

**MONTICELLO CENTRAL SCHOOL DISTRICT  
TECHNOLOGY PLAN  
2007 – 2010**

**MONTICELLO SCHOOL DISTRICT  
MONTICELLO, NEW YORK 12701  
845-794-7700 ext. 70550**

**February 2007**  
*Submitted by Shelley Rossitto  
Director of Instructional Technology*



**TABLE OF CONTENTS**

<b>School District Administration &amp; Committees</b>	<b>Pages 2 &amp; 3</b>
<b>I. Executive Summary</b>	
<b>A. Mission Statement/Vision Statement</b>	<b>Page 4</b>
<b>B. Plan Summary</b>	<b>Page 5</b>
<b>II. Information Technology Assessment</b>	
<b>A. Assessment Inventory</b>	<b>Appendix A and associated pages</b>
<b>B. Network Drawings</b>	<b>Appendix B,C,D</b>
<b>C. Current Program Status</b>	<b>Page 6,7,8</b>
<b>D. Current Budget</b>	<b>Appendix E</b>
<b>E. Needs Assessment</b>	<b>Page 8</b>
<b>III. Technology Objectives and Plans</b>	
<b>A. Overview of Objectives</b>	<b>Page 8 – 17, Appendix F,G,H</b>
<b>B. Equipment &amp; Service Components</b>	<b>Page 17, 18</b>
<b>C. Staffing and Training</b>	<b>Page 19, Appendix I</b>
<b>D. Deployment</b>	<b>Appendix I</b>
<b>IV. Plan Administration and Budget</b>	
<b>A. Current Plan Approval</b>	<b>Page 20</b>
<b>B. Budgeting</b>	<b>Appendix E</b>
<b>C. Planning and Review</b>	<b>Page 20, 21 Appendix J,K,L</b>

**MONTICELLO CENTRAL SCHOOL DISTRICT**

**Administration**

Dr. Pat Michel, Superintendent of Schools  
Kathleen Pagano-Fuller, Assistant Superintendent  
Gladys P. Baxter, School Business Manager

**Directors**

Ken Garry, Director of Physical Education  
Shelley Rossitto, Director of Instructional Technology  
Scott Palermo, Director of Pupil Personnel Services  
Dr. Kevin Dirth, Director of Music  
Gary Furman, Director of Math/Compensatory Education  
John Travis, Director of Plant Operations

**District Schools**

Emma Chase School  
Grades K-5  
50 Pennsylvania Ave.  
Wurtsboro, New York 12790  
Susan Gottlieb, Principal

George L. Cooke School  
Grades K-2  
Franklin Ave.  
Monticello, New York 12701  
Dr. William Greene, Principal

Cornelius Duggan School  
Grades K-5  
Route 55, White Lake, New York 12786  
Patti Sonnenschein, Principal

Kenneth L. Rutheford School  
Grades 3-5  
9 Patricia Place, Monticello, New York 12701  
Kim Patterson, Principal

Monticello High School  
Grades 9-12  
45 Breakey Ave.  
Monticello, New York 12701  
Arleene Siegel Lerner, Principal

Robert J. Kaiser Monticello Middle School  
Grades 6-8  
39 Breakey Ave.  
Monticello, New York 12701  
Deborah Wood, Principal

**District Technology Committees\***

**Emma C. Chase School**

Susan Gottlieb            Jennifer Unverzagt  
Dorrie Lounsbury        Keith Babbitt  
Linda Holmes

**George L. Cooke School**

Dr. William Greene     Brooke Schwarz  
Pat Segar                 Melanie Hector  
Jason Catanzariti        Cherish Barish  
Connie Ast                Lucretia Gillis

**Cornelius Duggan School**

Patti Sonnenschein     Roberta Eckes  
Dorrie Lounsbury        Sandy Lyttle  
Linda Holmes             Jennifer Unverzagt  
Keith Babbitt             Connie O'Rourke  
Eileen Kolaitis

**Kenneth L. Rutherford School**

Kim Patterson            Dawn Weiss  
Leanna Smith             Chris Emery  
Mike Cordisco            Connie Cheng  
Jennifer Jessup          Kim Thompson

**Monticello Middle School**

Deborah Wood            Sherri Blais  
Michael Moss             Kathy Hector

**Monticello High School**

Arlene Siegel Lerner  
Jeanine Nielsen          John Law  
Kim Hunt                  Wendy Levinson  
Lisa Pacht                 Maribeth Lauri

**District Team**

District Administration, Directors and Principals

**\*Director of Instructional Technology facilitates all Building Technology Teams.**

**Plan Development:** This plan has been developed as a collaborative effort through interviews, curriculum planning activities, meetings with vendors to assess infrastructure support, and meetings that focus on overall direction for the district in terms of improving our instructional and administrative environment. The technology plan was not produced in isolation of the current district initiatives. We planned within curriculum, instruction, and administrative meetings as we strive to become more efficient and provide additional instructional opportunities for students and staff. That conversation led to the technical needs that would support that overall vision.

## I. Executive Summary:

A. Mission Statement: The Monticello Technology Mission Statement is based on our district's educational philosophy as outline in our district mission statement. Our school district's mission statement states:

The Mission of the Monticello Central School Community is to graduate competent individuals who can succeed at their next level of endeavor, who believe in the worth and dignity of themselves and others, and who pursue lifelong learning in an ever changing, richly diverse society. This goal will be accomplished by providing an environment conducive to learning and well balanced curriculum facilitated by a high qualified staff in partnership with family and community with an uncompromising commitment to excellence.

