

The background of the slide is a close-up photograph of a person's hand holding a green printed circuit board (PCB). The hand is positioned on the right side, with fingers gripping the board. The PCB is populated with several integrated circuits (chips) and other electronic components. A prominent square area on the board is highlighted with a thick, yellow, hand-drawn style border. The text is overlaid on this highlighted area.

**Manchester-Shortsville CSD  
K-12 Technology Plan**

**May 2009**

# Table of Contents

<b><u>I. INTRODUCTION</u></b> .....	<b>4</b>
VISION .....	4
TECHNOLOGY GUIDING BELIEFS .....	4
<b><u>II. INFORMATION TECHNOLOGY ASSESSMENT</u></b> .....	<b>5</b>
<b>A. CURRENT INVENTORY OF EQUIPMENT AND SERVICES</b> .....	<b>5</b>
1. COMPUTERS .....	5
2. TELECOMMUNICATIONS .....	5
3. INTERNET ACCESS AND SERVICES (SEE APPENDIX A FOR A COMPLETE LIST OF NETWORK HARDWARE) .....	5
<b>4. OTHER TECHNOLOGIES (SEE APPENDIX B FOR A COMPLETE LIST OF SOFTWARE)</b> .....	<b>6</b>
<b>B. CURRENT PROGRAM STATUS</b> .....	<b>6</b>
1. CURRICULUM INTEGRATION .....	6
2. STAFFING AND TRAINING .....	9
3. TECHNOLOGY SERVICES STAFF .....	10
<b>D. NEEDS ASSESSMENT</b> .....	<b>11</b>
1. RECENT DEVELOPMENTS AND CURRENT STATUS .....	11
2. PLANNING PROCESS .....	11
<b><u>III. TECHNOLOGY OBJECTIVES AND PLANS</u></b> .....	<b>12</b>
<b><u>IV. INTERNET SAFETY</u></b> .....	<b>14</b>
<b>ACCEPTABLE USE</b> .....	<b>14</b>
ABUSES OF TELECOMMUNICATIONS .....	15
NO WARRANTIES .....	15
SAFETY AND PRECAUTIONS INFORMATION FOR STUDENTS .....	15
SUPERVISION AND MONITORING .....	15
EDUCATION .....	16
ADOPTION .....	16
<b><u>7V. TECHNOLOGY BUDGET</u></b> .....	<b>17</b>
<b><u>VI. TECH PLAN REVIEW</u></b> .....	<b>19</b>
<b><u>APPENDICES</u></b> .....	<b>19</b>
<b>APPENDIX A: NETWORK HARDWARE</b> .....	<b>20</b>
<b>APPENDIX B-SOFTWARE</b> .....	<b>22</b>

**APPENDIX C-INFRASTRUCTURE DATA ..... 25**  
**APPENDIX D-UPGRADES AND MAINTENANCE PROCESS ..... 28**  
**APPENDIX E-CIPA CHECKLIST..... 29**  
**..... 29**

# I. Introduction

In December of 1997, Manchester-Shortsville Central School District formed a District Level Technology Committee comprised of representatives from all of the stakeholder groups involved in our learning community. This committee undertook the process of developing a strategic plan for educational technology. Much effort and time was extended to set up and agree on a vision and guiding beliefs that could be used as a framework for making decisions related to needs and improvement for technology throughout our District.

Every three years, the committee reconvenes and reviews the progress of the plan, projected needs and plans for improvement. During the time between committee meetings, this document provides a clear path for acquisition, upgrades, and improvements in educational technology in our district.

## ***Vision***

MSCSD District Technology Committee is pleased to present its three-year strategic plan for educational technology. This plan is based on considerable thought and input from representatives from all of our stakeholder groups. This plan starts with a basic vision for educational technology's value within our district. Our vision is:

***TECHNOLOGY WILL BE TOTALLY INTEGRATED THROUGHOUT THE MANCHESTER-SHORTSVILLE CENTRAL SCHOOL DISTRICT SO THAT ALL LEARNERS WILL BE PRODUCTIVE IN OUR RAPIDLY CHANGING SOCIETY.***

## ***Technology Guiding Beliefs***

The guiding beliefs are broad and far-reaching statements that guide our goals and determine the direction we are taking when it comes to technology in our district.

### **WE BELIEVE THAT:**

1. Becoming a successful citizen in our society is increasingly dependent upon technological awareness and literacy.
2. We must provide access to technology as a tool for all students, staff, and community in order to encourage problem solving, exploration and learning.
3. Technology should be an integrated natural aspect of the curriculum and school environment. (Aligned with State Standards)
4. Technology, in all of its forms, should be utilized as tools by students and staff to enhance the learning process and to expand services to students.
5. On-going support and training for staff and students are necessary components for effective technology use.
6. With the community's support and involvement, technological resources will be utilized in a partnership between school and community.
7. Recognizing the rapidly changing nature of technology, our district plan should be reviewed regularly to ensure alignment with commencement outcomes.

