

# Technology Plan Cover Page

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<b>Plan Start Date:</b> July 1, 2011		<b>Plan End Date:</b> June 30, 2014	
<b>Tech Plan URL:</b> <a href="http://www.hartlandschools.us/technology.htm">http://www.hartlandschools.us/technology.htm</a>			
<b>ISD:</b> Livingston Educational Service Agency (ISD District Code: 47000)			

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# Introductory Material

## Plan History:

Hartland Schools began implementing technology plans to guide the procurement and use of educational technology in 1996 which coincided with the passage of a Bond involving the procurement of a significant amount of technology. Since that time, Hartland has passed three additional Bonds, the most recent of which was approved by voters in February of 2010. The passage of these various Bonds has been instrumental in the implementation of Hartland's Technology Plans and the plans themselves have always been used as the guide for the development of the scope of work for the technology portion of Hartland Bonds.

## Mission Statement:

The Hartland Consolidated Schools, in cooperation with the community, will provide a positive environment for the development of productive and caring individuals of all ages. We are teaching for learning for life.

## Vision Statement:

Hartland Consolidated Schools: A community of learners shaping successful tomorrows.

## District Profile:

The Hartland Consolidated School District is located in Hartland, Michigan, which is both a suburban and rural community. With less than a one-hour drive to any one of four larger cities (Flint, Detroit, Lansing, and Ann Arbor), Hartland has the tranquility of a rural town, but the convenience of a major city suburb. The Hartland Schools is a Class A district with a population of approximately 5,601 students, 290 teachers, 20 Administrators, 5 Technology Personnel and a total of 500 employees. The community is comprised of business people, farmers, professionals, service employees, children, parents, retirees, and clergy who are caring people dedicated to the School District in its desire to offer Hartland students a safe and quality education. All Hartland students are enrolled in the National School Lunch Program with 16.0% enrolled in the Free and Reduced Lunch Program (14.4% 2009-2010 school year, and 10.8% 2008-2009 school year).

Members of the District Technology Committee are listed on the next page. These members are selected based upon their role in the school system, leadership skills, and interest in enhancing student learning through the use of technology.

## School Buildings

- **Creekside Elementary School (K-4)**  
3480 East Street  
Hartland, MI 48353  
Population: 490  
Free and Reduced Lunch: 53/18
- **Lakes Elementary School (K-4)**  
687 Taylor road  
Brighton, MI 48114  
Population: 546  
Free and Reduced Lunch: 59/19
- **Round Elementary School (K-4)**  
11550 Hibner Road  
Hartland, MI 48353  
Population: 373  
Free and Reduced Lunch: 53/14
- **Village Elementary School (K-4)**  
10632 Hibner Road  
Hartland, MI 48353  
Population: 472  
Free and Reduced Lunch: 70/9
- **Hartland Farms Intermediate School (5-6)**  
581 Taylor Road  
Brighton, MI 48114  
Population: 899  
Free and Reduced Lunch: 125/40
- **Hartland Middle School at Ore Creek (7-8)**  
3250 North Hartland Road  
Hartland, MI 48353  
Population: 898  
Free and Reduced Lunch: 122/20
- **Hartland High School (9-12)**  
10635 Dunham Road  
Hartland, MI 48353  
Population: 1796  
Free and Reduced Lunch: 175/58
- **Hartland Legacy and Genesis (9-12)**  
9525 Highland Road  
Howell, MI 48843  
Population: 127  
Free and Reduced Lunch: 49/10

**Total: 706 Free and 188 Reduced**

**District Technology Committee Members  
2011-2014**

Name	Position
Michelle Hutchinson	Board Member and Parent
Laurie Mayes	Assistant Superintendent of Curriculum and Instruction
Scott Usher	Technology Director and Parent
Ethan Hawker	Teacher – High School
Matt Assenmacher	Teacher – High School
Cathy Peck	Teacher – Middle School
Michele Canaert	Media Specialist – Middle School/High School/Farms Int.
Rose Naughton	Teacher – Farms Intermediate School
Patti Roberts	Teacher – Farms Intermediate School
Matt Gutteridge	Teacher/ – Creekside Elementary
Pam Juliar	Teacher/ – Lakes Elementary School
Barb Benford	Teacher/Media Specialist – Round Elementary School
Erin Dennis	Teacher/Media Specialist – Village Elementary School
Lindsay Smither	Elementary Principal
Steve Livingway	Secondary Principal

# **Educational Technology Plan Summary**

## **Vision and Goals**

### **Background:**

In February of 2010, Hartland Consolidated Schools passed a 28 Million Dollar (5-year) Bond designated for facilities renovation and technology. Within this bond there was a roughly 7 million-dollar allocation for technology improvements. These improvements include, but are not limited to replacement of all primary computers in the district, district-wide wireless, building entry card-access security enhancements, extension of district fiber to the ISD, printer replacement, replacement of phone switch, and acquisition and implementation of interactive classroom technology in each of the district's classrooms.

The technology portion of the 2010 bond was designed to enhance teacher and student access to interactive technology in all classrooms throughout the district. All classrooms will be outfitted with some sort of interactive technology, most of which will be interactive whiteboards. An essential component to this implementation is our pilot group and the extensive training that is already under way.

### **Educational Technology Mission Statement:**

The Hartland Consolidated Schools, in cooperation with the community, will provide and promote the use of technology to enhance curriculum and prepare students for life-long learning.

