs were identified through a process that included surveys and focus group discussions. Many of these needs have been addressed.

	Identified need	Partially addressed	Completed
I. Administration/Communication Problems			
• Inability to access necessary and accurate information in a timely manner		■	
• Lack of a consistent and centralized data base	■		
• Lack of an effective data communication system district wide and within individual sites			■
• Inadequate support of current administrative hardware			■
• Inadequate support of current administrative software		■	
• Inconsistent and incompatible existing software and hardware		■	
• Lack of documentation of the current administrative hardware and software		■	
Recommendation 1 Establish a high-speed cost-effective interconnection between all district sites that possess the following characteristics:			
• Provides for the most cost effective transmission of data, voice and video signals			■
• Provides a gateway to interconnect with other organizations, both public and private			■
• Provides a method for parents to communicate with their child's teacher or other district staff			■
• Provides for sites to have access to district-wide information			■
• Provides for cost-effective communication between district sites			■
• Provides for online service and support of district site LANs			■
Recommendation 2 Establish a high-speed interconnection within all district sites that possess the following characteristics:			
• Provides for the most cost-effective transmission of data, voice and video signals			■
• Provides for the sharing of information between all users within the site			■
• Allows for the effective use of high-cost devices within the building i.e. (laser printer, scanners etc.)			■
• Provides for a lowest cost approach for acquiring software			■
• Allow for electronic communication between all users within the site			■
• Provides for a cost-effective method of communication with all other district sites			■

	Identified need	Partially addressed	Completed
Recommendation 3 Implement a central processing facility that will provide access to integrated database of information to all district personnel via a districtwide high speed data network. Some applications to be supported on this facility are:			
• Budgeting/forecasting	■		
• Accounting			■
• Accounts payable			■
• Accounts receivable			■
• Cash management	■		
• Purchasing			■
• Inventory/warehouse and building sites			■
• Fixed assets	■		
• Building and grounds	■		
• Transportation			■
• Payroll			■
• Employee benefits (sick leave, vacation, personal leave, miscellaneous)			■
• Employee contract negotiations	■		
• Personnel applications: (e.g., leaves of absence, substitute teachers, continuing education, assignments, history, evaluation, demographics)	■		
• Insurance: property/liability, employee groups, employees	■		
• Food service	■		
• Student/census information			■
• Assessment information/curriculum	■		
• Special education due process	■		
Recommendation 4 Implement distributed site-based student record management system. Applications to be supported include:			
• Demographics		■	
• Attendance		■	
• Scheduling		■	
• Grading/assessment		■	
• Individual Education Plans (IEP)/ Individual Learning Plans (ILP)/Child Study		■	
• Discipline		■	
• Office automations (i.e. lockers, fees, activities, etc.)		■	
Note: *The National Computer Systems (NCS) product, SASIxp, is now being piloted at six sites.*			

	Identified need	Partially addressed	Completed
Recommendation 5 Provide access to the following standardized set of productivity software accessible by all district personnel from their individual workstations.			
• Word processor		■	
• Spreadsheet		■	
• Desktop publisher		■	
• Database		■	
• Electronic mail		■	
• Meeting and facilities scheduler		■	
• Calendar		■	
Note: *For Anoka-Hennepin software standards, see appendix D.*			
Recommendation 6 Provide each site/department ready access to FAX technology.			■
Recommendation 7 Install additional telephone lines at each site so that staff/parents/community can easily and conveniently communicate.			■
Recommendation 8 Provide for the following administrative services/communications environments:			
Elementary Office Site (principal, clerical, health service, buildings and grounds, food service)			
• Networked computer per desk			■
• Laser printer			■
• Local printer			■
• Telephone per desk			■
• Fax machine			■
• Copy machine			■
• File server with LAN and WAN			■
Middle School Office (principal, assistant principal, clerical support, health service, counselors, buildings and grounds, food service)			
• Networked computer per desk			■
• Laser printer			■
• Local printer			■
• Telephone per desk			■
• Fax machine			■
• Copy Machine			■
• File server with LAN and WAN			■

	Identified need	Partially addressed	Completed
Senior High School Office, Anoka-Hennepin Alternative Program (principal, assistant principal, clerical support, attendance clerk, counselors/dean, health service, building and grounds, food service)			
• Networked computer per desk			■
• Laser printer per office area			■
• Local printer			■
• Telephone per desk			■
• Fax machine			■
• Copy machine			■
• File server with LAN and WAN			■
Learning Center/Distribution Center (special education, food service, buildings and grounds, technology repair, community education, purchasing/warehouse, staff development, technology/support, printing services, student services)			
• Networked computer per desk			■
• Laser printer per office area			■
• Local printer			■
• Telephone per desk			■
• Fax machines			■
• Copy machines			■
• File server with LAN and WAN			■
• Building network			■
Educational Services Center (finance/planning, transportation, governmental relations/census, operations and facilities, personnel, employee relations/insurance, student assessment, word processing, associate superintendents, superintendent, information systems, custodial/vehicle storage building, Indian education, curriculum)			
• Networked computer per desk			■
• Laser printer (one per 10 workstations)			■
• Local printer (one per 4 workstations)			■
• Telephone per desk			■
• Fax machine (two)			■
• Copy machine (one per department)			■
• File server with LAN and WAN			■
Problems/action items identified in 1997: • Inability to access all necessary and accurate information in a timely manner • Lack of long-range equipment replacement plan and funding • Incomplete districtwide video system • Lack of staffing for timely Internet web page support • Technology Steering Committee to meet and review all hardware and software for year 2000 compliance and require year 2000 compliance verification from all vendors			

	Identified need	Partially addressed	Completed
II. Classroom Instruction The items listed below were identified as needs in the 1999 technology plan: • Lack of technology available to meet individual student needs		■	
• Lack of equipment and courseware available for work with video productions for students and teachers		■	
• Lack of technology available to access needed reference and research information for students and staff		■	
Recommendation 1 Provide technology to the teacher for classroom instructional management functions such as attendance, grading, assessment and communications. • Software for classroom management such as gradebook, test generator, word processing, desktop publishing and attendance		■	
• On-site scanning based on classroom teacher needs			■

• Minimum dedicated on-site support
Note: *Certified technology support and tech support para positions have been established, but all funding for these positions has come from the site's FTE allotments (i.e., no additional money from the district).*
  • One half-time FTE certified technology support person
  • One half-time technical support para for each building
  • One certified FTE technology support person who supports one networked lab and 15 teacher workstations and one technical support para per lab
		■	

• Certified Technology Support Personnel work directly with instructors to provide integration of technology into the curriculum		■	
Note: *Four Instructional Facilitators have been created to work in integrating technology into the curriculum.*			
Recommendation 2 Provide technology to the teacher for instructional presentations.			■

	Identified need	Partially addressed	Completed
Recommendation 3 Continue to integrate additional technology in the classroom to meet group and individual student needs, and to maximize each student's learning potential. ***Note:*** *Sites have been installing networked computer labs with their own capital or with parent group money.* • Network all existing computer labs		■	
• Labs should contain adequate hardware to accommodate no more than one student per workstation		■	
• Labs must contain one teacher workstation for demonstration purposes		■	
• Install a minimum of one networked student workstation for every five students in each classroom	■		
• Utilize technology to help meet instructional goals		■	
• Utilize technology to meet specific and/or unique individual student needs	■		
• Provide software to meet district curricular goals		■	
• Additional technology support is needed as hardware, curriculum integration, and skill level of staff and students increase	■		
Recommendation 4 Provide technology to the student and teacher for work with video tape and video productions, so that student learning can be enhanced in the curriculum areas. • Fixed video cameras	■		
• Video controller	■		
• Video/audio editing deck	■		
• Microphones *(included with 2 way access video)*		■	
• Video overlay capabilities *(classroom computer has limited overlay capabilities)*		■	
• Appropriate lighting	■		
• Appropriate furniture	■		
• Students will utilize video to meet instructional goals		■	
Recommendation 5 Provide building wide reference and research information access for all students and staff. • Networkable CD-ROM reference materials		■	
Note: *All classroom machines have CD ROMs and the network provides access to any cross-platform CD ROM servers that the sites have purchased.*			

	Identified need	Partially addressed	Completed
Station Models:			
Classroom Student Station			
• Networkable notebook/desktop student computer	■		
• Access to local printing *(one printer for each four computers include the teacher's printer in this ratio)*	■		
• Appropriate furniture	■		
• Access to online database information	■		
Computer Lab (one lab per every 500 students) **Note:** *Each middle and high school has had 1 lab installed with district funds. More than 50% of the elementary schools have purchased labs with parent group money. All new construction has used this model.*			
• Networkable desktop student computers (30-35)		■	
• Access to local/network printing		■	
• Teacher Station			
◦ Computer system			■
◦ Group projection with color capabilities			
◦ Amplified audio speakers			
• Appropriate furniture		■	
Project Center (This model has been used by approximately 25% of the schools)			
• Still video camera *(one for every four classrooms)*	■		
• Color flatbed and handheld scanners	■		
• Mobile labs *(six to 12 notebook computers that can be moved)*	■		
• Camcorders *(three at elementary level, 16 at secondary level)*	■		
• VCRs - *(one for every four classrooms)*		■	
• Laser disk players *(one for every four classrooms)*	■		
• Color monitor with connectivity to notebook computer	■		
Video Studio			
• Video controller	■		
• Video/audio editing deck	■		
• Microphones *(included with 2-way access video)*		■	
• Video overlay capabilities *(classroom computer has limited overlay capabilities)*		■	
• Appropriate lighting	■		
• Appropriate furniture	■		
Media Center			
• Networkable CD-ROM reference materials		■	

Note: *All classroom machines have CD ROMs and the network provides access to any cross-platform CD ROM servers that the sites have purchased.*

	Identified need	Partially addressed	Completed
Software/Courseware			
• Videodisks *(acquired through the curriculum adoption process)*	■		
• Optical character recognition software		■	
• Gradebook/record keeping *(standalone software on a building basis)*		■	
• Test generator *(standalone software on a building basis)*		■	
• Management/attendance *(currently not being done in the classroom but being piloted at a number of sites)*		■	
• Building scheduling *(existing software is being used in the high schools and some of the middle schools. New software is being developed and piloted)*		■	
• Network			■
Problems/action items identified in 1997:			
• Continue to improve maintenance and repair of hardware and software			
• Develop a hardware replacement plan			
• Continue to develop better access to network information			
• Inconsistent delivery of curriculum electronically			
• Continue to develop on-site technology support			
• Develop technology to meet individual student needs			
• Continue to develop software to support the Graduation Rule			
• Lack of equipment and courseware available for work with video productions for students and teachers			
• 2-way video throughout the district			
• ITV			
• Lack of technology available to access needed reference and research information for students and staff			

	Identified need	Partially addressed	Completed
III. Staff Development/Technical Support			
Problems			
• Limited delivery systems for staff development – the number of courses and locations offered do not meet the demand for technology training		■	
• Insufficient staff to provide adequate numbers of course offerings		■	
• Limited support staff are expected to deliver staff development and support across all levels, from basic user support, low-level system maintenance, and low-level application specialization, to advanced planning and system design, research and development, as well as advanced application specializations		■	
• Insufficient time is allocated for staff development in the area of technology		■	
• Limited technology training is not provided when new hardware and software is delivered, when a new application is implemented, and/or when new curriculum is implemented			■
• No scope and sequence for technology training		■	
• Required technology competencies have not been developed and included in defined performance responsibilities		■	
• Increased staff frustration and diminished enthusiasm because of limited support and a limited staff development program in technology			■
• Lack of a clearly-defined priority system for the delivery of support			■
• Insufficient staff to provide adequate and timely support to sites		■	
• Current equipment is often under-utilized because of a lack of timely support		■	
• Difficulties for repair staff in determining their training needs due to lack of a long-range plan.		■	
• Difficulty for repair staff in keeping up to date and maintaining adequate supplies due to continual infusion of a variety of equipment.		■	

	Identified need	Partially addressed	Completed
Recommendation 1 A staff development program must be created and implemented whenever new hardware and software applications are introduced.			
• A staff development plan must accompany any requests for new hardware and/or software applications. This staff development plan must be approved by the appropriate technology staff members. In addition, this plan needs to be updated on a regular basis to insure continued use and success.			■
• On-site support staff hold initial responsibility for the staff development component which accompanies hardware and software purchases. This plan must follow approved guidelines as to timelines, resources needed, desired outcomes, etc.			■
Recommendation 2 The scheduling of staff development sessions is critical to achieve maximum participation. To ensure this success, in-service opportunities must be offered at times that meet the needs of all staff.			

• Staff development opportunities must be provided for district personnel when it is most beneficial to them. The following in-service times have been identified:
  • During the work day (62% of survey respondents)
  • During summer months (17% of survey respondents)
  • During regular staff development days (17% of survey respondents)
			■

• The decision making body at each site must provide release time for technology staff development and appropriate follow-up.			■

	Identified need	Partially addressed	Completed
Recommendation 3 Varied and ample opportunities need to be provided to meet the technology needs of district staff and programs.			
+ District-wide catalog listing all technology training, including building-level training; updated semi-annually		■	
+ Updated technology offerings district-wide and at the building level included in the Staff Focus	■		
+ Staff development programs will be provided to staff as new technologies are integrated into curriculum areas		■	
+ Staff development programs will be provided to staff as new technologies are integrated into administrative application areas		■	
+ Establish learner outcomes for all employee groups in the area of technology literacy	■		
+ Provide a scope/sequence plan that allows staff to move toward desired technology outcomes	■		
+ Staff development will be provided on- and off-site according to the needs of the staff (work site, 53% of survey respondents; Staff Development Center, 46% of survey respondents)		■	
Recommendation 4 Provide an incentive plan that rewards employees for achieving the district's technology learner outcomes for training and appropriate follow-up.			
+ Release time		■	
+ Graduate credit	■		
+ Continuing Education Units		■	
+ Earn hardware and or software 'tech points' for completing inservice in technology, i.e., tech points could be used to purchase additional hardware, software, and/or training for a site	■		
Recommendation 5 Establish a continuum of instruction that recognizes and defines appropriate levels and functions as they are related to staff development needs.			
+ Identify the level of staff development needed for each site and for each program *(See Appendix D, Sample Format for Identified Staff Development and Support)*		■	
+ Assign the responsibility of that staff development to appropriate support staff		■	

	Identified need	Partially addressed	Completed
Recommendation 6 Develop a staffing pattern that recognizes and defines appropriate levels and functions as they are related to technical support.			
+ Identify the level of support needed for each site and for each program		■	
+ Assign the responsibility of that support to appropriate support staff		■	
Recommendation 7 A support plan must be approved and implemented whenever new hardware and software applications are introduced.			
+ A support plan must accompany any requests for new hardware and/or software applications and be approved by the appropriate technology staff members. This plan needs to be updated on a regular basis to ensure continued use and success.			■
+ On-site support staff hold initial responsibility for the support component which accompanies hardware and software purchases. This plan must follow approved guidelines as to timelines, resources needed, desired outcomes, etc.		■	
Problems/action items identified in 1997:			
+ Limited support and staff development in video and other emerging technologies			

Section 5 Policy and Procedure Development and Revision

This section will describe:

- Acceptable Use Policy and Guidelines
- Data Disaster Recovery Plan
- Phone System Emergency Plan
- Problem Reporting and Change Request Flow for Voice Services
- Summer Equipment Storage/Maintenance Guidelines
- Summer Equipment Checkout Guidelines
- Technology Acquisition and Approval Procedures

5.1 **Acceptable Use Policy and Guidelines.** The Acceptable Use Policy and Guidelines was adopted by the School Board on September 11, 1995 and revised on December 15, 1997. This policy outlines the district policy for acceptable use of all technology resources, including:

Voice - including telephones and voice mail
Video - including television monitors
Data - including computers, servers, stored data
Network - both wide area and local area, including connections to other networks via TIES, and interdistrict e-mail
Internet use – including out-district e-mail and Internet browsing, and student e-mail accounts

A copy of the Policy is provided as Appendix B.

5.2 **Data Disaster Recovery Plan.** The Data Disaster Recovery Plan was implemented in November 1997. This document presents the district plan regarding antivirus software to prevent viruses from infecting district computers, storage of critical data, district-wide backup procedures, and recovery for servers and individual workstations. A copy of the Plan is provided as Appendix C.

5.3 **Anoka-Hennepin Software Standards.** The standards are provided as Appendix D.

5.4 **Phone System Emergency Plan.** The Phone System Emergency Plan was implemented in September 1997. This document provides information on system design parameters that preclude a phone system disaster. The plan outlines several scenarios in which the phone system could be inoperable, and how to use the system design to take care of these problems. The Plan is provided as Appendix E.

5.5 **Problem Reporting and Change Request Flow for Voice Services.** This flow chart provides detailed instructions for reporting problems with the phone system and taking care of change requests. This chart is provided as Appendix F.

5.5 **Summer Equipment Storage/Maintenance Guidelines.** This document is in memo form and is updated yearly and sent out to all buildings before the close of school. It outlines procedures for storing and maintaining computers, maintaining network equipment, repairing any equipment, maintaining/changing phones, and procedures for shutting down e-mail accounts during the summer. A copy of the 1997 guidelines is provided as Appendix G.

5.6 **Summer Equipment Checkout Guidelines.**
All property at a school site is managed by that site and the policy of allowing equipment to be taken off school property is a decision to be made by that site.

If it is decided as part of the site technology plan to allow technology equipment to leave that site, this Technology Checkout form may help manage the checkout of that technology equipment. The use of this form is optional. An individual school may develop its own form or procedure for checkout but should include the liability features listed on this form.

The employee who is checking out the equipment should:

- make sure that their homeowners insurance will cover the technology items. If not, they should check into a short-term policy with their insurance company to cover the equipment while it is off school property.

- allow ample time to return it to its proper location and make sure it is ready to do the function that it was purchased to do during a normal instructional day.

If equipment is checked out for extended periods of time (such as winter, spring or summer breaks), schools may also want to consider return timelines to allow the technology support people in a building to confirm that returned equipment is ready when school resumes. Technology Checkout Request Form is Appendix H.

5.7 **Technology Acquisition and Approval Procedures.** The procedures are provided as Appendix J.

Section 6 Objectives for the Use of Technology that Address Unmet Needs

This section addresses objectives for the use of technology that address unmet needs, by categories outlined in the *Technology Planning Guide for Minnesota Schools, School Districts, and Libraries.* For additional information, refer to pages 15-21, 22-26, and 27-31 of Appendix A.

6.1. Business and Reengineering Objectives.

- Provide appropriate site support for each building (technology coordinator, technology paraprofessional) to ensure uninterrupted use of hardware and software, as well as providing help for using technology in teaching.
- Provide staff development plans as a component of each new implementation of software or hardware. Each staff development plan must be submitted with the request for software or hardware and must be approved by appropriate technology staff. The plan will address these issues:
    1. Updating staff development plans on a regular basis to ensure continued use and success.
    2. Providing staff development inservice opportunities at times that are beneficial to staff, including during the work day, before and after the work day, during summer months, and during regular staff development days.
    3. Providing release time at each site for staff development and appropriate followup.
    4. Providing staff development on- and off-site according to the needs of staff.
    5. Making staff development available to new staff in a timely manner.
    6. Adequate communication of staff development opportunities to staff through flyers, Staff Focus, etc.
    7. Providing staff development programs as new technologies are integrated into curriculum and administrative application areas.
    8. Establishing learning outcomes for all employee groups in the area of technology literacy.
    9. Providing a scope/sequence plan that allows staff to move toward desired technology outcomes.
    10. Encouraging staff to create Individual Professional Learning Plans that incorporate technology.
    11. Developing an incentive plan that rewards staff for achieving the district's technology learning outcome and appropriate followup. Incentives could include: release time, graduate credit, continuing education credits, etc.
    12. Establishing a continuum of instruction that recognizes and defines appropriate levels and functions as they are related to staff development needs.
- Complete a self-assessment process in the area of technology at each site.

6.2 Technology Integration Program Objectives.

- Provide technology to the student and teacher for work with video tape and video productions, so that student learning can be enhanced in the curriculum areas.
- Provide technology in the classroom for delivery of instruction, to facilitate best practices in teaching and learning.
- Continue to integrate additional technology in the classroom to meet group and individual student needs, and to maximize each student's learning potential.

6.3 Technology Performance Objectives.

- Update a district-supported software and hardware list on a semi-annual basis.
- Develop and disseminate procedures for obtaining hardware/software support to staff.
- Develop and disseminate a composite list of all technology support services.
- Develop a network of, and funding structure for, on-site support.
- Support emerging technologies through staff development.
- Provide building-wide reference and research information access for all students and staff, extending access beyond the building media center.
- Establish a continuum of instruction that recognizes and defines appropriate levels and functions as related to technology support.

6.4 Year 2000 Compliance Objectives.

- Develop a new 5-year technology plan which includes procedures for ensuring the district is Year 2000 compliant.
- On or before December 1998, require letters of Year 2000 compliance from all hardware/software vendors that provide services/products to the district.

Section 7 Benefits to Stakeholders

The Technology Steering Committee will be producing a new 5-year technology plan beginning in the summer of 1998. The current benefits to stakeholders can be found in Appendix A, pages 32 and 33.

Section 8 Technology Inventory

The existing building Local Area Networks have been upgraded to Ethernet speed and provide for TCP/IP, IPX, and AppleTalk protocols. Workgroup switches have been added to all secondary sites to boost throughput on the Ethernet networks by supporting simultaneous, parallel conversations. These switches have solved congestion problems by dedicating 10Mbps to each segment and each high-bandwidth device. The physical RAM was upgraded on all district Workgroup Etherswitches during Fall 1997 in order to upgrade to the most current software version. Anoka-Hennepin has established one ATM test-bed site that allows a variety of PCs, workstations and servers to connect to a backbone at the full 155-Mbps line-speed. As bandwidth needs increase, the backbone speed can be upgraded to 622 Mbps. The school district annually purchases software maintenance to ensure upgrades to the SNMP software and other hardware/software standards.

During the summer of 1997, the Network Service Coordinators upgraded approximately 55 Novell NetWare file servers from Novell NetWare 3.X to InstraNetWare. Novell Directory Services were planned and implemented to allow for higher network efficiency. The file servers were upgraded with more physical RAM in order to upgrade to the new NOS.

The Upgrade of the Wide Area Network will be completed in three phases. The first phase dealt with the upgrade of Router Memory and IOS. The second phase was the implementation of T1 Circuits at our main sites and all elementary schools. The third phase addresses the new protocols available over WAN segments.

Phase One began in earnest in mid-September of 1997. A strategy meeting was held to create a complete implementation plan. The members of the panel consisted of the WAN Coordinator, Communications Technology Supervisor, US West Field Engineer, US West WAN Support Expert, US West Marketing Representative, TIES WAN Expert, and an independent consultant. The consensus of the meeting was to first upgrade all existing routers to a new IOS and more memory; second to reinforce our WAN infrastructure and upgrade all remaining elementary schools to T1 frame-relay connections and last to implement new WAN protocols.

All routers were upgraded to a new IOS and more memory was installed by mid November. By the end of December, the new T1 lines to the main hub sites and the elementary schools were in place. A meeting will be held in January to determine final router configuration.

A listing of the district inventory follows.

Technology Inventory

Anoka-Hennepin ISD #11 - Equipment Inventory

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Network	Adams	Hub	3Com	Super Stack	6
		Server	IBM	PC	1
		Mgmt Module	3Com	FMSII	2
		Tape Backup	HP	Surestore 6000	1
		UPS	APC	Smart UPS	1
		Fiber Transceiver	Digi	Fiber-10-base-T	1
		DSU/CSU	Memotec	ISU 5600	1
		Router	Cisco	2501	1
	Andover	Etherswitch	Cisco	Pro 16	2
		Server	Compaq	Prosignia 300	2
		Mgmt Module	3Com	FMSII	4
		Tape Backup	HP	Surestore 6000	1
		CSU/DSU	Kentrox	78222	2
		Hub	3Com	Super Stack	21
		Transceiver	Fiber	TP	6
		DSU/CSU	Kentrox	78222	1
		UPS	APC	Pro1400	1
		Router	Cisco	2501	2
	AHS	Etherswitch	Cisco	Catalyst 3000	2
		Router	Cisco	2501	1
		PS2	IBM	80	2
		Server	Compaq	Prosignia 300	1
		CD ROM Server	Meridian	914 CD-Server	1
		Server	Clone	—	1
		UPS	APC	Smart UPS	1
		Tape Backup	HP	Surestore 6000	1
		CSU/DSU	Kentrox	78222	1
		Hub	3Com	Super Stack	18
		Switch	3Com	Desktop	1
		Tranceiver	Fiber	TP	35
		UPS	APC	Pro1400	2
	Bell Center	Router	Cisco	2501	1
		Fiber Transceiver	Digi	Fiber-10-base-T	1
		Mgmt Module	3Com	FMSII	2
		UPS	APC	Smart UPS	1
		DSU/CSU	Memotec	ISU 5600	1
	BHS	Etherswitch	Cisco	Kalpana Ether Pro	1
		Etherswitch	Cisco	Catalyst 3000	1
		UPS	APC	Smart UPS	1
		CD ROM Server	Meridian	914 CD-Server	1
		Mgmt Module	3Com	FMSII	13
		Router	Cisco	2501	1
		Fiber Transceiver	Digi	Fiber-10-base-T	21
		Server	Compaq	Prosignia 300	1
		DSU/CSU	Kentrox	78222	1
		Hub	3Com	Super Stack	26

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Network (Contd.)	Champlin Elem.	Hubs	3Com	Super Stack	3
		Server	IBM	—	1
		Mgmt Module	3Com	FMSII	2
		Tape Backup	HP	—	1
		CD ROM Server	Meridian	914 CD-Server	1
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		UPS	APC	Smart UPS	1
		DSU/CSU	Memotec	ISU 5600	1
		Router	Cisco	2501	1
	CPHS	Etherswitch	Cisco	Catalyst 3000	2
		Server	Compaq	Prosigna 300	1
		Mgmt Module	3Com	FMSII	14
		UPS	APC	Smart UPS	1
		Fiber Transceiver	Digi	Fiber-10-base-T	13
		Server	Clone	—	1
		CSU/DSU	Kentrox	78222	2
		Tape Backup	HP	—	1
		Hub	3Com	Super Stack	30
		Router	Cisco	2501	1
	CRHS	Etherswitch	Cisco	Catalyst 3000	4
		Hub	3Com	Super Stack	28
		Server	Compaq	Proliant 1500	2
		Fiber Transceiver	Digi	Fiber-10-base-T	6
		CD ROM Server	Meridian	914 CD-Server	1
		Mgmt Module	3Com	FMSII	16
		CSU/DSU	Kentrox	78222	2
		Tape Backup	HP	Surestore 6000	1
		UPS	APC	Smart UPS	1
		Router	Cisco	2501	1
		ATM Switch	Cisco	1010	1
		Router	Cisco	4700	1
	CRMS	Etherswitch	Cisco	Kalapana Ether Pro	1
		Hub	3Com	Super Stack	24
		Server	Compaq	Prosigna 300	1
		Mgmt Module	3Com	FMSII	11
		UPS	APC	Smart UPS	1
		Fiber Transceiver	Digi	Fiber-10-base-T	6
		CSU/DSU	Kentrox	78222	2
		Tape Backup	HP	Surestore 6000	1
		Router	Cisco	2501	1
	Crooked Lake	Router	Cisco	2501	1
		Server	Compaq	Prosignia 300	1
		Mgmt Module	3Com	FMSII	2
		Tape Backup	HP	Surestore 6000	1
		DSU/CSU	Memotec	ISU 5600	1
		Hub	3Com	Super Stack	7
		UPS	APC	Pro1400	1
		Transceiver	Fiber	TP	2
	Cross Roads	Hub	3Com	Super Stack	3
		Server	Compaq	Prosigna 200	1
		Fiber Transceiver	Digi	Fiber-10-base-T	3
		UPS	APC	Smart UPS	1
		Mgmt Module	3Com	FMSII	3
		CSU/DSU	Kentrox	78222	2
		Tape Backup	HP	—	1
		Router	Cisco	2501	1

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Network (Contd.)	Dayton	Hub	3Com	Super Stack	5
		Server	Compaq	Prosigna 300	1
		UPS	APC	Smart UPS	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		DSU/CSU	Memotec	ISU 5600	1
		Tape Backup	HP	—	1
		Router	Cisco	2501	1
	Eisenhower	Server	Compaq	Prosignia 300	1
		DSU/CSU	Memotec	ISU 5600	1
		Fiber Transceiver	Digi	Fiber-10-base-T	4
		Mgmt Module	3Com	FMSII	3
		UPS	APC	Smart UPS	1
		Hub	3Com	SUPER STACK	5
		Router	Cisco	2501	1
	ESC	Etherswitch	Cisco	Kalapana Ether Pro	1
		Server	Compaq	Proliant 2500	1
		Access Server	Xyplex		1
		Hub	Xyplex		1
		Router	Cisco	2511	1
		Server	IBM	RS4000	1
		Firewall	Compaq	DeskPro 6000	1
		UPS	APC	Smart UPS	1
	Evergreen Park	Hub	3Com	Super Stack	5
		Server	Compaq	Prosigna 300	1
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		UPS	APC	Smart UPS	1
		Tape Backup	HP	—	1
		Router	Cisco	2501	1
	Franklin	Router	Cisco	2501	1
		Server	Compaq	Prosignia 300	1
		DSU/CSU	Memotec	ISU 5600	1
		Hub	3Com	Super Stack	5
		Transceiver	Fiber	TP	4
		UPS	APC	Pro1400	1
		Tape Backup	HP	Surestore 6000	1
	FMMS	Etherswitch	Cisco	Catalyst 3000	1
		Hub	3Com	Super Stack	13
		Server	Compaq	Prosigna 300	1
		CD ROM Server	Meridian	914 CD-Server	1
		Mgmt Module	3Com	FMSII	7
		Fiber Transceiver	Digi	Fiber-10-base-T	7
		UPS	APC	Smart UPS	1
		CSU/DSU	Kentrox	78222	2
		Tape Backup	HP	—	1
		Router	Cisco	2501	1
	Hamilton	Hub	3Com	Super Stack	6
		Server	Compaq	Prosignia 300	1
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		Tape Backup	HP	Surestore 6000	1
		UPS	APC	Smart UPS	1
		Router	Cisco	2501	1

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Network (Contd)	Hoover	Hub	3Com	Super Stack	7
		Server	IBM	PC	1
		Mgmt Module	3Com	FMSII	2
		CD ROM Server	Meridian	914 CD-Server	1
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		DSU/CSU	Memotec	ISU 5600	1
		Tape Backup	HP	Surestore 6000	1
		UPS	APC	Smart UPS	1
		Router	Cisco	2501	1
	JMS	Etherswitch	Cisco	Kalapana Ether Pro	1
		CD ROM Server	Meridian	914 CD-Server	1
		Hub	3Com	Super Stack	15
		Mgmt Module	3Com	FMSII	6
		Fiber Transceiver	Digi	Fiber-10-base-T	6
		UPS	APC	Smart UPS	1
		Server	Compaq	Prosigna 300	1
		Tape Backup	HP	—	1
		Router	Cisco	2501	1
	Jefferson	Server	Compaq	Prosignia 300	1
		DSU/CSU	Memotec	ISU 5600	1
		UPS	APC	Smart UPS	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		Hub	3Com	SUPER STACK	5
		Router	Cisco	2501	1
	Johnsville	Server	IBM	—	1
		DSU/CSU	Memotec	ISU 5600	1
		UPS	APC	Smart UPS	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	1
		Hub	3Com	Super Stack	5
		Router	Cisco	2501	1
	LO Jacob	Hub	3Com	Super Stack	11
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		Server	Compaq	Prosignia 300	1
		UPS	APC	Smart UPS	1
		DSU/CSU	Memotec	ISU 5600	1
		Server	IBM	PC	1
		Router	Cisco	2501	1
	LC/DC	Etherswitch	Cisco	Kalapana Ether Pro	1
		Etherswitch	Cisco	CPW16	1
		UPS	APC	Smart UPS	1
		Server	Compaq	Prosignia 300	1
		Mgmt Module	3Com	FMSII	8
		Fiber Transceiver	Digi	Fiber-10-base-T	18
		CD-ROM Server	SCSI Express	SCSI Express 7-bay	1
		Router	Cisco	4000	1
		Hub	3Com	Super Stack	25
	Lincoln	Router	Cisco	2501	1
		Server	Compaq	Prosignia 300	1
		Tape Backup	HP	Surestore 6000	1
		DSU/CSU	Memotec	ISU 5600	1
		Hub	3Com	Super Stack	5
		Transceiver	Fiber	TP	6
		UPS	APC	Pro1400	1

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Network (Contd)	Madison	Server	Compaq	Prosignia 300	1
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	1
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		Hub	3Com	SUPER STACK	4
		UPS	APC	Smart UPS	1
		Hub	3Com	Superstack	1
		Router	Cisco	2501	1
	McKinley	Server	IBM	—	1
		UPS	APC	Smart UPS	1
		Mgmt Module	3Com	FMSII	3
		Fiber Transceiver	Digi	Fiber-10-base-T	1
		DSU/CSU	Memotec	ISU 5600	1
		Hub	3Com	SUPER STACK	6
		Router	Cisco	2501	1
	Mississippi	Hub	3Com	Super Stack	8
		Server	Compaq	Prosignia 300	1
		CD ROM Server	Meridian	914 CD-Server	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		DSU/CSU	Memotec	ISU 5600	1
		Tape Backup	HP	Surestore 6000	1
		UPS	APC	Smart UPS	1
		Router	Cisco	2501	1
	Monroe	Hub	3Com	Super Stack	8
		UPS	APC	Smart UPS	1
		Server	IBM	—	1
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		Tape Backup	HP	—	1
		Router	Cisco	2501	1
	Morris Bye	Hub	3Com	Super Stack	7
		Server	IBM	PC	1
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	1
		Fiber Transceiver	Digi	Fiber-10-base-T	1
		Tape Backup	HP	Surestore 6000	1
		UPS	APC	Smart UPS	1
		Router	Cisco	2501	1
	NMS	Etherswitch	Cisco	Kalapana Ether Pro	1
		Server	Compaq	Prosignia 300	1
		Mgmt Module	3Com	FMSII	7
		Fiber Transceiver	Digi	Fiber-10-base-T	7
		DSU/CSU	Kentrox	78222	1
		UPS	APC	Smart UPS	1
		Hub	3Com	Super Stack	11
		Router	Cisco	2501	1