# II. Information Technology Assessment

## A. Current Inventory of Equipment and Services

### 1. Computers

#### Desktops

• HP xw4300	10
• HP dc5000	104
• HP dc5100	70
• HP dc5800	21
• HP dc7800	103

#### Laptops (includes 6 wireless carts and staff laptops)

• Compaq nc8000	69
• Lenovo R61i	10
• Lenovo R61	166
• Lenovo X60 tablet	1
• Lenovo X61 tablet	2

### 2. Telecommunications

Cell Phones

VOIP Voice Mail

VOIP Homework Hotline

School World Webpages

### 3. Internet Access and Services (see Appendix A for a complete list of network hardware)

Groupwise Email

Infinite Campus (Student Information System, eGradebooks, parent communication)

IEPDirect (Special Education Student Information System)

RTIm Direct (AIS Student Information System)  
 Nutrikids (Food Service Management System)  
 WiFi  
 High Speed Internet Access  
 School Messenger Emergency Notification System  
 Content Filtering Software (BESS/Lakenet)

**4. Other Technologies (see Appendix B for a complete list of software)**

Eighteen (18) SMART Board Interactive Whiteboards	Two (2) Poster Printers (Plotters)
Two (2) SMART Sympodiums	RAITN Distance Learning Lab
SMART Senteo Class Sets	Two (2) Computer Labs
Document Cameras	CAD Lab
Wireless Audio	SysAid Helpdesk
SMART Airliner Wireless Slates	DVD Players
Projectors	Digital Video Cameras
Laser Printers	Digital Still Cameras
DeskJet Printers	Overhead Projectors
Fax Machines	Document Scanners
Networked Security Cameras	Windows Application Servers
TV and Cable in the Classroom	Tech Server
OPAC/Mandarin (Library Management System)	Network Accounts for Students and Staff
VPN (Home/School Connectivity)	Microsoft XP OS
Two (2) Shared Drives	Four (4) Networked High Speed Document Copiers
CPS	PDA's

**B. Current Program Status**

**1. Curriculum Integration**

<b>UPK</b>	
<b>Elementary</b>	<ul style="list-style-type: none"> <li>• Edmark series of software – basic math, reading, etc.</li> <li>• Reader Rabbit series - phonics, phonemic awareness and beginning reading skills.</li> <li>• SMART Board – Interactive skills practice</li> <li>• Personal webpages</li> <li>• Audacity</li> <li>• MS Office - presentation and word processing</li> </ul>

	<ul style="list-style-type: none"> <li>• Inspiration - graphic organization and mind mapping</li> </ul>	
<b>6<sup>th</sup> Grade</b>	<ul style="list-style-type: none"> <li>• Power Media Plus - videos to support Social Studies &amp; English</li> <li>• SMART Board - interactive concept practice</li> <li>• Laptops &amp; desktops - word processing (MS Word), Internet, publishing (MS Publisher), audio books (speakers), attendance, email parents</li> <li>• Digital camera - for student writing</li> <li>• Document camera - to share limited resources</li> <li>• Projector - demonstration, streaming videos</li> <li>• Teacher Web page - links, news, web quests, book order, homework calendar</li> <li>• Scholastic Reading Inventory software - testing to determine lexiles for each student for selecting on-level books for independent reading practice</li> <li>• Scholastic Reading Counts software quizzes - a quick way to provide students with feedback about their successful understanding/completion of the independent reading</li> <li>• Web Application - Scholastic Book Wizard</li> </ul>	
<b>7<sup>th</sup> Grade</b>	<ul style="list-style-type: none"> <li>• SMART Board and Notebook software - Interactive graphing with</li> <li>• Study Island web application - remediation</li> <li>• Exam Gen assessment software</li> <li>• Online textbook</li> </ul>	
<b>8<sup>th</sup> Grade</b>	<b>Math</b>	<ul style="list-style-type: none"> <li>• SMART Notebook and Board - Interactive instruction and graphing</li> <li>• Study Island web application - remediation</li> <li>• Graphing calculators</li> <li>• Exam Gen assessment software</li> </ul>
	<b>ELA</b>	<ul style="list-style-type: none"> <li>• Read 180 - interactive, leveled remedial reading software</li> <li>• Scholastic Reading Inventory software - testing to determine lexiles for each student for selecting on-level books for independent reading practice</li> <li>• Scholastic Reading Counts software quizzes - a quick way to provide students with feedback about their successful understanding/completion of the independent reading</li> <li>• Subscription Databases - EBSCO and International Wildlife (Marshall Cavendish)</li> <li>• Laptop Cart - for revising/editing/publishing student documents;</li> <li>• Web Applications - Scholastic's Book Wizard, Freerice.com, Easybib.com</li> </ul>
<b>Secondary Math</b>	<ul style="list-style-type: none"> <li>• SMART Symposium and SMART Notebook - interactive instruction</li> <li>• Geometer's Sketchpad - dynamic concept presentation</li> <li>• T1 Emulator - graphing presentation</li> <li>• Internet - research</li> <li>• MS Office - presentation and graphing</li> <li>• Derive - Computer Algebraic System for calculus lab</li> </ul>	