### **Educational Technology Vision:**

Hartland Consolidated Schools vision is to create a community of technologically skilled individuals who are capable and motivated to meeting the increasing and diverse challenges of the future.

### **Goals of the Educational Technology Plan**

Our strategic plan is aligned with our district's School Improvement Plan and the goals for technology laid out within. The School Improvement Plan includes the provision of adequate hardware in all buildings, the development of this three year Educational Technology Plan, and the provision of on-going staff training in the use of technology to enhance student learning.

For our strategic plan to have valid educational meaning for the staff and students at Hartland, the Educational Technology Plan will:

1. Provide the ability for students and staff to use current interactive technology as a tool to enhance skills in all academic areas.
2. Prepare the Technology Curriculum to be refined and implemented into each grade level.
3. Adopt hardware, infrastructure, and software applications for the following purposes: education of students, management of student, staff, and facilities data and reports, facilitate communication, and provide networking and electronic communication capabilities.
4. Promote and encourage staff training opportunities in the use and integration of instructional technology.
5. Provide a means for the maintenance, support, upgrade and growth of district technology.
6. Provide a means for measurement and refinement during implementation.

# I. Curriculum

Goals: Provide the ability for students and staff to use current technology as a tool to enhance learning in all academic areas.

Allow for the Technology Curriculum to continue to be refined and implemented into each grade level.

## Technology Integration

In the 2010-2011 school year, our media and technology teachers began to refine a Hartland Technology Curriculum based off the NETS and METS. As core curricula are revamped over the next few years, the intent is to fully integrate the technology curriculum into content appropriate areas of the core curricula. In addition, the technology curriculum will continue to be revised as new technologies emerge and different ways to use technologies arise.

The district will maintain subscriptions to online curriculum resources which provide teachers at all grade and subject levels resources and opportunities for curriculum integration. These online subscriptions will include an encyclopedia, research databases, and video subscription to online video streaming resources. These types of services provide staff and students access to over 50,000 content-specific segments and over 6,000 full-length educational videos. This video content is correlated with state standards and provides a means by which users can search for videos by curriculum standard, keyword, subject area, or grade.

Staff have the ability to participate in training either in-person or by using a number of on-line tutorials prepared by various Hartland staff. These training resources will continue to evolve and grow. Training opportunities will be planned annually based upon need and the video collection will continue to be expanded.

Teachers will be asked to submit lessons where technology was used and a store of lessons will be housed on servers throughout the district. The technology committee will continue to monitor the submission of lessons as an indication of the level to which technology is being integrated in the classroom.

## Student Achievement

Through the course of previous Hartland Technology Plans, the technology committee developed Student Technology Benchmarks aligned with METS and NETS standards (see below). Over the course of this plan, the technology committee and the district's curriculum committee will continue to refine the benchmarks and turn focus toward integration into the core curricula and implementation. As a part of the refinement process, the Technology Committee will include grade appropriate Internet Safety components built into the curriculum at each grade level. Basic strategies and examples will be developed for implementation into the district's classrooms. At the elementary level, teachers have not had a defined curriculum and have therefore not had any consistent technology activities and exercises. As part of the curriculum, district teachers will have access to a bank of example lessons tied to curricular benchmarks. This will provide a solid technology curriculum upon which teachers can continue to build and share lessons.

In an effort to continue to improve student achievement across the curriculum, we will be evaluating using a number of methods including, but not limited to the MEAP and the 8<sup>th</sup> Grade Technology Literacy Test.

## Technology Delivery

It is the intent of Hartland Consolidated Schools to provide the technology necessary to meet curricular needs and improve academic achievement. Teachers and students have access to distant resources by way of the Internet using district computers located in computer labs, classrooms, and on mobile carts.

Hartland schools is investing in interactive classrooms technology (SMART Boards, Elmo Documents Cameras, Epson Data Projectors, SMART Slates, and SMART Learning Response Systems) to aide with

instruction throughout the district. Each classroom will be outfitted with an interactive white board or interactive podium, document camera, and data projector. A handful of classrooms are not designed to have an interactive white board in them so they will be outfitted with a portable slate device or wireless keyboard and mouse instead of an interactive white board so students and instructors can still manipulate the computer. There will be a handful of wireless slates available for checkout in each building and a handful of learning response systems available as well. Our goal is to provide opportunities to manipulate or interact from anywhere in the classroom.

It is the intent of Hartland Consolidated Schools to continue to expand the capability of offering distant resources to teachers and students. Hartland Schools is poised to be able to participate in interactive video distance learning and will respond to the needs of the curricular leadership at the high school for participation in on-line course work. Hartland Schools has access to an online course server (Moodle) to assist teachers in their desire to offer coursework online.

Hartland Schools will continue to work closely with the special education department to provide assistive technology to students in need. Special Education teachers and aides will utilize resources to ensure all students have access to technology. Examples include special keyboards and mice, text to speech software, sound-field amplification, wheel chair accessible workstations and touch devices such as iPads and iPods. Each school in the district will continue to make available any open time slots in the technology lab for classroom teachers to use for integrating technology in daily lessons and using technology as a tool.