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Network (Contd)	OMS	Etherswitch	Cisco	CPW16	1
		Router	Cisco	2501	1
		Server	Compaq	Prosignia 300	1
		Server	Compaq	Prolient 1500	1
		Tape Backup	HP	Surestore 6000	1
		CSU/DSU	Kentrox	78222	1
		Hub	3Com	Super Stack	27
		Mgmt Module	3Com	FMSII	11
		CD ROM Server	Meridian	914 CD-Server	1
		Tranceiver	Fiber	TP	8
		UPS	APC	Pro1400	1
	Oxbow Creek	Etherswitch	Cisco	Kaplana	1
		Hub	3Com	Super Stack	8
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		UPS	APC	Smart UPS	1
		Server	IBM	—	1
		Tape Backup	HP	—	1
		Router	Cisco	2501	1
	Park View	Router	Cisco	2501	1
		DSU/CSU	Memotec	ISU 5600	1
		UPS	APC	Smart UPS	1
		Mgmt Module	3Com	FMSII	1
		Fiber Transceiver	Digi	Fiber-10-base-T	1
	Ramsey	Etherswitch	Cisco	CPW16	1
		Router	Cisco	2501	1
		CD ROM Server	Meridian	914 CD-Server	1
		Server	Compaq	Prosignia 300	2
		Tape Backup	HP	Surestore 6000	1
		DSU/CSU	Memotec	ISU 5600	1
		Hub	3Com	Super Stack	17
		Mgmt Module	3Com	FMSII	6
		Transceiver	Fiber	TP	5
		UPS	APC	Pro1400	3
	Riverview	Hub	3Com	Super Stack	6
		Server	Compaq	Prosignia 300	1
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		UPS	APC	Smart UPS	1
		Tape Backup	HP	—	1
		Router	Cisco	2501	1
	RMS	Etherswitch	Cisco	Catalyst 3000	1
		Server	Compaq	Prosignia 300	1
		DSU/CSU	Kendrox	78222	1
		Mgmt Module	3Com	FMSII	4
		Fiber Transceiver	Digi	Fiber-10-base-T	8
		UPS	APC	Smart UPS	1
		Hub	3Com	Super Stack	10
		Router	Cisco	2501	1

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Network (Contd)	Sand Creek	Server	IBM	—	1
		DSU/CSU	Memotec	ISU 5600	1
		Hub	3Com	Super Stack	6
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		UPS	APC	Smart UPS	1
		Router	Cisco	2501	1
	SMS	Etherswitch	Cisco	Pro 16	2
		Server	Compaq	Prosignia 300	2
		Tape Backup	HP	Surestore 6000	1
		Router	Cisco	2501	2
		DSU/CSU	Kentrox	78222	2
		Hub	3Com	Super Stack	9
		Mgmt Module	3Com	FMSII	4
		Transceiver	Fiber	TP	10
		UPS	APC	Pro1400	1
	Sorteberg	Hub	3Com	Super Stack	6
		Server	Cisco	Prosignia 300	1
		Server	IBM	PC	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		DSU/CSU	Memotec	ISU 5600	1
		Tape Backup	HP	Surestore 6000	1
		UPS	APC	Smart UPS	1
		Router	Cisco	2501	1
	University	Server	Compaq	Prosignia 300	1
		DSU/CSU	Memotec	ISU 5600	1
		UPS	APC	Smart UPS	1
		Mgmt Module	3Com	FMSII	2
		Fiber Transceiver	Digi	Fiber-10-base-T	2
		Hub	3Com	Super Stack	5
		Router	Cisco	2501	1
	Washington	Router	Cisco	2501	1
		Server	Compaq	Prosignia 300	1
		Tape Backup	HP	Surestore 6000	1
		DSU/CSU	Memotec	ISU 5600	1
		Mgmt Module	3Com	FMSII	1
		Hub	3Com	Super Stack	6
		Tranceiver	Fiber	TP	2
		UPS	APC	Pro1400	1
	Wilson	Router	Cisco	2501	1
		Server	IBM	—	1
		Tape Backup	HP	Surestore 6000	1
		DSU/CSU	Memotec	ISU 5600	1
		Hub	3Com	Super Stack	4
		Mgmt Module	3Com	FMSII	1
		Transceiver	Fiber	TP	8
		UPS	APC	Pro1400	1
	Spare	Etherswitch	Cisco	Catalyst 3000	1

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Phone	Adams	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	38
	Andover	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	17
		Analog Phone	Nortel	8003	107
	AHS	Phone Switch	Nortel	Option 11 - 3 cab	1
		Digital Phone	Nortel	2616/2008	36
		Analog Phone	Nortel	8003	235
	Bell Center	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	6
		Analog Phone	Nortel	8003	36
	BHS	Phone Switch	Nortel	Option 11 - 3 cab	1
		Digital Phone	Nortel	2616/2008	35
		Analog Phone	Nortel	8003	206
	Champlin	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	7
		Analog Phone	Nortel	8003	31
	CPHS	Phone Switch	Nortel	Option 11 - 3 cab	1
		Digital Phone	Nortel	2616/2008	27
		Analog Phone	Nortel	500	269
	CRHS	Phone Switch	Nortel	Option 11 - 3 cab	1
		Digital Phone	Nortel	2008/2616	37
		Analog Phone	Nortel	8003	192
	CRMS	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	25
		Analog Phone	Nortel	8003	117
	Crooked Lake	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	43
	Crossroads Alt	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	10
		Analog Phone	Nortel	8003	41
	Dayton	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	45
	Eisenhower	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	6
		Analog Phone	Nortel	8003	40
	ESC	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	111
		Analog Phone	Nortel	8003/500	14
	Evergreen Park	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	40
	Franklin	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	33
	FMMS	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	19
		Analog Phone	Nortel	8003	95
	Hamilton	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	37

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Phone (Contd)	Hoover	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	10
		Analog Phone	Nortel	8003	44
	JMS	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	22
		Analog Phone	Nortel	8003	98
	Jefferson	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	43
	Johnsville	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	42
	LO Jacob	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	42
	LC/DC	Phone Switch	Nortel	Option 81C PBX	1
		E911 Equipment	DTI		1
		Voice Mail	Nortel	Mermail Rel 10	1
		Digital Phone	Nortel	2616/2008	124
		Analog Phone	Nortel	8003	114
	Lincoln	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	38
	Madison	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	42
	McKinley	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	50
	Mississippi	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	35
	Monroe	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	49
	Morris Bye	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	39
	NMS	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	19
		Analog Phone	Nortel	8003	108
	OMS	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	21
		Analog Phone	Nortel	8003	110
	Oxbow	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	11
		Analog Phone	Nortel	8003	62
	Park View ECC	Digital Phone	Nortel	2616/2008	7
		Analog Phone	Nortel	8003	20
	Ramsey	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	19
		Analog Phone	Nortel	8003	85
	Riverview	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	9
		Analog Phone	Nortel	8003	38

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
	RMS	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	22
		Analog Phone	Nortel	8003	91
	Sand Creek	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	39
	SMS	Phone Switch	Nortel	Option 11 - 2 cab	1
		Digital Phone	Nortel	2616/2008	15
		Analog Phone	Nortel	8003	67
	Sorteberg	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	11
		Analog Phone	Nortel	8003	31
	Univ Ave	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	34
	Washington	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	8
		Analog Phone	Nortel	8003	30
	Wilson	Phone Switch	Nortel	Option 11 - 1 cab	1
		Digital Phone	Nortel	2616/2008	10
		Analog Phone	Nortel	8003	41
Computer	Adams	Pre Mac LC	Apple	IIE, IIC, IIGS	54
		LC Series	Apple	LC 580	2
		Power PC 5200	Apple	Power PC 5200	55
		Power PC's	Apple	6100	4
		Printer	—	Dot Matrix	4
		Monitor	JVC	27"	32
	Andover	Pre Mac LC	Apple	IIGS	69
		II, III, ci, si, vx, fx	Apple	ci, LC II	4
		LC Series	Apple	LC 580	2
		Power PC 5200	Apple	Power PC 5200	121
		Power PCs	Apple	6100, 7200	6
		Power PC 5400	Apple	Power PC 5400	5
		Powerbooks	Apple	PB 190	2
		PC	IBM/Compaq	—	3
		Monitor	JVC	27"	51
		Printer	—	Dot Matrix	41
		Printer	—	Ink Jet	19
		Printer	—	Laser	6
	AHS	Pre Mac LC	Apple	IIE, SE, SE 30	35
		II, III, ci, si, vx, fx	Apple	IIci, si	3
		LC Series	Apple	LC, LC II, LC III	36
		LC 475, 630	Apple	LC 475, LC 630	13
		Power PC	Apple	6100	19
		Quadra	Apple	630	31
		Power PC 5200/5260	Apple	Power PC 5200	134
		PC	IBM/Compaq	—	125
		Monitor	JVC	27"	130
		Printer	—	Dot Matrix	12
		Printer	—	Ink Jet	11
		Printer	—	Laser	21
	Bell Center	Pre Mac LC	Apple	II +, II GS, SE	11
		LC Series	Apple	LC II, LC III	13
		LC Series	Apple	LC 580	2
		Power PC 5200	Apple	Power PC 5200	12
		Powerbooks	Apple	PB 520, 160, 150	3
		Monitor	JVC	27"	12
		Printer	—	Dot Matrix	8
		Printer	—	Laser	3

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer (Contd)	BHS	Pre Mac LC	Apple	IIE, IIGS, SE, Classic	81
		IIc, II+, IIsi	Apple	IIc, II+, IIsi	14
		LC Series	Apple	LC, LC II, LC III	92
		LC Series	Apple	LC 475, 580	36
		PC	IBM/Compaq	—	65
		Printer	—	Dot Matrix	52
		Printer	—	Ink Jet	10
		Printer	—	Laser	19
	Champlin Elem.	Pre Mac LC	Apple	IIE, IIGS, II+, SE	42
		IIc	Apple	IIc	9
		LC II	Apple	LC II	1
		LC Series	Apple	LC 475, 580, 630	6
		Power PC	Apple	5200, 5400, 5260, 6100	34
		PC	IBM/Compaq	—	3
		Monitor	JVC	27"	26
		Printer	—	Dot Matix	17
		Printer	—	Ink Jet	2
		Printer	—	Laser	2
	CPHS	PC	IBM/Compaq	—	48
		Pre Mac LC	Apple	SE, Classic, Classic II	3
		SI, CI	Apple	si, ci	66
		LC Series	Apple	LC II, LC III	286
		LC Series	Apple	LC 475, 580	9
		Quadra	Apple	660, 800, 840	5
		Power PC	Apple	5200, 5300, 5260	129
		Power PC	Apple	6100	1
		Monitor	JVC	27"	2
		Printer	—	Dot Matix	12
		Printer	—	Ink Jet	32
		Printer	—	Laser	28
	CRHS	PC	IBM/Compaq	—	108
		Pre Mac LC	Apple	IIGS, Classic, SE	81
		LC Series	Apple	LC II	49
		LC Series	Apple	LC 475, 580, 630	58
		Quadra	Apple	660	1
		Power PC 5200	Apple	Power PC 5200	105
		Power PC 5400	Apple	Power PC 5400	3
		Power PC	Apple	6100	3
		Portables	Apple	PB 140	16
		Monitor	JVC	27"	104
		Printer	—	Dot Matix	16
		Printer	—	Ink Jet	9
		Printer	—	Laser	15
	Crossroads	Power PC	Apple	5500, 5400, 5200	49
		PC	Compaq	—	2
		Monitor	JVC	27"	17
		Printer	—	Laser	4
	CRMS	PC	IBM/Compaq	—	23
		Pre Mac LC	Apple	II+, IIGS, SE, Classic	140
		IIc, IIsi	Apple	IIc, IIsi	22
		LC Series	Apple	LC, LC III	158
		LC Series	Apple	LC 475, 580, 630	13
		Power PC 5200	Apple	Power PC 5200	65
		Power PC	Apple	6100	3
		Power PC 5300	Apple	Power PC 5300	1
		Monitor	JVC	27"	68
		Printer	—	Dot Matix	25
		Printer	—	Ink Jet	9
		Printer	—	Laser	10

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer (Contd)	Crooked Lake	PC	IBM/Compaq	—	3
		Pre Mac LC	Apple	IIE, IIGS, Classic,SE	35
		LC Series	Apple	LC II	2
		LC Series	Apple	LC 475, 580, 630	6
		Power PC	Apple	6100	2
		Power PC	Apple	5200, 5400	61
		Monitor	JVC	27"	34
		Printer	—	Dot Matrix	8
		Printer	—	Laser	3
	Dayton	PC	IBM/Compaq	—	5
		Pre Mac LC	Apple	IIE, IIGS, II+, SE,	22
		IIc	Apple	IIc	21
		LC Series	Apple	LC II, LC III	6
		LC Series	Apple	LC 580	5
		Power PC	Apple	5400, 5260, 5200	34
		Portables	Apple	PB 180	1
		Power PC	Apple	6100	1
		Monitor	JVC	27"	34
		Printer	—	Dot Matix	13
		Printer	—	Laser	3
	Eisenhower	LC Series	Apple	LCII, 475, 580	8
		Quadra, Centres	Apple	—	2
		Power PC	Apple	5200, 5260, 5400, 6100	37
		PC	Compaq	—	4
		Printer	—	Laser	3
		Printer	—	Ink Jet	13
		Monitor	JVC	27"	28
	Enich KC	PC	IBM/Compaq	—	1
		Pre Mac LC	Apple	IIE, IIGS, II+	19
		IIc, IIsi	Apple	IIc, IIsi	5
		LC Series	Apple	LC II	1
		LC Series	Apple	LC 475	1
		Power PC 5200	Apple	Power PC 5200	12
		Monitor	JVC	27"	12
		Printer	—	Dot Matix	9
		Printer	—	Laser	1
	ESC	PC	IBM/Compaq	—	77
		PC Portable	IBM	Thinkpad	19
		Pre Mac LC	Apple	SE	5
		IIci, IISsi, IIcx	Apple	IIci, IIsi, IIcx	7
		Mac Portables	Apple	PB 180, 190, 520, 1400	16
		Quadra	Apple	630	3
		LC Series	Apple	LC II, LC III	3
		Power PC	Apple	6100, 5200, 54,00, 5500	48
		Printer	—	Laser	12
	Evergreen	PC	IBM/Compaq	—	5
		Pre Mac LC	Apple	IIE, IIGS, Classic	37
		IIci	Apple	IIci	2
		LC Series	Apple	LC II	2
		LC Series	Apple	LC 475, 630, 640	5
		Power PC	Apple	5200, 5260, 5400	38
		Monitors	JVC	27"	38
		Printer	—	Dot Matix	15
		Printer	—	Ink Jet	1
		Printer	—	Laser	3

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer (Contd)	Franklin	PC	IBM/Compaq	—	5
		Pre Mac LC	Apple	IIE, IIGS, SE, Classic	42
		LC Series	Apple	LC, LC II	3
		LC Series	Apple	LC 475, 580, 630	7
		IIc	Apple	IIc	1
		Portable	Apple	PB 150	1
		Power PC	Apple	5200, 5260, 6100	35
		Monitor	JVC	27"	26
		Printer	—	Dot Matix	7
		Printer	—	Laser	4
	FMMS	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIE, II+, IIGS, SE,	81
		IIc, si	Apple	IIc, IIsi	29
		LC Series	Apple	LC, LC II, LC III	41
		LC Series	Apple	LC 475, 580, 630	23
		Portables	Apple	PB 150	1
		Power PC	Apple	5200, 5260, 7200	69
		Quadra	Apple	950	1
		Monitor	JVC	27"	64
		Printer	—	Dot Matix	52
		Printer	—	Ink Jet	6
		Printer	—	Laser	13
	Hamilton	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIE, IIGS, SE, Classic	22
		IIc	Apple	IICc	14
		LC Series	Apple	LC II	19
		LC Series	Apple	LC 475, 630	5
		Quadra	Apple	660, 950	2
		Power PC 5200	Apple	Power PC 5200	1
		Power PC	Apple	6100	1
		Printer	—	Dot Matix	17
		Printer	—	Ink Jet	1
		Printer	—	Laser	3
	Hoover	PC	IBM/Compaq	—	4
		Pre Mac LC	Apple	IIE, IIGS, II+, SE,	35
		IIc	Apple	IIc	3
		LC Series	Apple	LC II, LC III	45
		LC Series	Apple	LC 475, 580	7
		Quadra	Apple	660, 950	2
		Power PC	Apple	5200, 5300, 5400, 6500, 5260	68
		Portable	Apple	5300	2
		Portables	Apple	PB 150	1
		Power PC	Apple	6100	3
		Monitor	JVC	27"	32
		Printer	—	Dot Matrix	11
		Printer	—	Ink Jet	4
		Printer	—	Laser	3

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer (Contd)	JMS	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIGS, SE, Classic	75
		si	Apple	si	2
		LC Series	Apple	LC II, LC III	11
		LC Series	Apple	LC 475	10
		Power PC	Apple	5200, 5260, 5400, 6100	114
		Portable	Apple	520C	1
		Monitor	JVC	—	65
		Printer	—	Dot Matrix	23
		Printer	—	Laser	14
	Jefferson	PC	IBM/Compaq	—	3
		Pre Mac LC	Apple	IIE, IIGS, SE, Classic	70
		IIc	Apple	IIc	12
		LC Series	Apple	LC II	1
		LC Series	Apple	LC 580, 638	5
		Quadra	Apple	660	1
		Power PC 5200	Apple	Power PC 5200, 5260	31
		Power PC 5400	Apple	Power PC 5400	2
		Power PC	Apple	6100	3
		Monitor	JVC	27”	35
		Printer	—	Dot Matrix	22
		Printer	—	Ink Jet	2
		Printer	—	Laser	3
	Johnsville	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIE, IIGS, II+, SE	44
		IIc	Apple	IIc	6
		LC Series	Apple	LC II, LC III	2
		LC Series	Apple	LC 475, 580	42
		Power PC 5200	Apple	Power PC 5200	37
		Portable	Apple	PB 180	1
		Monitor	JVC	27”	29
		Printer	—	Dot Matrix	19
		Printer	—	Laser	1
	LO Jacob	PC	IBM/Compaq	—	61
		Pre Mac LC	Apple	IIE, IIGS, II+, SE	45
		IIc	Apple	IIc	4
		LC Series	Apple	LC II	1
		Power PC 5200	Apple	Power PC 5200	25
		Power PC	Apple	6100, 7200	3
		Portables	Apple	PB 170	1
		Monitor	JVC	27”	28
		Printer	—	Dot Matix	13
		Printer	—	Ink Jet	2
		Printer	—	Laser	3
	LC/DC	PC	IBM/Compaq	—	12
		Pre Mac LC	Apple	Classic, SE, SE 30	30
		IIcx, IIfx, IIci	Apple	IIcx, IIfx, IIci	13
		Quadra	Apple	610, 650	3
		LC Series	Apple	LC II, LC III	4
		LC Series	Apple	LC 475, 580	8
		Portables	Apple	150, 160, 170, 180	49
		Centris	Apple	650	1
		Power PC	Apple	6100	12
		Power PC 5200	Apple	Power PC 5200	25
		Monitor	JVC	27”	12
		Printer	—	Dot Matix	5
		Printer	—	Laser	7

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer	Lincoln	PC	IBM/Compaq	—	2
(Contd)		Pre Mac LC	Apple	IIE, IIGS, SE,	23
		IIc	Apple	IIc	10
		LC Series	Apple	LC 475, 575, 580, 640	36
		Power PC 5200	Apple	Power PC 5200	22
		Power PC 5300	Apple	Power PC 5300	3
		Power PC	Apple	6100	1
		Monitor	JVC	27"	25
		Printer	—	Dot Matrix	13
		Printer	—	Ink Jet	3
		Printer	—	Laser	3
	Madison	Pre Mac LC	Apple	IIGS, IIE, II+, SE	37
		LC Series	Apple	LC II, LC, III	12
		LC Series	Apple	LC 475, 580	6
		Power PC 5200	Apple	Power PC 5200	32
		Power PC 5400	Apple	Power PC 5400	7
		Portables	Apple	PB 150, 160	2
		Monitor	JVC	27"	31
		Printer	—	Dot Matix	19
	McKinley	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIE, IIGS	27
		IIc	Apple	IIc	14
		LC Series	Apple	LC II, LC III	4
		LC Series	Apple	LC 475, 580	10
		Power PC 5200	Apple	Power PC 5200	34
		Power PC	Apple	6100	2
		Portable	Apple	PB 150	1
		Monitor	JVC	27"	33
		Printer	—	Dot Matrix	12
		Printer	—	Ink Jet	7
		Printer	—	Laser	1
	Mississippi	PC	IBM/Compaq	—	3
		Pre Mac LC	Apple	IIGS, IIE, SE, Classic	19
		IIc	Apple	IIc	36
		LC Series	Apple	LC II	1
		LC Series	Apple	LC 475, 520, 550, 630	14
		Power PC 5200	Apple	Power PC 5200, 5260	52
		Quadra	Apple	610	1
		Power PC	Apple	7200	2
		Monitor	JVC	27"	27
		Printer	—	Dot Matix	22
		Printer	—	Ink Jet	1
		Printer	—	Laser	2
	Monroe	PC	IBM/Compaq	—	1
		Pre Mac LC	Apple	IIE, IIGS, SE	67
		si, cx	Apple	si, cx	2
		LC Series	Apple	LC II, LC III	5
		LC Series	Apple	LC 475, 580, 630	10
		Quadra	Apple	660	5
		Power PC 5200	Apple	Power PC 5200	47
		Power PC	Apple	6100	3
		Portable	Apple	PB 165c	1
		Monitor	JVC	27"	45
		Printer	—	Dot Matix	19
		Printer	—	Laser	5

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer (Contd)	Morris Bye	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIE, II+, IIGS, SE,	30
		IIc	Apple	IIci, IIxv	2
		LC Series	Apple	LC II	2
		LC Series	Apple	LC 475, 575	6
		Power PC	Apple	5200, 7200, 5400, 5260	70
		Portable	Apple	PB 170	1
		Monitor	JVC, Panasonic	27”	33
		Printer	—	Dot Matix	9
		Priner	—	Ink Jet	3
		Printer	—	Laser	3
	NMS	Pre Mac LC	Apple	IIE, IIGS, SE, Classic	87
		IIc, si	Apple	IIc, si	32
		LC Series	Apple	LC II, LC III	10
		LC Series	Apple	LC 475, 580	40
		Power PC 5200	Apple	Power PC 5200, 5260	69
		Power PC 5400	Apple	Power PC 5400	1
		Power PC	Apple	6100, 7200	3
		Portables	Apple	PB 150, 5300	2
		Printer	—	Dot Matix	36
		Printer	—	Ink Jet	3
		Printer	—	Laser	9
	OMS	Power PC 5200	Apple	Power PC 5200	204
		Power PC	Apple	6100	4
		Monitor	JVC	27”	83
		Printer	—	Ink Jet	21
		Printer	—	Laser	7
	Oxbow Creek	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIE, IIGS, SE	97
		LC Series	Apple	LC II	1
		LC Series	Apple	LC 475, 520, 630	7
		Quadra	Apple	660	1
		Power PC 5200	Apple	Power PC 5200	51
		Printer	—	Dot Matrix	60
		Printer	—	Laser	4
	Park View ECC	PC	IBM/Compaq	—	2
		LC Series	Apple	LC 580	25
		Power PC 5200	Apple	Power PC 5200	19
		Power PC	Apple	6100	4
		Portable	Apple	PB 5300	2
		Monitor	JVC	27”	21
		Printer	—	Dot Matix	2
		Printer	—	Ink Jet	13
		Printer	—	Laser	2
	Ramsey	Pre Mac LC	Apple	IIE, IIGS	38
		IIc	Apple	IIc	36
		LC Series	Apple	LC II	3
		LC Series	Apple	LC 630	1
		Power PC	Apple	5200, 5500, 6500	107
		Power PC	Apple	6100	3
		Portable	Apple	PB 170, 1400cs	4
		e-mates	Apple	300	8
		Monitor	JVC	27”	66
		Printer	—	Dot Matix	14
		Printer	—	Ink Jet	10
		Printer	—	Laser	7

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer (Contd)	Riverview	PC	IBM/Compaq	—	1
		Pre Mac LC	Apple	IIE, IIGS, Classic, SE	21
		IIci	Apple	IIci	1
		LC Series	Apple	LC II, LC III	3
		LC Series	Apple	LC 475, 580	7
		Power PC 5200	Apple	Power PC 5200	30
		Power PC	Apple	6100, 7200	2
		Portable	Apple	PB 170	1
		Monitor	JVC	27"	27
		Printer	—	Dot Matix	8
		Printer	—	Ink Jet	2
		Printer	—	Laser	3
	RMS	LC Series	Apple	LC II, LC III	49
		LC Series	Apple	LC 475, 630	13
		Power PC 5200	Apple	Power PC 5200	96
		Monitor	JVC	27"	56
	Sand Creek	PC	IBM/Compaq	—	40
		Pre Mac LC	Apple	IIE, IIGS, SE, Classic	17
		IIc	Apple	IIc	6
		LC Series	Apple	LC II	2
		LC Series	Apple	LC 475	8
		Power PC 5200	Apple	Power PC 5200	74
		Power PC	Apple	6100	6
		Monitor	JVC	27"	35
		Printer	—	Dot Matrix	2
		Printer	—	Ink Jet	7
		Printer	—	Laser	3
	SMS	PC	IBM/Compaq	—	5
		Pre Mac LC	Apple	Classic, IIE, IIGS, SE	15
		IIc, si, vx	Apple	IIc, si, vx	2
		LC Series	Apple	LC 475, 580, 630	48
		Power PC	Apple	5200, 5400	57
		LC Series	Apple	LC II	44
		Portable	Apple	PB 150, 1400	6
		Monitor	JVC	27"	55
		Printer	—	Dot Matrix	8
		Printer	—	Ink Jet	2
		Printer	—	Laser	13
	Sorteberg	PC	IBm/Compaq	—	3
		Pre Mac LC	Apple	IIE, II+, IIGS, SE 30	49
		LC Series	Apple	LC II, LC III	3
		LC Series	Apple	LC 475, 550	4
		Power PC 5200	Apple	Power PC 5200, 5260	22
		Quadra	Apple	610	1
		Power PC	Apple	7200	1
		Portable	Apple	PB 165	1
		Monitors	JVC	27"	25
		Printer	—	Dot Matix	14
		Printer	—	Ink Jet	2
		Printer	—	Laser	4

Technology Inventory continued

Equipment Category	Location	Description	Manufacturer	Model	Quantity
Computer (Contd)	University Avenue	Pre LC	Apple	IIe, c, gs	55
		LC Series	Apple	LC, LCII, 475	8
		Power PC	Apple	5200, 6100	26
		Monitor	JVC	27”	25
		Printer	—	Dot Matrix	10
		Printer	—	Ink Jet	29
		Printer	—	Laser	2
	University Creek Alternative	LC 5400 Series	Apple	LC5400	5
		LC Series	Apple	LCII, IIcx	8
		Quadra	Apple	660	1
		Printer	Apple	Laser	1
	Washington	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	Classic, IIE, IIGS, SE	36
		IIc, cx	Apple	IIc, cx	5
		LC Series	Apple	LC II	3
		LC series	Apple	LC 475, 580	10
		Power PC 5200	Apple	Power PC 5200	30
		Power PC 5400	Apple	Power PC 5400	27
		Power PC	Apple	7200	1
		Monitor	JVC	27”	25
		Printer	—	Dot Matix	7
		Printer	—	Laser	4
	Wilson	PC	IBM/Compaq	—	2
		Pre Mac LC	Apple	IIE, IIGS, SE	59
		LC Series	Apple	LC, LC II	2
		LC Series	Apple	LC 475, 580, 630	7
		Power PC 5200	Apple	Power PC 5200, 5260	30
		Power PC 5400	Apple	Power PC 5400, 5500	34
		e-mate	Apple	300	3
		Monitor	JVC	27”	31
		Printer	—	Dot Matrix	21
		Printer	—	Laser	2

Section 9 Technology Models

Technology Models for our district are provided as Figures 9-1 and 9-2.

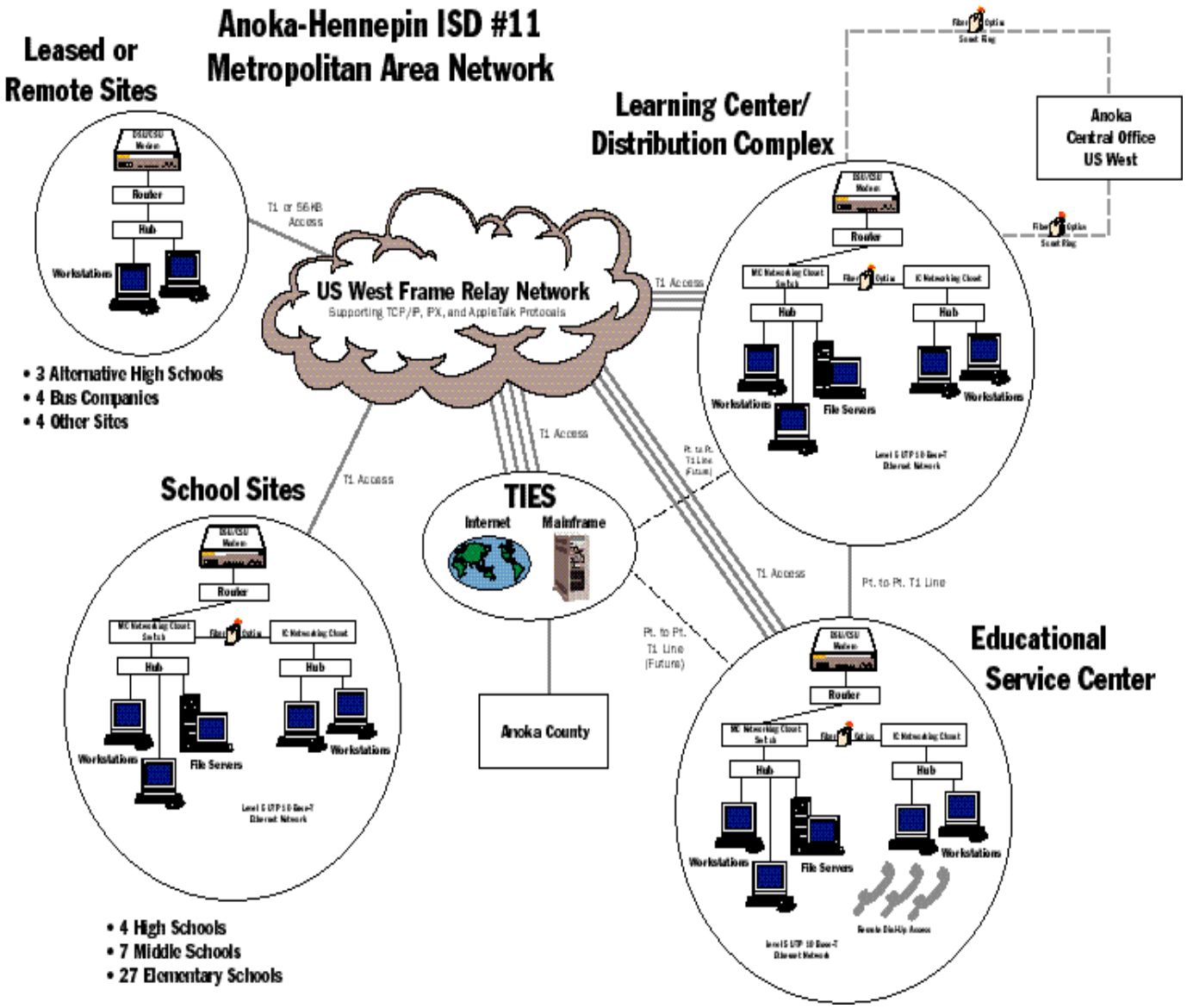
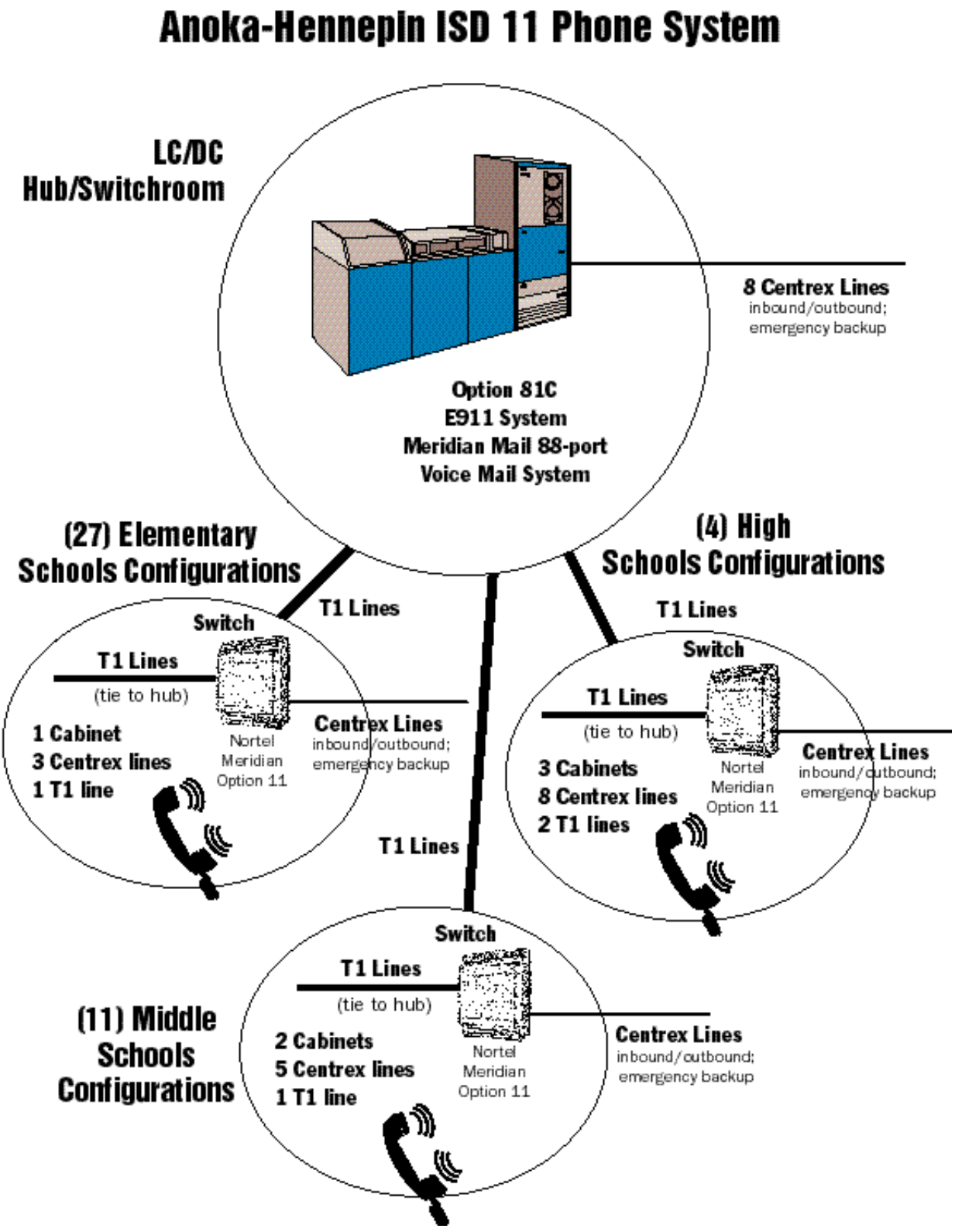


Figure 9-1

Figure 9-2


Anoka-Hennepin ISD 11 Phone System
LC/DC
Hub/Switchroom
8 Centrex Lines
inbound/outbound;
emergency backup
Option 81C
E911 System
Meridian Mail 88-port
Voice Mail System
(27) Elementary
Schools Configurations
T1 Lines
Switch
T1 Lines
(tie to hub)
1 Cabinet
3 Centrex lines
1 T1 line
Nortel
Meridian
Option 11
Centrex Lines
inbound/outbound;
emergency backup
(4) High
Schools Configurations
T1 Lines
Switch
T1 Lines
(tie to hub)
3 Cabinets
8 Centrex lines
2 T1 lines
Nortel
Meridian
Option 11
Centrex Lines
inbound/outbound;
emergency backup
T1 Lines
Switch
T1 Lines
(tie to hub)
(11) Middle
Schools
Configurations
2 Cabinets
5 Centrex lines
1 T1 line
Nortel
Meridian
Option 11
Centrex Lines
inbound/outbound;
emergency backup

Section 10 Technology Requirements

Our current technology requirements are outlined in detail in Appendix A, pages 75 through 83. These requirements will be updated with the implementation of our new 5-year technology plan, which will be revised starting in the summer of 1998.