The Technology Mission of the Monticello Central School District is to infuse technology into our educational programs so that we will help insure our graduates are well prepared for the world of work and/or post-secondary education in the global economy. To that end is our desire for technology to help:

- ❖ support student's ability to successfully meet state standards and assessments
- ❖ develop problem solving, creative thinking, and communication skills.
- ❖ support student centered education and encourage lifelong learning.
- ❖ encourage and assist effective district-wide communication
- ❖ enhance both instructional and administrative productivity
- ❖ provide equitable access to technology for all students and staff

B. Vision Statement: Our plan is based on the fundamental belief that technology implementation in the educational environment can contribute significantly to achieving our educational goals. The infusion of technology into the instructional and administrative programs is based on the beliefs that:

- ◆ technology creates new teaching and learning opportunities
- ◆ technology fosters creative problem solving and collaborative work
- ◆ technology offers powerful tools for engaging students systematically in higher order cognitive tasks
- ◆ technology helps students develop inquiry skills focusing on the acquisition, gathering and interpretation of information and relate this knowledge to real life situations

*Our vision is to provide an environment which utilizes easily accessible technology to enable students, faculty, staff, and administrators to communicate effectively, increase productivity and access information to support learning so that all of our community can function as productive members of 21st century society.*

B. Executive Plan Summary

*Improving Student, Staff, and community ACCESS will drive our decisions.*

*A – Aligning*

*C – Community*

*C – Connections*

*E – Educating*

*S - Students*

*S- Staff*

In 1999 the district installed a fully switched network with a gigabyte backbone and 100 MB Ethernet to the desktop. This infrastructure has provided us with the ability to grow and integrate technology into all of our instructional activities. Throughout the years there has been professional development made available in learning how to use technology to support instruction. The direction of the district is to plan for infrastructure upgrades to accommodate more users, the next steps in professional development to begin to infuse technology seamlessly into the curriculum, install a new student management system and financial management system and the expansion of management systems to ensure equipment reliability and sustainability. We will prepare for the next lifecycle of technology. We are building a virtual server environment (a strategy to consolidate multiple physical servers to fewer servers. This will save on energy and resources and will provide us with redundancy for our servers) to become more cost efficient and user efficient in experiences. Its primary benefit is to enhance the reliability and performance of user experience (curriculum delivery). We will begin to implement a wireless infrastructure to provide a different medium for the user's computer experience. We will duplicate our wired network to include wireless to improve access, mobility, and space for students and staff.

Management

- Research a data integration model

- Improve records management

  - E-mail (reveal)

  - Full electronic storage of e-mail and digital communication

  - Digitizing records for retrieval and safe storage

- Expand Network management and administration

- Improve bandwidth within the district and increase from the outside

- Build Data Distribution Environment Controls for closets that meet with equipment standards to promote reliability and security of equipment

User

- Improve curriculum delivery

- Improve the users experience by improving speed and efficiency

- Increased access to our faculty and students

- Staying up to date with software and web resources aligned to curriculum needs

Curriculum

- Implement data decision making

- Use crosswalk templates to align to standards

- Integrate NETS ([www.iste.org](http://www.iste.org)) standards for students, teachers, and administrators

- Promote Cybersecurity and health related - internet safety (health)

- Accommodate enriched media devices

- Offer additional opportunities for instruction and collaboration via distributed education

Data

- Design data and work flow systems to improve integrity and efficiency

Build data management with storage and retrieval

## Engineering

This plan will address the next levels of growth the district will need to prepare for because of increased usage, accommodation of new services and technology that require more bandwidth and access, excitement and confidence by users in the technology being reliable, NCLB and its implications for targeted instruction, productivity, and the desire to align with NETS (National Educational Technology Standards). Our goal is to engineer solutions based on requirements set by the state, improve student and staff technology skills, improving efficiency and data use, and for improving instruction.

## II. Information Technology Assessment:

### A. The Assessment Inventory – Appendix A

### B. Current Program Status

Attached are our current Network diagrams.

Appendix B: Monticello CSD Network

Appendix C: Sullivan County Network

Appendix D: MHRIC 4-County Network

1. Curriculum Integration: The following activities are taking place to begin the planning and continued growth of curriculum integration. The activities listed are currently available to teachers and administrators. Included in this list are the needs for comprehensive planning to align instruction to the standards, using technology to target needs, and to support instruction designs based on data. Teachers and administrators have been learning about technology and practicing with its implementation and integration. It is time to shift to more intensive planning and infused principle to meet our goal of total acquisition. Teachers will begin to use technology to support student learning in key content areas by linking to existing district or school initiatives. Data, content, and standards will be the foundation for technology use as we begin to move from using it as a separate activity to an infused instructional resource. The first year of the technology plan will support the planning phase with implementation occurring during the life of the plan. The current initiatives are tailored to teachers being able to know the technologies available to them, continue to grow based on new technical considerations (networks, wireless, increased access for students etc.), and personal planning based on the NETS for teachers and administrators.