#### Parental Communications and Community Relations

The district has made a commitment to involve the parents and community in all facets of Hartland Consolidated Schools, including technology. The Technology Plan and incorporated curriculum will be posted on the district's web site ([www.hartlandschools.us/technology.htm](http://www.hartlandschools.us/technology.htm)) and printed copies will be available to anyone who asks. The public at large has the opportunity to voice opinions and offer suggestions at a minimum of two public Board of Education meetings where the Technology Plan is discussed prior to Board approval. In addition to the public at large, there also exists parental representation on the Technology Committee and in the Fall of 2011, we will be adding two additional parent members on the committee.

Student accomplishments will continue to be traditionally delivered to parents; however, electronic delivery of materials and information including school newsletters will be expanded and all parents and students in the district are able to access grades, attendance, and lunch purchases online. Newsletters from all buildings are available electronically and those parents who do not have electronic access to these documents may still request a paper copy available at any building office. The district uses our student information system, email system, and a district listserv to communicate electronically with parents. There is an effort on the part of individual teachers, individual buildings, and the district as a whole to use various social media outlets (Facebook and Twitter) to communicate with the community. In addition, we will be implementing (2011-2012 school year) a parent phone, text, and email system to convey anything of importance to district stakeholders.

Hartland Consolidated Schools has also worked very hard to build an extensive community education program. Hartland Community Education offers courses in basic computer literacy, Microsoft Office Suite, digital imagery, web page design, and the utilization of eBay. We currently offer two levels of senior citizen basic computer classes designed just for senior citizens.

#### Collaboration

In the Fall of 2004 Hartland Community Education entered into an agreement with Washtenaw Community College. The college offers an array of opportunities in Hartland including a variety of computer classes.

Hartland Community Education and the Hartland Senior Center also offer an array of computer classes available in district computer labs throughout the year.

At the present time, Hartland Consolidated Schools does not offer GED certification. While we do have an ESL Tutor available to Hartland students, we do not currently offer this program at the post-graduate level.

## **Student Technology Benchmarks** (Based upon ISTE NETS for Students and the Michigan Curriculum Framework) **Hartland Consolidated Schools**

### **Kindergarten**

#### **The student will be able to:**

1. Identify Computer Parts and Hardware peripherals.
2. Turn the computer on and shut down properly.
3. Use the mouse to point, click, open, and close programs.
4. Identify and use the keyboard's basic functions including enter and spacebar.
5. Login to the network using a simple generic username and password.

### **First Grade**

#### **The student will be able to:**

1. Apply all Kindergarten Benchmarks.
2. Identify and open appropriate applications and software.
3. Describe technology that is used at home.
4. Demonstrate the ability to print to the appropriate printer for a specific project.
5. Understand and demonstrate basic computer care.
6. Use technology, when appropriate, in curricular areas: Language Arts, Math, Science, Social Studies, Art, Physical Education, and any others.

### **Second Grade**

#### **The student will be able to:**

1. Apply all First Grade Benchmarks.
2. Identify the home row and be able to properly place hands in the home row position.
3. Select different font types and sizes.
4. Login to the network using a unique username and password.
5. Open, save/save as, print, and close a document.
6. Demonstrate the functionality and uses of a toolbar.
7. Demonstrate the ability to use a word processor by creating a finished document.
8. Demonstrate the skills necessary to use a web browser and browse Internet resources.
9. Demonstrate the ability to research information using web and/or CD-ROM reference software.

### **Third Grade**

#### **The student will be able to:**

1. Apply all Second Grade Benchmarks.
2. Demonstrate the use of the keyboard with correct fingering for letter, shift, punctuation keys, and spacebar.
3. Save files to and retrieve files from the district's network.
4. Use print preview, undo, redo.
5. Insert graphics into programs.
6. Use the right click mouse function.
7. Perform basic text formatting tasks: font color, bold, italic, and underline.
8. Obey copyright and licensing laws.

9. Demonstrate understanding of the appropriate use of Internet resources, technology safety rules, privacy, and the district's Acceptable Use Policy.
10. Begin working with multimedia and create a finished document.

#### **Fourth Grade**

##### **The student will be able to:**

1. Apply all Third Grade Benchmarks.
2. Cut, copy, and paste.
3. Describe the impact that technology has had on people's lives.
4. Maintain familiarity and comply with copyright and licensing laws.
5. Maintain familiarity and comply with the district's Acceptable Use Policy.
6. Use desktop publishing software to create a product.
7. Use web browsers and search engines as research tools:
  - a. Type URL in location field.
  - b. Understand that not all sites are appropriate as sources of valid data.
  - c. Follow proper online etiquette.
8. Begin to independently use Media Center Technologies:
  - a. On-line databases
  - b. Library Catalogue System
  - c. Etc.

#### **Fifth Grade**

##### **The student will be able to:**

1. Apply all Fourth Grade Benchmarks.
2. Set margins and change page orientation.
3. Demonstrate file organization skills.
  - a. Create Folders
  - b. Rename Folders
  - c. Save files in folders
4. Utilize multimedia in a project.
5. Continue to develop keyboarding skills.
6. Choose appropriate software for a project.
7. Understand and use relevance and accuracy in online research.
8. Use information gathered online to produce a product (report, desktop publishing, etc).

#### **Sixth Grade**

##### **The student will be able to:**

1. Apply all Fifth Grade Benchmarks.
2. Discuss advancements in technology and describe the impact they have had on our society.
3. Appropriately use graphics in a project.
4. Use on-line resources for research and communication to demonstrate basic Internet search skills.