<b>Secondary Science</b>	<ul style="list-style-type: none"> <li>• SMART Board - interactive instruction</li> </ul>
<b>Secondary ELA</b>	<b>9<sup>th</sup></b> <ul style="list-style-type: none"> <li>• SMART Board - interactive instruction</li> <li>• MS Office - Word processing, page layout, presentation</li> <li>• Reading Counts - student independent reading assessment</li> <li>• School World website</li> <li>• Inspiration - graphic organization</li> <li>• Web App - Turnitin.com</li> </ul>
	<b>10<sup>th</sup></b> <ul style="list-style-type: none"> <li>• MS Office - Word processing, page layout, presentation</li> <li>• Internet - research</li> <li>• Electronic Periodical Databases - research</li> </ul>
	<b>11<sup>th</sup></b> <ul style="list-style-type: none"> <li>• SMART Board - interactive instruction</li> <li>• MS Office - Word processing, page layout, hyperlinking, presentation</li> <li>• MS Moviemaker - presentation</li> <li>• EasyBib - Citation</li> <li>• Electronic Periodical Database</li> <li>• Personal website</li> </ul>
	<b>12<sup>th</sup></b> <ul style="list-style-type: none"> <li>• MS Office - publishing and presenting</li> <li>• Internet - research</li> <li>• Web App - Easy bib</li> </ul>
<b>Secondary Social Studies</b>	<ul style="list-style-type: none"> <li>• SMART Board - interactive instruction</li> <li>• Laptops - research, webquests</li> <li>• PowermediaPlus - discovery education</li> <li>• Internet - research and current events</li> </ul>
<b>Music</b>	<ul style="list-style-type: none"> <li>• Midi technology for composition</li> <li>• Band-in-a-box</li> <li>• Music Ace 7</li> <li>• Cakewalk Sonar</li> <li>• Digital lighting</li> <li>• Professional sound mixers, wireless microphones, and wired mics</li> </ul>
<b>Art</b>	<ul style="list-style-type: none"> <li>• SMART Board - interactive instruction on history, design, and as drawing tool</li> <li>• Adobe Design Suite - Photo editing and graphic design</li> <li>• Digital cameras - photography</li> <li>• Internet - image reference source</li> <li>• Flatbed scanners</li> <li>• Projectors</li> </ul>
<b>Technology</b>	<ul style="list-style-type: none"> <li>• Pinnacle Media Editing software</li> <li>• Solidworks CAD software</li> </ul>
<b>Business</b>	<ul style="list-style-type: none"> <li>• MS Office 2007 - word processing, publishing, and presenting</li> </ul>

<b>Family and Consumer Science</b>	<ul style="list-style-type: none"> <li>• MS Office 2007 - word processing, publishing, and presenting</li> <li>• Web applications - interior design</li> </ul>
<b>Special Education</b>	<ul style="list-style-type: none"> <li>• MS Office - word processing, publishing, and presenting</li> <li>• Nuance Dragon Naturally Speaking</li> <li>• Adobe Reader screen reader</li> <li>• Thunder Screen reader</li> </ul>
<b>Library Science</b>	<ul style="list-style-type: none"> <li>• SMART Board - interactive instruction</li> <li>• Mandarin/ OPAC - research, book selection</li> </ul>
<b>Food Service</b>	<ul style="list-style-type: none"> <li>• Nutrikids - Cafeteria management system</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Networked cameras throughout district</li> </ul>

## 2. Staffing and Training

Because of the high demand for staff development involving technology, development opportunities have been made more diverse and accessible. While many teachers attend workshops sponsored by the TRC or Edutech, most development is planned by the District's part-time Technology Coordinator. In-house technology training is done in several ways including:

- One-on-one training initiated by teachers, departments, or grade levels
- Small group workshops targeted at areas of interest based on electronic needs assessment and offered on a voluntary basis
- Large group workshops on conference days and when school is not in session
- Electronically via digital movies

These development opportunities are offered at various times throughout the year and each opportunity is offered at different times of the day with the intent of accommodating different differentiating the learning experience to accommodate for teaching schedules in different buildings. Each session is differentiated and takes into account the different abilities and skills teachers may have. In addition, each session takes into account the various needs of adult learners and provides teachers with the opportunities for hands-on practice and authentic product design. Training opportunities within the last year have included the following:

- Advanced PowerPoint
- Introduction to SMART Boards
- MS Office
- Parent Communication with Infinite Campus
- Podcasts
- Review and Assessment with Technology
- School World Web design
- SMART Notebook 10
- Using Group Decision Making Hardware (CPS & Senteo)
- Web 2.0
- Webquests

- Windows MovieMaker in the Classroom

### **3. Technology Services Staff**

- a) Part-time Technology Coordinator (training and support)
- b) Full-time Elementary School Computing Aide (support)
- c) Full-time Technician (support)
- d) BOCES (training & support)
- e) Vendor provided training and materials