- ☞ Technology committees are established to identify training needs and technology coaches for staff. They act as resources to look at curriculum and help teachers with planning. Presently, most of our training is on how to use the computers and is evolving to integration.
- ☞ Instructional leaders such as principals, directors, and coordinators are beginning the process of resource planning with the Director of Instructional Technology to act as integration leaders, assess how the standards are aligned, and evaluate the effectiveness of how technology is integrated in the curriculum.
- ☞ Every staff member is now using e-mail and shared network folders for correspondence.
- ☞ Math is using Compass Learning for grades 5-8 to reinforce basic skills, graphing calculators in grades 9 – 11, TI Navigator, Smartboards, laptop carts, online curriculum, various software programs such as Geometer Sketchpad, and Math Pak to create worksheets.

- ☞ Scanton is beginning as a pilot to be used for processing benchmarks and other assessments for immediate feedback to lead to instructional decisions being based on data.
- ☞ Social Studies require internet research of all its students, testing programs are used for benchmark exams, and online grading being piloted by two teachers. They are also using the CPS systems for “do-nows”, Marco Polo, and extensive smartboard usage.
- ☞ English is using smartboards, online resources, video conferencing, laptop and Dana carts and a new English computer lab for publishing and design.
- ☞ Special Education is fully automated with IEP direct, integrating video conferencing, and assistive technology.
- ☞ We have added AISM direct and will begin its implementation.
- ☞ Science is using laptop carts, smartboards, tablets that interact with smartboards, probeware, and SAS in schools.
- ☞ The elementary schools are integrating Encarta, Office, smartboards, Kidsperation, and Inspiration into daily lessons.
- ☞ Teachers have attended workshops through Sullivan County, Orange-Ulster County BOCES Model Schools Program, the Regional Information Center, and conferences that target technology integration, management, and implementation.
- ☞ Teachers are engaged in grant initiatives that provide tech resources and equipment through Learning Tech Grant and Title 2-D.
- ☞ Specific department needs are being assessed based on district data.
- ☞ ILS programs: Compass Learning is being used with students for targeted instruction based on student needs.
- ☞ Our Technical Support Center is operating which gives users web based access to work orders for tracking and accountability.
- ☞ Smartboards are installed in most math and ela classrooms in MS and HS and those teachers have had intensive training through professional development offered through the grant.
- ☞ Finance Manager – new system to replace CIMS and the AS400 is running.
- ☞ Cafeterias are all digital with POS systems.
- ☞ The Libraries are automated through Sullivan BOCES.
- ☞ All classrooms are equipped with Cable TV.
- ☞ All classrooms are video conferencing capable.
- ☞ Templated webpages are available for all teachers.

## 2. Current Staffing and Training

- ☞ Since the adoption of the last technology plan the district continues to employ a fulltime Director of Instructional Technology to provide leadership, vision, direction, and act as a resource on all curriculum committees to ensure technology integration and support in all curricular initiatives.
- ☞ Two technicians that manage workstations.
- ☞ Two technical assistants that are assigned to the MS, KLR, and HS.
- ☞ Systems Operator to support student and financial management systems and track inventory, purchasing, licensing, and other software support.
- ☞ A network technician (.8 from Orange-Ulster BOCES).
- ☞ A data communications specialist (.8 form Orange-Ulster BOCES).
- ☞ An AS400 programmer – contracted service.
- ☞ A Partime inventory and ordering clerk.

☞ With NCLB Title 2 Part D funds a professional Developer from Sullivan BOCES for 50 days of training. This person works with all staff on targeted projects that will improve infusion of technology.

☞ Staff members attend various workshops and learning opportunities as defined above. The expectation is for them to bring back the information and coach teachers. Copyright, information literacy, and Marco Polo, Smartboards, using video in the classroom, creating webpages, are examples of workshops that have been attended.

☞ Workshops occur on conference days, through Sullivan BOCES, RIC, and Orange-Ulster BOCES.

☞ The Director of Instructional Technology is encouraging and supporting the writing of grants to acquire technology and additional training. Staff and the Director work toward searching for grants with teachers to write and revise.

☞ Web based applications to encourage more parental involvement and information are being rolled out. Examples are the district web page and online grading.

#### A. Current Budget

1. See attached sheet – Appendix E

#### B. Needs Assessment

☞ Principals meet with their technology committees along with the Director of Instructional Technology to address professional development and acquisition of hardware and software. That information is put together in a plan to be budgeted for the current and following school year. This process accomplished the needed goals to get buildings up and running with technology. The teams are beginning to work toward data analysis and targeted technology for improving student achievement along with updating existing equipment. Our goals for the next 3 years are to increase access for students. Our infrastructure is solid, staff has gained confidence in the system so they use technology more, and they have become expert in its implementation.

☞ Directors, coordinators, principals, and central administration have been meeting with the Director of Instructional Technology to determine needs based on improved productivity, the effectiveness of the student and financial management systems, sustained professional development, data driven decision-making, and targeted use of technology based on district wide goals, NCLB, document management, e-mail management, and data. All planning works toward improving student achievement as measured by the New York State assessments and local benchmarks.

☞ The Director of Instructional Technology has begun meetings with all administrators to adopt the ACOT and NETS standards for teacher, student and administrative guidelines.

☞ Technology needs assessments include:

- A network audit by Novel and Cisco to implement wireless.
- Security Audit by a consultant through Novell and Symantec to evaluate security issues as we grow. They will include wireless, viruses, hacking, etc.