#### **Seventh Grade**

##### **The student will be able to:**

1. Apply all Sixth Grade Benchmarks.
2. Demonstrate the appropriate use of Internet resources.
3. Model ethical, legal, safe, and responsible behavior when using technology.
4. Develop spreadsheets.
5. Develop graphs from spreadsheets.
6. Use a scanner and digital camera to capture an image and use in a project.

7. Develop a basic understanding of what a network is and what it does.
8. Produce a multimedia presentation.

### **Eighth Grade**

**The student will be able to:**

1. Apply all Seventh Grade Benchmarks.
2. Demonstrate advanced features of word processing and basic features of spreadsheets and database computer applications to produce an integrated product.
3. Continually model ethical, legal, safe, and responsible behavior using technology.

### **Ninth – Twelfth Grade**

**The student will be able to:**

1. Apply all Eighth Grade Benchmarks.
2. Produce documents using word processing skills.
3. Manipulate databases by gathering and reporting data, interpreting, and communicating results.
4. Process numeric information using a spreadsheet.
5. Use content-specific software (ex: Drafting, Business, Science, Journalism, Math, etc).
6. Use content-specific technologies (ex: Drafting, business, Auto, Art, etc).
7. Investigate careers that use various technologies.
8. Continue to model responsible, safe, and ethical use of technology.
9. Demonstrate email etiquette.
10. Produce an advanced multimedia presentation.

Over the course of the next three years, the Technology Committee will be working with the Curriculum Department to integrate the Technology Curriculum into the core curriculum. The following are the strategies for its integration:

<b>Goals and Timetable</b>	
<b>Date</b>	<b>Description of Task</b>
2011-2012	Integrate K-8 Technology Curriculum into Language Arts
2012-2013	Integrate K-8 Technology Curriculum into Math
2013-2014	Integrate K-8 Technology Curriculum into Science and Social Studies
Ongoing	Email Monthly Newsletters from buildings and post on district website
Ongoing	Teachers ability to use online course server (Moodle)
Ongoing	High school to use district listserv
On-going	Technology Committee will continue to incorporate lesson plan examples to address benchmarks at each grade level. Teachers will be encouraged to submit successful lesson plans to the Technology Committee who will review and add to the examples for each grade level.
On-going	Tech newsletter posted on the district's web site and emailed to teachers highlighting the use of educational technology in the classrooms.
Fall 2011	Add two additional parent members to the Technology Committee

## II. Professional Development

Goal: Promote and encourage staff training opportunities in the use and integration of technology, at the Hartland Consolidated Schools.

### Professional Development Programs

Each year, all new teachers to the district are required to attend a half-day training session on the use of educational technology in the classroom. Teachers (within the first 3 years of practice) have the ability to participate, voluntarily, in annual training opportunities offered by district trainers. This effort has helped Hartland's newer teachers reach their required 15 days of professional development per year. The district plans to continue and expand this practice in subsequent years.

Training for veteran teachers has been offered on both a mandatory and voluntary basis. Mandatory training occurs when applications are adopted or procedures are changed to such a degree that day-to-day teaching would be affected. Voluntary training occurs throughout the year at the building and district level for teachers when opportunities exist to share new ideas and ways of conveying information using technology.

Our Pilot Teachers for the interactive white board initiative spent 6 day-long sessions with professional trainers learning how to use the interactive whiteboard and how to develop creative and interactive integrated lessons during the 2010-2011 school year. During the 2011-2012 and 2012-2013, those Pilot teachers will turn their focus from learner to instructor as they become the responsible party for the training of the remainder of the district staff. Focus will continue to be on learning how to use the board and the development of interactive integrated lessons.

District trainers include teachers, administrators, and other staff members. Through the course of this plan, national standards (NETS for teachers and administrators) will be used to develop future professional development.

When district staff have questions or issues regarding the use or integration of technology, they have access to the curriculum, and technology staff who are all capable of assisting with their needs. In addition, access to a growing library of how-to videos provides staff with the ability to discover a solution to a problem or an answer to a question on their own.

The district will continuously seek additional resources for professional development, including REMC, LESA, and RESA in an effort to assist teachers with the utilization of technology. The Technology Director will continue to work with other local districts Technology Directors to offer training and online resources to all local teachers.

The current budget for the support of professional development for the use of technology is \$1,000 annually out of the technology General Fund. Title II monies have also been used in recent years at the amount of approximately \$3,500 per year. Hartland Consolidated Schools is aware that in order to support professional development initiatives, additional resources will need to be allocated. A continual effort will be made by the Technology and Curriculum Departments to continue to send teams of teachers and administrators to the MACUL conference.

Because access to technology requires a high level of responsibility, all district employees are required to sign the Staff Acceptable Use Policy prior to using district technology. Since the district continues to acquire technology for use in the learning environment on a regular basis, staff has access to a number of basic training materials via the district's web site. As often as possible throughout the year, members of the technology committee prepare a technology newsletter and post it online. The link to which is emailed to all

district staff for viewing and/or printing. Staff also have access to training materials offered through REMC, LESA and RESA.