Section 11 Technology Support Staff and Skills

Appendix A contains recommendations regarding an organizational structure necessary to adequately support the expanded use of technology called for in the report. Because the report required a phase-in over four years, the organizational structure has evolved as the various phases have been implemented.

In 1993, the Technology Steer Committee (TSC) became a decision-making body charged with the responsibility of planning and implementing the recommendations contained in the report. As part of its responsibility, the committee established procedures to assure the compatibility of hardware and software purchases with the requirements of the plan.

In 1994, the position of Director of Technology Design and Development was established to implement the recommendations of the plan that were funded by the 1994 bond issue. This person served as chairman of the Technology Steering Committee.

At approximately the same time, the district restructured its central instructional support division. Four new instructional facilitator positions where established. These positions provide training and support for teachers using technology in the classroom.

To coordinate the administrative software and hardware implementation, the existing position of Educational Information Services Coordinator was reconfigured and the position of Coordinator of Management Information and Administrative Technology was established. This position reported to the Associate Superintendent of Planning and Finance and later to the Director of Business Services. A series of users groups were established by the Coordinator of Management Information and Administrative Technology to deal with the problem of standardizing the district's productivity software and developing a set of standardized district technology policies. (See Figure 11-2)

In 1997, the positions of Director of Technology Design and Development, and Coordinator of Management Information and Administrative Technology were abolished. The position of Director of Technology was established at this time. This new position is under the direction of the Associate Superintendent for Instruction. It directs both the administrative and instructional areas of technology.

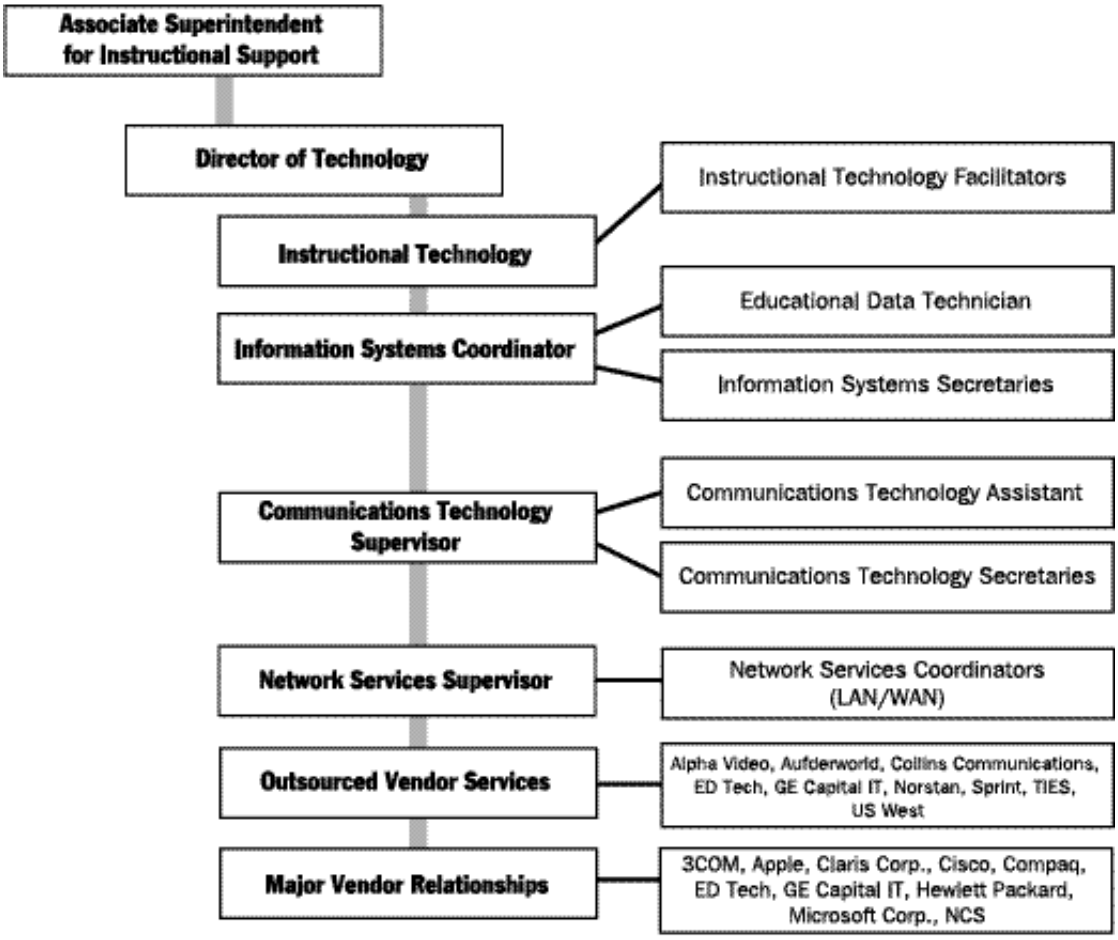
Figures 11-1 and 11-2 provide the district's Technology Organizational Structure and Technology Leadership Structure, respectively.

Technology position descriptions, including qualifications and skills required, are provided as Appendix I.

For additional information, refer to pages 34 through 46 of Appendix A.

Figure 11-1

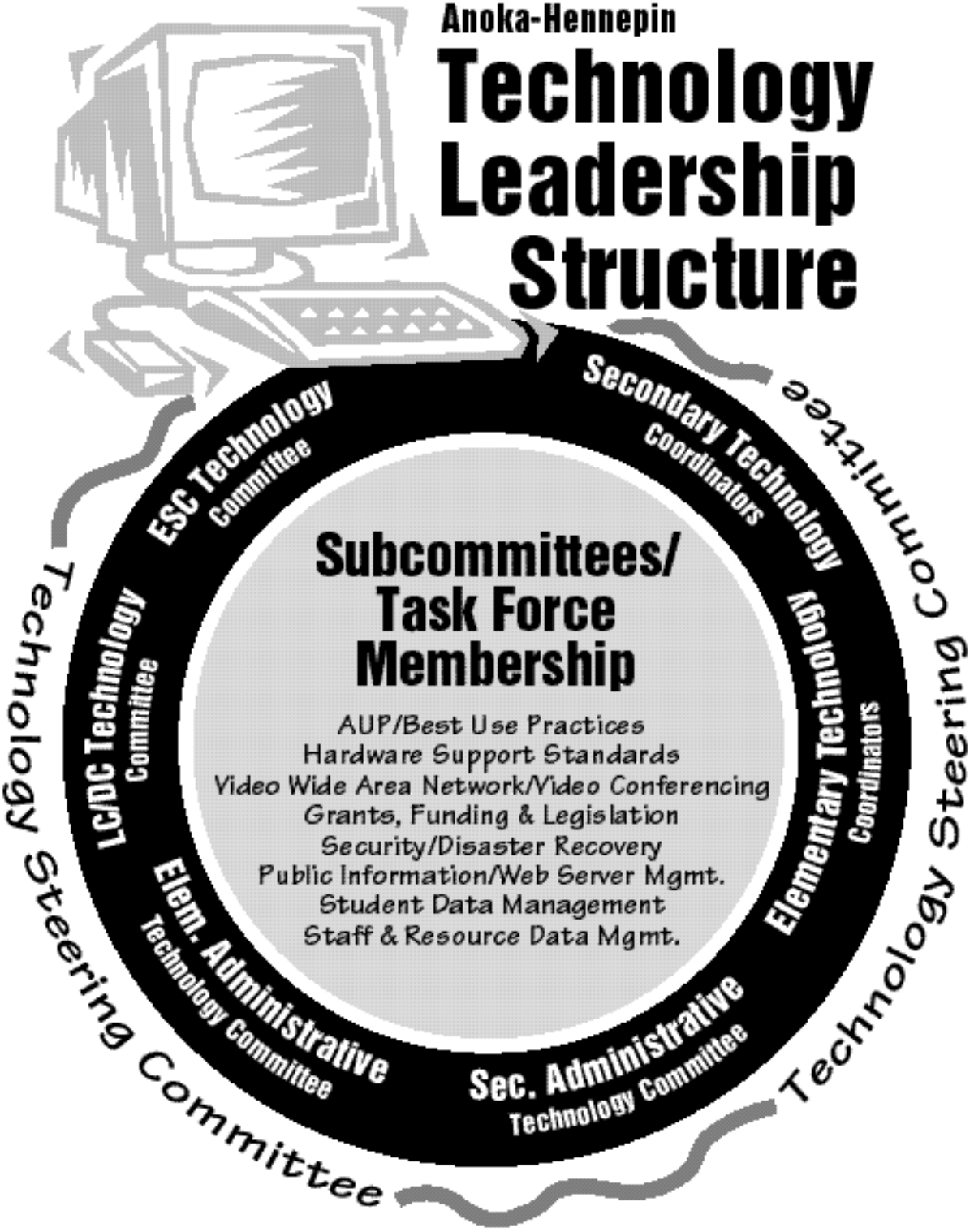
Technology Organizational Structure



Other technology-related services/personnel not supervised by the Director of Technology

- **Audio/Electronic/Computer Repair**
- **Media Services**
- **Print Shop/Graphic Design**
- **Technology Coordinators/Contacts for Buildings and Departments**

Figure 11-2


Anoka-Hennepin
Technology Leadership Structure
Technology Steering Committee
Technology Steering Committee
ESC Technology Committee
Secondary Technology Coordinators
Elementary Technology Coordinators
Sec. Administrative Technology Committee
Elem. Administrative Technology Committee
LC/DC Technology Committee
Subcommittees/ Task Force Membership
AUP/Best Use Practices
Hardware Support Standards
Video Wide Area Network/Video Conferencing
Grants, Funding & Legislation
Security/Disaster Recovery
Public Information/Web Server Mgmt.
Student Data Management
Staff & Resource Data Mgmt.

Section 12 Educational Development and Training

The first years of the district's experience with technology, support, and training were provided on a relatively unorganized basis. Initial training generally was provided with no provision for follow-up and growth.

During the 1986-87 school year, staff development funds were allocated to individual schools that provided a technology training plan. This proved so successful that the practice was continued the following year. A great number of staff became familiar with and began using technology for a wide variety of professional tasks. They also provided increased student exposure and hands-on experiences with technology.

With the budget reductions of the early 1990's, the practice of sponsoring individual building or department plans was significantly curtailed. The amount of technology hardware and software applications increased dramatically during this period, while the district resources for support increased only marginally.

With the creation of a district technology plan in 1993-94, came a strong, unified commitment to provide adequate resources for staff development and support. To achieve the vision of creating a technologically literate staff, a wide variety of teaching opportunities were made available. Courses for the neophyte as well as the advanced learner were provided year round at a multitude of sites. Participation exceeded expectations, as staff found the "client centered" program very appealing.

The authors of the original plan understood that user support was essential if the technology plan was to be successful. Subsequently, support for the new and expanding technologies increased significantly. This included personnel to support both local and wide area networks, phone, data, video hardware, and the broad spectrum of software. Uniform building support still remains somewhat of a problem because the decision to provide the resources is made at the individual site level.

As 1997 comes to a close, it's evident that this component has been successful in meeting its original goals. However, there is still much to be accomplished! The ever changing face of technology places greater demands and strains on the existing system.

As mentioned in other sections of this document, our educational development, training, and support plan will be updated with production of our new 5-year technology plan, which we will start working on next summer. For additional information regarding our training and support programs, refer to pages 27 through 31 and 73 and 74 of Appendix A.

Section 13 Technology Operations Management Requirements

As discussed in Section 5, the district has plans for physical security and data disaster recovery. These plans are provided as Appendices G and C.

In addition, a user support desk is available through the district's Communications Technology Department. The support line is 506-HELP. Currently, the HELP desk provides a ticketing system for network services work, e-mail change/problem support, and Phone/Network wiring support. To use the system, building technology contacts call 506-HELP to request services. Communications Technology staff will try to help fix the problem over the phone – if it is beyond the operator's capability, a ticket is generated and sent to the right person to fix the problem. Future use of the HELP line will include staff to answer general questions from all district staff regarding use of various district-supported software.

Hardware and software upgrades, as well as hardware and software maintenance contracts are reviewed annually by the Technology Steering Committee, which prioritizes the district needs and recommends which requests can be funded.

For additional information regarding technology operations management requirements, refer to Appendix A, pages 47 through 49.

Section 14 Budget Development and Planning for Funding

Budget development and planning for funding is addressed in detail in Appendix A, pages 75 through 83.

Section 15 Action Plan

Year	Objective	Status
Annually	Maintain existing hardware/software at high quality support level (Goal – as close to "zero" downtime as deemed cost-effective)	Ongoing
1996-97	Install PBX phone system and voice mail at 42 sites in the district	Completed July 1997
1996-99	Implement pilot site for evaluating NCS SASIxp software for student data management and grad rule compliance. Test Graduation Standards recordkeeping compliance and implement SQL server, district integration.	2 pilot sites implemented 1996-97; now have 11 sites piloting sofware
Annually	Upgrade classroom computer standardized software • more than 2000 classroom computers involved • upgraded annually during the summer • upgraded RAM on each computer August 1997	Ongoing
1997	Implement firewall to create Intranet and to protect data integrity on district TCP/IP servers	Completed November 1997
1997	Implement Novell 4.11 directory services structure district-wide • included upgrading software, RAM, and hard drives on all servers	Completed fall 1997
1997	Implement video conferencing center; will be available for all sites in Winter 1998	Completed October 1997 at AHS
1997	Implement a HELP line and job ticketing database for repair ticketing	Implemented October 1997
1997	Upgrade software for all media centers in district	Completed Summer 1997
1997-98	Submit site-based technology grant applications for all sites (Successful with 21 sites being funded.	Completed June 1998
1997/98	Pilot Smart Filter Internet caching, monitoring, and filtering software	On schedule – software being tested at multiple sites
1997/98	Upgrade all elementary school data lines from 56K to T1 Add DS3 point-to-point backbone between hubs	Completed Sept. 1998
1997/98	Continue to improve maintenance and repair of hardware and software	On schedule
1997/98	Continue to develop better access to network information	Completed winter 1998
1997/98	Continue to develop on-site technology support	Ongoing
1997/98	Upgrade district routers/implement new protocol throughout district	Completed spring 1998
1997/98	Continue growth of dialup access services	Completed – provided access terminal server in spring 1997; added lines in summer 1997
1998	Streamline staff data management process	On schedule - task force was formed in January 1998
1998	Review needs for support and staff development in video and other emerging technologies including Internet web page	Completed spring 1998
1998	Continue development of custom internal training templates by leadership structure for budgeting, staffing, boundaries, finance system use	Ongoing
1997-99	CNE certification obtained by all network services staff	On schedule – spring 1999
1999	Complete documentation of all wiring closets	On schedule – winter 1998

Section 15 Action Plan continued

Year	Objective	Status
1997-99	Work with Student Data Management Task Force to identify short and long term methods for managing grad standards data. Pilot at CRHS.	On schedule – Spring 1999
1998/99	Update 5-year Technology Plan (including comprehensive needs assessment and quality control discussion groups)	On schedule – June 1999
1998/99	Implement a long-range equipment replacement plan and funding	On schedule – June 1999
Monthly	Technology Steering Committee meets for monitoring and evaluating purposes	Meets at least once per month, other technology subcommittees meet at least every other month (Figure 11-2)
1998-00	Implement the elementary lab project designed to provide one multimedia, networked lab in each elementary building.	On schedule
1999-00	Implement the secondary lab project which will ensure that each middle school will have two multimedia, networked labs. Additionally, the lab resource inequities at the high schools will be addressed.	On schedule
1998-00	Continue implementation of staff development, targeting staff and student technology skill standards.	Ongoing
1999	Implement upgraded e-mail system for better XP support, Remote Access, secure and Internet compliant for all staff.	On schedule - Fall 1999

For further information, refer to Appendix A, pages 55 through 59.

Section 16 Evaluation and Communications Plan

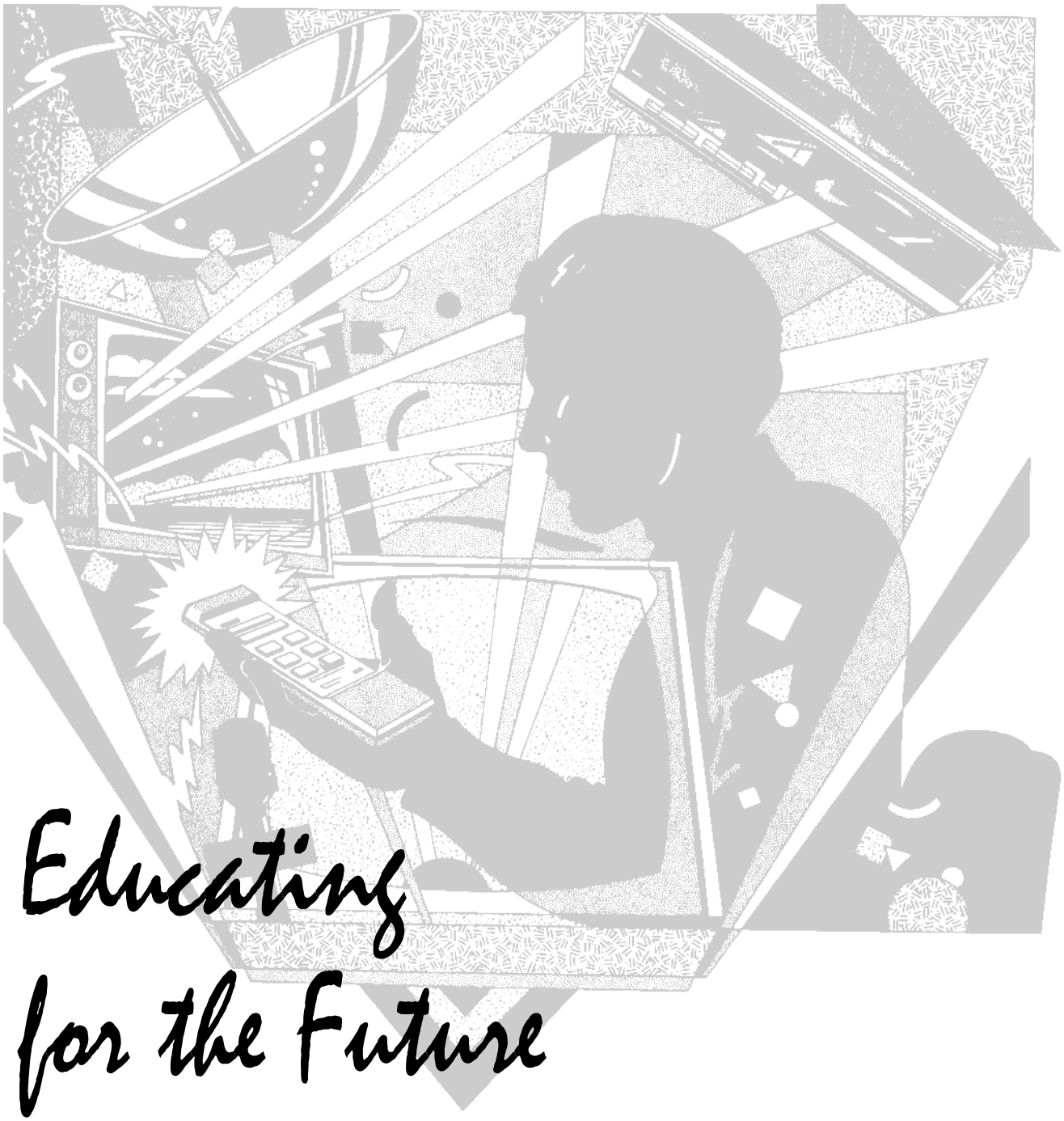
Information about all aspects of technology in Anoka-Hennepin School District 11 will be communicated through the following vehicles:

- information posted on district's Internet website
- articles in the Staff FOCUS staff newsletter
- articles in the Focus on Anoka-Hennepin community newsletter
- articles supplied to schools for use in building level newsletters
- news releases to the media
- special community events, such as the districtwide *Connected!* Celebration held to mark the completion of the final link in the district's technology network. It provided each school the opportunity to demonstrate ways in which they use technology.
- regular community events such as the annual Northern EXPO at Northtown Shopping Center, which has featured district technology for the past two years
- presentations to School Board, district committees, community organizations, etc.

For more information, refer to Appendix A, page 36.

Appendix A

See ATS Update Appendix A that follows.



Educating for the Future

Report of the
Technology Study Committee

Application Transfer Study
Anoka-Hennepin Independent School District 11

Anoka-Hennepin
Independent
School District 11

Educating for the Future

Report of the
Technology Study Committee

Application Transfer Study (ATS)
Presented to the Anoka-Hennepin District No. 11 School Board on January 11, 1993
Revised March, 1994

January 1993

Because technology is changing so rapidly, these recommendations for implementation and structure of technology use in Anoka-Hennepin School District 11 are current as of the printing of this document. The Technology Study Committee suggests that the recommendations be reviewed every six months.

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Forward

Anoka-Hennepin School District 11 has always prided itself on providing students with a sound, comprehensive education that enriches their lives and prepares them for their future, whether it be a job, family, the military, a technical college, community college, or university. In recent years, however, rapid changes in technology have caused educators to reassess the skills students will need to compete successfully.

The dramatic changes in technology have created dramatic changes in the workplace. While the number of jobs open to unskilled workers dwindles, the number of jobs available for people who possess excellent technical skills grows by leaps and bounds. The job opportunities today's kindergartners will find when they are ready to leave school will be vastly different from today. Thus the need for well prepared students is greater now than ever before.

In addition to a sound background in traditional academics, today's students must feel competent in using a range of technology in a variety of settings. Today, even entry level jobs require the use of computers, robotics, and other technology. In short, students must be as comfortable using a computer as they would using a pencil and paper.

Teachers are the key to developing technology literacy in our students. Therefore, they must have access to up-to-date technology and the appropriate training and technical support to take advantage of it. Technology then becomes a tool to assist teachers in many ways–from presenting lessons in new, dynamic ways, to assessing individual student needs and monitoring student progress. And, teachers must be able to prepare students by teaching the concepts and skills needed for them to understand and use technology effectively.

Technology is equally important to the administrative side of the school district. In these times of increasing demands on limited financial resources, it is essential that all staff have access to technology and the skills to use it to its best advantage. With this, staff at all levels can be more productive and efficient.

To meet these needs, Anoka-Hennepin School District 11 conducted an extensive study of the current use of technology within the district. The district formed a Technology Study Committee of teachers and administrators to work through the study process with assistance of technology study specialists from IBM. This process has used successfully by IBM to help other school districts examine technology needs and

develop plans. After assessing the district's technology needs, the Technology Study Committee made recommendations and developed a comprehensive plan to implement those recommendations.

This document provides documentation of the committee's work. It includes a summary of technology problems and solutions in three areas:

- instruction
- administration/communication
- staff development/technical support.

Acknowledgements

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4 History of Technology Use in Anoka-Hennepin

Instructional Technology

Anoka-Hennepin Schools have used technology in the classroom for over two decades. Classroom use began with terminals and timeshare access over modems in math classrooms. Today every school building in the district has a minimum of one classroom-sized microcomputer lab. Teachers and students are taking advantage of a wide variety of software packages to enhance and extend many curricular areas.

Our early use of remote access computing, facilitated first by TIES and later by MECC, allowed us to purchase access time on mainframe computers. This made it possible to teach programming at junior and senior high levels through the math curriculum. Programs were stored either on the mainframe computer, on graphite marked cards, or on "punched" paper tape. Terminals, card readers and phone access were expensive and in short supply, so there was little "hands-on" time for the students who had the opportunity to program as part of their math courses. A variety of business courses also were beginning to take advantage of this computer access.

By 1980 the first personal computers were introduced in the high schools. These Apple II computers (4K with no disk drives) laid the foundation for personal computing in our school district.

In 1982-83 the district hired a full-time instructional technology consultant to plan for the future of micro computing in the district with funding assistance from the Minnesota Department of Education. The result was a five year plan for instructional technology. At the same time, the district, again with state grant money, developed a plan to provide staff development and technical support. A mobile technology lab created from a converted transit bus brought training to schools throughout the district. This project, known as IN-TECH, also served several other school districts adjoining District 11.

A task force composed of teachers, administrators and parents determined that the district should strive for a ratio of one computer for every 20 students and one computer for every 10 teachers. By fall of 1984 computer labs of 36 machines were placed in each junior high school to support a 20 day computer literacy curriculum through the math department.

At this time the district received a Model Schools Grant from IBM. This provided computer labs in two elementary buildings, one junior high, and one senior high as well as a professional development center for staff training.

The following year, additional microcomputers were placed in both the math and business areas of the high schools to support half lab configurations.
Computers were added more slowly in the elementary buildings, primarily because curriculum did not require such equipment. Programming was a part of the fifth and sixth grade curriculum, but it was done much in the same fashion as timeshare use 10 years earlier–students marked cards, teachers ran the programs through a card reader attached to the Apple II and gave students the results. By fall of 1988 each elementary building had a minimum of 30 computers that most used to form a "lab" and keyboarding was implemented districtwide in the elementary curriculum.

Recognizing the need for technology support, the superintendent created two "special assignment" positions in 1987 to provide assistance to staff at the schools. These two positions eventually led to a full-time instructional technology coordinator and technology consultant who oversaw use of technology in school offices and classrooms. In addition, these positions were responsible for the "train the trainer" concept. Under this approach, each school had a designated computer coordinator or contact person who delivered on-site support. This person received additional training opportunities from the district staff.

When Oxbow Creek Elementary School opened its doors in 1987 it lived up to its billing as a "state of the art" technology school. Each classroom contained a computer/printer/phone system plus a 27" color RGB monitor that could project the computer signal. The school also included a fully-equipped 31 station computer lab, a five station mini-lab, a teacher project area with high quality printing, a video studio, editing suite and a building-wide video and computer network. This became the "unofficial" model for other buildings. Andover Elementary School opened as a "twin" school a year later. Our newest facility, Champlin Park High School, has followed this same model.

School offices have standardized equipment and software for student management. A Professional Staff Development Center was developed to provide a facility where staff can receive training on a wide variety of software and hardware.

The district took a major step forward in using technology for instruction when it implemented a Computer Managed Instruction system in 1988. The system allows teachers and parents to monitor progress of individual students. It also provides information used in monitoring the effectiveness of the district's curriculum and instruction.

Administrative Technology

Office personal computing began in earnest between 1983 and 85 when IBM PCs (256K) were placed in each school office. These were used to facilitate word processing tasks and provide a simple database of student information downloaded from TIES. The single source of both software and support came from the TIES Coordinator. During this time period Apple II+s were used along with card readers to record student attendance electronically at our secondary schools. Now each school takes attendance electronically. All of the secondary and ten of the elementary sites use networks to share commonly-used data including discipline, scheduling, health and more. In addition the district has a common pool of word processing, database, spreadsheet, desktop publishing, and telecommunications software to use on a common Macintosh platform.

At the Educational Service Center, fewer than 15 staff had personal computers on their desks through 1987. The number of computers and usable applications at the school sites and central offices grew rapidly between 1987 and 1991. Now virtually every staff in the central offices has a personal computer or easy access to one in the department. In the past two years, Food Service, Transportation, Warehouse/ Purchasing and Finance have invested heavily in computerized applications for their particular areas. The ESC and LC/DC sites are "bridged" into a single network with electronic mail and scheduling running in a combined mode.

Staff Development/Technical Support

Through the first years of our experience with technology, support and training were provided on a relatively unorganized basis. Initial training generally was provided with no provision for follow-up and growth. This was true both instructionally and administratively. During the 1986-87 school year, staff development funds were allocated to individual buildings which provided a technology training plan. This proved so successful that the practice continued through the 1988-89 school year. During this time, the district experienced the greatest number of staff becoming familiar with and using technology in a wide variety of professional tasks including increased student exposure and hands-on experiences. With the budget reductions of the past three years, this practice of sponsoring individual building or department plans has been curtailed to a very minimum amount. In addition, while the number of technology hardware components and software applications has increased dramatically in the past six years, the number of people who provide staff development or repair that equipment has increased only marginally.

8 Development of Study Objectives

Working under the direction of technology study specialists from IBM, a committee of Anoka-Hennepin staff brainstormed 46 technology related problems and issues (listed below). The group then defined six objectives for the study that encompassed those issues:

- Define the role, purpose and use of information and technology in Anoka-Hennepin.
- Identify and provide appropriate resources at the instructional level.
- Identify standards and responsibilities for maintaining an accurate, accessible and uniform database(s).
- Define curriculum and administrative accessibility needs and design an information and communications system architecture that supports both.
- Identify the level and need for training and develop a plan.
- Establish a decision making process for technology resources and purchases.