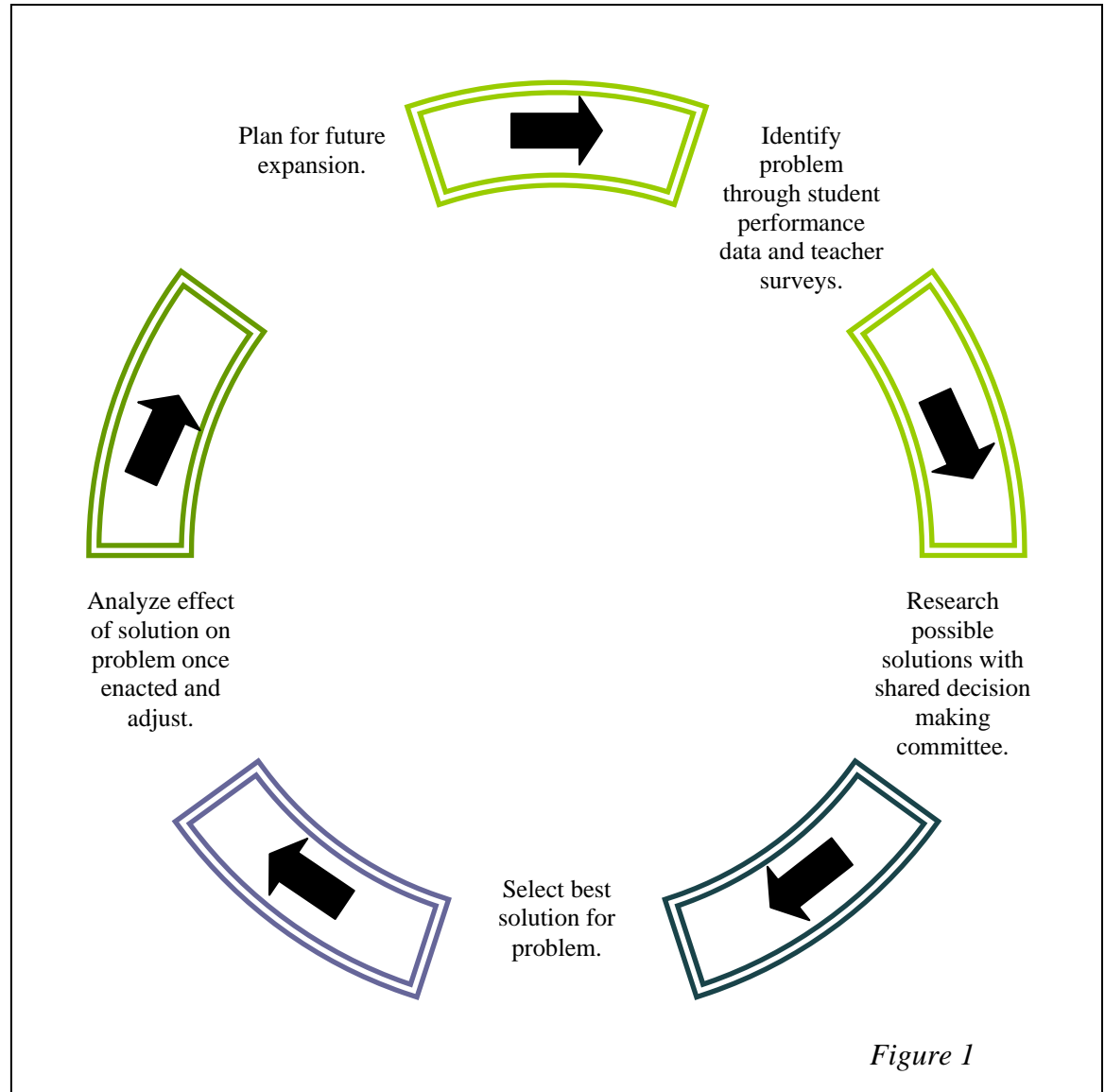
## D. Needs Assessment

### 1. Recent developments and current status

As of the close of the 2008-2009 school year, many work stations in the school have been upgraded or replaced. In addition, as the result of installations and purchases that have taken place during the 2008-2009 school year, traveling SMART Boards and laptop carts have become readily available at all levels. Requests for additional hardware has slowed greatly in recent months. It seems as if the next logical step is to begin integrating this technology into classrooms in order to eliminate obvious “seams.” It also seems logical to focus not just on the purchase of large hardware, but also on the purchase of interactive applications and devices that might lend greater utility to our current assets. Currently, we are beginning this process by installing three SMART Boards in each building. We hope that these “SMART classrooms” eventually expand until all classrooms have embedded interactive technology.

### 2. Planning Process

Our planning process to determine needs is as follows as defined in Figure 1.



# III. Technology Objectives and Plans

Our standards for technology integration align with National Educational Technology Standards (NETS). They are as follows:

- Standard 1: *Students and staff will demonstrate creative thinking by developing innovative projects using technology*
- Standard 2: *Students and staff will use digital media to work collaboratively.*
- Standard 3: *Students and staff will use critical thinking skills to research, solve problems, and make informed decisions.*
- Standard 4: *Students and staff will demonstrate an understanding of the safe and ethical usage of technology.*
- Standard 5: *Students and staff will demonstrate an understanding of technology concepts, systems, and operations.*

In order to live up to our standards, we must first meet several key objectives. They are as follows:

<b>Standard</b> <i>(Based on National Educational Technology Standards)</i>	<b>Objective</b>	<b>Strategies</b>
<b>Standard 1</b> <i>Students and staff will demonstrate creative thinking by developing innovative projects using technology</i>	<ul style="list-style-type: none"> <li>• By 2012, 80% of classrooms will feature either SMART technology or digital projection equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Classrooms will be updated via lottery system. All teachers who can demonstrate a desire and an ability to integrate these features into classrooms will be eligible for the lottery.</li> <li>• Various levels of in-house workshops will be offered on presentation software (PowerPoint, Notebook) and hardware (Symposium, Senteo, SMART Board, Airliner, projectors, etc) by Technology Coordinator, staff turn-key trainers, and outside vendors contracted through BOCES.</li> </ul>
<b>Standard 2</b> <i>Students and staff will use digital media to work collaboratively.</i>	<ul style="list-style-type: none"> <li>• By 2012, all faculty will use individual web sites for classroom instruction.</li> <li>• By 2012, 80% of secondary parents will utilize the Infinite Campus Parent Portal.</li> </ul>	<ul style="list-style-type: none"> <li>• Various levels of in-house workshops will be offered on web design elements (podcasting, blogging, widgets, hyperlinking, etc) by Technology Coordinator.</li> <li>• Interested faculty will be given release time to maintain/setup web presence.</li> </ul>