**Professional Development Training Goals and Timetable:**

- New teachers are required to attend a mandatory technology orientation session on their first official day in the district. – Ongoing
- Provide interactive whiteboard training to the district’s pilot committee of interactive whiteboard users. – 2010-2011 school year
- Provide training opportunities for non-pilot group teachers to learn basic skills in use of the interactive whiteboards. – Summer 2011
- Provide training times for mandatory after school interactive white board training sessions (1 hour per month minimum). – 2011-2012 school year
- Provide funding to buildings for release time for interactive whiteboard training. – 2011-2012 school year
- Make available Technology Standards and Benchmarks for Teachers (Appendix I). – Ongoing
- Develop and make available Technology standards and benchmarks for Administrators (Appendix II), Office Secretaries and Paraprofessionals, Classroom Paraprofessionals, and Media Center Staff (Administrators Standards will be based upon the NETS) – Summer 2012
- Develop a training program for each group of technology users: Teachers, Administrators, Office Secretaries and Paraprofessionals, Classroom Paraprofessionals, and Media Center Staff – Summer 2012
- Design incentives to attract employees to attend training on a voluntary basis. – Summer 2012
- Identify group trainers for the various groups. The district will utilize students, teachers, community members, ISD Staff, and district staff members with specialized technology skills as trainers. – Spring 2012
- Continue participation in and support of the Regional Technology Academy through LESA. - Ongoing
- Continue to solicit training assistance from LESA and other ISDs. – Ongoing
- Train teachers not only to develop a set of skills in using technology, but to incorporate their knowledge in day-to-day lesson plan development and use correct terminology. – Ongoing
- Train Technology Staff as new technologies are adopted. – Ongoing

### III. Infrastructure, Hardware, Technical Support, and Software

Goal: Allow for the adoption of hardware, infrastructure, and software titles for the following purposes: education of students, management of data and reports (for students, staff, and facilities), facilitate communication, and provide networking and electronic communication capabilities.

#### Infrastructure

##### LAN/WAN (See Network Diagram in Appendix IV)

All district buildings are connected via our WAN with terminating into Cisco 3550 or Cisco 3750 switches at the far ends and all running back to our High School Facility on the main campus which runs a Cisco 6509 core. Most buildings have IDF's (remote data closets) that are connected to each MDF (main data closet) via Multi-Mode fiber gigabit connections.

The district currently connects to our Internet Service Provider (Wayne RESA) with an AT&T product called Optiman which currently provides a 50 Mb connection which is upgradeable. We have employed a Cisco PIX Firewall which provides protection from intrusion. In addition, we are working on the completion of a county fiber network which will not only connect Hartland Schools to the rest of the districts in the county via fiber, but also provide connectivity to LESA where we will be able to participate in shared Internet Connectivity with the rest of the county districts to our joint Internet Service Provider, Wayne RESA.

Objective	Description/Rationale	Timetable	Progress
I.1 Install electrical and data for interactive white board, wireless, and security systems and install wireless access points at CES	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	
I.2 Install electrical and data for interactive white board, wireless, and security systems, and install wireless access points at LES	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	
I.3 Install electrical and data for interactive white board, wireless, and security systems, and install wireless access points at RES	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	
I.4 Install electrical and data for interactive white board, wireless, and security systems, and install wireless access points at VES	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	
I.5 Install electrical and data for interactive white board, wireless, and security systems, and install wireless access points at FIS	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	
I.6 Install electrical and data for interactive white board, wireless, and security systems at HMS	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	

1.7 Install electrical and data for interactive white board, wireless, and security systems, and install wireless access points at HHS	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	
1.8 Install electrical and data for interactive white board, wireless, and security systems, and install wireless access points at SSC	Interactive whiteboards, wireless, and security systems require data and electrical to function. Wireless will provide access to district and public wireless devices on campus.	Oct. 2010 – Aug. 2012	
1.9 Replace Core Switch and replace/extend network infrastructure at HHS	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.10 Replace/extend network infrastructure at HMS	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.11 Replace/extend network infrastructure at FIS	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.12 Replace/extend network infrastructure at VES	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.13 Replace/extend network infrastructure at RES	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.14 Replace/extend network infrastructure at LES	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.15 Replace/extend network infrastructure at CES	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.16 Replace/extend network infrastructure at SSC	Need to replace older equipment and expand existing capacity to account for additional networkable devices.	August 2012	
1.17 Extend Fiber and connect to county-wide network	Provides the ability to collaborate and share services more effectively.	August 2011	

## File Servers

Currently, Hartland Schools runs a small server farm in order to meet the academic and business needs of our organization. All of the main servers for the district are located in a server farm in the MDF at the High School which connects to a 10 TB NAS (Network Attached Storage) device. Email and voice mail is retrieved from an Exchange server and computer imaging is handled using an Altiris server. The district's Internet content filtering and email virus scanning is governed by our LightSpeed server which receives nightly blacklist downloads.

As we work toward replacement of server infrastructure, we will virtualize where possible.

**Back-Up**

Hartland Schools has an extensive back-up plan to protect from catastrophe. All student and staff files are replicated to a 13 TB back-up device located off-site at the Support Services Center. In addition, files are backed-up daily to tape. Each month the tape backups are removed from the tape server and taken to an off-site storage location, locked in a fire-proof cabinet. The Altiris server replicates servers and stores that data on the 13 TB back-up device located at the Support Services Center.