Problems/Issues

(This list is not prioritized)

1. Compatibility of data and networks
2. Lack of electronic interaction
3. Access to master schedule
4. No site ownership of central database
5. Site access to personnel information
6. Lack of uniform/integrated database sharing
7. Lack of district-wide network and or access to remote data
8. Integrity of information and security
9. Perceptions of where we are today
10. Lack of understanding of district expectations
11. Need for built-in evaluation process
12. Need for technology philosophy
13. Too many pet projects—fragmentation
14. Unknown decision-making process—isolated
15. Need for district-wide communications—information
16. Need “futures” think-tank to establish goals
17. Integration of administrative and curriculum (data/functions)
18. Productive use of all special education information
19. Information on and use of adaptive technology for special education
20. Storing records electronically, e.g. personnel

21. Lack of standards in decision-making process
22. Commitment and ownership/understanding of information
23. Storing and using information relevant to Outcome Based Education (OBE)
24. Lack of electronic storage and retrieval for student information
25. Current database needs to match external reporting requirements, i.e. state and federal
26. Lack of training on databases and their utilization
27. Turf and politics controls resource distribution
28 Document by job title what technology background is necessary
29. Keep data current and accurate
30. Data collection and updating is manual
31. Lack of appropriate resources at the instructional and administrative levels
32. Lack of data history, i.e. for individual composite histories
33. Lack of definition of CAI (Computer Aided/Assisted Instruction) and its uses in the classroom
34. Lack of direction for ILSs (Integrated Learning Systems) in the district
35. Time and money
36. Productivity goes down with initial system change
37. Conversion from old to new
38. No centralized decision-making for software, e.g. word processing
39. Lack of a plan for integration of voice and video
40. Lack of convenient/available technology for teachers
41. Lack of distance learning for students and teachers
42. Need to create an awareness of “belief system”
44. Need general keyboarding skills
45. How urgent and important is information to our organization?
46. Information priority–district is reactive, not proactive

10 Overview of Survey and Interview Process

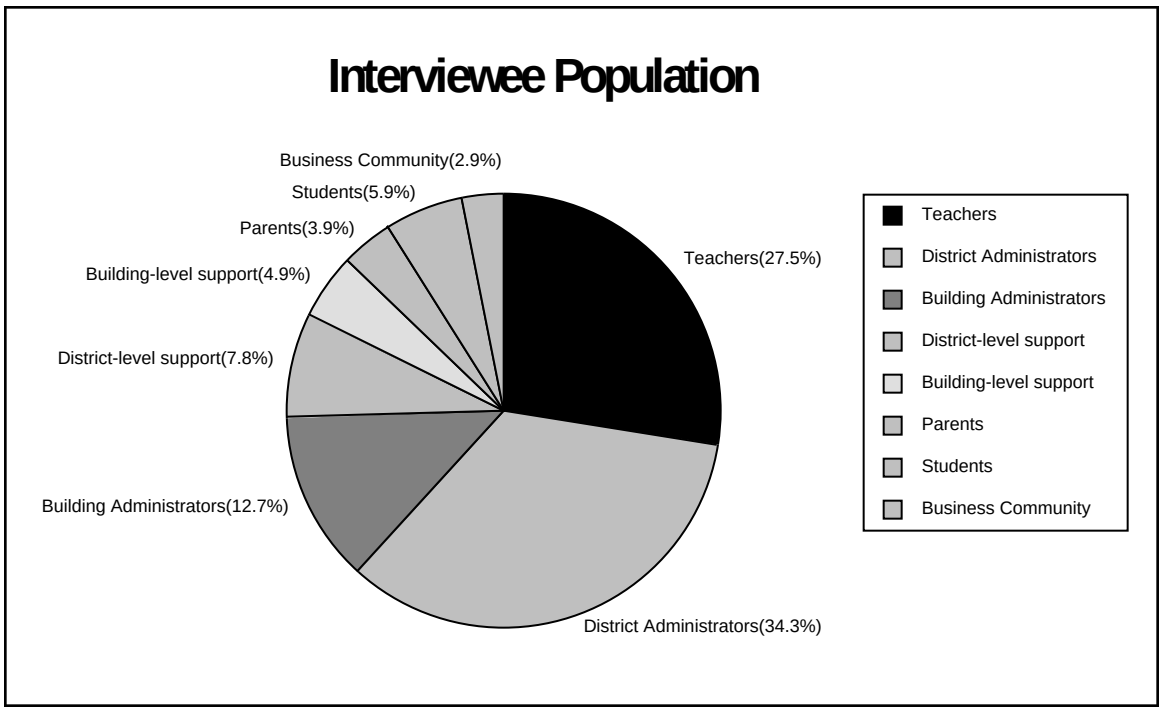
The Technology Study Committee developed a 200 item survey and a series of interview questions to use in collecting information related to the six study objectives. (See Appendix A for survey and results, Appendix B for interview questions, and Appendix C for survey participants.)

The committee then conducted a series of group interviews to solicit opinions from more than 125 teachers, students, parents, principals, paraprofessionals, central administrators, support staff, and business and community representatives.

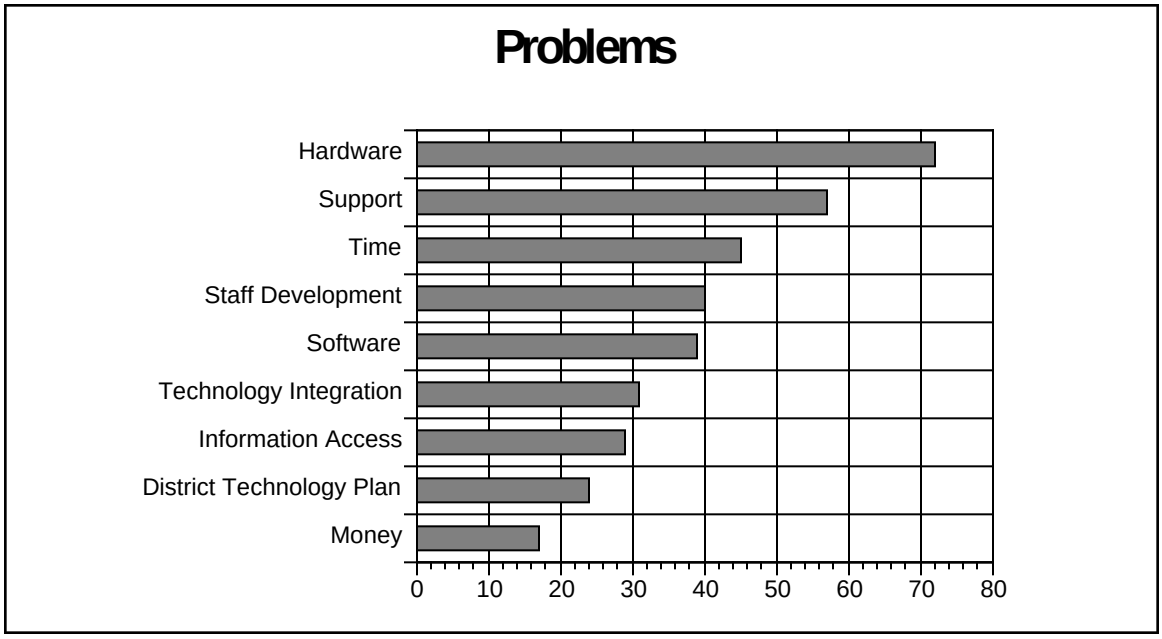
Once the survey and interview data had been compiled, committee members analyzed the results to draw conclusions.

The following graphs summarize the data gathering process and results.

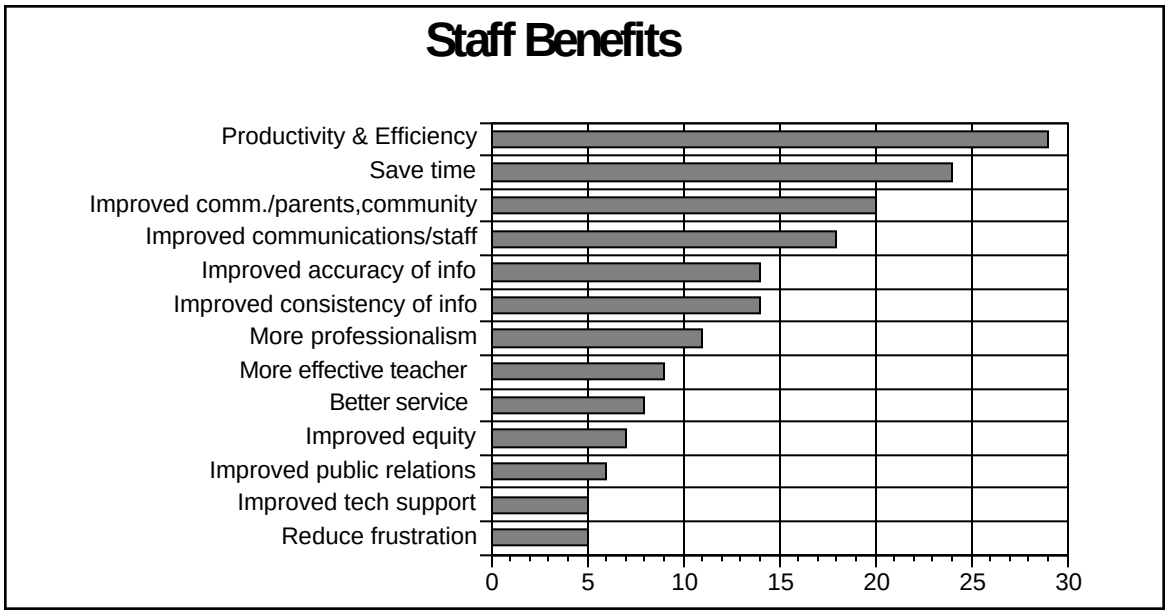
- Interview population, page 11
- Problems, page 11
- Staff benefits, page 12
- Student benefits, page 12
- Recommendations, page 13



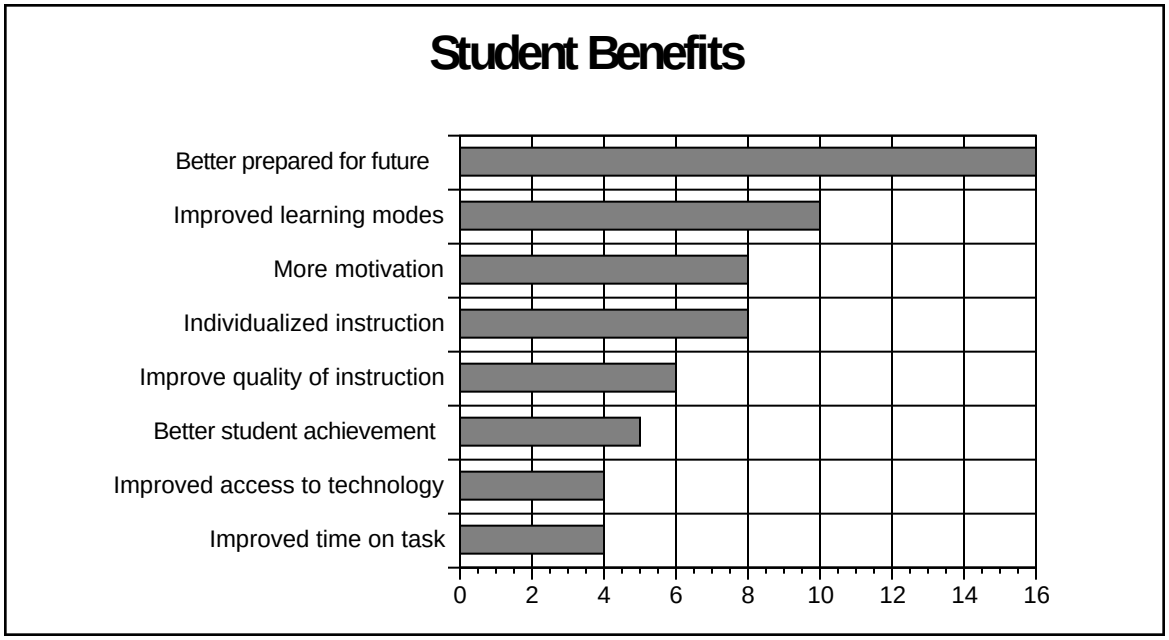
The Technology Study Committee interviewed 125 persons. This chart shows the composition of the interviewee population.



What problems do you have in making the best uses of technology in the performance of your job? This question was asked of 125 persons interviewed. The graph indicates the number of times a specific response was given by the interviewees.



If one or more of your recommendations were implemented, what would be the value and benefits for you, the district, the school, the students, and the community? This question was asked of 125 persons interviewed. The graph indicates the number of times a specific response was given by the interviewees.



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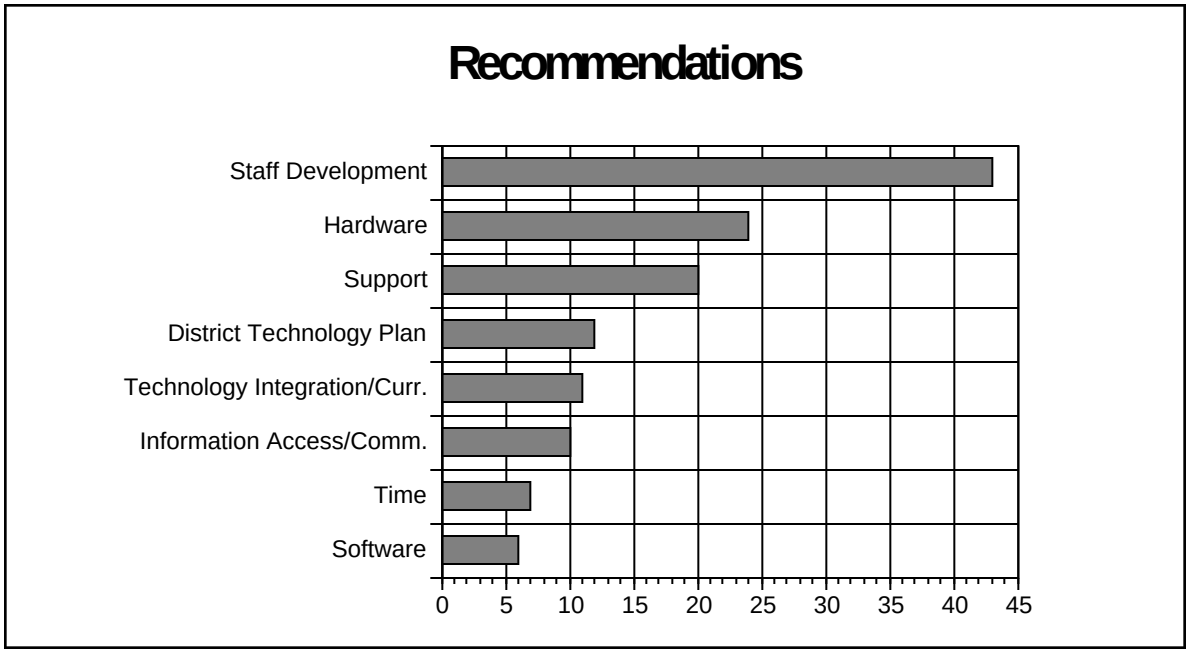

What ideas or suggestions would you have to improve your job skills through the use of technology? This question was asked of 125 persons interviewed. The graph indicates the number of times a specific response was given by the interviewees.

14 Redirected Time

During the interview process and follow-up some staff indicated they could redirect time with technology or technological access to critical information in the following ways:

Teachers:
- Spend more time in the classroom with students
- Have a more productive teaching day
- Time to prepare more quality instructional materials
- Be a better role model for the students
- Provide more timely status updates to students
- Assist students understanding of broad concepts, as well as detail

Counselors:
- Make student visits more productive
- Place students in the correct classes sooner
- Have more teamwork with secretaries and assistant principals
- Reduce paperwork

Principals:
- More visibility in the school
- Spending more time in the classroom
- Spending more time as instructional leader
- Spend more time observing and working with teachers
- Attend fewer meetings with improved communications
- Look more professional

Secretaries:
- Assist principals, teachers, students and parents
- Produce more quality work
- Handle additional work coming from the district and state
- Give better service to the principal
- Expand school to home communications
- Improve professionalism
- Reduce frustration
- Spend more time planning

General Guidelines for Technology Implementation

Given the wide array of technologies available to choose from, the task force used the following guidelines to direct technology selection and implementation recommendations:

1. Adequate site support needs to be provided.
2. Make use of existing technology whenever feasible.
3. Design with the future in mind.
4. Allow for input of affected users.
5. Technology investments should deliver tangible improvements in district operational efficiency and quality of service to its students and staff.
6. Select hardware and software systems that minimize initial and on-going support costs.
7. Data that is needed among administrative departments must be maintained on one central database.
8. Equity among all sites, but some additional resources should be allocated for hardware and software purchases in every school every year.
9. All future district curriculum studies should explore and incorporate any technological applications that would enhance that curricular area.
10. Hardware and software must be chosen to support district defined curriculum.
11. Standards will be established for acquisition of technology to ensure compatibility and alignment with long-term district goals.
12. Simpler is better.
13. Awareness and training procedures will be established that ensure the readiness of staff to use current and new technology.
14. A thorough assessment of sites will occur that establishes recommendations for:
    - Adapting facilities for technology in the areas of space, cabling, electricity, furniture, lighting, security, etc.
    - Use of existing hardware that will include age, number of workstations, network compatibility and potential, etc.
    - The quantity and quality of existing software available to support the implementation plan.
    - Awareness and training needs.
15. All or parts of the existing Staff Development program can be incorporated into the new model.
16. Equitable and timely staff development and support opportunities must be provided for all staff.

17. Staff development and support must be based on administrative and instructional needs.
18. All Staff Development must be based on sound pedagogical practices.
19. Introduction of new applications must be paired with adequate support.

Instruction

Problems

- Teachers do not have direct access to technology to help with routine communication and classroom management tasks.
- Teachers do not have technology available for instructional presentations in curricular areas.
- Individual students do not have technology available to meet their needs.
- Students and teachers do not have equipment and courseware available for work with video productions.
- Students and staff do not have technology available to access needed reference and research information.

Recommendation 1

Provide technology to the teacher for classroom instructional management functions such as attendance, grading, assessment and communications.

- Telephone in every classroom
- Networked teacher station in each classroom to secure relevant access to student data
- Software for classroom management such as gradebook, test generator, word processing, desktop publishing and attendance
- Software for inter-classroom communication with peers and administration
- On-site scanning based on classroom teacher needs
- Minimum dedicated on-site support:
  - One half FTE certified technology support person
  - One half-time technical support para for each building
  - One certified FTE technology support person who supports one networked lab and 15 teacher workstations and one technical support para per lab
- Certified Technology Support Personnel work directly with instructors to provide integration of technology into the curriculum

Recommendation 2

Provide technology to the teacher for instructional presentations.

- Electronic presentation tools (27" monitor, presentation software as well as large screen color projection from the computer) in all classrooms
- Access to additional multimedia preparation and delivery technology systems such

as CD-ROM, videodisc player, VCR, still/motion video cameras, scanners/digitizers, multimedia software, etc.

Recommendation 3
Continue to integrate additional technology in the classroom to meet group and individual student needs, and to maximize each student's learning potential.

- Network all existing computer labs.
- Labs should contain adequate hardware to accommodate no more than one student per workstation.
- Labs must contain one teacher workstation for demonstration purposes.
- Install a minimum of one networked student workstation for every five students in each classroom.
- Utilize technology to help meet instructional goals.
- Utilize technology to meet specific and /or unique individual student needs.
- Provide software to meet district curricular goals.
- Additional technology support is needed as hardware, curriculum integration, and skill level of staff and students increase.

Recommendation 4
Provide technology to the student and teacher for work with video tape and video productions, so that student learning can be enhanced in the curriculum areas.

- Every classroom cabled to the distribution center of the building system with access to multiple channels
- Portable 2-way access to video: one per elementary, three per secondary school
- Two-way interactive video (distance learning)
- Fixed video cameras
- Video controller
- Video/audio editing deck
- Playback and recorder VCR's
- Microphones
- Multi-media computer
- Video overlay capabilities
- Appropriate lighting
- Appropriate furniture
- Students will utilize video to meet instructional goals

Recommendation 5

Provide building wide reference and research information access for all students and staff.

- Networkable CD-ROM reference materials
- Modem connection to on-line data
- Electronic card catalog
- Electronic check-out system

Station Models

Classroom Configuration

- Telephone
- 27" Monitor with appropriate cabling to central distribution area
- Network connection capable of supporting 35 units
- Video access

Teacher Workstation

- Networkable notebook/desktop computer
- Local and network printing
- Group projection with color capabilities
- Modem
- Appropriate furniture

Teacher Resource Station (mobile) *One per every four classrooms*

- Multi-Media computer with composite video out
- CD-ROM
- Hand held scanner
- Sound and video digitizer
- Videodisc player
- Video overlay capabilities
- Multi-media cart to hold above equipment

Classroom Student Station

- Networkable notebook/desktop student computer
- Access to local printing (one printer for each four computers include the teacher's printer in this ratio)

- Appropriate furniture
- Access to on-line database information

Computer Lab *(one lab per every 500 students)*
- Networkable desktop student computers (30-35)
- Access to local/network printing
- Teacher station
  - Computer system
  - Group projection with color capabilities
  - Amplified audio speakers
- Appropriate furniture

Project Center
- Still video camera *(one for every four classrooms)*
- Color flatbed and hand held scanners
- Mobile labs *(six to 12 notebook computers that can be moved)*
- Camcorders *(three at elementary level, 16 at secondary level)*
- VCR's - *(one for every four classrooms)*
- Laser disk players *(one for every four classrooms)*
- Color monitor with connectivity to notebook computer

Video Studio
- Every classroom cabled to the head end of the building system with cable access to multiple channels within the building
- Portable two-way access to video one per elementary - three per secondary
- Fixed video cameras
- Video controller
- Video/audio editing deck
- Playback and recorder VCR's
- Microphones
- Multi-media computer
- Video overlay capabilities
- Appropriate lighting
- Appropriate furniture

Media Center
- Networkable CD-ROM reference materials
- Modem connection to on-line data
- Electronic card catalog
- Electronic check-out system

Software/Courseware
- Videodiscs
- Optical character recognition software
- Multi-media presentation software
- Word processing
- Data base
- Spreadsheet
- Desktop publishing/page layout
- Graphics/paint
- Telecommunications
- Gradebook/record keeping
- Test generator
- Management/attendance
- Building scheduling
- Network

22 Administration/Communication

Problems

- Inability to access necessary and accurate information in a timely manner
- Lack of a consistent and centralized data base
- Lack of an effective data communication system district wide and within individual sites
- Inadequate support of current administrative hardware
- Inadequate support of current administrative software
- Inconsistent and incompatible existing software and hardware
- Lack of documentation of the current administrative hardware and software

Recommendation 1

Establish a high-speed cost effective interconnection between all district sites that possess the following characteristics:

- Provides for the most cost effective transmission of data, voice and video signals
- Provides a gateway to interconnect with other organizations both public and private
- Provides a method for parents to communicate with their child's teacher or other district staff
- Provides for sites to have access to district wide information
- Provides for cost effective communication between district sites
- Provides for on line service and support of district site LANs

Recommendation 2

Establish a high speed interconnection within all district sites that possess the following characteristics:

- Provides for the most cost effective transmission of data, voice and video signals
- Provides for the sharing of information between all users within the site
- Allows for the effective use of high cost devices within the building i.e. (laser printer, scanners etc.)
- Provides for a lowest cost approach for acquiring software
- Allow for electronic communication between all users within the site
- Provides for a cost effective method of communication with all other district sites

Recommendation 3

Implement a central processing facility that will provide access to integrated data base of information to all district personnel via a district-wide high speed data network. Some applications to be supported on this facility are:

- Budgeting-forecasting
- Accounting
- Accounts payable
- Accounts receivable
- Cash management
- Purchasing
- Inventory/warehouse and building sites
- Fixed assets
- Building and grounds
- Transportation
- Payroll
- Employee benefits (sick leave, vacation, personal leave, miscellaneous)
- Employee contract negotiations
- Personnel applications:(e.g., leaves of absence, substitute teachers, continuing education, assignments, history, evaluation, demographics)
- Insurance: property/liability, employee groups, employees
- Food service
- Student/census information
- Assessment information/curriculum
- Data conversion
- Special education due process

Recommendation 4

Implement distributed site-based student record management system. Applications to be supported include:

- Demographics
- Attendance
- Scheduling
- Grading/assessment
- Individual Education Plans (IEP)/Individual Learning Plans (ILP)/Child Study
- Discipline

Recommendation 5

Provide access to the following standardized set of productivity software accessible by all district personnel from their individual workstations.

- Word processor
- Spreadsheet
- Desktop publisher
- Data base
- Electronic mail
- Meeting and facilities scheduler
- Calendar

Recommendation 6

Provide each site/department ready access to FAX technology.

Recommendation 7

Install additional telephone lines at each site so that staff/parents/community can easily and conveniently communicate.

Recommendation 8

Provide for the following administrative services/communications environments:

Elementary Office Site (principal, clerical, health service, buildings and grounds, food service)

- Networked computer desk
- Laser printer
- Local printer
- Telephone per desk
- Fax machine
- Copy machine
- File server with LAN and WAN

Middle School Office (principal, assistant principal, clerical support, health service, counselors, buildings and grounds, food service)
- Networked computer per desk
- Laser printer
- Local printer
- Telephone per desk
- Fax machine
- Copy Machine
- File server with LAN and WAN

Senior High School Office, Anoka-Hennepin Alternative Program (principal, assistant principal, clerical support, attendance clerk, counselors/dean, health service, building and grounds, food service)
- Networked computer per desk
- Laser printer per office area
- Local printer
- Telephone per desk
- Fax machine
- Copy machine
- File server with LAN and WAN

Learning Center/Distribution Center (special education, food service, buildings and grounds with technology repair, community education, purchasing/warehouse, staff development, technology/support, printing services, student services)
- Networked computer per desk
- Laser printer per office area
- Local printer
- Telephone per desk
- Fax machines
- Copy machines
- File server with LAN and WAN
- Building network

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Educational Services Center (finance/planning, transportation, governmental relations/census, operations and facilities, personnel, employee relations/insurance, student assessment, word processing, associate superintendents, superintendent, information systems, custodial/vehicle storage building, Indian education, curriculum)

- Networked computer per desk
- Laser printer *(one per 10 workstations)*
- Local printer *(one per four workstations)*
- Telephone per desk
- Fax machine *(two)*
- Copy machine *(one per department)*
- File server with LAN and WAN

Staff Development/Technical Support

Problems

- Limited delivery systems for staff development–the number of courses and locations offered do not meet the demand for technology training
- Insufficient staff to provide adequate numbers of course offerings
- Current support staff are expected to deliver staff development and support across all levels from basic user support,low level system maintenance, and low level application specialization through advanced planning and system design, research and development as well as advanced application specializations.
- Insufficient time is allocated for staff development in the area of technology.
- Technology training is not provided when new hardware and software is delivered, when a new application is implemented, and/or when new curriculum is implemented.
- Technology training for staff lacks scope and sequence.
- Required technology competencies have not been developed and included in defined performance responsibilities.
- Increased staff frustration and diminished enthusiasm because of limited support and a limited staff development program in technology
- Lack of a clearly defined priority system for the delivery of support
- Insufficient staff to provide adequate and timely support to sites
- Current equipment is often under-utilized because of a lack of timely support.
- Lack of a long range plan creates difficulties for repair staff in determining their training needs.
- Continual infusion of a variety of equipment creates difficulty for repair staff in keeping up to date and maintaining adequate supplies.

Recommendation 1

A staff development program must be created and implemented whenever new hardware and software applications are introduced.

- A staff development plan must accompany any requests for new hardware and/or software applications. This staff development plan must be approved by the appropriate technology staff members. In addition, this plan needs to be updated on a regular basis to insure continued use and success.
- On site support staff hold initial responsibility for the staff development component which accompanies hardware and software purchases. This plan must follow approved guidelines as to timelines, resources needed, desired outcomes, etc.

Recommendation 2

The scheduling of staff development sessions is critical to achieve maximum participation. To insure this success, inservice opportunities must be offered at times that meet the needs of all staff.

- Staff development opportunities must be provided for district personnel when it is most beneficial to them. The following inservice times have been identified:
  - During the work day (62% of survey respondents).
  - During summer months (17% of survey respondents).
  - During regular staff development days (17% of survey respondents).
- The decision making body at each site must provide release time for technology staff development and appropriate follow-up.

Recommendation 3

Varied and ample opportunities need to be provided to meet the technology needs of district staff and programs.

- District-wide catalog listing all technology training including building level training; updated semi-annually.
- Updated technology offerings district wide and at the building level included in the Staff Focus.
- Staff development programs will be provided to staff as new technologies are integrated into curriculum areas.
- Staff development programs will be provided to staff as new technologies are integrated into administrative application areas.
- Establish learner outcomes for all employee groups in the area of technology literacy.
- Provide a scope/sequence plan that allows staff to move toward desired technology outcomes.
- Staff development will be provided on and off site according to the needs of the staff. (work site, 53% of survey respondents; Staff Development Center, 46% of survey respondents)

Recommendation 4

Provide an incentive plan that rewards employees for achieving the district's technology learner outcomes for training and appropriate follow-up.

- Release time
- Graduate credit
- Continuing Education Units
- Earn hardware and or software "tech points" for completing inservice in technology, i.e.,tech points could be used to purchase additional hardware, software, and/or training for a site

Recommendation 5

Establish a continuum of instruction that recognizes and defines appropriate levels and functions as they are related to staff development needs.

- Identify the level of staff development needed for each site and for each program. (See Appendix D, Sample Format for Identified Staff Development and Support)
- Assign the responsibility of that staff development to appropriate support staff.

Recommendation 6

Develop a staffing pattern that recognizes and defines appropriate levels and functions as they are related to technical support.

- Identify the level of support needed for each site and for each program.
- Assign the responsibility of that support to appropriate support staff.

Recommendation 7

A support plan must be approved and implemented whenever new hardware and software applications are introduced.

- A support plan must accompany any requests for new hardware and/or software applications and be approved by the appropriate technology staff members. This plan needs to be updated on a regular basis to insure continued use and success.
- On site support staff hold initial responsibility for the support component which accompanies hardware and software purchases. This plan must follow approved guidelines as to timelines, resources needed, desired outcomes, etc.

Recommendation 8

Provide adequate staffing for the delivery of technology support.
Provide timely on site technology support for staff.

- Directory of technology support services
- District-supported software list (updated semi-annually)
- District-supported hardware list (updated semi-annually)
- Procedures for obtaining hardware/software support;
- Composite list of all technology support services.
- Provide a District Solution Center (available during normal staff working hours, 7 a.m. to 5 p.m.)
- Technical hotline with immediate recommendation and immediate referrals–new staff position
- Hardware support–beyond the hotline;
  - maintenance
  - installation
- Software support–beyond the hotline;
  - Installation
  - Upgrades
  - Maintenance
- Media Services
- Staff development
  - Basic skills;
  - Application specific:
    - Instructional
    - Administrative
    - Productivity

Create a Technology Learning Center that includes:

- Technology labs–equipped to provide staff development on all supported platforms
- Research and development–instructional, administrative, productivity
- Administration, instruction and support would be provided by the solution center staff.

Develop a network of, and funding structure for, on site support staff.

- Current support levels must be maintained and new monies should be reallocated from the current staff development budget for this purpose.
- Initial site support will be determined by technology performance objectives.
- Additional site support will be determined by an annual review of technology performance objectives.
- The on site support should be funded by administration (20%), curriculum (40%), and staff development (40%).

Benefits of Implementation

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Instruction

- Reduce time spent by teachers on non instructional tasks
- Enhance teacher-parent communication
- Improved student data consistency and accuracy
- Increase teacher morale
- Tangible evidence that the district is keeping pace with technology advances
- Timely assessment results for improved student motivation and achievement
- Improved instructional effectiveness which results in greater student achievement
- Greater motivation for learning
- Motivates enthusiastic teaching
- Provides teacher the tools to monitor and adjust instruction to meet student needs and learning styles
- Real-world modeling of how technology can enhance daily life
- Improved student academic achievement
- Provides teacher the tools to monitor and adjust instruction to meet student needs and learning styles
- Increase student morale/motivation
- Provide technological skills for present and future needs of students
- Access to wide variety of video information from various sources (access is available to all or to any configuration of classrooms at the same time)
- Ability to send video information (announcements, etc.) to all students and staff
- Students able to produce video reports for classroom academic requirements
- Life-long video production skills achieved by both students and staff
- Ease of information access
- Wider access to current information
- Accurate and time-saving media management

Administration/Communication

- A central computer system and support for district financial, personnel, operational and information systems will provide access to a centralized, integrated data base.
- Site-based computer systems will support student-related operational and information systems.
- Local area networks (LAN) throughout all sites will provide high speed interconnection and data and software sharing.

- A district-wide standardized set of productivity application software (e.g., word processing, spreadsheet, desktop publishing) accessible from any network workstation will make it easier and more efficient for staff to share information and documents, and to work together cooperatively.
- High speed telecommunication links will provide a WAN between all sites that will support electronic communication and access to centralized information system.
- Fax machines at each site will enhance intra and inter district communication of hardcopy information.
- An improved telephone system will provide convenient access for intra/inter district voice communications by staff and parents.

Staff Development/Support

- More effective employees
- Increased efficiency and productivity
- Improved staff morale
- Better service (students/staff/public)
- Equitable technology support opportunities for all employees
- Better utilization of technology investment

34 Organizational Structure for Technology

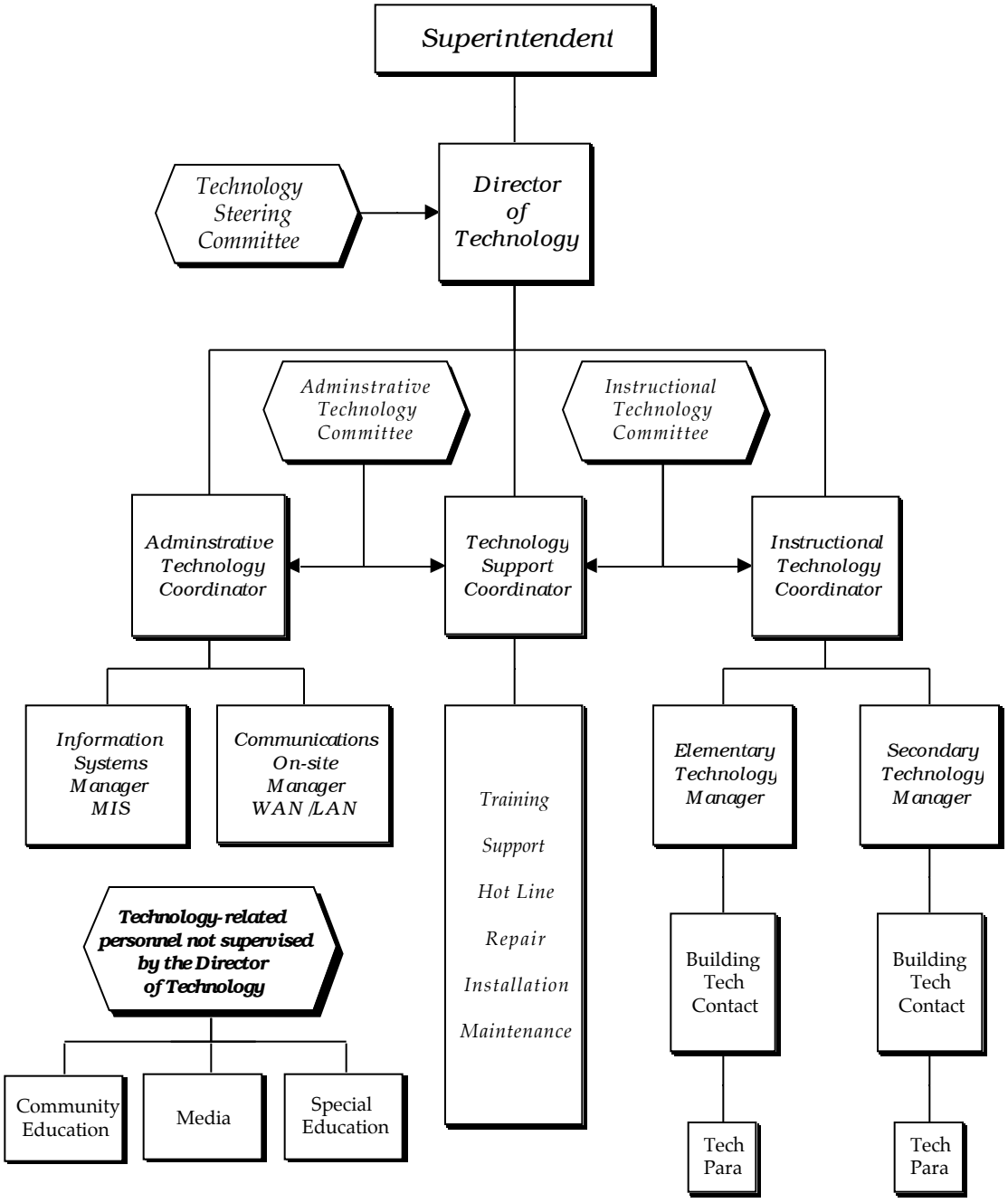
The following pages detail the organizational structure for technology in Anoka-Hennepin.