		<ul style="list-style-type: none"> <li>• Parent Portal registration will be simplified.</li> <li>• Parent Portal will be advertised on report cards.</li> </ul>
<p><b>Standard 3</b> <i>Students and staff will use critical thinking skills to research, solve problems, and make informed decisions.</i></p>	<ul style="list-style-type: none"> <li>• By 2012, interactive hardware will be fully integrated into 80% of classrooms.</li> <li>• By 2012, all special area classes will integrate technology into their curriculum</li> </ul>	<ul style="list-style-type: none"> <li>• Installation of SMART boards and staff development.</li> <li>• Purchase of additional SMART tools that will increase interactivity.</li> <li>• Research and purchase of software that may be used with SMART technology.</li> <li>• Installation of wireless graphics editing lab in art room.</li> <li>• Purchase, installation, and training of music composition and editing software.</li> <li>• Purchase of video gaming systems that promote physical activity.</li> <li>• Curriculum development time for special area teachers will be provided on conference days.</li> </ul>
<p><b>Standard 4</b> <i>Students and staff will demonstrate an understanding of the safe and ethical usage of technology.</i></p>	<ul style="list-style-type: none"> <li>• By 2012, students at 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade will be explicitly instructed and assessed on ethical and responsible principles related to technology in core area classes including.</li> </ul>	<ul style="list-style-type: none"> <li>• Yearly presentations on cyberbullying and responsible online behavior sponsored by Ontario County Sheriff Department cyber crime task force.</li> <li>• Integration of ethical use of information into ELA research units at all grade levels.</li> </ul>
<p><b>Standard 5</b> <i>Students and staff will demonstrate an understanding of technology concepts, systems, and operations.</i></p>	<ul style="list-style-type: none"> <li>• By 2012, 100% of students at 5<sup>th</sup>, 8<sup>th</sup> and 11<sup>th</sup> grade will demonstrate proficiency in our standards by taking and passing leveled proficiency tests.</li> </ul>	<ul style="list-style-type: none"> <li>• Committee will work together to identify grade level appropriate computer skills. These skills will be spiraled into various subjects where appropriate.</li> </ul>

# IV. Internet Safety

Manchester-Shortsville Central School is providing students and faculty with access to the Internet. The Internet is a rich source of information and is fundamental to preparation of citizens and future employees. Access to the Internet enables students to explore thousands of libraries, databases, web sites, and other resources. Students will be provided with guidelines and lists of resources particularly suited to curriculum, and learning objectives. Students will conduct their Internet work in a supervised environment. However, access to the Internet also has the potential to be abused and made inappropriate for a learning community. Just as in the greater world, it is possible to come across information that may be offensive, morally objectionable, or pornographic. Resources are filtered in an attempt to diminish this possibility. Users should not find inappropriate material unless they look for it. Just as students are responsible for their behavior away from the computer, they are responsible for their behavior while working with one.

Use of the Internet is a privilege, not a right, and the purpose of this policy is to define acceptable and unacceptable use of the Internet at the Manchester-Shortsville Central School District (MSCSD) learning community. Unacceptable use, as defined by this policy may result in suspension or revocation of network access and privileges and/or computer access. Violations may also result in school suspension or expulsion and/or legal action and prosecution by authorities.

## ***Acceptable Use***

Acceptable use of the MSCSD Internet access is any use that is consistent with the educational objectives of the MSCSD. The Internet offers a wealth of information, the opportunity for the exchange of ideas and information, and the possibility of collaborative work. All communications should be polite with appropriate language use.

## **Unacceptable Use (Including but not limited to)**

Illegal Activity. It is unacceptable use to in any way promote or engage in any activities which are deemed criminal under federal, state, or local laws, including but not limited to copyright laws.

Hacking and Other Vandalism. It is unacceptable use to maliciously attempt to harm or destroy the hardware or data of another user, whether at MSCSD or any other site connected to the Internet. This includes, but is not limited to, the creation or spreading of computer viruses. It is also unacceptable use to attempt to use another's account, including Computer System Administrators' accounts, without written permission of the other person.

Offensive and Obscene Materials. It is unacceptable use to send or receive any data that is mean, threatening, suggestive, obscene, belligerent, or violent according to MSCSD standards and purposes.

Private Commercial Gain. It is unacceptable use to engage computer resources in activity for private commercial gain or fraud.

## **Abuses of Telecommunications**

- Using outside, private services (bulletin boards, blogs, commercial service, games, chat-rooms, streaming media etc.) that have not been approved by your teacher or principal for in-school use.
- Transferring any objectionable or prohibited material, as defined by current school and community standards.
- “Flaming” or showing disrespect for any other person, including posting anonymous messages.
- Using equipment to violate any laws, including copyright laws.
- Using telecommunications to plagiarize and otherwise use other people’s work without their permission.
- Prying into other people’s work.
- Disrupting or “downing” a system.
- Stealing from others.
- Degrading or disrupting equipment or system performance.
- Downloading and storing large files or intentionally wasting limited resources.

## **No Warranties**

MSCSD will work with its service providers (Lakenet/Edutech/Bess) to make Internet service reliable and secure. MSCSD will also work with every user to promote technical skills and acceptable use. MSCSD makes no warranties of any kind, whether expressed or implied, for the service it is providing. MSCSD will not be responsible for any damages you suffer. This includes loss of data from delays, non-deliveries, or service interruption from whatever cause.

## **Safety and Precautions Information for Students**

- Do not use the Internet unless a teacher is supervising.
- Do not reveal your personal address or phone number or those of others.
- Notify your teacher if you come across information that makes you feel uncomfortable.
- Users must alert the computer system administrators of questionable activities and communications, both incoming and outgoing.

## **Supervision and Monitoring**

Use of the internet will be closely monitored both by school personnel and remotely by Vision software.

## **Education**

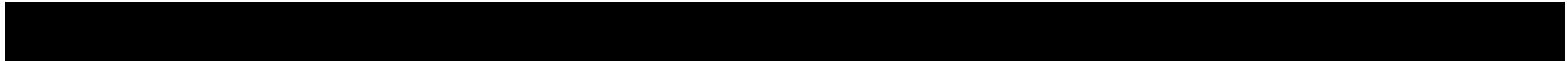
Safe, proper, and effective use of the internet is a curricular focus at MSCSD. In addition to explicitly instructing on this topic, outside educators and law enforcement officials will be utilized to help students learn to avoid legal and ethical pitfalls.