### iii. Technology Objectives and Plans

#### A. Overview

##### 1. Overall Objectives

Goal 1: *To build and sustain a strong network infrastructure to support instruction.* During the past four years we have been adding computers, users, and increasing digitized record keeping, and as a result have placed bandwidth and storage demands on the network. As we analyze the status of our infrastructure it is important to include engineers who will ensure that our designs are in compliance with network standards, analyze our infrastructure for upgrades and security, and help us avoid pitfalls by predicting how new services will perform on the network. The infrastructure decisions will be based on support for instructional needs as defined by data, the NY State Learning Standards and assessments, curriculum integration, and NCLB. The overall investment in the infrastructure will:

☞ Support proposed upgrades and additions for a comprehensive and integrated data collection system for –

- student
- data
- financial
- plant operations
- cafeteria
- registration
- archiving
- administrative functions

- ☞ Improve efficiency of network so data can flow and be stored effectively.
- ☞ Add disaster recovery and increase back up and storage.
- ☞ Provide infrastructure integrity to support instructional needs as defined by data, NCLB, NY State Standards (PI's), statewide assessments, and curriculum.
- ☞ Support network growth and enriched media devices as it increases in size and number of services (more computers, portable computing devices, distributed educational opportunities, virtual field trips, streaming audio and video, etc.).
- ☞ Increase access capability to five per classroom and laptop carts which includes additional wiring, switches, and core switch upgrades.
- ☞ Increase access speed to gigabit to the desktop.
- ☞ Design infrastructure to accommodate wireless computing (laptops, PDA's, phones, Alphasmarts).
- ☞ Establish replacement cycle for computers with a goal of reducing the ratio of students per Internet connected student computer to 4:1.
- ☞ Build confidence in the dependability and reliability of the technology to end users.
- ☞ Reduce turn-around-time for repairs through the use of desktop management as designed by the consultants and staff.
- ☞ Increase technical support:
  - At least one repair technician for every 350 computers.
  - Add district wide Mac and network administrator.
  - A 1.0 technology integrator for professional development.
  - Add clerical support or increase inventory and ordering clerk to fulltime to accommodate clerical needs.

Strategies to meet this goal include:

☞ Obtaining network audit reports from engineering consulting companies with Novell, and Cisco design certifications. They will analyze the viability of the district network and contribute to the solutions that will impact our goals. Along with our network staff and Orange-Ulster BOCES we will:

- Analyze anticipated network traffic.
- Build redundancy and provide additional paths for leveraging bandwidth.
- Update Cisco switches to gig switches to accommodate new computers that require gig and to improve data flow and speed.
- Implement wireless environment for HS to save on space, reduce need for wiring to improve mobility
- Research Citrix environment for home access
- Research Linux desktops to increase longevity of machines.
- Implement data back up system to protect district data – data retrieval, overcome data corruption.
- Continue QOS for prioritization of network traffic (voice, video, data).
- Design appropriate server configurations – implement virtual server environment.
- Enhance users ability to utilize servers.
- Increase use of Zenworks – include inventory.
- LDAP (Lightweight Directory Access Protocol) – integrated user database including ID number, Novell password, e-mail, phone, AS400, SIFS – data warehousing.
- Significantly increase available network storage space.
- Internet Filtering – align to user needs – develop several levels.
- Expansion of web based technical support center (upgrade from TSC to Schooldude.
- Inventory control.
- Improve data distribution environment controls to conform to standards based on equipment and electrical needs.
- Services
  - Instructional – Internet, Video Conferencing, Instructional Software
  - Administrative – Network and software upgrades, cafeteria, student and financial management, data warehousing, AS400, technical applications, operating system upgrades, anti-virus support, remote desktop, help desk, etc.
  - Applications – Microsoft, Compass, Inspiration, instructional software.
  - Scheduling of deployment of services to maximize the available bandwidth over time. The plan is to address the following areas –
    - Security issues – virus, hackers.
    - Automated desktop management- software and hardware inventory, software updates, security policies, update computers and OS remotely.
    - Improve e-directory and logins.

The intensive planning will establish a benchmark for which subsequent reports and planning will be measured against. The Director of Instructional Technology, district data communication specialist, lead technician, and Orange-Ulster BOCES will complete a plan.

☞ The conclusions of the continuous network planning will be based on instructional needs as defined by curriculum teams through interviews and pre-assessments with Director of Instructional Technology. Areas to integrate and be considered are the development of:

- Wireless services to accommodate small learning communities.
- Equity and increase of access.
- Security with wireless, desktop and network, hacking, confidentiality.
- Palm computing devices.
- Video Conferencing.
- Increased access of current and emerging technology for all users including students, administrators, teachers, and staff.
- Build in appropriate technical support – 1 technician per 350 workstations, 1 computer per teacher, and replacement cycle of 3 –4 years<sup>1</sup>.
- Improve process for technical support.
- Shorter repair times.
- Remote desktop solutions.
- Network applications to ease repairs-
  - Standardization and review policies for software.
  - Testing system for all software.
  - Web based system and data analysis.
  - Technical assistants and college and high school interns in buildings.
  - Disaggregation of data from reports generated from Technical Support System to improve quality and effectiveness.
  - Additional building level technicians as defined by Neir-Tec.
  - Additional technology integrators as defined by Neir-Tec.
  - Integrated Phone system-
    - Support current VOIP.
- Software
  - Standardize on software.
  - Implement networked solutions.
  - Update and maintain appropriate licensing.
  - Test all software.
  - Package software for remote installation after reimaging.
- Staffing recommendations are attached in a report (Appendix )and will include additional technical support and the realignment of current resources in personnel we currently employ as a district and through BOCES. As teachers become more comfortable and competent and our reliance on digital data increases the technology reliability becomes more critical.
  - Our Data Communications Specialist will be responsible for the network infrastructure and the flow of traffic. He is currently doing

---

<sup>1</sup> Neir-Tec – Northeast and the Islands Regional Technology in Education Consortium, Technology briefs and planners for NCLB website address: <http://www.neirtec.org/products/techbriefs/default.asp>

this but with additional responsibilities. He will be on hand for technical assistance in the buildings when needed, but on a limited basis.