Technology decision making will be headed by the Director of Technology, with input from the Technology Steering Committee.

Coordinators for administrative technology, instructional technology and technology support will work directly under the Director of Technology, with input from the Administrative Technology Committee and the Instructional Technology Committee.

- Technology Organizational Structure Chart, page 35
- Technology Steering Committee, page 36
- Instructional Technology Committee, page 36
- Administrative Technology Committee, page 37
- District level administrative/supervisory structure, page 37
- Building level delivery structure, page 37

Technology Organizational Structure



36 Management and Operation of Technology

Committee Structure

Technology Steering Committee
Purpose: As an advisory committee to the Technology Director, the Steering Committee is responsible for the periodic review of the technology planning process. It shall review and recommend policies and procedures which will ensure the effective use of technology for both administrative and instructional applications.

Members: To include members from the existing Technology Steering Committee as well as representatives from the Instructional Technology Committee and the Administrative Technology Committee. Membership also includes the Technology Support Manager, the Instructional Technology Manager, and the Administrative Technology Manager

Chairperson: Technology Director

Instructional Technology Committee
Purpose: Interfaces with the curriculum study process, the school improvement process, and staff development. One or two representatives serve on the Technology Steering Committee. Makes hardware and software recommendations and ensures adequate staff development and support.

Members: Representatives from all staff categories reflecting the diverse instructional settings in the district. (principals, teachers, para-professionals, etc. from all organizational levels and a variety of student populations). Central administrative groups such as subject matter consultants should also be represented. Membership also includes the Technology Director (ex officio), the Technology Support Manager, and the Administrative Technology Manager.

Chairperson: Instructional Technology Coordinator

Administrative Technology Committee
Purpose: Interfaces with a variety of user groups and/or representatives of all administrative departments (payroll, transportation, personnel, food service, employee relations, etc.). One or two representatives serve on the Technology Steering Committee. Makes hardware and software recommendations and ensures adequate staff development and support.

Members: Representatives from all staff categories reflecting the diverse administrative settings in the district. Principals, clerks, para-professionals, etc. from all organizational levels and administrative departments. All central administrative groups should be represented. Membership also includes the Technology Director (ex officio), the Technology Support Manager, and the Instructional Technology Manager.

Chairperson: Administrative Technology Coordinator

District level administrative/supervisory structure

- **Technology Director** *(see job description)*

- **Three Technology Coordinators** *(see job descriptions)*
  - Instructional Technology Coordinator
  - Administrative Technology Coordinator
  - Technology Support Coordinator

- **Technology Managers** (report to three technology coordinators) *job descriptions to be developed*

Building level delivery structure

- **Building Technology Coordinator:**
  Responsible for the implementation of a building technology plan. Coordinates the installation of hardware and software and provides training/support for the building.
  Serves as facilitator of the Building Technology Management Team.
  (Decisions need to be made as to licensure requirements and collective bargaining unit agreement considerations)

- **Technology Support Para** (one or more - nonlicensed)
  Provides on-site assistance, along with the Building Technology Coordinator, to staff and students in the classroom application of technology at the building level.

- **Building Technology Management Team**
  Plans for and oversees the building's technology needs. Chaired by the Building Technology Coordinator. Includes members from the Building Leadership Team.

Job Descriptions

Technology Director

Reports to: Superintendent of Schools

Supervises:
- Technology Support Coordinator
- Instructional Technology Coordinator
- Administrative Technology Coordinator

Contract: Administrative/supervisory: full-time, full-year (260 days)

Selection Process: Interview committee includes members from the present Technology Task Force

Primary Responsibilities:

1. Implements Technology Task Force recommendations in consultation with the Steering Committee.

2. Directs all instructional, administrative, staff development, and technical support activities related to technology.

3. Coordinates the technology functions across the district, e.g., community education, special education, and media.

4. Directs the allocation of existing resources and seeks additional support, both personnel and financial, to ensure the implementation of the Task Force recommendations regarding technology.

5. Monitors, evaluates, updates, and establishes within the context of the District Technology Plan.

6. Serves as member of the District Facilities Committee. Chairs District Technology Steering Committee and serves as ex officio member of Instructional Technology Committee and Administrative Technology Committee.

7. Performs other duties as assigned by the Superintendent.

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Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of instructional, administrative and technical support needs of technology in a large school district.

2. Ability to establish, maintain and improve computer networks.

3. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

4. The ability to work cooperatively and effectively with others.

5. Successful related experience in classroom teaching and/or administration.

6. Bachelor's degree and advanced training relevant to this position.

7. Demonstrated ability to perform position responsibilities.

Technology Support Coordinator

Reports To: Technology Director

Supervises: The training, support and hot-line services, the installation, maintenance, and repair of all hardware.

Contract: Administrative/supervisory: full-time, full-year (260 days)

Primary Responsibilities:

1. Provides staff development in technology at the district and building level for instructional, administrative, and support staff.

2. Maintains a current awareness and knowledge of emerging information, trends, and applications for technology.

3. Installs software/hardware updates and improvements, including networks and work stations.

4. Provides technical assistance to personnel, schools and sites.

5. Institutes preventative maintenance/repair/safety procedures for school sites, the ESC and the LC/DC.

6. Creates and coordinates referrals for the repair system.

7. Assists with the development of, participates in , and facilitates computer user groups.

8. Serves on the Technology Steering Committee, the Instructional Technology Committee, and the Administrative Technology Committee.

9. Performs other responsibilities as assigned by the Technology Director.

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Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of technical support needs of technology in a large school district.

2. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

3. Ability to maintain computer networks.

4. Ability to work cooperative and effectively with others.

5. Successful related experience.

6. Bachelor's degree and advanced training relevant to this position.

7. Demonstrated ability to perform position responsibilities.

Instructional Technology Coordinator

Reports to: Technology Director
Supervises:
- Technology Manager - Elementary
- Technology Manager - Secondary

Contract: Administrative/supervisory: full-time, full-year (260 days)

Primary Responsibilities:

1. Provides for the instructional application of technology in elementary, secondary, and special education programs.

2. Maintains a current awareness and knowledge of emerging information, trends, and applications for technology.

3. Provides for the installation of technology for teacher classroom management functions such as attendance, grading, assessment and communications.

4. Provides technology to the teacher for instructional presentations.

5. Continues to integrate additional technology in the classroom to meet group and individual student needs, and to maximize each student's learning potential.

6. Provides technology to the student and teacher for work with video tape and video productions, so that student learning can be enhanced in the curriculum areas.

7. Provides building wide reference and research information access for all students and staff.

8. Chairs the Instructional Technology Committee. Serves on the Technology Steering Committee and the Administrative Technology Committees.

9. Performs other responsibilities as assigned by the Technology Director.

Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of instructional needs of technology in a large school district.

2. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

3. Ability to maintain computer networks.

4. Ability to work cooperative and effectively with others.

5. Successful related experience in classroom teaching.

6. Bachelor's degree and advanced training relevant to this position.

7. Demonstrated ability to perform position responsibilities.

Administrative Technology Coordinator

Reports to: Technology Director

Supervises:
- Information Systems Manager
- Communications/Network Manager

Contract: Administrative/supervisory: full-time, full-year (260 days)

Primary Responsibilities:

1. Provides for administrative application of technology for central services of the Educational Service Center (ESC), and the Anoka-Hennepin Learning Center/Distribution Complex (LC/DC), and for individual school buildings and community schools.

2. Maintains a current awareness and knowledge of emerging information, trends, and applications for technology.

3. Designs wide area and local area networks and works cooperatively with others regarding design issues related to installation.

4. Establishes a high-speed, cost effective interconnection between all district sites. Establishes a high-speed interconnection of all computers within buildings and/or departments.

5. Implements a central processing facility that will provide access to an integrated data base of information to all district personnel via a district-wide high-speed data network.

6. Implements a distributed site-based student record management system.

7. Develops and tests a “disaster recovery” plan.

8. Chairs the Administrative Technology Committee. Serves on the Technology Steering Committee and Instructional Technology Committee.

9. Performs other responsibilities as assigned by the Technology Director.

Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of administrative needs of technology in a large school district.

2. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

3 Ability to maintain computer networks.

4. The ability to work cooperatively and effectively with others.

7. Successful related experience in classroom teaching and/or administration.

8. Bachelor's degree and advanced training relevant to this position.

9. Demonstrated ability to perform position responsibilities.

Decision Making Process for Acquiring Software and Hardware

Any hardware or software that has implications beyond the use of an individual must be reviewed before purchase through the District Technology Steering Committee process outlined here.

Planning for purchases of hardware/software can be initiated in the following fashion:

- by curriculum committees as they adopt new materials as part of their review process,
- by departments (both instructional and administrative) as they plan on new implementations,
- by building sites as they plan for new implementations,
- by any of the technology advisory committees (Technology Steering, Instructional and Administrative).

To purchase additional hardware:

- Each building and/or department is responsible for developing a site-based technology implementation plan. Any hardware purchases must first be presented and approved by a building-level technology committee. Approval by this committee will also involve detailing what additional support might be required by this purchase.

- The request for hardware purchase must be forwarded to the appropriate Technology Coordinator (Administrative or Instructional) for comment on both the technical appropriateness of the hardware plus the completeness of the support plan for implementation.

- If all minimum conditions are met, the building and/or department can proceed with the purchase.

- A list of minimum hardware requirements for purchase will be published and updated regularly by the Technology Support Coordinator with input from the Technology Steering Committee, as well as the Administrative and Instructional Technology Committees. Any purchases by individual departments or building sites should meet these requirements. Support, both instructional and repair, will be provided for only “approved” hardware pieces.

To purchase (or update) software:

- Software purchases must first be approved by the site-based technology committee. Approval by this committee also involves the writing of rationale as to why the software package is needed as well as updating the building/department staff development plan to include training on this software purchase. Updating existing software would fall under the same guidelines.

- The request for software purchase must be forwarded to the appropriate Technology Coordinator (Administrative or Instructional) for comment on both the technical appropriateness of the software plus the completeness of the support plan for implementation.

- If all minimum conditions are met, the building/department can proceed with the purchase.

- A list of supported software packages will be published and updated regularly by the Technology Support Coordinator with input from the Technology Steering Committee as well as the Administrative and Instructional Technology Committees. Each of these software packages will be supported through training and installation provided by the Technology Support area.

Decision Making Process for Integrating Technology into the Curriculum

The process for integrating technology into instruction will continue to follow the regular district curriculum review process.

Through this process, a Curriculum Study Committee of staff and citizens is appointed for each area of the curriculum. The committee reviews the existing curriculum and makes recommendations for changes and improvements. As part of its work, it studies new research and trends in the specific curriculum area.

Part of the charge given to Curriculum Study Committees is to address other topics of timely concern such as future trends, technology, inservice, and staff development. The Instructional Technology Coordinator, Administrative Technology Coordinator, and the Technology Support Coordinator would serve as ad hoc committee members.

Before selecting new textbooks and other materials, the committee reviews the options available and seeks input from staff and citizens. It chooses materials that best meet the needs of the district's students. In some cases, the district chooses to develop its own materials.

Final reports are prepared by each committee and submitted to the School Board and the Planning, Evaluating, and Reporting Committee for review.

Once new curriculum has been adopted, it is implemented in the classroom and monitored carefully. Adjustments are made if necessary.

Each area of the curriculum is reviewed on a six year rotating basis with several areas being studied each year. Each areas goes through a four part cycle:

- Study, one to two years
- Design new curriculum, one to two years
- Implement new curriculum, approximately one year
- Monitor new curriculum, approximately two years

Recommended Configurations for Technology Implementation

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The following pages include recommended configurations for technology implementation in Anoka-Hennepin School District 11.

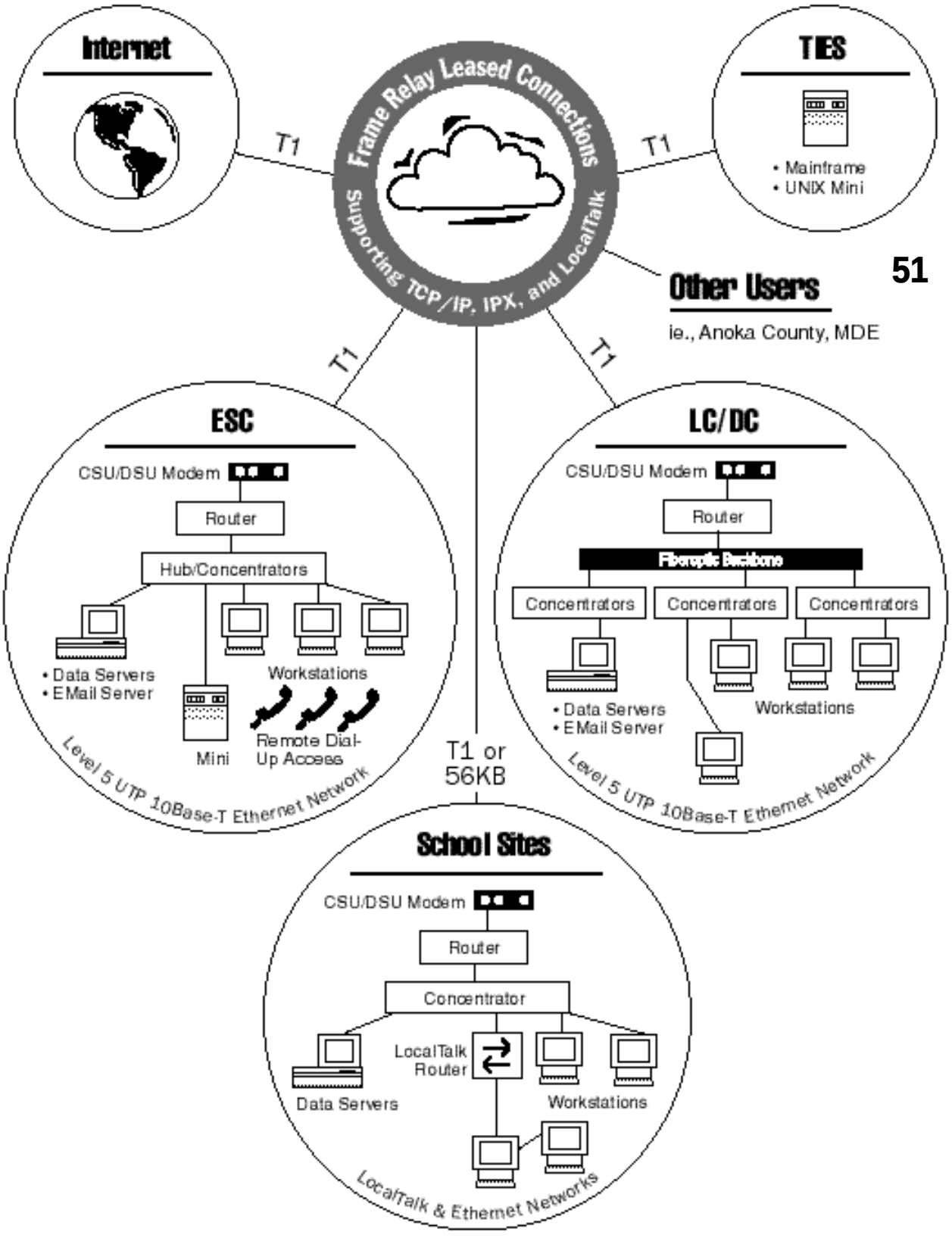
- **Anoka-Hennepin Schools wide area network**
  This diagram indicates that all educational facilities will be connected electronically, allowing more rapid information sharing. Page 51

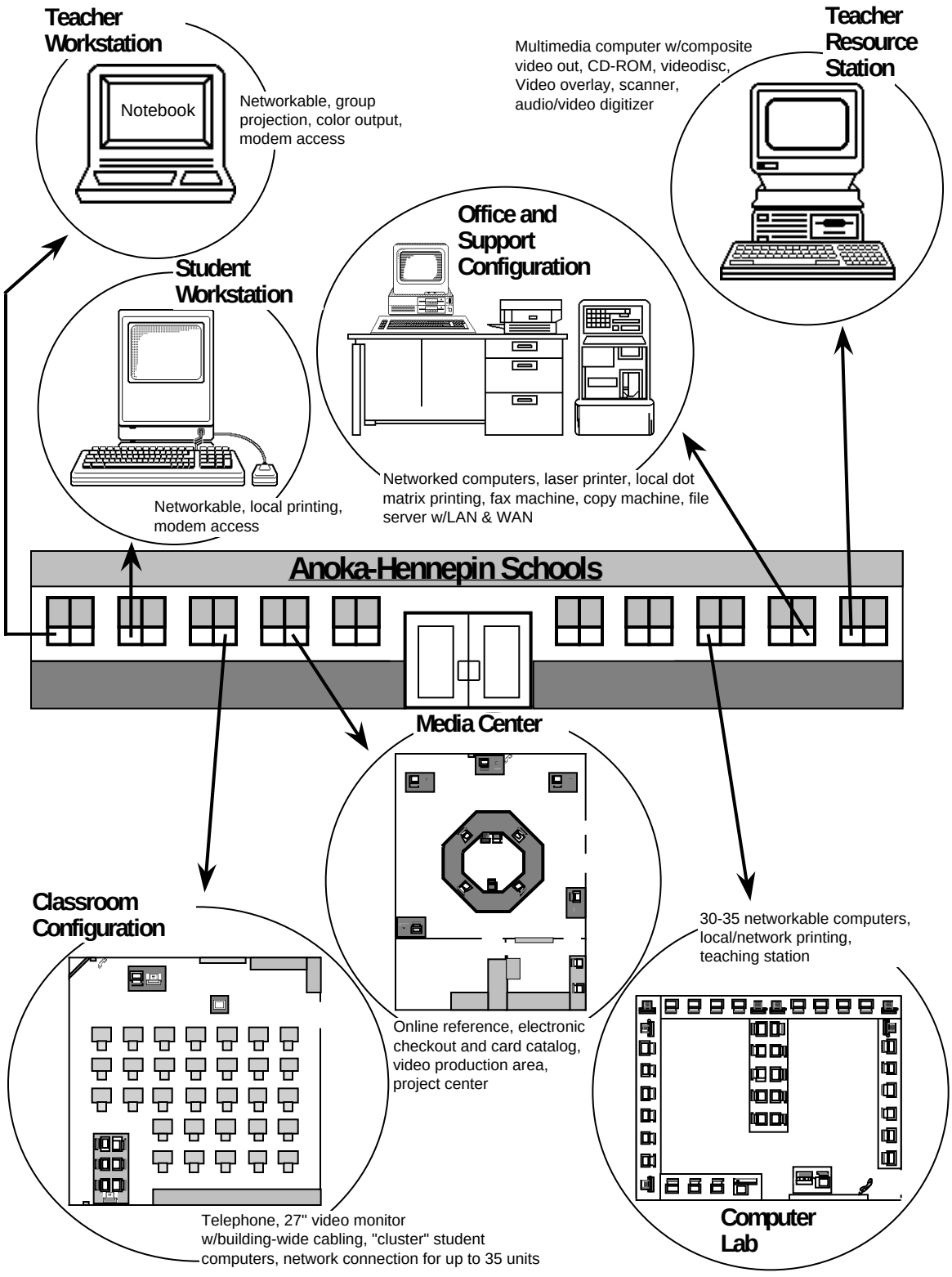
- **Individual school site**
  This diagram indicates the minimum technology configurations that will be available at each school. Page 52

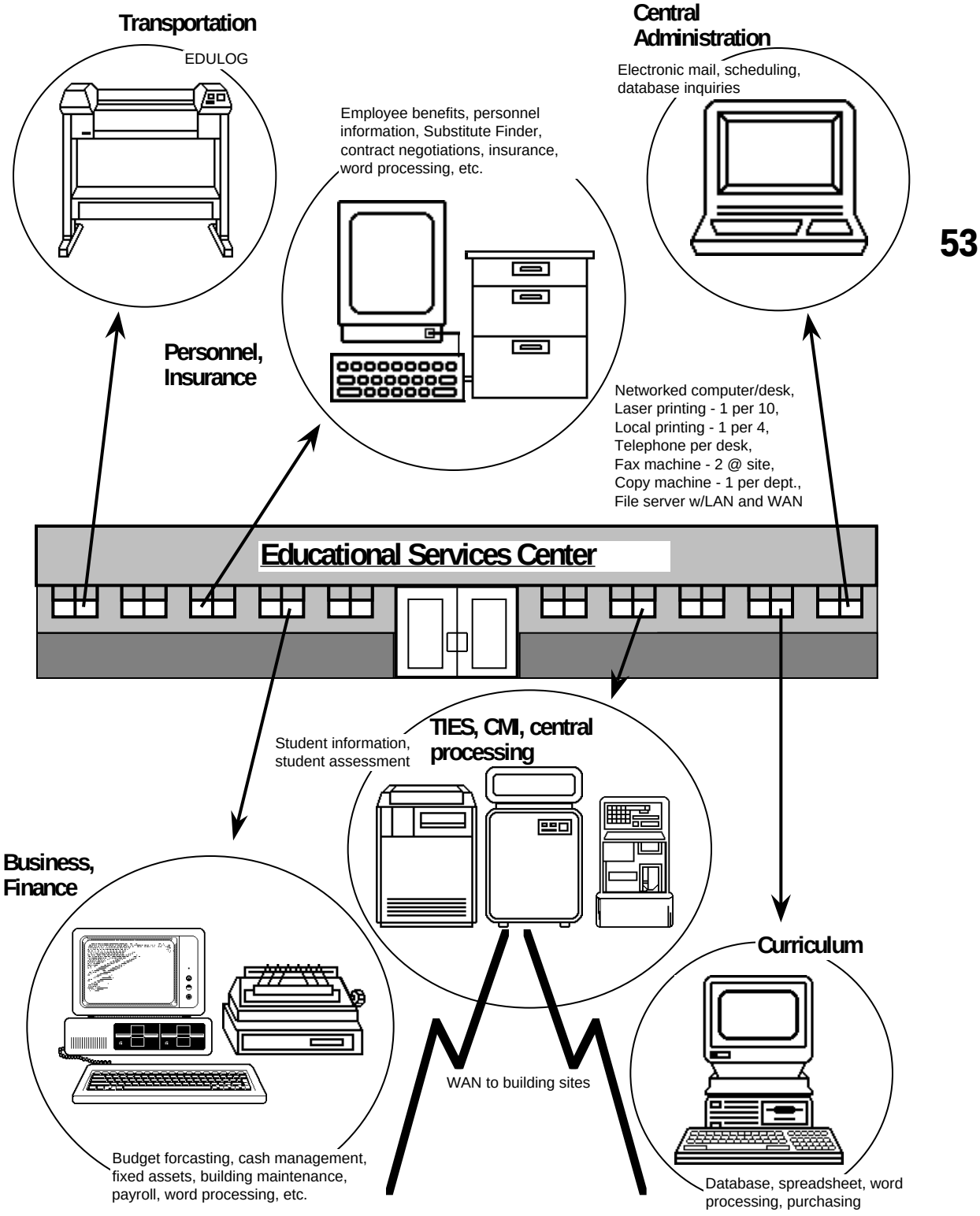
- **Educational Services Center**
  This diagram indicates the technology available at the Educational Services Center. The ESC will house or maintain the central processing unit which operates the districtwide network. Page 53

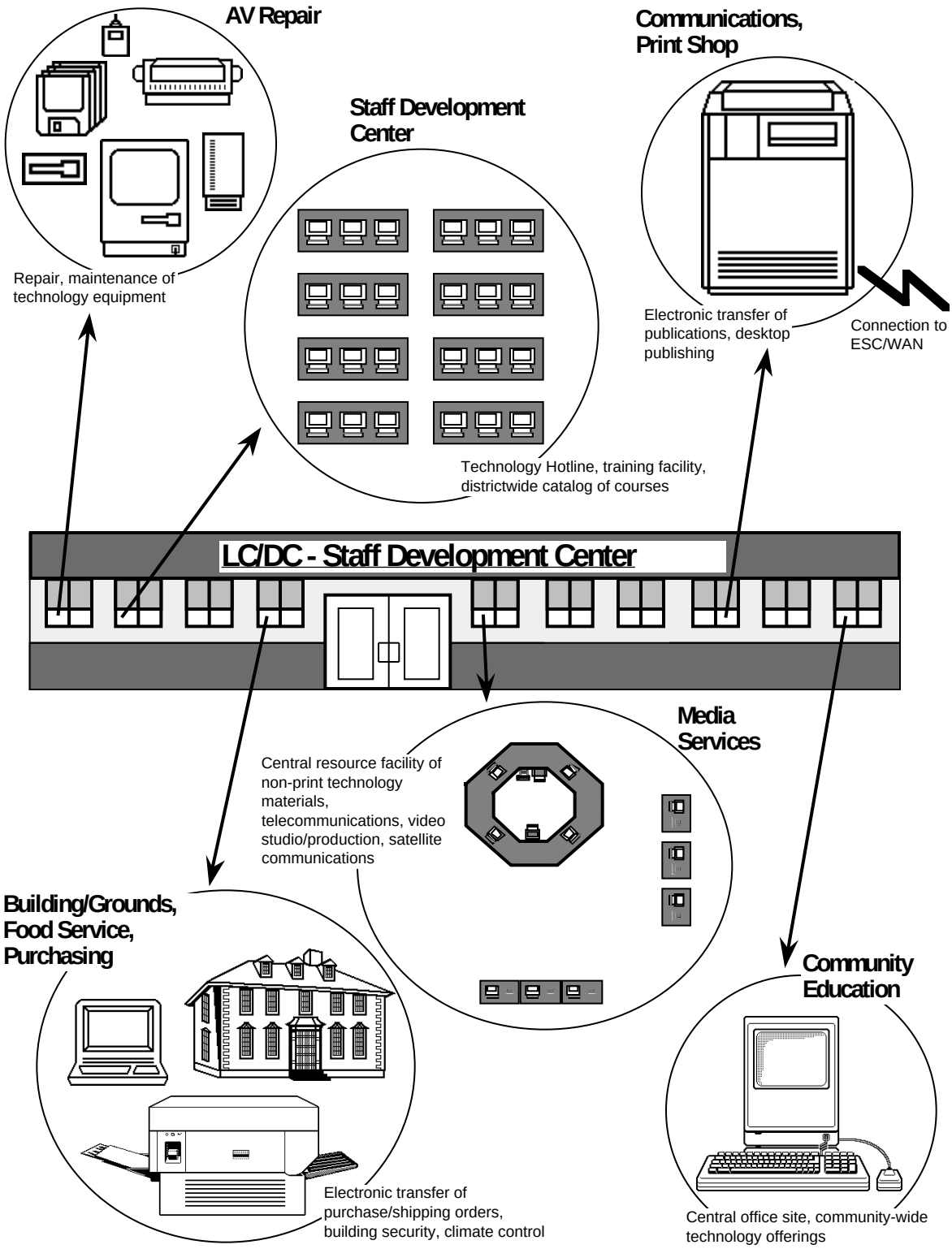
- **Learning Center/Distribution Complex**
  This diagram indicates the technology available at the Learning Center/Distribution Complex. Page 54

Anoka-Hennepin Schools Metropolitan Area Network




Teacher Workstation
Notebook
Networkable, group projection, color output, modem access
Multimedia computer w/composite video out, CD-ROM, videodisc, Video overlay, scanner, audio/video digitizer
Teacher Resource Station
Office and Support Configuration
Student Workstation
Networkable, local printing, modem access
Networked computers, laser printer, local dot matrix printing, fax machine, copy machine, file server w/LAN & WAN
Anoka-Hennepin Schools
Media Center
Online reference, electronic checkout and card catalog, video production area, project center
Classroom Configuration
Telephone, 27" video monitor w/building-wide cabling, "cluster" student computers, network connection for up to 35 units
30-35 networkable computers, local/network printing, teaching station
Computer Lab


Transportation
EDULOG
Central Administration
Electronic mail, scheduling, database inquiries
Employee benefits, personnel information, Substitute Finder, contract negotiations, insurance, word processing, etc.
Personnel, Insurance
Networked computer/desk,
Laser printing - 1 per 10,
Local printing - 1 per 4,
Telephone per desk,
Fax machine - 2 @ site,
Copy machine - 1 per dept.,
File server w/LAN and WAN
Educational Services Center
Student information, student assessment
TIES, CMI, central processing
Business, Finance
Curriculum
WAN to building sites
Budget forcasting, cash management, fixed assets, building maintenance, payroll, word processing, etc.
Database, spreadsheet, word processing, purchasing

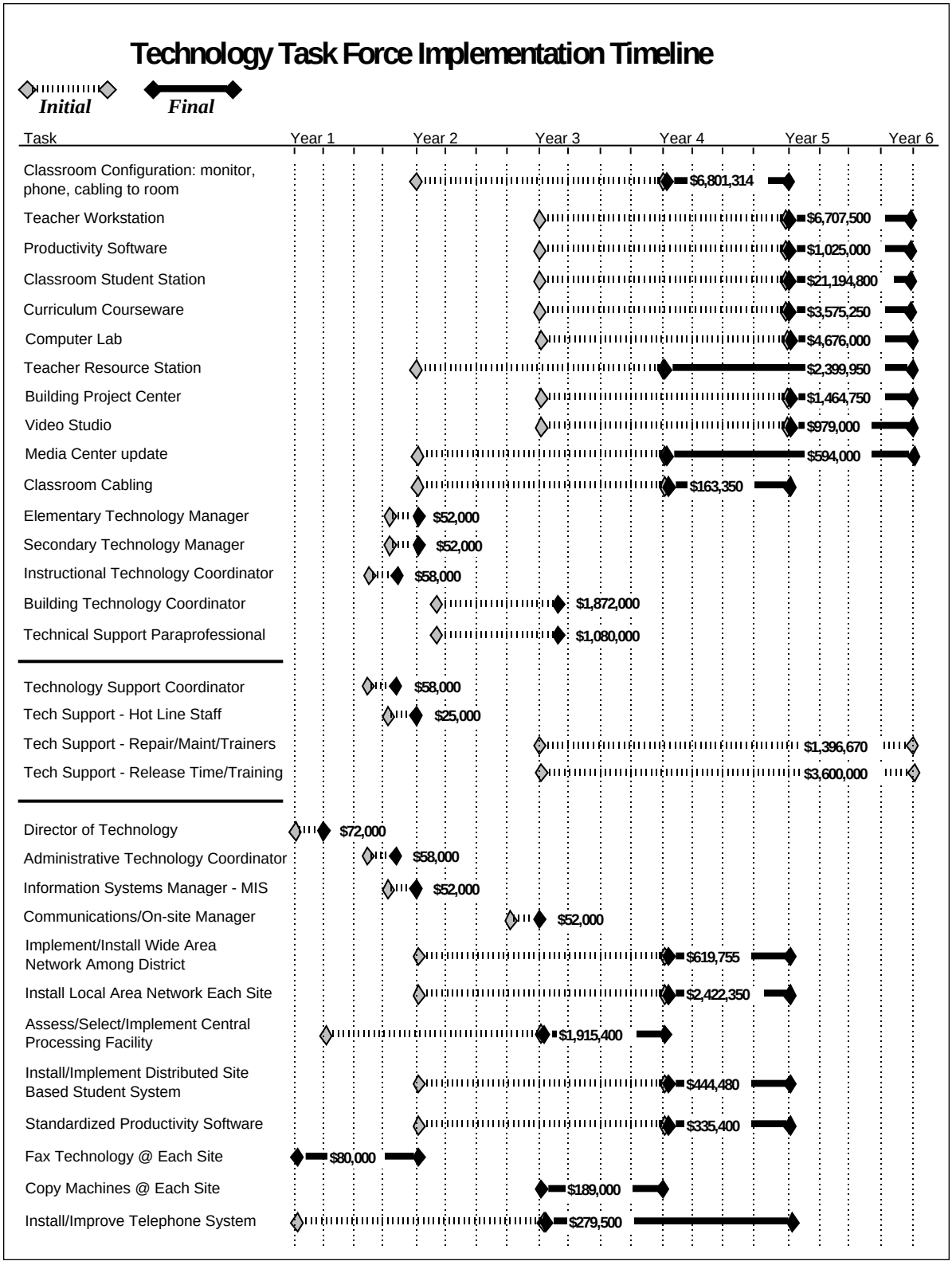

AV Repair
Repair, maintenance of technology equipment
Staff Development Center
Technology Hotline, training facility, districtwide catalog of courses
Communications, Print Shop
Electronic transfer of publications, desktop publishing
Connection to ESC/WAN
LC/DC - Staff Development Center
Media Services
Central resource facility of non-print technology materials, telecommunications, video studio/production, satellite communications
Building/Grounds, Food Service, Purchasing
Electronic transfer of purchase/shipping orders, building security, climate control
Community Education
Central office site, community-wide technology offerings

Recommended Timeline

A suggested timeline for implementing the recommendations in this report follows this page.