## **Adoption**

This internet safety plan was adopted by the Manchester-Shortsville CSD Board of Education, at a public meeting, following normal public notice on August 5, 2009.

# V. Technology Budget

Technology Budget	09-10	10-11	11-12
<b>Staffing</b>			
.5 FTE Computer Coordinator	\$21,366	\$22,170	\$23,057
1.0 FTE Network Technician	\$54,782	\$56,425	\$58,117
<b>Network Support and Training via BOCES</b>			
Administrative	\$80,000	\$80,000	\$80,000
Instructional	\$100,000	\$100,000	\$100,000
Telecommunications	\$58,000	\$58,000	\$58,000
<b>Purchases of Hardware</b>			
Hardware			
State Aid	\$12,000	\$12,000	\$12,000
Budgetary	\$100,000	\$150,000	\$100,000
Software			
State Aid	\$5,000	\$5,000	\$5,000
Budgetary	\$12,000	\$12,000	\$12,000
<b>Supplies and Materials</b>			
Budgetary	\$10,000	\$10,000	\$10,000



# VI. Tech Plan Review

This plan is a living document designed to guide the use, acquisition, and purpose of educational technology in MSCSD. It can only provide the direction if it is reviewed often.

Strategies:

1. District technology Committee meets every three (3) years
2. Technology Coordinator reviews on a regular basis to monitor progress of goals and make mid-course corrections in response to new developments and opportunities.
3. The plan is formally updated yearly by the Technology Coordinator to document changes that occur between review of the District Technology Committee with input from building level committees.

# Appendices

## *Appendix A: Network Hardware*

### **Novell Servers - 9**

RJ1  
RJ3  
RJTech  
Groupwise1  
RJ-GW2

### **Windows Servers - 4**

RJ2  
RJ Read180  
IEP Viewer  
Infinite Campus

### **3Com VCX Phone System**

- 1 VCXManagement switch
- 2 VCX Central Management switches

### **Network Core Device**

3Com 8810 Gigabit Ethernet

### **Switches**

Main Closet	5	3Com 4500 GB - 48 port
	2	3Com Ethernet Power supply
TC1	4	3Com 4500 GB - 48 port
		3Com Ethernet Power supply
TC2	2	3Com 4500 GB - 48 port
	2	3Com Ethernet Power supply
TC3	3	3Com 4500 GB - 48 port
	2	3Com Ethernet Power supply
TC4	6	3Com 4500 GB - 48 port
	1	3Com Ethernet Power supply

TC5                    4            3Com 4500 GB - 48 port  
                          1            3Com Ethernet Power supply

TC6                                    4 3Com 4500 GB- 48 port  
    3 3Com Ethernet Power supply

## ***Appendix B-Software***

<u>Software</u>	<u>Grade Level</u>	<u>Location</u>
<b><u>Elementary</u></b>		
5 A Day Adventure	Kindergarten only	Machine
A To Zap	Kindergarten only	Machine
Accelerated Reader	K-5	Machine
Alphabet Express	Kindergarten only	Machine
Bailey's Book House	K-2	Network
B. Fizz & Martina Math Adventures	3rd-5th	Network
Discover New York	3rd-5th	Network
Discover Time	2nd - 5th	Network
Fractions	3rd - 5th	Network
Island Adventure	K-2	Network
Jungleway	1st - 3rd	Network
Kidway	K-2	Network
Math Blaster's	K-2	Network
Math for the Real World	3rd - 5th	Network
Mighty Math	3rd only	Machine
Millie's Math House	K-2	Network
Money Challenge	1st - 4th	Network
Reader Rabbit 1	K-2	Network
Reader Rabbit 2	1st - 3rd	Network
Reader Rabbit 3	2nd - 4th	Network
Reader Rabbit Journey	K-2	Network
Reader Rabbit Learn to Read	K-2	Network
Sammy's Science House	K-3	Network
Sound it Out Land	K-2	Network
Speedway	2nd - 4th	Network
Thinkin Thing Collection 2	K-5	Network
Thinkin Thing Collection 3	K-5	Network

Time	K-5	Network
Treasure Cove Math	1st - 5th	Network
Treasure Mountain	1st - 5th	Network
Treasure Storm Math	1st - 5th	Network
Trudy's	K-3	Network
Type 4 Fun	K-2	Network
Type to Learn Jr.	1st - 3rd	Network
Waterway	4th - 6th	Network
Word Munchers Deluxe	3rd - 5th	Network
Starway	5th - 7th	Network

**District**

Electronic Clip Art	K-12	Shared Drive
Inspiration	K-12	Network
Print Shop	K-12	Computer Lab only

**MS/HS**

Adobe Photoshop 7	9th -1 2th	Art Room Only
CPS Software (Remote Pads)	7th -1 2th	
Dragon Naturally Speaking Preferred	3 licenses	1 in MS Need setup on teacher machine
ExamGen (Math, Science)		
Geometer's Sketchpad	9th - 12th	Network
Inspiration 6		Network
National Geographic		
Omni Form/Filler		Machine
Pinnacle	10 users	Room 82
Reader's Choice 6-7-8	9th - 12th	Network
Reading Counts	5th-9th	Network
SkiQuations	8th - 10th	Network
Speedway	K-5th	Network
Starway	5th - 7th	Network