Objective	Description/Rationale	Timetable	Progress
F.1 Continue to keep servers up to date and properly patched	This will avoid security holes and help to curtail incompatibilities with newer applications running on the servers	On-Going	

Server Replacement Schedule		
Servers	DOP	Replace
NAS	Jul-07	Jul-14
Backup NAS	Jul-07	Jul-14
Staff1	Jul-07	Jul-14
Staff2	Jul-07	Jul-14
Student1	Jul-07	Jul-14
Student2	Jul-07	Jul-14
HA-CAD	Jul-05	Jul-14
HA_UTIL	Jul-04	Jul-14
LightSpeed	Jul-07	Jul-14

## Voice

Over the course of the last 10 years, Hartland Schools has implemented what can be essentially thought of as a single district-wide phone system. The SSC, HMS, and CES are functioning off analogue DFINITY and Prologix phone switches (2000 Bond) connecting to an Avaya Modular Messaging voice mail server acting as a pass through to our district email server. The switches are located in the MDF of each of the aforementioned buildings while the voice mail server is located in the MDF at the high school.

Through our 2006 Bond, Hartland Schools installed an Avaya 8700 phone switch located in the MDF at the high school which governs the functionality of the analogue handsets located at the high school and the IP handsets located at the remote sites of LES, RES, VES, FIS, and HHS. The newer voice mail server is an Avaya Modular Messaging Server which acts as a pass through forward of all voice mail to our district mail server. We need to replace our old analog phone switches at the SSC, HMS, CES.

Hartland Schools uses three T1 prime phone lines that carry a total of 72 connections which are shared across the entire district. Each classroom and office has either an analogue or IP phone handset located in it which is connected to a phone switch in the system. In addition to the land-line phone, Hartland Schools also issues cellular phones to district administration, technology, and maintenance personnel. Cellular phones and district phone lines are all E-rate eligible and are used to promote safety, parental communication, and expedite service enhancing the ability of the district to provide the most effective learning environment.

In all district buildings, a small number of Centrex lines are still used as 911 emergency, fire alarm, security system, energy management system, and elevator lines. These lines are POTS lines and do not interface with our district-wide phone and voice mail system save for the 911 emergency lines which allow outgoing calls in the event of power failure.

The district currently has its technology, maintenance, and administrative personnel equipped with cell phones. These devices are essential for repairs, maintenance, and emergency communication.

Objective	Description/Rationale	Timetable	Progress
P.1 Replace phone switch at SSC	Replace outdated and out of warranty phone equipment.	August 2012	
P.2 Replace phone switch at CES	Replace outdated and out of warranty phone equipment.	August 2012	
P.3 Replace phone switch at HMS	Replace outdated and out of warranty phone equipment.	August 2012	
P.4 Replace sound field at CES	Many of the existing units are malfunctioning at this point and need to be replaced. They are almost 10 years old.	August 2011	
P.5 Install sound field at FIS	To provide proper sound amplification for the IWB implementation, sound field is required.	August 2011	
P.6 Install sound field at HMS	To provide proper sound amplification for the IWB implementation, sound field is required.	August 2011	
P.7 Install sound amplification at HHS	To provide proper sound amplification for the IWB implementation, sound field is required.	August 2011	

P.8 Install sound amplification at SSC	To provide proper sound amplification for the IWB implementation, sound field is required.		
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## Video/Security

All district buildings constructed or remodeled between 1996 and 2005 (CES, HMS, HHS, SSC) have an installed video network with TV, VCR, and DVD capabilities in each classroom. Access to Comcast's Limited Basic Cable is also available for these buildings. Access to any cable channel above 22 is not possible since local Comcast converted to Digital on November 15, 2007. These newer buildings also have a video distribution cart that allows connectivity to any video drop for broadcast throughout the building.

District buildings constructed prior to 1996 (LES, RES, VES, FIS) do not have video networks and use TVs and VCRs on carts to show VHS tapes and DVDs. There is no cable access and no video network in any of these buildings. In order to show online videos, teachers must use data projectors on carts connected to laptops or classroom computers.

Objective	Description/Rationale	Timetable	Progress
V.1 Installation of Network Video System at CES	Equity across the district Allows for the distribution and viewing of video throughout the district. Classrooms will have access to cable in all classrooms and access to district-created video through our own video streaming server.	July 2012	
V.2 Installation of Network Video System at LES	Equity across the district Allows for the distribution and viewing of video throughout the district. Classrooms will have access to cable in all classrooms and access to district-created video through our own video streaming server.	July 2012	
V.3 Installation of Network Video System at RES	Equity across the district Allows for the distribution and viewing of video throughout the district. Classrooms will have access to cable in all classrooms and access to district-created video through our own video streaming server.	July 2012	
V.4 Installation of Network Video System at VES	Equity across the district Allows for the distribution and viewing of video throughout the district. Classrooms will have access to cable in all classrooms and access to district-created video through our own video streaming server.	July 2012	
V.5 Installation of Network Video System at FIS	Equity across the district Allows for the distribution and viewing of video throughout the district. Classrooms will have access to cable in all classrooms and access to district-created video through our own video streaming server.	July 2012	
V.6 Installation of Network Video System at HMS	Equity across the district Allows for the distribution and	July 2012	