Implementation of the recommendations must begin with appointment of a Director of Technology. The director must be on duty to coordinate decision making for technology that will impact implementation of the committee's recommendations.

The following timeline can be modified to meet the district's needs and financial resources.


Technology Task Force Implementation Timeline
Initial
Final
Task
Year 1
Year 2
Year 3
Year 4
Year 5
Year 6
Classroom Configuration: monitor, phone, cabling to room
$6,801,314
Teacher Workstation
$6,707,500
Productivity Software
$1,025,000
Classroom Student Station
$21,194,800
Curriculum Courseware
$3,575,250
Computer Lab
$4,676,000
Teacher Resource Station
$2,399,950
Building Project Center
$1,464,750
Video Studio
$979,000
Media Center update
$594,000
Classroom Cabling
$163,350
Elementary Technology Manager
$52,000
Secondary Technology Manager
$52,000
Instructional Technology Coordinator
$58,000
Building Technology Coordinator
$1,872,000
Technical Support Paraprofessional
$1,080,000
Technology Support Coordinator
$58,000
Tech Support - Hot Line Staff
$25,000
Tech Support - Repair/Maint/Trainers
$1,396,670
Tech Support - Release Time/Training
$3,600,000
Director of Technology
$72,000
Administrative Technology Coordinator
$58,000
Information Systems Manager - MIS
$52,000
Communications/On-site Manager
$52,000
Implement/Install Wide Area Network Among District
$619,755
Install Local Area Network Each Site
$2,422,350
Assess/Select/Implement Central Processing Facility
$1,915,400
Install/Implement Distributed Site Based Student System
$444,480
Standardized Productivity Software
$335,400
Fax Technology @ Each Site
$80,000
Copy Machines @ Each Site
$189,000
Install/Improve Telephone System
$279,500

Funding

The funding for the proposed technology plan can best be described by breaking it down into its three components of Instruction, Administration/Communication and Staff Development/Technical Support.

Assumptions
When developing this model, the following assumptions were used:
1) Capital expenditure facility funds can be used to purchase equipment.
2) No new equipment or software will be purchased without providing the appropriate level of support.
3) Implementation costs are distributed over six years.

Instruction Component
The total cost of implementing the instruction component is $49,600,000 for capital expenditures and $13,400,000 for staffing from the general fund.

This component could be funded by:
1) Reallocating approximately $876,000 of the current facilities funds to a five year lease purchase program.
2) Issuing construction bonds for those costs directly related to building renovation.
3) Issuing 5-year equipment certificates for the purchase of the necessary hardware and software for the system.
4) Providing additional operating revenue to fund the additional costs in the form of an operating referendum of approximately $3,325,000 per year.

Administration/Communication component
The total cost for this component is $9,400,000. This consists of $3,100,000 from the general fund and a projected $6,300,000 from the capital expenditure fund.

These costs could be funded by:
1) Increasing the current spending level by $52,000 in the general fund and $80,000 in the capital fund.
2) Redirecting current capital expenditures for administrative and communication systems for a five year total of $2,700,000; redirecting current general fund expenditure of $250,000 for four years for a total of $1,000,000; reallocating approximately $700,000 of facility funds to a five year lease that would cover the cost of additional hardware.
3) Providing additional operating revenue when the plan is fully implemented to fund the ongoing operational costs of approximately $880,000 per year.

Staff Development/Technical Support Component
The total cost of this component is $12,400,000 and represents all general fund costs.

This component could be funded by:
1) Increasing the current level of funding by $80,000.
2) Redirecting current expenditures for technical support of $144,000 per year.
3) Providing additional operating revenue to fund the additional costs in the form of an operating referendum of approximately $5,200,000 per year.

The phase in of this component is directly related to the phase in of the instructional and administrative components.

Because the detailed renovation needs of each of the buildings are not known at this time, the component cannot be broken down between one time building costs funded by 20-year construction bonds and equipment costs funded by five-year equipment certificates.

It should be noted, however, that in order to keep the district's equipment current, the equipment certificates funded with the reallocation of current facilities fund would be an ongoing cost which would reoccur in five to seven year intervals.

A summary of these funding recommendations is shown in the table that follows:

Analysis of Funding Proposal - Computer Task Force 6 year plan

	Admin. & Comm.		Instructional		Tech. Support		Total 6 Year Cost	
Description	General Fund	Capital Fund	General Fund	Capital Fund	General Fund	Capital Fund	General Fund	Capital Fund
Funding Source								
Increase FY 93 budget	$52,000	$80,000			$80,000		$132,000	$80,000
Redirect current funding								
$250,000 per year for 4 years - data processing	$1,000,000						$1,000,000	
$500,000 per year TIE's fees - 4 years		$2,000,000						$2,000,000
$140,000 annual funding for cap. - 5 years		$700,000						$700,000
$144,000 instructional tech. - 5 years					$720,000		$720,000	
$400,000 annual allocation instr. tech. - 5 years				$1,600,000				$1,600,000
Reallocate future budgets - general fund	$328,000						$328,000	
Reallocate $1,800,000 cap. exp. funds - 5 years		$3,520,000		$2,880,000				$8,400,000
Future operating referendum levy or other								
other new revenue sources	$1,720,000		$13,400,000		$11,800,000		$28,720,000	
Future bond referendum levy				$45,120,000				$45,120,000
Total Funding Sources	**$3,100,000**	**$6,300,000**	**$13,400,000**	**$49,800,000**	**$12,400,000**	**$0**	**$28,900,000**	**$55,900,000**

Recommendations on Alternate Funding Sources

There is a perception that there is a growing base of financial resources and public support for an increased use of technology in education. However, the demand for such support is ever increasing and generally exceeds the available "local" resources.

To implement the recommendations in this study, it will be necessary to secure resources from a variety of public and private organizations.

Competitive governmental grants, state and federal, would provide significant support, especially for staff development. These grants are generally targeted to meet a district's most critical needs and are highly competitive. (i.e. several hundred applicants for five to 10 grants).

Private foundations (local, regional and national) have shown support recently for unique uses of technology toward "restructuring" education. Local corporations, businesses and a variety of community-based organizations have made contributions to support a specific school or program (e.g. adopting a school or program).

All of the above mentioned avenues of support for this plan should be examined thoroughly and pursued aggressively.

Appendices

A. Survey and Results

B. Interview Questions

C. Participant Lists

D. Sample Format for Identified Staff Development and Support

E. Cost Summaries

F. Glossary

G.

NAME All Groups **SCHOOL/DEPT./GRADE** 90 Respondents

To facilitate the analysis of your responses along with others, please use the attached GENERAL PURPOSE ANSWER SHEET to record your responses. Note the directions on side two relative to the need for a No. 2 pencil, etc.

On side one of the answer sheet, record your name by filling in the appropriate circles.

Ignore the birth date, sex, grade or education fields.

Use the **IDENTIFICATION NUMBER** area to identify the category which best describes your position. *Examples: A special education teacher would fill in circle A-3 . A district-level community education manager would fill in circle B-4.*

TEACHER, chose one of the categories and mark in column A.

N (number) = 30 (33%)

0. Elementary
1. Middle/Junior High School
2. Senior High School
3. Special Education
4. Student Services

ADMINISTRATOR, chose one of the categories and mark in column B.

N = 47 (52%)

0. Elementary Principal
1. Middle/Junior High School Principal/AP, etc.
2. Senior High School Principal/AP/etc.
3. Consultant or Coordinator
4. Supervisor/Manager
5. Director

BUILDING-LEVEL SITE SUPPORT PERSON, chose one of the categories and mark in column C.

N = 8 (9%)

0. Paraprofessional
1. Clerical
2. Custodial/Food Service
3. Community Education

DISTRICT-LEVEL SITE SUPPORT PERSON, chose one of the categories and mark in column D.

N = 5 (6%)

0. Clerical
1. Custodial/Buildings and Grounds/ Food Service
2. Community Education

Use columns E. and F. for your answers to the following questions.

E. Are you currently using a computer at your worksite?

0. Yes
1. No

F. IF YOUR ANSWER TO E. IS YES, What type of computer do you use most?

0. Apple IIe,c,gs
1. Macintosh
2. IBM
3. IBM Compatible
4. Terminal (e.g. TIES or CMI)

GENERAL QUESTIONS

INSTRUCTIONS: Please indicate how frequently you use each of the following types of technology to assist you in your job by placing your answer on the scan sheet in circle "A" or "B". Mark "C" if you do not use the item *and* do not see the need for it. Mark "D" if you do not currently use the item, but would if it were made available. Mark "E" if you have a need further assistance or staff development related to the item. Note, you may only make one choice from A-D for each item, but in addition to that choice, you may also choose "E". ***If you are unfamiliar with the particular item, please leave it blank.***

	Frequently	Sometimes	No, and I don't Need it	No, but I would if Available	Staff Dev.. Needed
I use the following technologies in my job:					
Wordprocessing					
1. Desktop (Personal)	63	12	5	7	18
2. Central (e.g. ESC, LC/DC)	11	35	22	10	7
Electronic					
3. Bulletin Board	7	21	14	33	23
4. Calendar/Scheduling	10	13	16	34	21
5. Encyclopedia	0	6	27	39	18
6. Mail	23	20	14	22	14
7. Fax machines	20	29	12	22	6
8. Modem/Telephone	16	18	10	34	17
Network Access (computer and/or video)					
9. Within your building	32	12	6	34	16
10. Between your buildings	9	16	8	49	16
Printing Devices					
11. Dot Matrix	31	19	27	2	5
12. Inkjet/Bubblejet	2	4	46	9	10
13. Laser	59	14	3	10	3
14. Plotter	1	6	33	21	17
Projection devices					
15. Panel/Overhead projector (LCD).	13	25	24	20	12
16. Large Screen Monitor (Computer/Video)	9	22	24	24	16
Television					
17. Cable	0	22	334	23	7
18. Closed Caption	1	7	51	10	9
19. Closed Circuit	0	7	40	25	10
Video					
20. Camcorders	7	36	30	11	6
21. Camera (still image)	10	36	31	7	3
22. VCR Recorder	20	36	22	6	3
23. Editing Equipment	1	11	43	18	16

	Frequently	Sometimes	No, and I don't Need it	No, but I would if Available	Staff Dev.. Needed
Input Devices					
24. Touch screen	0	4	31	35	12
25. Graphics tablet	1	5	28	22	18
26. Mouse	67	11	5	3	2
27. Scanners (data, graphics, text)	5	31	12	22	24
28. Speech recognition	1	4	35	24	19
Output Devices					
29. Speech Synthesis	0	7	43	13	9
30. Braille output	0	1	59	5	6
31. Augmentative/Alternative Communication Devices	1	1	46	5	10
Software					
32. Desktop Publishing	36	19	7	15	20
33. Database	33	23	4	13	24
34. Spreadsheet	24	26	11	13	24
35. Simulation	3	12	26	14	23
36. Career Planning	0	3	51	10	11
37. Tutorials	9	30	24	10	13
38. Graphics	18	37	9	13	21
39. Paint/Illustration programs	13	27	18	11	20
40. Keyboarding	27	17	30	8	9
41. Authoring	10	13	27	12	20
42. Programming	4	20	43	5	14
43. Multi-media	4	18	25	15	26
44. Music applications	3	5	58	5	13
45. Telephone	78	2	0	5	6
46. Teleconferencing	4	37	16	22	13
47. Voice Mail	60	14	5	9	1
48. Bar Code Reader	4	6	46	21	12
49. Calculator (Graphing, Multi-function)	16	23	22	16	9
50. Compact Disc Player	6	10	41	21	0
51. CD Rom	4	9	26	22	17
52. Copy Machines (low volume)	67	14	3	2	2
53. Copy Machines (high volume)	39	25	8	6	2
54. Digitizer	2	8	31	14	10
55. Laptop computer	4	7	17	53	12
56. Videodisks	0	11	27	29	14
57. MIDI-Musical Instrument Data Interface	2	1	52	4	4
58. Microfiche/Microfilm	1	26	36	11	4
59. Pagers	7	9	37	22	4
60. Portable P.A./Music/Sound System	7	18	36	16	2
61. Robotics	0	1	55	10	6
62. Color Printing	4	14	10	49	12
63. Satellite Down-link, receiving only	0	5	30	23	13
64. Satellite Up-link, two-way communications	0	0	34	19	15

Comments:

STAFF DEVELOPMENT

INSTRUCTIONS: Please mark the letter on the scan sheet that **best** reflects staff development activities you feel are necessary to do your job and to address the technology advances you perceive will be in place in the next two to five years.

65. Do you see a need for a District Technology location that would allow staff to preview and review hardware/software?
    A. Yes(77)
    B. No(12)

66. Where would you prefer technology training to occur? (Choose only one.)
    A. At your worksite(48)
    B. Staff Development Center(41)
    C. Vendor's Site(0)
    D. TIES(1)
    E. Telephone consultation(0)

67. When would you prefer technology training to occur? (Choose only one.)
    A. During the School Day(52)
    B. Before/After School(9)
    C. Weekend(0)
    D. Summer(14)
    E. Staff Development Days(14)

68. How would you prefer technology training to occur? (Choose only one.)
    A. Formal class(40)
    B. Training Manual/Tutorial(3)
    C. Training Diskettes/Workbook(0)
    D. Video Based Tutorial(6)
    E. Someone knowledgeable at my site(45)

69. What would be the most attractive incentive for your staff development?
    A. Release Time(34)
    B. Compensatory Time(15)
    C. Substitute Available(10)
    D. Graduate Credit(10)
    E. Continuing Education Units (CEU's)-12

70. Who do you most often call when you need help with software, equipment or maintenance?
    A. Site Technology Person(22)
    B. District Technology Consultants(38)
    C. Media Generalists(3)
    D. Colleague/Peer(2)

Comments:

DECISION-MAKING PROCESSES FOR TECHNOLOGY

INSTRUCTIONS: Please mark the letter on the scan sheet that corresponds to the code listed below to indicate who must be involved in decisions concerning technology. You must choose only one from A-E.

A. Individuals at a Building Site
B. A Committee at a Building Site
C. Curriculum Study Committees
D. A Department at the District Level
E. A District Technology Management Team

	A.	B.	C.	D.	E.
71. Equipment/hardware purchases	15	30	1	7	34
72. Software purchases	25	30	9	10	13
73. Staffing decisions	15	25	2	23	19
74. Integration of Technology into the Curriculum	5	5	51	10	12
75. Guidelines for the selection and acquisition of Technology	3	13	4	16	50
76. Guidelines for the equitable distribution of Technology	0	6	1	15	62

PRIORITY OF EXPENDITURES

If you had funds to spend on technology to support and enhance the instructional program and administrative functions, rank each item from 1(Low) to 5(High) which reflects your priorities?

	Low				High
Hardware					
77. For Students	1-1	2-4	3-11	4-22	5-48
78. For Staff (certified, noncertified)	1-2	2-2	3-16	4-17	5-56
Software					
79. Instruction	1-2	2-3	3-12	4-26	5-49
80. Administration	1-3	2-6	3-22	4-21	5-33
81. Staff Development	1-1	2-6	3-27	4-24	5-32
82. Opportunities to review new technologies (Workshop attendance, Conventions, District tech conference, etc.)	1-1	2-12	3-30	4-21	5-25
83. Communications systems (i.e. Electronic mail, Electronic bulletin boards, Voice mail, Modems, Fax, etc.)	1-6	2-8	3-20	4-31	5-24
	Less		**Same**		**More**
84. In relationship to all district expenditures, what amount should be spent on Technology?	1-3	2-1	3-27	4-34	5-24

Comments:

COMMUNICATION

(Respond only to items which directly apply to your position.)

INSTRUCTIONS: Please mark the letter on the scan sheet that corresponds to the code listed below to indicate what needs you have or anticipate needing in the areas of communication. **Give only one answer per item. IF YOU HAVE NO KNOWLEDGE OF THE ITEM, LEAVE THE RESPONSE BLANK.**

A. Current system is available, used and acceptable
B. Current technology is available and used, needs improvement
C. Current technology is needed but not available
D. Technology is not needed
E. Staff Development needed

Should all school and District sites be electronically networked for the following applications?

	A.	B.	C.	D.	E.
85. Budget Information	4	12	28	7	8
86. Calendar	8	15	16	9	11
87. Electronic mail	21	21	17	3	9
88. Facility scheduling	6	11	28	6	7
89. Personnel	7	14	21	6	5
90. Purchasing	6	18	17	2	6
91. Student attendance	10	26	4	1	6
92. Student information	6	26	11	1	8
93. Warehouse orders	12	26	12	0	4
94. Work orders	5	6	17	5	4
95. Student Assessment	15	22	10	2	5

My ability to communicate with the following entities utilizing technology is:

	A.	B.	C.	D.	E.
96. Other sites within the District	6	31	27	1	9
97. Other sites outside the District	4	17	32	6	5

Comments:

INSTRUCTIONAL SUPPORT

(Teachers Only)

INSTRUCTIONS: Please indicate how frequently you use each of the following types of technology to assist you in your job by placing your answer on the scan sheet in circle "A" or "B". Mark "C" if you do not use the item *and* do not see the need for it. Mark "D" if you do not currently use the item, but would if it were made available. Mark "E" if you have a need further assistance or staff development related to the item. Note, you may only make one choice from A-D for each item, but in addition to that choice, you may also choose "E". ***If you are unfamiliar with the particular item, please leave it blank.***

	Frequently	Sometimes	No, and I don't Need it	No, but I would if Available	Staff Dev.. Needed
98. Do you use a scanner for test scoring?	11	15	17	5	2
99. Do you use a computer for monitoring student progress? (grading, behavior mgmt, wpm, etc.)	14	14	13	6	7
100. Do you use a computer for equipment inventory?	8	5	18	9	4
101. Do you use a computer for textbook inventory and/or control?	4	3	21	9	2
102. Do you prepare student exercises and tests on a computer?	19	8	11	2	2
103. Do you write progress reports, parent letters, and other home/school correspondence with a computer?	27	6	4	1	3
104. Do you prepare lesson plans with a computer?	8	10	14	7	2
105. Do you order supplies on a computer?	4	3	19	17	1
106. Do you manage your instructional activities budget with a computer?	5	2	23	15	2
107. Do you generate IEP's with a computer?	3	5	23	7	2
108. Do you have a centralized collection of multi-media materials at your school?	18	4	6	6	2
109. Do you have the technology hardware/software necessary for presentation and management available in your classroom?	6	2	6	21	7
110. Do students in your classroom use technology for remediation?	5	18	4	6	2
111. Do students in your classroom use technology for enrichment?	7	20	3	3	1

112. What kind of video equipment do you use most in your teaching? (Choose only one.)

A. VCR-25
B. Camcorder/Still Video Camera-3
C. Still Video Camera-0
D. Editing Equipment-0
E. Videodisk player-2

113. Where would you most like to see student computers in the school? (Choose only one.)

A. In labs-16
B. In my classroom-18
C. In media centers-1
D. Portable stations-0

114. If your answer was "B" on the previous question, how many computers would you prefer in the classroom?
   A. 1 for the classroom-0
   B. 2-4 for the classroom-5
   C. 1 for every 3 students-6
   D. 1 for every 2 students-5
   E. 1 per student-2

115. In a lab?
   A. 1 for every 3 students-2
   B. 1 for every 2 students-0
   C. 1 per student-28

OFFICE TECHNOLOGY/AUTOMATION

(Administrative Staff Only)

INSTRUCTIONS: What information do you currently use or need, or would like to use in performing your job? Choose only one of the following responses:

A. Available, used, acceptable
B. Available, but needs improvement (Please comment on the need for training, hardware, software, etc.)
C. Not available, but needed
D. Not needed
E. Not familiar

		A.	B.	C.	D.	E.
STUDENT INFORMATION						
116.	Student demographics	7	22	12	10	5
117.	Cumulative records	3	11	13	17	11
118.	Health information	5	9	13	18	7
119.	Student attendance information	9	19	7	143	7
120.	Withdrawal/Drop out reports	6	13	10	16	10
121.	Student progress reporting	6	16	9	16	7
122.	Credits earned	1	8	6	24	11
123.	Student characteristics and test scores	2	9	14	17	9
124.	Student competencies/Proposed Graduation Rule	0	2	12	23	14
125.	Master schedule building	4	10	8	20	14
126.	Student course registration	1	11	9	24	12
127.	Student course scheduling	3	6	8	24	10
128.	Class lists w/additional student information	7	16	10	12	9
129.	Student fines	1	3	9	25	16
130.	Locker assignments	3	2	7	29	13
131.	Disciplinary records	2	12	10	19	9
132.	Student activity information	2	6	9	24	11
133.	Special education information	2	13	12	15	12
134.	Absence calling	6	7	11	20	10
PERSONNEL						
135.	Employee name (current/former)	23	10	11	8	6
136.	Home address/phone	19	10	13	6	6

A. Available, used, acceptable
B. Available, but needs improvement
(Please comment on the need for training, hardware, software, etc.)
C. Not available, but needed
D. Not needed
E. Not familiar

		A.	B.	C.	D.	E.
137.	Biographical data	4	8	11	19	8
138.	Protected class status	3	5	7	22	13
139.	Applicant Information	4	10	15	12	11
140.	Employee qualifications/credentials	4	12	14	13	11
141.	Official correspondence	13	9	10	9	11
142.	Licensure/relicensure status	5	11	9	16	10
143.	Professional development	6	6	14	14	12
144.	Performance review/evaluation	6	15	10	12	9
145.	Employment status	12	9	10	13	8
146.	Probationary status	9	10	10	15	8
147.	Assignment	8	14	10	10	10
148.	Pay rate/hours/days	6	13	11	11	10
149.	Individual contract benefit information	8	7	9	17	10
150.	Seniority	9	12	13	11	8
151.	AHISD employment history	3	11	11	11	15
152.	Calendar (duty year/holiday)	9	9	14	9	9
153.	Leave of absence type/dates	5	12	12	10	10
154.	Attendance	3	11	15	12	8
155.	Substitutes	3	10	14	13	10
156.	Organizational chart of positions	5	8	14	9	15
157.	Table of authorized positions	1	7	12	10	19
158.	Vacancy/posting information	11	11	19	10	8
EMPLOYEE RELATIONS/INSURANCE						
159.	Contracts and Policies	13	7	12	10	11
160.	Employee Insurance Information	11	9	10	10	9
161.	Bargaining Groups Benefit Information	6	12	11	11	11
162.	Salary Schedules	13	6	12	9	9
163.	Bargaining Units/Policy Groups	11	6	11	11	11
FINANCE/BUSINESS						
Budget						
164.	District budget (school site)	7	17	11	4	11
165.	Budget development	5	20	10	8	8
166.	Budget detail (revenues/expendit.)	6	17	10	9	8
Transportation						
167.	Bus routes/numbers	3	6	8	17	13
168.	Bus schedules	5	8	8	21	13
169.	Route planning	2	8	2	22	16
170.	Contractor payment	1	2	2	25	16

A. Available, used, acceptable
B. Available, but needs improvement
(Please comment on the need for training, hardware, software, etc.)
C. Not available, but needed
D. Not needed
E. Not familiar

		A.	B.	C.	D.	E.
Purchasing/Warehouse						
171.	Purchase orders/requisitions	9	21	10	4	4
172.	Warehouse catalogs	13	16	7	4	8
173.	Bid preparation/management	5	2	6	12	22
174.	Inventory control	3	9	6	10	19
175.	Vendor information	8	6	9	7	16
Accounting						
176.	Accounting reports (cash journals, check registers, etc.)	3	7	6	11	20
177.	Accounts payable information	5	8	6	9	19
178.	Accounts receivable information	5	9	6	14	19
179.	Fixed asset inventory control	4	5	8	11	23
Facilities						
180.	Facility scheduling	5	11	15	7	9
181.	Maintenance reports (work orders)	2	5	6	15	20
182.	General maintenance scheduling	3	2	6	18	19
183.	New construction tracking	3	0	2	18	26
184.	Energy management system	4	1	4	15	24
185.	Inventory control	5	4	8	12	20
District Planning						
186.	Attendance boundary development	5	9	5	16	12
187.	Facility planning	2	5	8	11	21
Food Services						
188.	Menu and ticket schedules	5	3	7	20	22
189.	Cash accounting	1	5	4	21	24
190.	Inventory control	1	3	3	16	24
191.	Free/reduced lunches	1	9	7	14	17
192.	Employee scheduling	0	1	7	18	22
193.	Recipe information	0	2	4	19	23
194.	Lunch counts	2	4	7	16	19
Payroll						
195.	Salary computation information	5	10	9	10	14
196.	Employee leave accrual/use	5	18	10	6	9
197.	Vacation accrual/use	5	17	11	7	8
198.	Payment history	8	13	9	12	15
199.	Employee deduction information	8	8	8	16	12
200.	**Customized report preparation for any of the above administrative areas**	**1**	**14**	**20**	**4**	**8**

Comments:

Interview Questions

These are questions which you will be asked by members of the Task Force. While you may want to think about your answers before the interview process, we do not expect you to have prepared a written response.

Students

1. How are computers and other technology (videos, camcorders, video disks, tape recorders, etc.) used in your classroom and school?
2. What kind of technology would you like to have, in your school, to help you learn?
3. From all the answers to question 2, which one would you name as the most important?
4. Is there an idea you've heard that you'd like to see tried in your school and how would this technology help you learn?
5. Using a "crystal ball," look in the future. What do you think the school and the classroom will be like as more computers and technology are used.?
6. Is there anything else that you would like to tell us as we plan for future use of technology in our school district?

Business, Community and Parents

1. What do you think are the major issues related to technology in our schools and/or district?
2. What suggestions do you have for using technology to address these issues?
3. Of the suggestions that have been identified in response to question 2, which one do you think is most important and should be top priority?
4. If the recommendations were implemented, what benefits would be realized?
5. As you take an optimistic look into the future, how do you see technology enhancing the educational programs within the schools and the district?
6. What other comments or observations would you like to add?

District Staff

1. What problems do you have in making the best uses of technology in the performance of your job?
2. What ideas or suggestions would you have to improve your job skills through the use of technology?
3. From the suggestions or recommendations you made, would you tell us which one of them would have the highest priority?
4. If one or more of your recommendations were implemented, what would be the value and benefits for you, the District, the school, the students, and the community?
5. Using an "optimistic crystal ball" to look into the future, how do you see technology impacting the learning process and the operations of schools, departments, and the District as a whole?
6. Do you have any other concerns or comments which have not been addressed in the survey or this interview?

ANOKA-HENNEPIN TECHNOLOGY INTERVIEWEES

Elementary Principals
Don Rautio, Adams
Ken Berg, Evergreen Park
Charles Burnside, Mississippi
Bonnie Martinson, Morris Bye
Jean Kincanon, Washington
Marlys Tietz, Hamilton
Stan Peichel, Eisenhower

Elementary Teachers
Marge VonBerg, Champlin
Linda Bain, Dayton
Lois Ballinger, PEKC
Mavis Paluck, Oxbow Creek
Carol Paul, LOJ
Pat Johnson, Hoover
Sue Nordby, Johnsville
Gladys Hawke, University Ave.
Gordon Sironen, Riverview
Carol Waletski, Monroe
Sue Garnett, Wilson
Sherrie Marcy, Andover

Paraprofessionals
Suzanne Fussy, CRSH
Nancy Gerritz, RJH
Geraldine Uhde, Andover
Carolyn Thompson, Franklin
Linnea Eisinger, FMJH
Janet Conway, Washington

Business/Community
Larry Ragland, Augsburg College
Terry O'Connell—Quad Cities TV
Lyle Haney, CR City Hall

Secondary Principals
David Bonthuis, CPSH
Bruce Bastian, NJH
Nancy Amenrud, BSH
Ron Olsbo, RJH
Dennis Psick, CRJH
Ron Scott, ASH

Business Services
Denise Mergens, Business Services, ESC
Chuck Holden, Transportation, ESC
Lori Knee, Food Service, LC/DC
Jim Michaelson, Food Service, LC/DC
Char Otteson, Payroll, ESC
Louise Thomas, Purchasing, LC/DC

Administrators
Louis Klingelhouts, Buildings/Grounds, LC/DC
Cathryn Olson, Human Resources, ESC
Mary Olson,Public Information, ESC
Iris McGinnis, Assessment, ESC
Dennis Carlson, Community Education, LC/DC
Tom Albrecht, Technology, LC/DC
Phyllis Wolak, Special Education, LC/DC
Earl Keyser, Information Systems, ESC
Kathi Jorissen,Staff Development, ESC
Bob Teeling, Special Education, LC/DC

Students
Veronica Jurisch, ASH
Brian Broesder, RJH
Dawn Nyhus, CRJH
Darin Mahlke, NJH
Chris Perske, Crooked Lake
Kristine White, Washington

Community Education
Diana Menster-Sullivan
Dennis Arthur
Steve Kerr
Bernell Fedje
Kim LeTourneau
Pat Plant

Student Support
Janet Davenport, ESC
Judy Sutter, LC/DC
Nancy Syverts, ESC
Mary Ann Blechinger, LC/DC
Tim Sheie, LC/DC

Consultants
Rod Vacek, Science
Karen Long, Business Education
Ruth Brown, Reading
Dale Zellmer, Social Studies
Poncho Bennett, Media Services
Rance Howe, English
Mike Lindstrom, Industrial Technology
Leslie Caye, Foreign Language
Jerry Staples, Indian Education
Roger Larson, Mathematics

Site Support
Karen Mallery, Secretary, ESC
Bonnie Althouse, Secretary, Riverview
Marilyn Mellenthin, Secretary, ESC
Marilyn Duffey, Secretary, Food Service
Ken Yocum, Buildings/Grounds, LC/DC
Russ Banta, Technology Repair, LC/DC
Jim Smith, Custodian, Sand Creek

Junior High Teachers
Ron Cockerham, RJH
Scott Clark, NJH
Scott Dougherty, NJH
Chuck Burnham, JJH
Joe DeMuth, JJH
Paulette Flemming, Jr. HS

Senior High Teachers
Ronda Magill, ALC
Carol Doschadis, CPHS
Greg Thornton, JJH
Cathy Wagner, BSH
Doug Bakkum, BSH
Rob Anderson, ASH

Special Education
Sue Sturzl, ASH
Linda Denbleyker, LC/DC
Brenda Mulry, Hoover
Guy Bartolain, CRSH

Parents
Lynnea Lindgren, Jefferson
Terry Lane, Ramsey
Debbie Anderson, Madison
Patty Thorson

Sample Format for Identified Staff Development and Support

	Tech Support	Teachers	Site Administrative	District Administrative	District Clerical	Site clerical	Paraprofessional
1. Technology Plan Implementation awareness (1 hour)	3	3	3	3	3	3	3
2. Introduction to indivdual computer workstation (2 hours)	3	3	3	3	3	3	3
3. Maintenance of workstation plus network introduction (2 hours)	3	3	3	3	3	3	3
4. Introduction to word processing and electronic mail (3 hours)	3	3	3	3	3	3	3
5. Introduction to database reporting (3 hours)	3	3	3	3	3	3	
6. Introduction to spreadsheet design and reporting (3 hours)	3	3	3	3	3	3	
7. Introduction to Student Information System (hour	3	3	3	3	3	3	3
8. Introduction to Business Inform Syste (2 rs)			3	3	3	3	
9. Introduction to Employ yr Management (2 hou	3		3	3	3	3	
10. Introduction to Media Center Manag nt ( )	3	3		3		3	3
11. Introduction to Classroom nel t (2 ours)	3	3		3		3	3
12. Introduction to Desktop Publishing (3 hours)	3	3	3	3	3	3	3
13. Introduction to Multimedia (3 hours)	3	3	3	3	3	3	3
14. Introduction to Utilities/upgrading procedures (2 hours)	3	3	3	3	3	3	3
15. Introduction to LAN maintenance for site support staff (6 hours)	3						3
16. Introduction to telecommunications (2 hours)	3	3		3		3	3
17. Introduction to phone/voice mail system (2 hours)	3	3	3	3	3	3	3

Sample Format for Identified Staff Development and Support

	Tech Support	Teacher	District Administrative	Site Administrative	District Clerical	Site clerical	Paraprofessional
18. Intermediate word processing (3 hours)	3	3	3	3	3	3	3
19. Position specific word processing (3 hours)	3	3	3	3	3	3	3
20. Intermediate database reporting (3 hours)	3	3	3	3	3	3	
21. Position specific database reporting (3 hours)	3	3	3	3	3	3	3
22. Intermediate spreadsheet design and reporting (3 hours)	3				3	3	
23. Financial management system (5 hours)	3		3	3	3	3	
24. Employee/Payroll management system (5 hou	3				3	3	
25. Food Service management em (5 rs					3	3	
26. Transportation ma nt system (5 hours)	3				3	3	
27. Insurance management system (5 hours)	3				3		
28. Student management sy n (5 h s)	3	3	3	3	3	3	3
29. Student scheduling system (ours)	3			3		3	
30. Student attendance system (5 hours)	3	3		3		3	3
31. Student grading systems (5 hours)	3	3					3
32. Intermediate multimedia (3 hours)	3	3					
33. Intermediate desktop publishing (3 hours)	3	3			3	3	3
34. Position specific training (6 - 18 hours)	3	3	3	3	3	3	3