Timeliner 5  
Waterway

K-12  
4th - 6th

Network  
Network

## Appendix C-Infrastructure Data

3 com network

7 wiring closets

3 com wireless access points serving ES, MS, HS, & DO

9 servers

546 Workstations:

### DESKTOP COMPUTERS

FEATURE	CRITERIA
<b>Processor (PC)</b>	An IntelCore based processor running at 2.20 GHz or greater that can networked desktop computer. Other equivalent processors can be evaluated and considered.
<b>Cache</b>	Performance will be enhanced through the use of 512kb or greater of Level 2 cache. Other configuration solutions can be evaluated and considered for equivalent performance.
<b>Fixed Disk</b>	The capability to store an appropriate number of applications as well as documents on the network is improved through the use of a fixed disk of 80GB or greater.
<b>Fixed Disk Controller</b>	Performance efficiency will be improved through the use of an enhanced IDE or SATA drives.
<b>RAM Size</b>	The ability to run sophisticated applications and to maintain an array of open programs is enhanced by the use of 1 GB or more of RAM. If the computer is to be used with multi-media applications or Project Lead the Way Program , 3-4 GB of RAM or more should be implemented as needed.
<b>Bus</b>	Performance efficiency on the computer will be enhanced by the use of a PCI or PCI-E bus.
<b>Display</b>	An adequate viewing area is provided by a 17 inch Multimedia monitor. Flat Panel monitors should gradually become the district norm.
<b>Resolution</b>	Picture and text clarity can be improved by higher resolution and bit depth. Monitors capable of high resolution and bit depth should be able to adjust to lower resolutions and bit depth. An adequate resolution may be achieved with 800 X 600 pixels with 32 bit colors, but 1024 X 768 pixels with 32 bit colors should be considered. If the computer is to be used with graphical or multi-media applications 1280 x 1024 pixels may prove more satisfactory.
<b>Network Interface</b>	A network interface adapter is required. The recommendation is to purchase 10/100/1000 autosensing Ethernet as provided by either an interface card built in NIC on the motherboard.

**DESKTOP COMPUTERS (Network Ready) – continued**

<b>Miscellaneous Ports</b>	A minimum of one serial port, or a minimum of 6 USB ports is required.
<b>CD/CD-RW/DVD Drive</b>	A 24X or higher DVD/CD-RW Drive should provide satisfactory performance. Higher speed drives can be evaluated and considered.
<b>Sound Adapter</b>	If this is a desired option, 32 bit stereo will improve performance especially with multi-media applications. Some software may require SoundBlaster compatibility. Sound in, out, and microphone ports recommended
<b>Miscellaneous</b>	Plug and Play capability is a requirement.

CISC = complex instruction set computer

RISC = reduced instruction set computer

**PORTABLE COMPUTERS (Network Ready)**

<b>FEATURE</b>	<b>CRITERIA</b>
<b>Processor</b>	A CPU running at 2.6 GHz or greater can be used in either a standalone or networked environment.
<b>Fixed Disk</b>	The capability to store an appropriate number of applications as well as required data and documents is improved through the use of a fixed disk of 80GB or greater.
<b>Fixed Disk Controller</b>	Performance efficiency will be improved through the use of enhanced IDE or SATA drives.
<b>RAM Size</b>	The ability to run sophisticated applications and to maintain an array of open programs is enhanced by the use of 64 512 MB or more of RAM. More RAM can be evaluated and considered for special uses and needs, such as for, the Project Lead the Way program.
<b>CD/DVD/CD-RW Drive</b>	A Forty-eight speed CD ROM drive should provide satisfactory performance. A 5 16X speed DVD Drive should provide satisfactory performance. A 24X or higher CD-RW Drive should provide satisfactory performance. Higher speed drives can be evaluated and considered.
<b>PCMCIA</b>	The computer must contain one Type III slot in order to accommodate a PCMCIA card. One Type III slot will serve as two Type I or II slots.
<b>Display</b>	A minimum of 15 inch active matrix display is acceptable
<b>Modem</b>	A capability of 56 KBPS will provide for communications at satisfactory speed.
<b>External Connections</b>	An external port, which is SVGA or equivalent, will allow a connection to a quality desktop display. An appropriate external connection port will be needed for a connection to a docking station or presentation display device.
<b>Carry Case</b>	A carry case should be available and may be included in the price of the base system.
<b>Docking Station</b>	If docking station capability is needed, it should be explicitly specified. The capability for “hot swapping,”(i.e. docking/undocking while the portable computer is powered on) should be specified if desired. The ability to secure the portable computer while unattended through a key lockable docking station should be specified if desired.
<b>Removable</b>	The capability to use removable fixed disks may provide a solution for multiple users who each need their own disk but who

<b>Fixed Disk</b>	share the use of the same portable computer.
<b>Extra Battery and Charger</b>	If a portable computer is to be used for prolonged periods of time when it does not have access to a permanent power source, the acquisition of extra batteries and a charger should be considered.
<b>Network Interface</b>	A network interface adapter is required. The recommendation is to purchase 10/100/1000 autosensing Ethernet as provided by a built in NIC on the motherboard and an 802.11 b/g Internal WI FI or Better.