	viewing of video throughout the district. Classrooms will have access to cable in all classrooms and access to district-created video through our own video streaming server.		
V.7 Installation of Network Video System at HHS	REMC is no longer acquiring videos for curricular purposes. Video Streaming solutions are currently bringing content to classrooms.	July 2012	
V.8 Installation of Network Video System at SSC	Protect from vandalism, and increase security.	July 2012	
V.9 Install card access controller / blank cards to all buildings throughout district	To properly lock down our buildings and provide security.	July 2012	
V.10 Install card access doors to all buildings where indicated in the 2010 Bond	To properly lock down our buildings and provide security.	July 2012	
V.11 Extend alarm system to portable and correct principal office keypad	Provide security to our buildings and protect assets.	July 2012	
V.12 Install alarm system to RES	Provide security to our buildings and protect our assets	July 2012	
V.13 Install alarm system to VES	Provide security to our buildings and protect our assets.	July 2012	
V.14 Replace PA at VES	Provide greater flexibility and paging capability to the building	July 2012	
V.15 Expand video surveillance system at FIS	Providing greater security to our students and assets	July 2012	
V.16 Expand video surveillance system at HMS	Providing greater security to our students and assets	July 2012	
V.17 Expand video surveillance system at HHS	Providing greater security to our students and assets	July 2012	
V.18 Expand video surveillance system at SSC	Providing greater security to our students and assets	July 2012	
V.19 Expand video surveillance system at 51 bldg.	Providing greater security to our students and assets	July 2012	
V.20 Continue our subscription to educational on-line videos	Video Streaming solutions are currently bringing content to classrooms.	On-going	
V.21 Install Video Broadcast Carts at CES, LES, RES, VES, FIS, HMS, HHS, SSC	Provide the ability for all schools to do live video broadcast via the network to anywhere in the district.	July 2012	

## **Computer Hardware and Peripherals**

The major issue facing the Hartland Consolidated Schools, with regard to hardware, is the timely replacement of its 2000+ computers and the ability to get educational technology into as many student hands as possible. The use of computers in education has become commonplace and the potential benefits to enhance student learning are significant. However, the equipment must be in good working condition and capable of supporting the current software titles and applications to have the most impact on a student's learning. Some locations do not require the technology to be as new so some older computers may be re-allocated. In locations where computers must be newer to support current software or teaching practices, this plan calls for a replacement after 5 years.

Most district printers are approximately 10 years old and in need of replacement. Corresponding with computer replacement, printers will also be replaced in all buildings.

Students learn best when learning opportunities are available at any time. And employees are most productive when they can work no matter where they are located. Teachers will be provided the opportunity to have laptop computers when their desktop computers are replaced. In addition, the installation of district-wide wireless will promote anywhere anytime learning for students and staff alike. Interactive classroom solutions including these or similar devices will be installed into all district classrooms: Interactive whiteboards, data projectors, and document cameras. In addition, wireless technology devices (slates and classroom response systems) will be made available in all buildings throughout the district.

### **Considerations for Hardware and Peripheral Replacement**

- General funds cannot be the only method of funding technology replacement and procurement.
- Teacher computers need to be capable of running the common teacher applications in the district.
- Student computers need to be capable of running grade and content specific software in the location the computer resides.
- In general, the high school's technology/computers must be kept current.
- Those areas of proven and productive technology use should receive priority over those areas that have not displayed as productive uses.
- All computers, can be placed where they are most productive.
- Any TTI computers remaining are to remain on extended loan to the teacher until he/she has left the district and will not be replaced when broken or too old to be useful.
- Primary computers are 0-5 years old and will be included in the replacement plan.
- Supplemental computers are 5 years old or older and are not included in the replacement plan.
- More advanced/newer technologies will change the costs and hardware solutions for what is considered a primary computer workstation.
- This plan will focus on complete and functional solutions.
- The needs of equity issues and assistive technology are constantly addressed and updated.
- As the availability of finances allows, computers will be upgraded and/or reassigned to extend their useful life.

## Current Primary Computer Inventory

Location	Quantity	Brand	Processor	Purchase Date
CES	159	Dell	P-IV 2.5 GHz Dual Core	July 2009
LES	81	Dell	P-IV 1.8 GHz Dual Core	July 2007
RES	82	Dell	P-IV 1.8 GHz Dual Core	July 2007
VES	84	Dell	P-IV 1.8 GHz Dual Core	July 2007
FIS	208	Dell	P-IV 1.8 GHz Dual Core	July 2007
HMS	371	Dell	2.53 GHz Core 2 Duo	July 2008
HHS	709	Dell	2.7 GHz Core 2 Duo	July 2010
SSC	137	Dell	P-II 266 – P-IV 2.8 GHz	July-98 – July-04
51 Bldg.	13	Dell	P-IV 1.8 GHz Dual Core	July 2007

### Primary Computers Guidelines

- 1 teacher laptop assigned to each teacher.
- Administrative computers are for office, clerical and technology use
- Minimum of 2 student computers for each special education room
- 30 student computers per computer lab (Exceptions Below)
  - 35 in HHS Media Lab to accommodate larger classes
  - 33 in lab 300 and 204 at the HHS
  - We would like to increase to 35 in the HMS Media Center in the future
  - 15 in HHS Graphics lab
  - 30 in HHS Marketing lab
  - 8 in HHS Music Lab
  - 31 in HMS in rooms 31 and 33

### Supplemental Computer Guidelines

- Allocated to the locations proven to be productive with technology (never new computers)

Objective	Description/Rationale	Timetable	Progress
H.1 Replace computers as they become too costly to maintain or incapable of performing the processes needed	As large numbers of computers become older, the cost of maintaining them grows rapidly. In addition, newer and more advanced software and other applications often do not run as quickly making the use of the computer less desirable.	See replacement schedule below this table	
H.2 Provide each building with at least one computer that is wheelchair accessible.	Each building should have a table and computer in the building's computer lab that is capable of raising up to accommodate a wheel chair.	July 2014	
H.3 Provide the high school with at least two portable voice amplification systems.	Devices that can be carried around or be placed in specific classrooms to accommodate students who have difficulty with hearing.	July 2014	
H.4 Continue discussions with the technology committee and the department of special education the district's needs for assistive technologies.	Various assistive technologies are available and continue to become available which are helpful to students of varying disabilities.	On-Going	