- The System Administrator will continue. Responsibility is to manage the 5000 users, which include passwords, security, software, back-ups, LDAP, user data, and Zenworks. Shared technicians will be contracted through Orange-Ulster BOCES for 4 days per week. The duties of this position will shift from break/fix to more network related duties to insure the reliability of technology in classrooms throughout the district. The technician support that this is replacing was coverage for the elementary schools and MS. The district cannot be without a technician covering those buildings. Our data indicates the repairs are mainly Level 1 and 2. A cost effective solution is to look into the hiring of entry-level Technical Assistants under the guidance of the district technician.
- Add fulltime mac and network technician in first year of tech plan to be re-evaluated in subsequent years to determine appropriateness of existing technical support. This technician will perform break/fix and network related repairs for our macs along with PC support.
- Update staffing based on staffing report to align with the county salaries and actual job duties.

- ☞ The technology staff is also involved in intensive staff development and team building skills to ensure infrastructure reliability through staffing and growth.
  - Training sessions such as learning tree, online courses through Apple.
  - Monthly meetings to review projects, work orders and problems.
  - Surveys to get feedback from users concerning effectiveness and responsiveness of staff.
  - Meeting attendance with other network administrators quarterly.
  - Engineering support from Annese and CNC (Creative Networking Concepts).

*Goal 2: Plan and implement an effective professional development program to infuse technology, create communities of inquiry and knowledge, target student accessibility, become embedded into current instructional initiatives, and integrate NETS for students, teachers, and administrators and ACOT(revised to meet our needs (Appendix F and G).*

Teachers have been involved in technical training and have learned about and worked with technology throughout the district. Many teachers have begun to integrate and there are many that are now ready. The technology is now stable so instructional time is not lost to disrepair and frustration with equipment not working. Technology will begin to be infused into all curriculum and technology initiatives where it is appropriate to ensure accessibility for all students. Teachers will work with the standards/benchmarks identified for students through NETS (National Educator Technology Standards [www.iste.org](http://www.iste.org)) in planning and implementation of curriculum. Administrative based teams of coordinators, directors, and principals will be the vehicle and provide the leadership for technology infusion in all content and standards based areas. Leaders will include technology integrated rubrics into their planning, implementation of

instructional strategies to improve student achievement, and in the evaluation of teacher performance. School based teams of teachers and principals will act as coaches, trainers, and liaisons between the technology director and staff to provide support and needed training. Technology is viewed as an instructional strategy so staff development will occur either during other instructional strategy initiatives or as an extension of current practice.

#### 1. Technical Training

Staff members will stay current with technology (NETS Technology Operations and Concepts – Appendix F) although this can be integrated into projects there are some logistical trainings to improve overall efficiency. Technical training is done with technology coaches in the buildings during seminar and staff development days.

☞ Teachers demonstrate a sound comprehension of operations and concepts.

- Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.
  - Network – saving, shared folders, leveraging the use of, e-mail, grading, safe practice with logging in, adherence to AUP.
  - Simple technical tasks – plugging in, labeling live ports, TSC process, reading the screen.
  - Perform simple troubleshooting tasks.

☞ Software

There are two phases: exposure and integration. Users will be exposed to new software applications installed on their machines. Teachers will then embrace and integrate it into the curriculum.

- New software applications.
- Standardization policies.
- Project based activities with follow up.

NETS Standards II, III, and IV (Appendix G): Planning and Designing Learning Environments and Experiences and Teaching, Learning and Curriculum.

The director will focus discussion on the New York State Standards, classroom management in 1 – 5 computer classrooms, and data. Decisions on projects will be based on that data. It will be important to include examples of standards based ideas, Blooms Taxonomy, and technology solutions as another idea or instructional strategy.

Professional development for technology integration is most effective when it is in the context of curriculum content, effective pedagogy, and student learning, not focused on the technology itself.<sup>2</sup>

Meeting goals will include professional development planning for NETS:

☞ Teachers plan and design effective learning environments and experiences supported by technology.

- Design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners. Teachers will work in teams, funded by grants, to learn and create learning activities and environments infused with technology.
- Plan for the management of resources for technology resources within the context of learning activities. We have increased access to technology to improve instructional time. This includes laptops, data carts, smartboards, probeware, etc.