#### Network servers

<b>FEATURE</b>	<b>CRITERIA</b>
<b>Processor</b>	A CPU running at 2.4 GHz or greater can provide a good low end server. Processors that support SMP should be considered.
<b>Fixed Disk</b>	The capability to store an appropriate number of applications as well as required data and documents is improved through the use of a fixed disk capacity of 72 GB or more configured with RAID 0,1, or 5 technology with “hot swappable” drives.
<b>Fixed Disk Controller</b>	Performance efficiency will be improved through the use of a Fast/Wide 32-bit SCSI-II controller capable of RAID with hot swappable drives.
<b>RAM Size</b>	The ability to respond satisfactorily to the requirements of a multi-user network environment is dependent on the initial use of 4GB.
<b>Expansion Bus</b>	A configuration with at least 4 PCI, or equivalent bus master slots will allow additions to the current chassis and should provide a sufficient upgrade/growth path.
<b>CPU to RAM Bus</b>	A 800 MHz Front-side Bus or more should provide satisfactory throughput.
<b>Power Supply</b>	Two or more redundant power supplies should be sufficient. All servers must have sufficient power for a fully populated box at maximum configuration.
<b>Display</b>	A 15-inch Rack Mountable LCD monitor provides an adequate viewing area
<b>Resolution</b>	Picture and text clarity can be improved by higher resolution and bit depth. Monitors capable of high resolution and bit depth should be able to adjust to lower resolutions and bit depth. An adequate resolution may be achieved with 1024 x 768 pixels with 32 bit colors.
<b>CD Drive</b>	An internal twenty-four speed or higher drive should provide satisfactory performance. Higher speed drives can be evaluated and considered.
<b>Warranty</b>	A 3-year on-site warranty with 24-hour problem resolution often provides sufficient recovery capability at a reasonable price. However, the need for a higher degree of response should be evaluated and considered if the business function of the network is critical.

### **Appendix D-Upgrades and Maintenance Process**

<b>STRATEGY/ STEPS</b>	<b>PERSON RESPONSIBLE</b>	<b>TIMELINE</b>	<b>TECHNOLOGY</b>
Research products & services available	Grade Level & Department Representatives, Technology Coordinator, Director of Instruction, Superintendent, Community, Users	1-6 months	Investigations and discussion via email & Internet
Recommend products & services, keeping in mind compatibility & standardization district-wide & regionally and cost effectiveness	Technology Coordinator, Director of Instruction, Superintendent, District Technology Committee	1-6 months	Workstation replacement – within 6 years
Approval of above recommendations	Administrators & Board of Education	1-6 months	-
Training to implement above	Technology Coordinator, BOCES, Vendors	1 year	Needs Assessment
Evaluate Outcomes	Technology Committee above - initiates process	Within 3 years	Surveys, Anecdotal reports, logs

# E-Rate Checklist

## CIPA Compliance Checklist

Schools and libraries that plan on receiving E-rate discounts on Internet access and/or internal connection services after July 1, 2002, need to be in compliance with the Children's Internet Protection Act ("CIPA"). CIPA compliance means that schools and libraries are filtering their Internet services and have implemented formal Internet Safety Policies (also frequently known as Acceptable Use Policies).

The Federal Communications Commission ("FCC"), charged with administering CIPA for E-rate purposes, has established only the broadest guidelines for interpreting the filtering and policy requirements of the Act. The following checklist is designed as a simple, but unofficial, guide for determining whether a school or library meets the CIPA compliance guidelines.

### Internet Filtering:

**Basic Requirement:** CIPA requires the implementation of a "technology protection measure" – generally referred to as an Internet filter – to block access to visual depictions deemed "obscene," "child pornography," or "harmful to minors." Filtering is required for all Internet-enabled computers whether used by minors or adults. For E-rate purposes, filtering for adult Internet usage can be disabled for "bona fide research or other lawful purpose."

Filtering Provisions	Yes (Y) or No (N)	Comments – Including filtering product name, if known
Filtering is incorporated with the service provided by the Internet Service Provider.	Yes	Bess/Lakenet
Filtering is provided locally for all Internet-enabled computers on a networked basis.	Yes	Bess/Lakenet
Filtering is provided individually on each Internet-enabled computer.	Yes	Bess/Lakenet

CIPA compliance requires a "Y" in at least one of the Filtering Provision boxes listed above.

### Internet Safety Policy:

**Basic Requirement:** CIPA requires the public adoption and enforcement of an "Internet Safety Policy" covering the filtering discussed above. For minors, the policy must also address monitoring of online activities, the safety and security of all forms of direct electronic communications, unauthorized online access, and unauthorized disclosure of personal identification information.

CIPA Checklist  
Page 2

Policy Provisions	Yes (Y) or No (N)	Comments
Filtering will be provided for all Internet-enabled computers used by students, patrons, and staff.	Yes	Bess/LakeNet
Filtering will be disabled only for bona fide research or other lawful purposes.	Yes	Bess/LakeNet
Online activities of minors will be monitored for appropriate use.	Yes	Vision
Safe and secure use by minors of direct electronic communications (including e-mail, chat rooms, and instant messaging) will be assured.	Yes	Bess/LakeNet
Unauthorized online access, including "hacking" and other unlawful activities, is prohibited.	Yes	Bess/LakeNet
Unauthorized disclosure, use, and dissemination of personal identification information regarding minors is prohibited.	Yes	Bess/LakeNet
The Policy was adopted with reasonable public notice and after at least one public meeting or hearing.		Meeting Type: _____ Meeting Date: _____

CIPA compliance requires a "Y" in all of the Policy Provision boxes listed above.

Additional information on Internet Safety Policy requirements and provisions can be found in the CIPA policy primer available on the E-Rate Central Web site at [http://e-ratecentral.com/help/cipa\\_policy\\_primer.pdf](http://e-ratecentral.com/help/cipa_policy_primer.pdf).

Checklist Completed By:

Printed Name: James Niedermeier

Title: Technology Coordinator

Signature: 

Date: 6/16/09

Checklist Certified By:

Printed Name: Robert Leiby

Title: Superintendent

Signature: \_\_\_\_\_

Date: \_\_\_\_\_