Cost Summary

$55,866,799 HARDWARE, SOFTWARE, WAN, LAN
$4,612,486 NEW POSITIONS, ADDITIONAL STAFF(APPROX 155):SUPPORT, SERVICE, ADMINISTRATIVE
$3,600,000 TRAINING (5 DAYS/YEAR FOR STAFF), RELEASE TIME, ADD DUTY DAYS, SUBS

		YEAR ONE		YEAR TWO	
INSTRUCTIONAL & CLASSROOM IMPLEMENTATION PLAN					
$6,801,314	CLASSROOM CONFIGURATION: MONITOR, LAN-CABLING, TELEPHONE	0.00%	$0	33.33%	$2,267,102
$6,707,500	TEACHER WORKSTATION: COMPUTER, PRINTER, MODEM	0.00%	$0	0.00%	$0
$1,025,000	PRODUCTIVITY SOFTWARE	0.00%	$0	0.00%	$0
$21,194,800	CLASSROOM STUDENT STATION: COMPUTER, PRINTER	0.00%	$0	0.00%	$0
$3,575,250	CURRICULUM COURSEWARE	0.00%	$0	0.00%	$0
$4,676,000	COMPUTER LAB: MONITOR, COMPUTER, PRINTER	0.00%	$0	0.00%	$0
$2,399,950	TEACHER RESOURCE STATION: MM COMPUTER,CD-ROM, SCANNER, DIGITIZER, VDP, VOC, CART	0.00%	$0	25.00%	$599,988
$1,464,750	PROJECT CENTER: VIDEO CAMERA, FLATBED, SCANNERS, COMP, CAMCORDER, VCR, MONITOR	0.00%	$0	0.00%	$0
$979,000	VIDEO STUDIO: VIDEO CAMERAS, CONTROLLER EDITING, MMCOMP, VCR, MIKES, FURN, LIGHT, SW	0.00%	$0	0.00%	$0
$594,000	MEDIA CENTER: CD-ROM, MODEM CARD CATALOG, ELECT CHECK OUT SYSTEM, SW	0.00%	$0	25.00%	$148,500
$163,350	CLASSROOM CABLING FOR STUDENT WORKSTATIONS	0.00%	$0	0.00%	$0
$104,000	INSTRUCTIONAL MANAGERS: (2 @ $52,000)	0.00%	$0	100.00%	$108,160
$58,000	INSTRUCTIONAL COORDINATOR: (1 @ $58000)	16.67%	$9,666	100.00%	$60,320
$1,872,000	INSTR BLDG TECH COORDINATOR: (39 @ $48,000)	0.00%	$0	50.00%	$936,000
$585,000	INSTR BLDG TECH SUPPORT PARA (1/BLDG):(39@$15,000)	0.00%	$0	50.00%	$292,500
$495,000	INSTR BLDG TECH SUPPORT PARA(1:500-39):(33@$15,000)	0.00%	$0	0.00%	$0
($162,034)	LESS CURRENT ADMINISTRATIVE SALARIES PAID		$0	SEE TRANSITION OUTLINE	($168,515)
TECHNICAL SUPPORT & STAFF DEVELOPMENT IMPLEMENTATION PLAN					
$58,000	TECHNOLOGY SUPPORT COORDINATOR: (1 @ $58,000)	16.66%	$9,663	100.00%	$60,320
$25,000	TECH SUPPORT: 1 HOT LINE-RC PERSON	0.00%	$0	100.00%	$25,000
$1,396,670	TECH SUPPORT: REPAIR+MAINT+SERVICE+INSTALL ADDITONAL STAFF (APPROX 35) EST @ 2.5%*HW+SW	0.00%	$0	0.00%	$0
$3,600,000	TECH SUPPORT TRAINING 5 DYS/YR: RELEASE TIME, SUBS, ADD DUTY DAYS-SUMMER, SUBS, (NOT ADD STAFF)	0.00%	$0	0.00%	$0
ADMINISTRATION & COMMUNICATION IMPLEMENTATION PLAN					
$72,000	DIRECTOR OF TECHNOLOGY: (1 @ $72,000)	75.00%	$54,000	100.00%	$74,880
$58,000	ADMINISTRATIVE COORDINATOR: (1 @ $58,000)	16.66%	$9,663	100.00%	$60,320
$104,000	ADMINISTRATIVE MANAGERS: (2 @ $52,000)	0.00%	$0	50.00%	$52,000
($53,150)	LESS CURRENT ADMINISTRATIVE SALARIES PAID		$0	SEE TRANSITION OUTLINE	($55,276)
$619,755	IMPLEMENT/INSTALL WIDE AREA NETWORK AMONG DISTRICT SITES WHICH INCLUDES STAFF SUPPORT & TRAINING WITH HW & SW	0%	$0	33%DESIGN/BID/INSTALL/TRA	$206,564
$2,422,350	INSTALL LOCAL AREA NETWORK(BACKBONE) EACH SITE BRIDGED W/WAN WHICH INCLUDES STAFF SUPPORT &TRAINING W/HW & SW	0%	$0	33%DESIGN/BID/INSTALL	$807,369
$1,915,400	ASSESS/SELECT/IMPLEMENT CENTRAL PROCESSING FACILITY TO SUPPORT CENTRAL ADMIN APPLICATIONS & CORE REQUIREMENTS AND CONNECT TO WIDE AREA NETWORK	ASSESS CURRENT SYSTEM/ NEEDS FOR HW & SW 2% OF TOTAL COST	$38,308	DESIGN/BID/PURCHASE CENTRAL HW & SW 8% OF TOTAL COST	$153,232
$444,480	INSTALL/IMPLEMENT DISTRIBUTED SITE BASED STUDENT SYSTEM INCLUDES TRAINING ON SW & MF SW	0%	$0	0% 0%	$0
$335,400	PROVIDE STANDARDIZED SET OF PRODUCTIVITY SOFTWARE	0%	$0	33%INST/IMP SW	$111,789
$80,000	PROVIDE FAX TECHNOLOGY	100% INSTALL	$80,000		
$189,000	PROVIDE COPY MACHINES @ EACH SITE	0%	$0	0%	$0
$279,500	INSTALL/IMPROVE TELEPHONE SYSTEM	ASSESS CURRENT SYS/NEEDS 5% OF TOTAL COST	$13,975	DESIGN/BID NEW SYSTEM 25% OF TOTAL COST	$69,875

Cost Summary

YEAR THREE		YEAR FOUR		YEAR FIVE		YEAR SIX	
33.33%	$2,267,102	33.33%	$2,267,102	0.00%	$0	0.00%	$0
33.33%	$2,235,831	33.33%	$2,235,831	33.33%	$2,235,831	0.00%	$0
33.33%	$341,666	33.33%	$341,666	33.33%	$341,666	0.00%	$0
33.33%	$7,064,926	33.33%	$7,064,926	33.33%	$7,064,926	0.00%	$0
33.33%	$1,191,749	33.33%	$1,191,749	33.33%	$1,191,749	0.00%	$0
33.33%	$1,558,665	33.33%	$1,558,665	33.33%	$1,558,665	0.00%	$0
25.00%	$599,988	25.00%	$599,988	25.00%	$599,988	0.00%	$0
25.00%	$366,188	25.00%	$366,188	25.00%	$366,188	25.00%	$366,188
33.33%	$326,333	33.33%	$326,333	33.33%	$326,333	0.00%	$0
25.00%	$148,500	25.00%	$148,500	25.00%	$148,500	0.00%	$0
33.33%	$54,450	33.33%	$54,450	33.33%	$54,450	0.00%	$0
100.00%	$112,486	100.00%	$116,986	100.00%	$121,665	100.00%	$126,532
100.00%	$62,733	100.00%	$65,242	100.00%	$67,852	100.00%	$70,566
75.00%	$1,460,160	100.00%	$1,946,880	100.00%	$2,024,755	100.00%	$2,105,745
75.00%	$456,300	100.00%	$608,400	100.00%	$632,736	100.00%	$658,045
33.33%	$171,583	66.66%	$343,166	100.00%	$514,800	100.00%	$535,392
	$0		$0		$0		$0
100.00%	$62,733	100.00%	$65,242	100.00%	$67,852	100.00%	$70,566
100.00%	$26,000	100.00%	$27,040	100.00%	$28,122	100.00%	$29,246
25.00%	$363,134	50.00%	$726,268	75.00%	$1,089,403	100.00%	$1,452,537
1/4	$675,000	1/2	$1,500,000	3/4	$2,475,000	ALL ON	$3,600,000
100.00%	$77,875	100.00%	$80,990	100.00%	$84,230	100.00%	$87,599
100.00%	$62,733	100.00%	$65,242	100.00%	$67,852	100.00%	$70,566
100.00%	$108,160	100.00%	$112,486	100.00%	$116,986	100.00%	$121,665
	$0		$0		$0		$0
33%INSTALL/TRAIN		33%INSTALL/TRAIN					
	$204,519		$204,519				
YR 2 ++	$102,080		$106,163		$110,410		$114,826
33%INSTALL/TRAIN		33%INSTALL/TRAIN					
	$807,369		$807,369				
INSTALL & TRAIN							
90% OF TOTAL COST							
	$1,723,860						
		YR 2 ++	$426,140		$443,186		$460,913
33%SITE INSTALL W/HW		33%SITE INSTALL W/HW		33%SITE INSTALL W/HW			
33%IMPL STUDENT SW		33%IMPL STUDENT SW		33%IMPL STUDENT SW			
	$148,145		$148,145		$148,145		
		YR 2 ++	$31,200		$32,448		$33,746
33%INST/IMP SW		33%INST/IMP SW					
	$111,789		$111,789				
100%INSTALL		0%					
	$189,000		$0				
INSTALL/TRAIN 50% SITES		INSTALL/TRAIN 50% SITES					
35% OF TOTAL COST		35% OF TOTAL COST					
	$97,825		$97,825				

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Glossary

bridge:
connects two networks of the same type together.

camcorder:
a self-contained videotape recording device. Signals can be recorded live through the attached lens or via a standard video or antenna signal.

CD ROM (Compact Disk Read Only Memory):
a computer storage disk in the same physical form as a CD audio disc. CD ROMs can hold approximately 550 megabytes of digital data.

CMI (Computer Managed Instruction):
student achievement results as measured against sets of district objectives and outcomes.

communications:
the transfer of information from one computer to another. Data commincations refers to data and text communications. Telecommunications refers to all forms of communications, including voice and data.

CPU (central processing unit):
the computing part of the computer. It is made up of the control unit and arithmetic/logic unit. The control unit extracts the instructions out of memory and executes them. The arithmetic/logic unit performs the arithmetic calculations and comparisons.

database:
any collection of data that is electronically stored.

digitizer:
a hardware device that converts an image or signal into digital code for imput into the computer. This could be tracing an image on a digitizing tablet or converting camera images into into the computer.

distance learning:
classes held in one location and sent via cable lines or satellite to one or more remote locations for interactive lessons.

DOS (Disk Operating System):
may refer to any computer operating system from microcomputer to mainframe. For personal computers it usually refers to the operating system used by IBM compatible PCs, known as DOS, PC-DOS or MS-DOS.

dot matrix printing:
a device that uses patterns of tiny dots to form characters and graphic images. The printer uses tiny hammers to strike a needle mechanism against the paper at precise moments as the print head moves across the page. These printers use standard ribbon technology and are limited in their resolution.

EDULOG:
TIES-sponsored, electronic transportation system.

electronic:
the use of electricity in intelligence-bearing devices such as telephones, radios, televisions, instrumentation, analog and digital computers and telecommunications.

electronic mail:
transmission of letters, messages and memos over a communications network.

equipment certificates:
short term notes issued at the discretion of the school board to fund the purchase of equipment. These notes are paid for by a transfer of the Equipment Levy in the Capital Expenditure Fund (5) to the Debt Service Fund (7). The maximum amount that may be issued is limited to the total Equipment Levy in the Capital Expenditure Fund.

ESC (Educational Services Center):
location of the primary district offices including the Superintendent, Personnel, Curriculum, Transportation, Business/Finance and TIES offices.

FAX (FACSimile):
the communication of a printed page between remote locations using standard telephone lines. Fax machines can be standalone units or combined as part of a computer modem's functions.

file sharing:
use of data by more than one computer.

gateway:
a computer that connects two different communications networks together. The gateway will perform the protocol conversions necessary to go from one network to the other.

IEP (Individual Education Plan):

ILP (Individual Learning Plan):

LAN (local area network):
a communications network that serves several users within a confined geographic area (e.g. a computer lab, office, or building). Although the term may refer to any communication network within a building or plant, it typically refers to the interconnection of personal computers. These computers not only can intercommunicate but also can share resources such as disk storage and printers.

laserdisc:
a plastic platter resembling a phonograph record that uses low-intensity laser beams to store visual materials that will appear on a display screen. This storage device can hold approximately 60 minutes of audio/video information in digital form. Any of the more than 54,000 frames can be accessed individually.

laser printer:
a nonimpact printing device that places images on a rotating drum using a laser beam. The drum picks up a toner powder on the laser exposed areas. These areas on the drum are pressed and fused into the paper forming the characters (uses the electrophotographic method used in copy machines to print a page at a time).

LC/DC (Learning Center/Distribution Complex)
location of a number of district offices including Technology, Media Services, Special Education, Purchasing/Warehouse, Food Services, Building/Grounds, Enich Kindergarten Center, Printing/Communications and Community Education.

local printing:
printing to a device that is connected directly to the user's computer.

modem (MOdulator-DEModulator):
a device that adapts a terminal or computer to a telecommunications network. Modems turn digital signals from the computer into frequencies (modulate) within the audio range of the telephone system and convert the frequencies back into digital signals (demodulate) on the receiving side.

network:
an electronic hardware and software communication pathway linking multiple computers and accessories; any device can exchange information with any other device on the network.

notebook computer:
a portable computer that weighs under 7 pounds and fits easily in a standard briefcase.

online reference:
materials that are accessed by electronic means (modem, CD ROM, etc.)

router:
a device that selects the most effective travel path in a network and routes information accordingly. Routers are used in complex networks where there are many pathways between users in the network.

scanner:
a hardware device that reads text, graphic images and bar codes and converts the data into digital codes such as ASCII text or raster graphics.

server:
a computer in a local area network that stores the programs and data files shared by the users connected to the network. A file server acts like a remote disk drive to the users in the network.

spreadsheet:
a computer program that turns a computer terminal into a huge ledger sheet. The program allows large columns and rows of numbers to change according to parameters determined by the user. A whole range of numbers can be changed when a single entry is varied, allowing complex projections and numerical forecasts to be performed without tedious manual calculations.

still video:
electronic photographs stored on a magnetic diskette. No developing is needed, these pictures can be displayed through any standard monitor or VCR directly.

technology:
encompasses the generation and distribution of information via voice, data, or video communications.

TIES (Technology and Instructional Educational Systems):
a consortium of 47 school districts brought together for the primary purpose of state reporting and financial management.

WAN (wide area network):
a communications network that interconnects geographical boundaries such as buildings and districts.

word processing:
the management of text documents and replaces all the operations normally associated with a typewriter. The advantage over typing is that documents are permanently stored in the computer and can be called back for editing.

Appendix B

Policy for Acceptable Use of Technology Resources
Anoka-Hennepin ISD #11

The Technology Steering Committee is charged with the management of the technology resources of the school district. These resources include all voice, video and data systems. These systems include: telephones, television monitors, various computers, servers, local and wide area networks, the connections to other computer networks via TIES and the Internet and stored electronic data. A part of this management responsibility includes the establishment and administration of an acceptable use policy and implementation guidelines of these resources by staff, students and other users. The intent of this statement is to give an overview of user responsibility, acceptable and unacceptable use of these resources without exhaustively enumerating all such responsibilities, uses and misuses.

User Responsibility

- Comply with all existing school board policies as they may be interpreted to apply to technology resources, including but not limited to the following:
  - Staff: Selection and Reconsideration of Instructional Materials and Resources: Religious, Racial, and Sexual Harassment/Violence; Use and Rental of School Facilities; and the Media Materials Selection Policies.
  - Students: Student Discipline and Religious, Racial, and Sexual Harassment/Violence Policies.
- Respect the privacy of other users, and not intentionally seek information on, obtain copies of, or modify files, other data or passwords belonging to other users without permission.
- Comply with legal protection provided by copyright and license to programs, data and documents.
- Help maintain the security of the district technology resources by adhering to all security rules developed by the Technology Steering Committee and/or the users' buildings.
- Monitor and supervise any individual to whom access to technology resources is granted by you**,** the user.
- Comply with the acceptable use policies of all technology resources to which the district has access.

Acceptable Use

- Use consistent with the mission of the Anoka-Hennepin School District.
- Use that encourages efficient, cooperative and creative methods to perform the user's job duties or educational tasks.
- Use related to instructional, administrative, and other support activities considered consistent with the mission of the district.
- Use of district technology resources for authorized and appropriate access to voice, video, and data systems, software or data, both locally and at other sites.

Unacceptable Use

- Providing, assisting in, or gaining unauthorized or inappropriate access to the district's technology resources, including any type of voice, video, or data information server.
- Activities that interfere with the ability of students/staff members to use the district's technology resources or other network connected services effectively.
- Activities that result in the loss of another student/staff member's work or unauthorized access to another student/staff member's work.
- Distribution of any material in such a manner that might cause congestion of the voice, video, and data networks.
- Distribution or collection of obscene, abusive or threatening material via telephone, video, electronic mail, Internet or other means.
- Use of technology resources for a commercial, political, or profit-making enterprise, except as specifically agreed to with the district.

Appendix B continued

Implementation Guidelines for the Acceptable Use Policy

Enforcement of the policy

- Staff: Building administration, district administration
- Students: Teacher, building administration

Consequences of breach of policy

The use of technology resources is a privilege, not a right. The district recognizes that some personal use of district email, voice mail and computer systems - including use during non-work time is acceptable, however, excessive use or abuse of these privileges (as outlined in the Acceptable Use Policy adopted by the school board) is unacceptable. Excessive personal use and or the abuse of these privileges may result in one or more of the following consequences:

- suspension or cancellation of use or access privileges
- payments for damages or repairs
- discipline under appropriate school district policies including
- suspension
- expulsion
- exclusion or termination of employment
- civil or criminal liability under applicable laws

Building additions to the policy

Building staffs who wish to make additions to this policy must notify the Technology Steering Committee in writing. The Technology Steering Committee will respond to the building with any comments within one month after receipt of the request. Any proposed additions should in no way negate or impinge on the user responsibility, acceptable and unacceptable use set forth in the Acceptable Use Policy. It will be the committee's policy to grant all requests that fit within our planning for content, performance, use and security of the networks.

Privacy

- By authorizing use of technology resources, the school district does not relinquish control over materials on the systems or contained in files on the systems. Files stored on school-based computers and communications via e-mail, internet browsers or voice mail are not private.
- Electronic messages and files stored on school-based computers may be treated like any other school property. Administrators, faculty, or network personnel may review files and messages to maintain system integrity and, if necessary, to insure that users are acting responsibly.
- School district employees and students should also be aware that data and other material and files maintained on the school district system may be subject to review, disclosure, or discovery under the Minnesota Government Data Practices Act. The school district will cooperate fully with local, state, and federal authorities in any investigation concerning or related to any illegal activities or activities not in compliance with school district policies conducted through the school district system.
- Employees are also discouraged from excessive use of the district's e-mail, voice mail, and computer systems for personal use. Excessive personal use of the electronic communications systems may result in disciplinary action.

Specific rules and best practices

The district's Wide Area Network infrastructure, as well as the building-based Local Area Networks have been implemented with performance planning as a major part of the process along with appropriate security. Guarantee of an appropriate level of network efficiency is one of the foremost priorities of the Technology Steering Committee along with acceptable use practices and best use of resources. To that end, modifications to an individual building network infrastructure and use will almost always affect Local Area Network performance and quite often will have an impact on the efficiency of the Wide Area Network. For these reasons, consider the following issues before instigating any changes to a building network infrastructure or use. It is essential that you work with your technology facilitator or contact before you make any modifications.

Appendix B continued

Passwords

All users that have access to building and district servers must maintain a password for their account. This password should be at least 5 characters long, and should not be the "default password" that may have been created when the user account was first established. Passwords should not be the user's name or initials or any other word that might easily be associated with the user. (Example: The music teacher shouldn't use "music" as his/her password.)

Also, users should be willing and able to change their password on request from building or district technology support personnel.

Student Internet Use:

Students utilizing district-provided internet access must first have the permission of and must be supervised by the district's professional staff. Students utilizing district-provided internet access are responsible for good behavior on-line just as they are in a classroom or other area of the school. The same general rules for behavior and communications apply. Parents should be made aware of student internet use by means of a written notice, perhaps in the student handbook or a student delivered handout. An example of such a notice follows.

> *The district is pleased to offer its students supervised access to the internet. The internet is an electronic highway connecting hundreds of thousands of computers and millions of individual users all over the world. This computer technology will help propel our schools through the communication age by allowing students and staff to access and use resources from distant computers, communicate and collaborate with other individuals and groups around the world, and significantly expand their available information base. The internet is a tool for life-long learning. Families should be aware that some material accessible via the internet may contain items that are illegal, defamatory, inaccurate, or offensive to some people. In addition, it is possible to purchase certain goods and services via the internet which could result in unwanted financial obligations for which a student's parent or guardian would be liable.*
>
> *While the District's intent is to make internet access available in order to further educational goals and objectives, students may find ways to access other materials as well. Even should the District institute technical methods or systems to regulate students' internet access, those methods could not guarantee compliance with the District's acceptable use policy. That notwithstanding, the District believes that the benefits to students of access to the internet exceed any disadvantages. Ultimately, however, parents and guardians of minors are responsible for setting and conveying the standards that their children should follow when using media and information sources. Toward that end, the district makes its acceptable use policy and guidelines available on request and at the district web site (hhtp://www.anoka.k12.mn.us) for review by all parents, guardians, and other members of the community; and also provide parents and guardians the option of requesting for their minor children alternative activities not requiring internet use.*

Student e-mail:

Students may be issued temporary e-mail accounts only through a district administered student mail system. This system, called projectmail, will be available upon the request of a supervising teacher for students involved in specific learning situations where e-mail communication is essential to student learning. Application for these short term accounts must be made using the form available from your Technology Facilitator. As a supervising teacher, you will be expected to monitor student e-mail use, notify parents and administrators of the students' involvement in this project and instruct students in appropriate use of e-mail.

Appendix B continued

Electronic Mail:
Electronic mail (e-mail) is an electronic message sent by or to a staff member (or student, see above) for business/communications purposes. The e-mail package used by the district includes internet access as well. Messages received by the e-mail system are retained on the system until deleted by the recipient. Staff members are expected to remove old messages in a timely fashion and the system administrators may remove such messages if not attended to regularly by the staff member. The system administrators will not intentionally inspect the contents of e-mail sent by one staff member to an identified addressee, or disclose such contents to other than the sender or an intended recipient without the consent of the sender or an intended recipient unless required to do so by law or policies of Anoka-Hennepin School District #11, or to investigate complaints regarding e-mail which is alleged to contain material contrary to district policies. E-mail accounts for staff members may be requested through the building or department QuickMail contacts, who will contact the Communications Technology department. Individual student accounts for e-mail are not issued except as discussed above.

Suggested best practices for QuickMail users:
- Check e-mail at least daily.
- Try to answer e-mail messages in a timely fashion, usually considered to be within 24 hours.
- Delete messages after reading them. If you need to keep messages for any reason, file them in personal folders which transfers them to your local drive.
- Use the return receipt option only when necessary as it adds extra burden to the system. You can check receipt of messages by looking at your mail log instead.
- Do not send enclosures larger than 250K. For large file transfers, use building servers.
- Subscribe only to listserves that are critical to your job responsibilities.
- Do not forward or otherwise respond to “chainmail” type communications.
- When addressing a “mass mailing” (for example, daily announcements or other communications to all staff in your building or staff in many buildings) use the Public feature rather than individual addresses. This will greatly reduce the amount of drive space needed by the system.
- Change the default assigned password to a unique one.
- For security reasons, do not use the auto-login feature.

Voice Mail:
In July 1997, the District completed a comprehensive 18-month-long project to provide better communications tools between staff and the public. The results of this project are an upgraded phone system networked throughout the district and voice mail boxes for all staff, as well as phones in every classroom. Voice mail accounts for staff members may be requested through the building or department phone contacts, who will contact the Communications Technology Department. Individual student accounts for voice mail are not issued.

Suggested best practices for voice mail users:
- Check voice mail on a timely manner, usually considered to be daily.
- Try to return calls within 24 hours.
- Delete messages after listening to them.
- Phones should not ring in the classroom during student contact hours.
- Staff with "phantom TNs" should only bring their number to their classroom phone during non-student contact times.
- Change the default assigned password to a unique one.
- Record a greeting for your mailbox and your name for identification purposes. The greeting should include an emergency out, such as, “If you need immediate assistance, please press zero.”

Appendix B continued

Authorization of building information servers:
If an additional server is to be added to a local area network that provides access to or from the building, permission must be granted by the Technology Steering Committee. To gain this permission, a letter should be written to the Director of Technology, detailing the need, use, and information content of the server. Also the letter should include the name and credentials of a staff member who will be ultimately responsible for the use, maintenance and content of the server. This request will then be forwarded to the committee for consideration. It will be the committee's policy to grant all requests that fit within our planning for content, performance and security of the networks.

Authorization of building remote access:
Remote access to district computing resources will be controlled by the Technology Steering Committee. If a building wants to establish remote access to their network, and thus the district network, permission must be granted by the committee. The building must demonstrate to the committee the ability to maintain the security of the network and also must submit the name of the staff member that is to maintain this service.

Authorization of building lab connections:
Building computer labs were originally designed to function as discrete local area networks. With the advent of our Wide Area Network and the internet connection plus the price points of current routing devices, it's becoming more attractive to consider placing these computer lab networks on the overall building network and by default, onto the district Wide Area Network. This impacts network performance in two ways. First, the network electronics installed as part of the overall network implementation allow for remote monitoring and maintenance. In other words, the network is designed so it is simpler to troubleshoot. Unless you've invested in electronics such as this in your building computer lab configurations, placing those labs on the building or district network creates "black holes" that we can't monitor and adjust electronically, defeating a primary means of support. Second, our internet connection was sized to support standard office and classroom configurations. Placing additional units on the internet leaves less "bandwidth" than our performance planning called for to maximize efficiency of access in each building. Unfortunately, that excess demand can actually affect other building's internet access as well. A final consideration is appropriate supervision on the building computer lab networks. At this point, our only recognized access point, other than classrooms and offices, is the school media center. Unless a curriculum area calls for internet access to support their delivery, an open lab without proper supervision becomes a potential liability for your building.

If a building wants to establish internet or building-wide network access for a computer lab, permission must be granted by the Technology Steering Committee. To gain this permission, a letter should be written to the Director of Technology, detailing the need for the increased network connection. This request will then be forwarded to the committee for consideration. It will be the committee's policy to grant all requests that fit within our planning for content, performance and security of the networks.

Policy logistics

- Adoption: Committee, Superintendent, School Board
- Distribution: On paper to staff when LAN's are implemented; to students in school handbooks; electronically on the district internet Information Server.
- Revision: The Technology Steering Committee will periodically review and maintain this policy. Requests for policy amendments should be forwarded to the Director of Technology for consideration by the committee.

Anoka-Hennepin ISD No. 11
Revised, Tue, Apr. 14, 1998

Appendix C

ANOKA-HENNEPIN ISD#11
DATA DISASTER RECOVERY PLAN

November, 1997

- Have Anti-Virus software continuously running on every server and every workstation District wide to prevent viruses from infecting data. This software protects all information written to the file server, and all information downloaded to the workstation from either floppy disks or Internet.

- Have RAID Level 5 (disk mirroring) at the district office central server. This file server hosts centralized administrative data.

- Have users store critical data from workstation on local File Server. This is done by having a Netware drive mapped for each individual user, that is secure and is being backed up through the procedure explained above.

- Have full daily backup procedures in process on all District 11 Servers.
    - Starting with a minimum inventory of 19 tapes per site, the first 4 tapes are to be labeled: Monday, Tuesday, Wednesday, and Thursday. These four tapes are rotated through a cycle every week.
    - The second set of three tapes are to be labeled: Friday-A, Friday-B, and Friday-C. In the months where there are more than 4 Fridays, an existing spare tapes should be used (Friday-D). These tapes are rotated weekly.

- Have full monthly backup procedures in process with monthly tapes being collected and stored off site (from the server) for each District 11 server.
    - The final set of 12 tapes are to be labeled Month-1, Month-2, etc. These tapes are to be used on the last Friday of the month and ARE NOT rotated. They are to be stored off site from the server in a secure location in case of a disaster.

- Have a special disaster recover boot disk which contains special startup.ncf and autoexec.ncf files that load the server with the correct disk driver, network drivers, the correct server name, and other configuration information unique to that file server. There are two disaster recover boot disks. One is stored on-site with the file server and one is stored off-site at a central location.

- Have fully equipped spare Novell 4.11 Server on standby, ready to be implemented in case of School server disaster.

- Have spare Wide Area Network electronics for a site on standby, in case of disaster.

- Have Novell Directory Services (District 11 tree structure) being replicated at four different sites in District 11 in case of server failure.

- Have Novell Directory Service ISD #11 tree structure being backed up daily at four different sites, using the backup procedure explained above.

- The Novell file server recovery process is listed below:

    Recovery from a hard drive crash: This is in the event that the file server still remains in tact and the hard drives can be repaired.

Appendix C continued

Procedure for the file servers that have RAID LEVEL 5

First, disk mirroring would automatically see that one of the drives has crashed and the other drive would continue to work. The user would see NO DOWN TIME.

Second, we then replace the bad hard drive after hours, and disk mirroring would re-sync. the data on both drives.

Procedure for file servers that do not have RAID LEVEL 5

First, determine if one, or both of the drives from the server can be used.

If they can be used, then run server diagnostics and VREPAIR in order to fix the problem. After, restore any loss data from the last backup tape.

If the drives can not be used, then install new drives into the file server from spare 4 gigabyte hard drives stored off-site at the district office. Install Dos, NetWare, and ArcServe onto the new drive. Restore the data from the last nights backup tape.

Recovery from a total server loss: This is in the event that the file server is a complete loss – i.e. nothing from the server remains in tact.

First, clean up the mess from the disaster, for example: fire or theft.

Second, replace the old file server with the stand-by server which we keep at the ESC - central administrative building. The stand-by server already has the base NetWare, and ArcServe software loaded.

Third, determine if one, or both of the drives from the old file server can be used. If they can be used then put the old drives in the stand-by server, and boot-up with the disaster recovery boot disk.

Fourth, if the old drives can not be used, then boot-up the stand-by server using the second special configuration diskette that was stored at the District Office - ESC. Using the Arcserve software that is also already on the stand-by server, restore the old file server data from the "off-site" tape backup. Down the stand-by server, and re-boot it using the disaster recovery boot disk.

Note: Having the stand-by server saves us considerable time in restoring the server to normal operation because we won't have to waste time finding new hardware, and we won't have to re-load NetWare and ArcServe before restoring from tape.

Appendix D

Anoka-Hennepin ISD#11 General User Software Standards

Criteria For Standards and Transition Assumptions:

1. Cross platform versions of product are available.
2. Aggressive educational pricing makes product cost effective.
3. Features meet needs and are rated well compared to competition in same software class.
4. Product support availability.
5. Time must be given for a smooth transition from current to new software standards.

Software Category	**Instructional**	**Administrative**
E-mail	QuickMail	QuickMail
Word Processing	ClarisWorks	Microsoft Word, ClarisWorks
Spreadsheet	ClarisWorks	Microsoft Excel, ClarisWorks
Database	FileMaker Pro, ClarisWorks	FileMaker Pro, FoxPro, ClarisWorks, Microsoft Access
Presentation	HyperStudio, ClarisWorks	PowerPoint, HyperStudio, ClarisWorks
Remote Support and Control	Likewise, At Ease for Workgroups, Mac Control (BDW), Fortress	Timbuktu
Desktop Publishing	ClarisWorks	ClarisWorks, Quark XPress
Group Scheduling	Meeting Maker XP	Meeting Maker XP
Internet Client Software	MacTCP, Novell TCP, Netscape, Microsoft Explorer, Telenet Client	MacTCP, Novell TCP, Netscape, Microsoft Explorer, Telenet Client
Screen Saver	Windows 3.1, Windows 95	After Dark, Windows 3.1, Windows 95
Startup Protection	After Dark, Windows 3.1, Windows 95 Mac OS	After Dark, Windows 3.1, Windows 95, Mac OS
Virus Prevention	McAfee	McAfee

*** The listing is not meant to be inclusive of all of the specialty software used throughout the district (i.e. MacSchool, Access, Osiris, Edulog, Lotus, etc.) for a given application/curriculum. It is rather a listing of the basic packages required for most instructional and administrative users.

Appendix D continued

Recommended File Transfer Formats

Microsoft WORD:

Windows:.....Word 2.0
Mac:.....Word 5.x
Cross-Platform (Mac to Windows) .....Word 2.0
Cross-Platform (Mac to DOS).....MS-DOS Text
Cross-Platform (Windows to Mac).....Word 5.x

Microsoft EXCEL:

Windows: .....Excel 4.0
Mac: .....Excel 4.0
Cross-Platform (Mac to Windows).....WK3 file (Lotus), Excel 4.0 (Excel)
Cross-Platform :(Mac to DOS).....OS/2 or DOS
Cross-Platform (Windows to Mac).....Excel 4.0

CLARISWORKS:

Windows
Mac:.....ClarisWorks 4.0
Cross-Platform (Mac to Windows).....ClarisWorks 4.0
Cross-Platform (Mac to DOS).....ClarisWorks 4.0
Cross-Platform (Windows to Mac).....ClarisWorks 4.0

Appendix E

ANOKA-HENNEPIN ISD #11
PHONE SYSTEM EMERGENCY PLAN

The phone system at ISD #11 was installed during the period of July 1996 through August 1997. It consists of one hub site (at the Learning Center/Distribution Center) with a Nortel Option 81C PBX system and Nortel Option 11s at each site. Each system is connected to the hub site by USWest T1 circuits. Collins Communications installed the system and has provided an onsite technician to maintain it. This Disaster Plan outlines the steps taken when any part of the phone system is out of service.