---

<sup>2</sup> IBID Neir-Tec

- Identify and locate technology resources and evaluate them for accuracy and suitability. Teachers work closely with administrators to test and align software to needed areas of instruction.
- Plan strategies to manage student learning in a technology-enhanced environment.
  - Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning:
  - Apply technology in assessing student learning of subject matter using a variety of assessment techniques. Teachers will continue to use CPS systems and surveys.
  - Use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning. The district will expand the use of Scantron.
  - Teachers use technology to enhance their productivity and professional practice.
  - Use technology resources to engage in ongoing professional development and lifelong learning. We will continue to encourage the use of online resources such as ASCD and Accelerate to promote growth in an online environment.
  - Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning. We are currently and continue to make connections over video conferencing, have begun live webstreaming, and e-mail.
  - Leadership and Vision: Administrators inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision. Administrators will integrate technology into many instructional activities and create rubrics that evaluate skills and infusion.
  - Facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision.
    - Foster and nurture a culture of responsible risk-taking and advocate policies promoting continuous innovation with technology.
    - Evaluate data when making leadership decisions.
    - Advocate on the state and national levels for policies.
  - Learning and Teaching: Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.
  - Identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement.
  - Facilitate and support collaborative technology-enriched learning environments conducive to innovation for improved learning. Video conferencing and collaborative projects online will continue to expand.
  - Provide for learner-centered environments that use technology to meet the individual and diverse needs of learners. Teachers and

administrators will become trained in Compass, Lexia, and other software tools that will improve performance. We are expanding the use of technology for our special education, AIS, and alternative ed students through online courses.

- Facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills.
- Productivity and Professional Practice: Administrators will apply technology to enhance their professional practice and to increase their own productivity and that of others. Educational leaders. We will be employing a data administrator to assist in the development and use of data to inform instruction.
- Model the routine, intentional, and effective use of technology.
- Employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community. Our staff is using this medium and will now become more effective as e-mail has grown out of control and communication has become in sentence structure.
- Create and participate in learning communities that stimulate, nurture, and support faculty and staff in using technology for improved productivity.
- Engage in sustained, job-related professional learning using technology resources.
- Maintain awareness of emerging technologies and their potential uses.
- Employ technology to advance organizational improvement.

The specific school district needs will center on:  
K-12 Appendix H (presented to Sullivan BOCES)

#### 4. Information Literacy

As we move to a digital world an education in information literacy, its impact on student learning, and how we access information and knowledge will need to be incorporated in every phase of planning and technology integration.

☞ Teachers and administrators must understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice: (NETS V)

- Model and teach legal and ethical practice related to technology use. This would include the appropriate use of technology by staff members such as logging off of computers, suitable use of e-mail and websites.
- Promote safe and healthy use of technology resources. The Isafe and other cybersecurity curriculum will facilitate this process. Teachers, students, parents and community will be trained and educated on a safe internet environment. This can occur through parent forums and curriculum.
- Facilitate equitable access to technology resources for all students. This will be accomplished by increasing access in the classroom, through computer labs, and laptops.

## 5. Planning

HS and MS: Director will meet with all departments and set goals based on the NETS and ACOT (Apple Classrooms of Tomorrow) Assessment and Evaluation criteria: *Administrators will use technology to plan and implement comprehensive systems of effective assessment and evaluation.*

- ☞ Utilize technology to collect and analyze data, interpret results, and communicate findings in order to improve instructional practices and student learning.
- ☞ Assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to make informed personnel decisions.
- ☞ Incorporate technology into the decision-making process to assess, evaluate, and manage administrative and operational systems.
- ☞ Plan with elementary, MS, and HS principals, coordinators/head teachers 6-12 (SS, Art, Home and Careers, Technical Education, and Science), and Directors K-12 (Music, Phys. Ed, Math, ELA, Special Education) to establish assessment and evaluation procedures.
- ☞ Teacher evaluations will include technology integration. This will not be a separate category and will be assessed for alignment to lessons, standards, and relevancy based on data.
- ☞ Align elementary curricula to NETS standards listed above and conduct:
  - Plans for additional staff meeting days.
  - Plans for district planning days.
  - Work with teachers in teams to develop projects based on processes described for HS – Curriculum (What do we teach) and instruction (how do we teach it).

## 6. Process

- ☞ Adult Learning Theory: Professional development will be offered in a variety of ways. Teacher learning styles will be used to develop successful adult learners.
- ☞ Online learning:
  - Provide anytime, anyplace learning to alleviate problems with time and substitutes.
  - Establish professional learning communities outside of the district.
  - Provide access to resources, colleagues, and experts that may not otherwise be available.
  - Expand professional development over time and integrate it directly into classroom practice.
  - Provide teachers with the experience for new ways of learning, which can influence their decisions for incorporating technology into instruction.
  - Provide the opportunity for face-to-face meetings, study groups, coaching, and other professional development activities to enhance comprehensive professional development programs.
    - Mentoring (art).
    - Project based activities.
    - Teacher Research.
    - BOCES Collaborative Training. Maximize the use of BOCES to offer trainings that would be too expensive for the district. We can also invite other districts for training if there are fees involved.

- Integration of Distributed Education. We will begin to look at video conferencing, cable, and distance education as advanced resources for instruction. These resources will be planned with teacher projects. We are also developing the Moodle environment for online use.

*Goal 3: Provide educators and administrators with access to technologies that provide for the collecting, organizing, analyzing, disaggregating, and reporting of student and administrative data.*

- ☞ Provide all administrators with access and training in the use of web based tools to review and analyze data for analysis.
- ☞ Work with the Mid-Hudson Regional Information Center to enhance data warehousing to include our local benchmark data along with statewide assessments.
- ☞ Collaborate with Wayne Finger Lakes BOCES to develop Data Mentor 2 for teacher access to data and instructional resources to support classroom instruction.
- ☞ Provide data access to teachers.
- ☞ Research and design a student management system to provide teachers and administrators with necessary data for planning and meeting the requirements of NCLB.

*Goal 4: Enhance school and community communication through parents and adult literacy.*

Research indicates that parental involvement increases student achievement.<sup>3</sup> To address this growing awareness we will implement the following programs:

- ☞ Online grading for parental access to assignments and grades.
- ☞ Website development district-wide.
- ☞ Addition of classroom web interfaces for assignments, information, news, and communication.
- ☞ E-mail between administrators, parents, and teachers.
- ☞ Voicemail.
- ☞ Online courses and experiences for parents.
- ☞ Online surveys.
- ☞ Collaboration with the adult literacy program through Sullivan BOCES to provide technology training for parents.
- ☞ Development of web and media enriched tools such as podcasts and video.
- ☞ Webcasting of events unable to attend school activities and board meetings.

## B. Equipment and Service Components

### 1. Hardware and Software

- a. Computers: Increase access to computers based on need and targeted subgroups as defined by NCLB. Instructional technology will be targeted toward student achievement as indicated by district data and goals for school improvement. A complete inventory will provide the Director of Instructional Technology with data to determine repurchasing cycles for computers and related equipment.

---

<sup>3</sup> Caplan, J., G.Hall, et al. Pathways to School Improvement (1997). *Literature Review of School-Family Partnerships*. March, 2002. Online at <http://www.ncrel.org/sdrs/pidata/pi0ltrev.htm>

- b. Telecommunications: We will continue to upgrade our network. This will include core switch improvements, upgrades and enhancements, replacement of older work group switches, security hardware, i.e. Internet filtering (multiple filtering schemes by grade level), firewall, wireless access and video conferencing. The plan includes updates biannually to address the results of the audit. We connect to the Internet through the 4-County ring provided to us through the Mid-Hudson Regional Information Center.

2. Services

- a. Computer and related hardware and software: Our current and continued services and maintenance are with Dell for servers and workstations, IBM for AS400 and servers, Xerox for copiers, Lexmark for printers, Polycom for video conferencing units, VOIP for phones, MAC server and workstations, and Cisco for switches, routers, and firewalls. Software services include Successmaker from Pearson Digital Learning, CIMS for our student and financial management from Pearson Digital Learning, Novell licensing of Netware and ZenWorks, SLA maintenance fee for Novell upgrades, Groupwise for email, SAS for schools (curriculum content), Powermedia Plus (video content), and Symantec for antivirus.

BOCES and RIC services include:

MHRIC: Finance Manager, AISM Direct, IEP Direct, Guidance software, DDIS for SMS support and associated costs, COGNOS, TSS and (Technical Support Services for clerical training).

Orange-Ulster BOCES: Instructional Technology CoSer, Internet Filtering, Shared Technician

Capitol Region BOCES: Web services

Sullivan BOCES: Model Schools CoSer

GST BOCES: Teacher webpages

Dutchess BOCES: Compass

- b. Telecommunications and Internet access:

We contract through Sullivan County BOCES for our Internet access. The plan described in the following paragraphs is the current configuration. The 4 County region is in the process of negotiating a new contract that could alter the design.

The Monticello Central School District is part of a cooperative group of schools from Orange, Ulster, Sullivan, and Dutchess counties that collaborate through their local BOCES on an Internet services bid. The bid will commence its third term on July 1, 2007. Orange, Ulster, and Dutchess counties are tied directly together via a fiber-optic ring carrying 100mb Ethernet services through Hudson Valley DataNet (HVDN). Because of geography and areas of service of the local telecommunications providers, Sullivan County can not be connected directly to the ring through HVDN. Consequently, HVDN contracted with Time Warner Cable for 100mb Ethernet physically and logically diverse redundant connectivity to the HVDN ring for Sullivan County's schools. The result is a network that connects all of the public schools of the four county region, as well as those private schools that wish to participate, to high-speed redundant Internet access for the students, faculty, and staff of the region.

Each county BOCES and its associated schools has a direct connection to the Internet through HVDN and one of its two contracted Internet Service Providers (ISPs), Qwest and AT&T. The network is configured so that if one ISP loses service the network will automatically “flip” to the other ISP in a fraction of a second, with no interruption in service. The cooperative effort between the two ISPs is a negotiated term of the four-county contract. The bandwidth for the Internet service begins at 45mb and is expandable, by district, to meet the growing needs of the individual school district’s bandwidth requirements.