T1 Circuit Down. If a T1 circuit is down at any site, it is automatically detected by the CAC Center at Collins Communications. The CAC center notifies the onsite technician immediately and he contacts USWest and implements an emergency repair ticket to take care of the problem. He then notifies the district Communications Technology department, who, in turn, notifies the school that the problem is being taken care of.

The way the system is designed provides a backup at each site for incoming and outgoing calls. In this scenario, calls are routed automatically through the centrex lines at each site. Outgoing calls can be made simply by picking up the phone and dialing; however, the amount of calls that can be made simultaneously are limited to the amount of centrex lines available (generally, 3 at an elementary school, 5 at middle schools, and 8 at high schools). Incoming calls can be made by dialing the centrex line number, a list of which is available at each site in the district. If the centrex number is dialed, it rings at the receptionist phones in the main office of each. Also, that number is given out by site staff requiring a call-back from people outside of the district.

Power Outage at any Site. If the power goes out at any site, a universal power supply (UPS) automatically kicks in for, depending on the site, can last up to 4 hours (Hub site - 4 hours, high schools - 1 hour, all other sites - 30 minutes). If power is out for more time than the UPS will last, the system is designed with a backup route for emergency access to phones. Each school has at least 3 centrex lines (3 elementary, 5 middle, 8 high school) that are attached to different phones in the building. Each site's phone contact has a list of where the phones are. These phones will have dial tone in case of power outages. The site can make outgoing calls and receive incoming calls at these phones. In case of a power outage, the CAC center at Collins will receive notification automatically that the switch at that site is not on line. The Collins technician will then determine whether the switch needs to be shut down or whether to leave it running. The buildings and grounds department at the site will contact the applicable electrical company to determine how long the outage is expected to be. The Communications Technology department will contact other buildings in the district, via fax and e-mail, to notify them of the power outage. Once power is restored, Collins will be available at the site to ensure the switch is running properly.

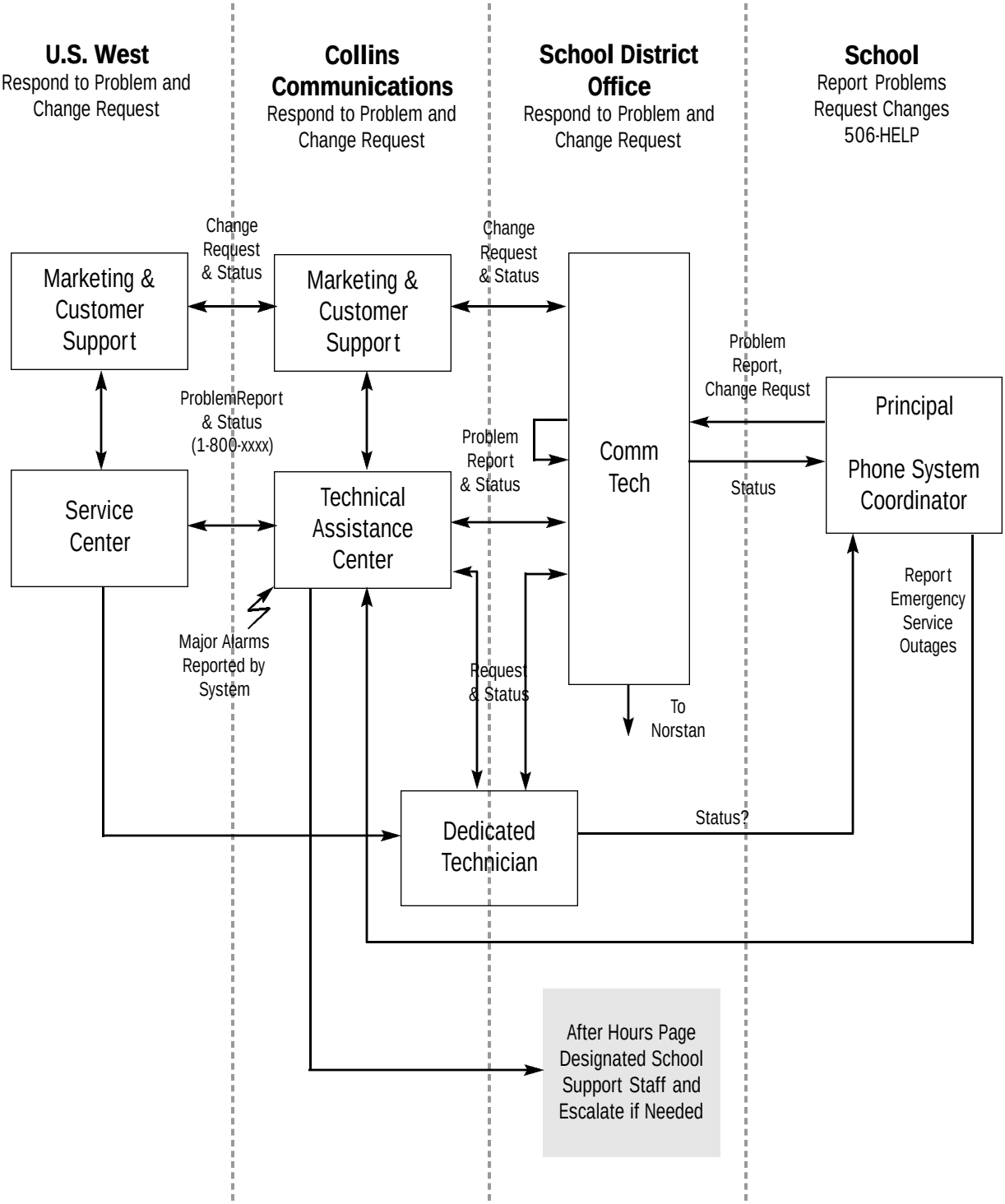
Appendix E continued

25% System down at any site (not due to power outage or T1 circuits down). If a system at a school is 25% down, the phone contact at each site can call the Collins CAC center directly to report the emergency. The CAC center will, in turn, contact their on-call technician (if after hours) or the on-site technician to correct the problem.

Emergency Site Closure. If a site is closed for any reason and the students/staff are moved to another site, the system is designed to handle the situation quickly. Communications Technology staff will notify Collins, who will work with district staff to have all calls for the site forwarded to another site. No phone numbers will need to be changed and the public will see no change in how they contact the school.

Appendix F

Problem Reporting and Change Request Flow for Voice Services



Appendix G

MEMO

DATE: **June 3, 1997**

TO: **Building Principals, Technology Coordinators, Building Supervisors**

FROM: **Technology Steering Committee**

RE: **Summer Technology Storage Guidelines, etc.**

Please take the following points into consideration as your building technology committee plans for appropriate storage and maintenance of technology equipment:

Classroom Computers:

- As was the case last year, the classroom computers need your utmost attention. If they remain in your building, they should be in a secure area and covered to protect buildup of dust or moisture. Depending on your building situation, the "secure" area could be locked classrooms where the computers generally stay or it could be one or more central areas that are part of your building security system. Your summer cleaning schedule may also have some effect on the location of the equipment. **The most important point is that the computers must be in an area that is always locked or part of the building security system.** We encourage you to apply these guidelines to other technology equipment, as well.
- The technology facilitators will work with your building technology contact to schedule times in August to update the software packages we provided as part of the bond implementation. Physical cleaning of the computers is a building responsibility that needs to be planned for by your technology committee.
- Equipment can be checked out to staff members, but that is a building decision and should be based on the guidelines shared with your new building contacts or available on our Internet server at *http://www.anoka.k12.mn.us/Technology/techsupport.html*.

Network Issues:

- The wiring closets remain the responsibility of our local area network coordinators: Jill Bourman (Coon Rapids cluster), Jeff Conger (Anoka cluster), Damon Stubbs (Blaine cluster), and Kevin Bixby (Champlin Park cluster). **Please leave file servers and central server equipment on.** If equipment needs to be powered down for any reason, coordinate this with your LAN coordinator. Any maintenance that needs to occur during the summer months will be coordinated by them. They will power down any equipment that is not necessary for summer building operation.
- The video head end equipment can be powered down for the summer. The exception might be for those schools with offices in operation that want to continue to receive video programming. The technology facilitators will work with the building technology contact to consider appropriate maintenance on the video head end.

Equipment Repair and Maintenance:

AV Repair has asked us to remind you to submit all equipment requiring their attention to the AV Repair shop prior to leaving for the summer. This will help alleviate backlogs in August. Questions??? Call Dave Piechocki at 61212.

Appendix G continued

Phone Issues:

- DO NOT move any phones (or they may no longer work the way you think they should). Phone moves/adds/changes must be coordinated with the Communications Technology Department by either calling 506-PHON or e-mailing Hattie Leary.
- During cleaning, phones may be unplugged by custodial staff, but realize that, for digital phones, the phone will be disabled and will reenable itself by the next morning. If phones are needed immediately, coordinate this with Communications Technology.
- For personnel changes, provide a list to Communications Technology so message waiting lamps can be moved with any teacher location changes. Information needed: Person's name, phone number, add/move/change/delete, classroom number, classroom phone number.
- If there are building renovations, send a floor plan with changes indicating where personnel will be located to Hattie Leary.

QuickMail Issues:

- **Have all staff who will be gone during the summer log off of any Internet list servers.** This will alleviate messages bogging down the servers during the summer. Last year, we had a few people with literally THOUSANDS of messages in their mail box.
- If any staff member wants to have their messages forwarded to a home account, use **Server** (not Client) Mail Manager rules to accomplish this. Contact Tracy Herold (61027) with any questions.
- Staff changes (adds/moves/deletes) need to be sent to Tracy Herold. The sooner we can enter changes, the less chance of being behind in August when staff return.

Appendix H

Technology Checkout Request

I, _____ request the use of the technology indicated below from

_____ to _____ for the following reason (s):

_____

_____

I understand that I will be held responsible for any damage to, or loss of, this equipment, and be required to pay for the replacement cost of the equipment, except for repairs considered to be normal maintenance items. I further understand that all equipment must be returned in time to be functional by the start of the work day.

_____ _____

Signature of Recipient Today's Date

_____ Approved _____Disapproved _____

Signature of Principal or designee

Equipment Requested: Please provide the make/model of the items being requested (examples: Computer - Mac 5200, Printer - HP Deskwriter, etc.) Include serial numbers where appropriate.

A. Computer_____ Serial #_____

B. Monitor (if not built in)_____ Serial #_____

C. Printer _____ Serial #_____

D. Keyboard _____ Serial #_____

E. Mouse_____ Serial #_____

F. Camera_____ Serial #_____

G. Scanner _____ Serial #_____

H. Cables, cords, power strip, mouse pad, other (include serial numbers if available):

_____ _____

_____ _____

Appendix I

Anoka-Hennepin Independent School District No. 11
Technology Position Descriptions
December, 1997

TITLE: Director of Technology

REPORTS TO: Associate Superintendent of Instructional Support

SUPERVISES: Teacher-Instructional Technology Facilitators, Network Services Supervisor (LAN/WAN Coordinators), Information Systems, Communications Technology Supervisor, Education Data Analyst and District Technology Services Coordinator (not presently staffed).

PERFORMANCE RESPONSIBILITIES:

1. Plans and directs technology implementation and support in the school district for all areas of instruction, staff development, central services (including complex voice, data and video systems), and technical support.
2. Directs the allocation of existing human and financial resources and seeks additional support, both personnel and financial, to ensure the successful implementation of the School District Technology Plan.
3. Communicates current and future visionary technologies for delivery of curriculum and functional activities to the school board, staff and public.
4. Develops policies, procedures and standards regarding technoloy use.
5. Develops and implements recommendations of the Technology Steering Committee.
6. Coordinates the integration of available technologies into school district curriculum.
7. Coordinates the use of technology for assessment of instructional learning.
8. Coordinates the implementation of technologies across Clusters in accordance with the School District Technology Plan.
9. Coordinates the technology functions and delivery across the district with other departments, e.g.: community education, special education, printing services, Media Services and EDP repair.
10. Assesses technology use districtwide.
11. Manages and recommends technology support for school district personnel.
12. Monitors, evaluates and updates the District Technology Plan in cooperation with the Technology Steering Committee.
13. Chairs District Technology Steering Committee and serves as ex-officio member of Instructional Technology Committee and Administrative Technology Committees.
14. Manages major vendor outsourced technology service relationships (i.e. US West, TIES).
15. Initiates participation and represents school district interests on state and national technology advisory committees (i.e. MN CFL Graduation Standards data management, Microsoft, Apple, US West).
16. Keeps abreast of current developments and innovations in technology through reading and/or attending related conferences, seminars, and meetings.
17. Performs other duties as assigned.

QUALIFICATIONS:

Education: Bachelor's degree with emphasis in information or technology management. Advanced degree preferred.

Appendix I continued

Skills, Knowledge and Abilities:

- Outstanding communication skills in the area of technology.
- Demonstrate skill and understanding of the coordination and interoperability of instructional, central services, and technical support needs of technology in a large school district.
- Ability to establish, maintain, and improve computer networks.
- Demonstrate skills in effectively managing human and financial resources.
- Working knowledge of and experience with a variety of hardware and software applications, networks. and operating systems.
- Ability to work cooperatively and effectively with others.
- Successful related experience in classroom teaching and/or administration.
- Demonstrate ability to perform position reponsibilities.

Experience: Two-five years instructional technology management. Other related administrative experience considered.

Appendix I continued

TITLE: Technology Paraprofessional

REPORTS TO: Building Principal or Program Supervisor

PERFORMANCE RESPONSIBILITIES:

1. Instruct and assist staff and students in the use of instructional technology including word processing, spreadsheets, database, grading programs, QuickMail, Internet and graphics programs.
2. Assist staff with software related to curriculum by developing a familiarity with the content and a working knowledge of applications.
3. Train and support staff and students in the use of hardware such as computers, printer, networks and other technology.
4. Develop and maintain a database of building technology equipment for inventory, maintenance/service and repair.
5. Schedule and organize the computer labs to meet the curriculum needs of the building.
6. Trouble-shoot, diagnose, and recommend maintenance of technology equipment.
7. Maintain on-going communication with Building Technology Coordinator.
8. Communicates to the Principal or Program Supervisor the requirements and needs of the assigned area of responsibility.
9. Performs other tasks and duties as assigned by the Principal or Program Supervisor.

QUALIFICATIONS:

Skills, Knowledge and Abilities:
Working knowledge of technology hardware and software.
Working knowledge of Macintosh and Windows/DOS computer systems.
Organization abilities.
Ability to work with minimal direction.
Communication skills including writing, speaking, and listening.
Ability to work with diverse groups.

Experience: Two years technology background. Other related experience considered.

Appendix I continued

TITLE: Network Services Supervisor

REPORTS TO: Director of Technology

PERFORMANCE RESPONSIBILITIES:

1. Directs the installation and management of wide and local area networks.
2. Provides leadership in the development and maintenance of district technology security and disaster recovery plans.
3. Provides primary direction for the management, support and inventory of Local Area Networks, servers, and wiring closets for a geographic cluster of schools and/or other district facilities. Act as a resource to plan, implement, and troubleshoot building based local and wide are networks.
4. Supervises and appraises the performance of personnel assigned to the areas of responsibility.
5. Prepares and monitors program budgets for the allocation of resources in coordination with the Director of Technology.
6. Provides telephone and/or on-site support and remotely solves problems relating to networks, work stations, networked peripherals, and data communications.
7. Install and maintain network servers, network application software, computers, and network peripheral equipment (printers, scanners, CD Rom Towers)
8. Provides support for general and network applications, including Novell, Appleshare, UNIX, and TCP/IP.
9. Assists buildings with inventory, security and management of technology equipment for the assigned cluster and/or other district facilities.
10. Assists building staff with workstation application software installation.
11. Maintain and documents network topology hardware such as hubs, bridges, and routers.
12. Assists the Technology Steering Committee in the development and implementation of the school district's long-range plan for the utilization of computers.
13. Assists in maintaining data communications between the cluster schools and the district offices via the district Wide Area Network.
14. Assists in the management of Internet Information servers, proxy servers, caches and/or firewalls as assigned.
15. Maintains a current awareness and knowledge of emerging information, trends, and applications for network technology.
16. Serves as a member of a cluster team and District Technology Steering Committee.
17. Executes assigned administrative responsibilities to insure compliance with federal and state laws in accordance with Anoka-Hennepin School District policies and guidelines pertaining to equal employment opportunity and affirmative action.
18. Performs other tasks and duties as assigned by the Director of Technology.

QUALIFICATIONS:

Education: Two year degree with emphasis in information or technology management. Equivalent experience/training considered. Certified Network Administrator or Engineer preferred. (CNA/CNE, MCSE)

Skills, Knowledge and Abilities:
Organization and management abilities.
Communication skills including writing, speaking, and listening.
Ability to work with diverse groups.
Working knowledge of technology hardware and software.
Working knowledge of Windows/DOS, Macintosh and mainframe computer systems.

Experience: Two years technology management. Other related administrative experience considered.

Appendix I continued

TITLE: Network Services Coordinator (LAN/WAN)

REPORTS TO: Network Services Supervisor

PERFORMANCE RESPONSIBILITIES:

1. Directs the installation and management of wide and local area networks.
2. Provides primary management, support and inventory of Local Area Networks, servers, and wiring closets for a geographic cluster of schools and/or other district facilities. Act as a resource to plan, implement, and troubleshoot building based local and wide are networks.
3. Provides telephone and/or on-site support and remotely solves problems relating to networks, work stations, networked peripherals, and data communications.
4. Install and maintain network servers, network application software, computers, and network peripheral equipment (printers, scanners, CD Rom Towers)
5. Provides support for general and network applications, including Novell, Appleshare, UNIX, and TCP/IP.
6. Installs and manages district remote dial-up services and terminal servers.
7. Assists buildings with inventory, security and management of technology equipment for the assigned cluster and/or other district facilities.
8. Assists building staff with workstation application software installation.
9. Maintain and documents network topology hardware such as hubs, bridges, and routers.
10. Assists the Technology Steering Committee in the development and implementation of the school district's long-range plan for the utilization of computers.
11. Assists in maintaining data communications between the cluster schools and the district offices via the district Wide Area Network.
12. Assists in the management of Internet Information servers, proxy servers, caches and/or firewalls as assigned.
13. Maintains a current awareness and knowledge of emerging information, trends, and applications for network technology.
14. Supports data migration, file transfer, file backup restoration, and file recovery.
15. Performs other tasks and duties as assigned by the Network Services Supervisor.

QUALIFICATIONS:

Education: Two year degree with emphasis in information or technology management. Equivalent experience/training considered. Certified Network Administrator or Engineer preferred. (CNA/CNE, MCSE)

Skills, Knowledge and Abilities:
Organization and management abilities.
Communication skills including writing, speaking, and listening.
Ability to work with diverse groups.
Working knowledge of technology hardware and software.
Working knowledge of Windows/DOS, Macintosh and mainframe computer systems.

Experience: Two years technology management. Other related experience considered.

Appendix I continued

TITLE: Communications Technology Supervisor

REPORTS TO: Director of Technology

PERFORMANCE RESPONSIBILITIES:

1. Assists in the development of school district programs for technological support of office functions.
2. Coordinates administrative word processing/computer user training and equipment support.
3. Manages word processing and duplicating services, including supervision of equipment operators, maintenance and ordering of supplies, keeping a log of usage of the equipment and charge-back system for duplicating services.
4. Manages the district-wide voice mail system, E-mail, group calendar, and backup systems.
5. Assists with maintenance of the district wide area network, and modem dial-up/dial-out access.
6. Provides information to district staff in the selection and usage of fax machines.
7. Manages the district-wide telecommunications system, including adds/moves/changes, supervising a vendor-provided technician, determining needs for upgrades and new systems, and developing/maintaining the budget.
8. Develops and manages the job ticketing system for providing repair/change support for the wide area network, telephone systems, and e-mail system.
9. Manages and plans for district-wide wiring (phone/data/video) adds/moves/changes and billing.
10. Acts as data base design consultant for administrative departments.
11. Coordinates with the MN State Administrative Department in developing/negotiating streamlined processes and cost-saving measures relating to the district-wide phone billing.
12. Manage district-wide cell phones, pagers, and pay phones, including approval and billing.
13. Develops and maintains quality work and adequate turnaround time processes to meet the needs of the users of word processing services.
14. Establishes and maintains necessary reports and records to meet management's requirements.
15. Establishes and maintains relationships with authors, secretaries, salespersons, and repair technicians to discuss center capacities, equipment, work priorities, and to accept and deliver work products.
16. Plans ahead for departmental equipment and supplies for warehouse stock and outside purchase, including school letterhead, ribbons, disks, materials for storage and retrieval of documents.
17. Assumes major responsibility including screening and assigning of personnel for the areas of responsibility.
18. Develops and implements staff development programs appropriate to the needs of personnel in areas of responsibility.
19. Supervises and appraises the performance of personnel assigned to the areas of responsibility.
20. Recommends the termination of personnel whose performance is deemed as unsatisfactory in accordance with procedures of due process.
21. Communicates to the Director of Technology the requirements and needs in the assigned areas of responsbility.
22. Prepares and monitors program budgets for the allocation of resources in coordination with the directors in the areas of responsibility.
23. Upgrades own knowledge and developsk by training, the knowledge and skills of operators as required for producing the final product delivered by the department.
24. Performs minor machine maintenance and contracts and schedules for service representatives as required.
25. Assumes primary responsibility for ensuring that personnel practices within the areas of direct supervision are in compliance with fedceral, state, and local laws and in accordance with Anoka-Hennepin School District policies and guidelines pertaining to equal employment opportunity and affirmative action.
26. Performs such other tasks and assumes such other responsibilities as the Director of Technology may assign.

Appendix I continued

QUALIFICATIONS:

Education: Bachelor's degree with emphasis in information or technology management. Equivalent experience/training considered.

Skills, Knowledge and Abilities:
Organization and management abilities.
Communication skills including writing, speaking, and listening.
Ability to work with diverse groups.
Working knowledge of technology hardware and software.
Working knowledge of telephone, groupware and server based software.
Working knowledge of Windows/DOS, Macintosh and mainframe computer systems.

Experience: Two years technology management. Other related administrative experience considered.

Appendix I continued

TITLE: Communications Technology Assistant

REPORTS TO: Communications Technology Supervisor

PERFORMANCE RESPONSIBILITIES:

1. Assists in the collection and preparation of data for maintaining the district-wide PBX telecommunications system.
2. Coordinates changes and maintains the district-wide voice mail system.
3. Assists in the maintenance of the districtwide e-mail system and internet e-mail gateway.
4. Produces the district communications directory (paper & electronic).
5. Assists with the management of the district-wide group calendaring and central office Macintosh data backup system.
6. Assists with the management of the telecommunications system/billing process and job ticket system, including tracking of open tickets.
7. Assists with management of the district-wide E-911 data base.
8. Performs software installation as directed.
9. Assists with the design of custom databases.
10. Assists with coordinating staff e-mail, phone, and group calendar training needs.
11. Assists with the development and delivery of training on department based application software (i.e. Quickmail, Meeting Maker, MS Word)
12. Communicates to the Communication Technology Supervisor the requirements and needs of the assigned area of responsibility.
13. Performs other tasks and duties as assigned by the Communications Technology Supervisor.

QUALIFICATIONS:

Education: Two year degree with emphasis in information or technology management. Equivalent experience/training considered.

Skills, Knowledge and Abilities:
Organization and management abilities.
Communication skills including writing, speaking, and listening.
Ability to work with diverse groups.
Working knowledge of technology hardware and software.
Working knowledge of telephone, groupware and server based software.
Working knowledge of Windows/DOS, Macintosh and mainframe computer systems.

Experience: Two years technology management. Other related administrative experience considered.

Appendix I continued

TITLE: Communications Technology Secretary

REPORTS TO: Communications Technology Supervisor

PERFORMANCE RESPONSIBILITIES:

1. Performs word processing duties (i.e., letters, memorandums, reports, statisical data, contracts, proposals, forms, financial, newsletters, labels, lists, spreadsheets, etc.)
2. Assists in the development and preparation of training materials for training sessions on a variety of software packages.
3. Provides assistance in reformatting various word processing documents using HTML code and combining text and graphics using a scanner.
4. Updates server-based software programs, (i.e., QuickMail and Meeting Maker, by assisting in making changes to passwords, resetting modems, etc.)
5. Provides duplicating services for district office staff in a timely manner.
6. Assists in conducting and conducts training sessions on groupware technologies (i.e., Meeting Maker, QuickMail and telephone systems).
7. Provides support and problem resolution in the operation and functionality of computer software for users.
8. Responsible for handling calls from district staff related to technology repairs and requests including entering and tracking data in district job ticketing database.
9. Communicates to the Communication Technology Supervisor the requirements and needs of the assigned area of responsibility.
10. Performs other tasks and duties as assigned by the Communications Technology Supervisor.

Appendix I continued

TITLE: Information Systems Coordinator (not presently staffed)

REPORTS TO: Director of Technology

PERFORMANCE RESPONSIBILITIES:

1. Directs the day-to-day activities of the district's Information Systems department, which includes data processing in the following application areas: finance, payroll, personnel, student information, census, instructional programs, research activities, transportation and student assessment.
2. Regularly assesses the district's use of information management systems and related technologies, and recommends alterations and expansion as necessary.
3. Develops and recommends policies and procedures to improve student information systems within the school district.
4. Develops procedures for the collection, storage, retrieval and dissemination of student information in accordance with the needs of the school district and in accordance with the district's long-range plan.
5. Supervises the preparation and submission of all required federal, state, and district reports relating to the areas of responsibility.
6. Provides consultant services to those departments which indicate a need, interest, or desire to develop data processing applications, conducts in-service programs to keep staff informed of application developments in the field of information technology and other related software.
7. Develops schedules and establishes procedures for the administrative utilization of information technology equipment and staff through the district.
8. Interprets output data from the educational information system for users.
9. Supervises and appraises the performance of personnel assigned to the areas of responsibility.
10. Communicates to the Director of Technology the requirements and needs in the assigned areas of responsibility.
11. Prepares and monitors program budgets for the allocation of resources in coordination with the Director of Technology.
12. Executes assigned administrative responsibilities to insure compliance with federal and state laws in accordance with Anoka-Hennepin School District policies and guidelines pertaining to equal employment opportunity and affirmative action.
13. Performs other tasks and duties as assigned by the Director of Technology.

QUALIFICATIONS:

Education: Bachelor's degree with emphasis in information or technology management. Equivalent experience/training considered.

Demonstrated organization and management abilities.
Excellent communications skills including writing, speaking and listening.
Ability to work with diverse groups.
Working knowledge of information systems and Windows/DOS, Macintosh and Mainframe computer systems.
Knowledge and understanding of laws, rules and regulations affecting school district personnel, student populations and school district operations.

Experience: Two years information systems management. Other related administrative experience considered.

Appendix I continued

TITLE: Educational Data Analyst

REPORTS TO: Director of Technology

SUMMARY:
Manages the collection of educational data for state compliance and revenue payments, and district projections by performing the following duties:

PERFORMANCE RESPONSIBILITIES:

1. Collects and prepares data for state and federally required reports, periodic research reports, and surveys.
2. MARSS Contact (Minnesota Automatice Reporting Student System) coordinate efforts to ensure compliance with state statutes and maximum general education revenue and other revenue payments to the district.
3. Maintains records for student enrollment projections, boundary decisions, and computerized mapping systems.
4. Prepare student projections used by the Director of Finance in preparing the school district budget and by Human Resource Manager building staff issues.
5. Coordinates update of mapping and desk reference manual to include boundary changes and real estate development.
6. Coordinates special projects and provides assistance to public relations and communications efforts of the District.
7. Monitors compliance with federal and state laws, including Equal Employment Opportunity and Affirmative Action.
8. Assigns, organizes, and facilitates data related projects accurately.
9. Performs other tasks and duties as assigned by the Director of Technology.

TECHNOLOGY RESPONSIBILITIES:

1. Designs databases for various departments and projects.
2. Oversees MARSS data based on mainframe computer (TIES).
3. Assures overall integrity and accuracy of data elements.

QUALIFICATIONS:

Education: Bachelor's degree with emphasis in information or data management systems. Equivalent experience/training considered.

Skills, Knowledge and Abilities:
Organization and prioritization abilities.
Communication skills including writing, speaking, and listening.
Ability to work with diverse groups.
Working knowledge of information systems.
Skill in interviewing people.
Ability to read and comprehend mapping systems.
Knowledge of census data, boundaries and student information.
Working knowledge of Windows/DOS, Macintosh and mainframe computer systems.

Experience: Two years data or information systems management. Other related administrative experience considered.

Appendix I continued

TITLE: Information Systems Secretary

REPORTS TO: Director of Technology

PERFORMANCE RESPONSIBILITIES:

1. Responsible for accurate data input of confidential information utilizing a variety of software and mainframe programs including Windows/DOS and Macintosh platform equipment.
2. Verify accuracy of data input using output sources.
3. Assists in the development and preparation of training materials for training sessions on a variety of software packages.
4. Handles report requests to include designing, ordering and record keeping. This involves the regular lifting and sorting of boxes or reports.
5. Provides support and problem resolution in the operation and functionality of computer software for users.
6. Responsible for documenting written and telephone calls regarding the processing new students, changes to information or the removal of students from the district roster.
7. Communicates to the Director of Technology the requirements and needs of the assigned area of responsibility.
8. Performs other tasks and duties as assigned by the Director of Technology.

Appendix I continued

TITLE: Instructional Technology Facilitator
(187 days teaching contract with 20 days extra service)

REPORTS TO: Director of Technology

PERFORMANCE RESPONSIBILITIES:

1. Facilitates the integration of available technologies into school district curriculum.
2. Communicates current instructional technology achievements, needs and future visions to the school board, staff and public.
3. Facilitates the use of technology for assessment of instruction and learning.
4. Plan, coordinates, and conducts technology staff development district wide.
5. Coordinates the installation of technology for teacher classroom management functions such as, attendance, grading, assessment and communications.
6. Coordinates the content of district Internet servers in cooperation with the Public Information Coordinator and other district personnel.
7. Assess instructional technology use in the school district.
8. Provides for the instructional application of technology within the educational program.
9. Integrates technology in the classroom to maximize each learner's potential.
10. Assists in assessing and providing for instructional and management technology needs for cluster schools and/or assigned programs.
11. Provides technical support and training in instructional improvement practices.
12. Provides services to assist schools in reaching improvement goals.
13. Provides references and research information, trends, and applications for technology.
14. Maintains current knowledge of emerging information, trends, and applications for technology.
15. Provides support related to the maintenance of technology related hardware.
16. Facilitates communication between the Technology Steering Committee, other technology staff and among clusters and departments.
17. Serves as a member of a cluster team and/or the District Technology Steering Committee.
18. Performs other tasks and duties as assigned by the Director of Technology.

QUALIFICATIONS:

Education: A Minnesota teaching license is required (field open); experience and background in technology curriculum integration preferred.

Ability to work with diverse groups.
Working knowledge of technology hardware and software, telephone, groupware, and server based software, Windows/DOS, Macintosh and/or Mainframe computer systems.
Two years technology background in an educational environment.
Demonstrated organization and management abilities.
Excellent communications skills including writing, speaking and listening.

Appendix J

Technology Acquisition and Approval Procedures

All recommended hardware and software standards are reviewed on an annual basis by the District Technology Steering Committee.

Planning for purchases of hardware/software can be initiated in any of the following ways:
- by curriculum committees as they adopt new materials as part of their review process
- by departments (both instructional and administrative) as they plan on new implementations
- by building sites as they plan for new implementations
- by any of the various district technology advisory committees (see figure 11-2)

To purchase additional hardware:

- Each building and/or department is responsible for developing a site-based technology implementation plan. Any hardware purchases must first be presented and approved by a building-level technology committee. Approval by this committee will also involve detailing what additional support might be required by this purchase.
- The request for hardware purchase must be forwarded to the appropriate Technology Facilitator, Coordinator, or the Director of Technology for comment on both the technical appropriateness of the hardware plus the completeness of the support plan for implementation.
- If all minimum conditions are met, the building and/or department can proceed with the purchase.
- A list of minimum hardware requirements for purchase will be published and updated regularly by the Technology Steering Committee with input from the district Audio/Electronic/Computer Repair Shop, as well as the various district technology advisory committees (see figure 11-2). Any purchases by individual departments or building sites should meet these requirements. Support, both instructional and repair, will only be provided for "approved" hardware pieces.

To purchase (or update) software:

- Software purchases must first be approved by the site-based technology committee. Approval by this committee also involves the writing of rationale as to why the software package is needed as well as updating the building/department staff development plan to include training on this software purchase. Updating existing software would fall under the same guidelines.
- The request for software purchase must be forwarded to the appropriate Technology Facilitator, Coordinator, or the Director of Technology for comment on both the technical appropriateness of the software plus the completeness of the support plan for implementation.
- If all minimum conditions are met, the building and/or department can proceed with the purchase.
- A list of supported software packages (Appendix D) will be published and updated regularly by the Technology Steering Committee with input from the various district technology advisory committees. Each of these software packages will be supported through training and installation provided by the Technology Services Department working in conjunction with the technology coordinator/contacts for buildings and departments.
- Designated building/department technology support personnel have been granted access to a district INSTALLS server to facilitate software installation. Volume license pricing has been secured for all major supported products (i.e., Microsoft Select, Claris MESL, etc.). Authorized installation personnel are to initiate an electronic purchase order for each installation conducted. **A purchase order must be generated prior to any software installation.** A copy of each purchase order is to be kept centrally in the Purchasing department, as well as within each building for license auditing purposes. Specific pricing and procedures for each software package are posted on the INSTALLS server.