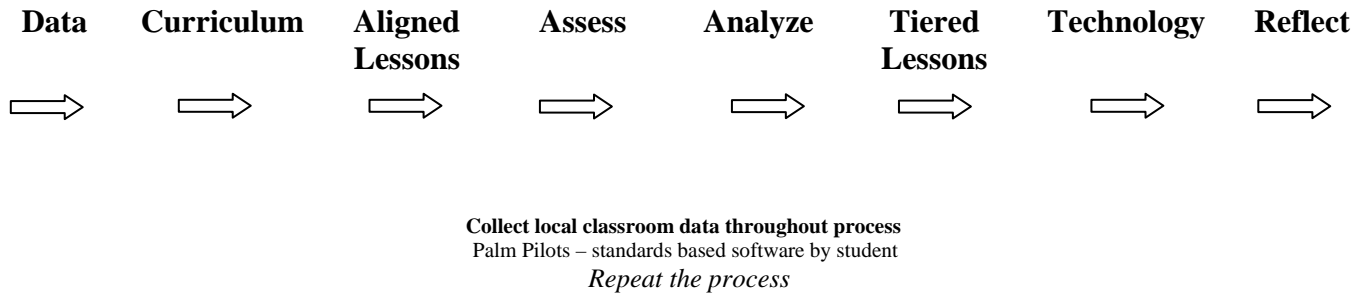
The Monticello Central School District is connected to the Sullivan BOCES network and, therefore, the four-county network, via a contract with Time Warner through Sullivan County BOCES. This network connects all of the school districts in the county and provides services for both data and distance learning. Data services include Internet, administrative services through the Regional Information Center (RIC), video conferencing, and Voice over IP (VOIP). The Time Warner network also connects the outlying schools within the district back to the high school, with the exception of the middle school, KLR, and Rutherford, which are located on the local campus and are directly connected via district-owned fiber-optic cable at gigabit speeds. *Every* computer in the district has high-speed access to the Internet through this network.

The district/county/regional computer networks are designed to manage Internet, administrative, and instructional traffic and provide for options to increase bandwidth to accommodate future essential computing services, both instructional and administrative, as they emerge.

### C. Staffing and Training

1. Technology Coordination: The Director of Instructional Technology continues to work as the facilitator of the district’s efforts to achieve its goals.
2. Support and Maintenance: The plan proposes one data communication specialist (manages the routing of all of the data throughout the district – switches, routers, servers), one systems administrator, one mac and network administrator, 2 district technicians, 2 technology assistants, consultants, staff developer, secretary, systems operator, and technical support from Orange-Ulster BOCES and the Regional Information Center for 2007 – 2008. We anticipate the need to include a database engineer and more instructional support in subsequent years. I have included a staffing report that outlines the change in salary and needs as we move to 2007-2008. (Appendix I).
3. Curriculum Planning: All instructional and curriculum initiatives will include the Director of Instructional Technology in order to assure an embedded model during the planning and implementation process. . To achieve the goal of demonstrating continuous student improvement, we will develop a plan; Comprehensive Planning and Implementation Process (CPIP), see Figure1 to impact student learning that

includes a process that defines what to teach and how to teach it so all students are successful.



**Figure 1.**

4. Staff Training: Training will include all staff members in Monticello and will employ multiple strategies to provide staff members with sustained, high quality, embedded, and relevant improvement opportunities.
  - ☞ Sullivan County and Orange-Ulster BOCES Model Schools Programs focus on classroom based integration strategies through workshops and online experiences and are incorporated into the training schedule.
  - ☞ The Mid-Hudson Regional Information Center focuses on specific application training for administrators, clerical, and teaching staff. This will occur onsite for targeted instruction or in workshops.
  - ☞ In-house conference days are facilitated by the Director of Instructional Technology. Courses are taught by teachers, consultants, Sullivan BOCES staff, Orange-Ulster BOCES staff, and/or the Director.
  - ☞ Conference attendance will be offered, such as NYSCATE.
  - ☞ Training for clerical staff to upgrade skills to improve productivity through Regional Information Center and staff developers.
  - ☞ Teacher Task Force offers teachers targeted and individualized staff development based on their needs. Teachers focus learning opportunities that can include planning, teacher research, and other experiences to articulate for summer work. In this environment teachers can plan based on their current and immediate needs and solicit appropriate resources to self-educate.
  - ☞ Grant initiatives are currently being written. All grants have a technology component built in to insure compliance with the long-range district technology plan.
  - ☞ A Staff Developer is being procured through the NCLB funds to provide on-site professional development one day per week for all staff members.
  - ☞ Summer Leadership Academies, NY Talks, and Principals Academies provide programs that integrate technology for administrators.
  - ☞ Utilize Virtual Learning Space for teacher resources and activities to support instruction.

**iv. Plan Administration and Budgeting**

A. Current plan approval status: Board of Education approves and reviews the plan yearly; the Board of Education receives a yearly update on meeting the plan goals

B. Budgeting: Appendix E

Other funding sources

Grants – The district will continue to write grants to offset needed equipment that will help us keep up with current technology, research, and growth. The grants that are currently under review are the NCLB, HP grant, state records grants to offset the cost of restructuring for our records, registration, student management, SMART Technologies, Improving Literacy Through our Libraries, Technology grants, and other relevant funding sources.

C. Timeline for upgrades and software installs: Appendix J

D. Ongoing planning and review

- ☞ We will continue to assess, monitor, evaluate and revise our plan accordingly.
- ☞ The following will be employed to monitor the progress of the plan:
  - Evaluation of plan for impact on student performance: State Assessments and Standardized Test Performance, NCLB identification of subgroups and how technology focused on NCLB
  - Surveys.
  - Classroom Observations.
  - Analysis of student work.
  - Assessment of teacher skills and needs through NETS and ACOT standards.
  - Assessment of student skills based on NETS.
  - Biennial review of progress towards goals will be completed.
  - Review progress with technology teams, Directors, Coordinators, Principals, and staff.
  - Evaluation rubrics for the plan and professional development can be found in Appendix K and L. They are based on researched national standards supported by Apple and the International Technology Association.