## Primary Computer Replacement Schedule Summer 2012

	<i>CES</i>	<i>LES</i>	<i>RES</i>	<i>VES</i>	<i>FIS</i>	<i>HMS</i>	<i>HHS</i>	<i>51</i>	<i>SSC</i>	<i>Total</i>
<b>Administrative</b>		7	9	7	11			3		<b>37</b>
<b>Admin Laptop</b>		1	1	1	2					<b>5</b>
<b>Teacher</b>		2	3	0	3			10		<b>18</b>
<b>Teacher Laptop</b>		30	27	31	47					<b>135</b>
<b>Student</b>		40	41	44	112					<b>237</b>
<b>Student Laptop</b>		1	1	1	33					<b>36</b>

<b>Total</b>	<b>0</b>	<b>81</b>	<b>82</b>	<b>84</b>	<b>208</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>468</b>
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## Summer 2013

	<i>CES</i>	<i>LES</i>	<i>RES</i>	<i>VES</i>	<i>FIS</i>	<i>HMS</i>	<i>HHS</i>	<i>51</i>	<i>SSC</i>	<i>Total</i>
<b>Administrative</b>						15				<b>15</b>
<b>Admin Laptop</b>						3				<b>3</b>
<b>Teacher</b>						5				<b>5</b>
<b>Teacher Laptop</b>						46				<b>46</b>
<b>Student</b>						255				<b>255</b>
<b>Student Laptop</b>						47				<b>47</b>

<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>371</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>371</b>
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## Summer 2014

	<i>CES</i>	<i>LES</i>	<i>RES</i>	<i>VES</i>	<i>FIS</i>	<i>HMS</i>	<i>HHS</i>	<i>51</i>	<i>SSC</i>	<i>Total</i>
<b>Administrative</b>	12						27			<b>39</b>
<b>Admin Laptop</b>	2						8			<b>10</b>
<b>Teacher</b>	3						10			<b>13</b>
<b>Teacher Laptop</b>	29						85			<b>114</b>
<b>Student</b>	97									<b>97</b>
<b>Student Laptop</b>	16									<b>16</b>

<b>Total</b>	<b>159</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>130</b>	<b>0</b>	<b>0</b>	<b>289</b>
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## Summer 2015

	<i>CES</i>	<i>LES</i>	<i>RES</i>	<i>VES</i>	<i>FIS</i>	<i>HMS</i>	<i>HHS</i>	<i>51</i>	<i>SSC</i>	<i>Total</i>
<b>Administrative</b>										<b>0</b>
<b>Admin Laptop</b>										<b>0</b>
<b>Teacher</b>										<b>0</b>
<b>Teacher Laptop</b>										<b>0</b>
<b>Student</b>							489			<b>489</b>
<b>Student Laptop</b>							90			<b>90</b>

<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>579</b>	<b>0</b>	<b>0</b>	<b>579</b>
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## Summer 2016

	<i>CES</i>	<i>LES</i>	<i>RES</i>	<i>VES</i>	<i>FIS</i>	<i>HMS</i>	<i>HHS</i>	<i>51</i>	<i>SSC</i>	<i>Total</i>
<b>Administrative</b>									38	<b>38</b>
<b>Admin Laptop</b>									16	<b>16</b>
<b>Teacher</b>									8	<b>8</b>
<b>Teacher Laptop</b>									12	<b>12</b>
<b>Student</b>									62	<b>62</b>
<b>Student Laptop</b>									1	<b>1</b>

<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>137</b>	<b>137</b>
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<b>Grand Total</b>	<b>1844</b>
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## Non-Computer Hardware Acquisition and Implementation

<b>Objective</b>	<b>Description/Rationale</b>	<b>Timetable</b>	<b>Progress</b>
H.5 Acquire and install interactive classroom equipment at CES	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all students.	Pilot group 2010-2011 school year  Balance by September 2011	
H.6 Acquire and install interactive classroom equipment at LES	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all students.	Pilot group 2010-2011 school year  Balance by September 2011	
H.7 Acquire and install interactive classroom equipment at RES	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all students.	Pilot group 2010-2011 school year  Balance by September 2011	
H.8 Acquire and install interactive classroom equipment at VES	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all students.	Pilot group 2010-2011 school year  Balance by September 2011	
H.9 Acquire and install interactive classroom equipment at FIS	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all	Pilot group 2010-2011 school year  Balance by September 2011	

	students.		
H.10 Acquire and install interactive classroom equipment at HMS	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all students.	Pilot group 2010-2011 school year  Balance by September 2011	
H.11 Acquire and install interactive classroom equipment at HHS	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all students.	Pilot group 2010-2011 school year  Balance by September 2011	
H.12 Acquire and install interactive classroom equipment at SSC	Interactive white boards, document cameras, data projectors, and a handful of slates, student response systems, wireless keyboards and mice will be purchased to aide teachers in all district classrooms in making learning an interactive experience for all students.	Pilot group 2010-2011 school year  Balance by September 2011	
H.13 Replace Channel 22 Equipment	This equipment has never been replaced and is currently running very old gear. It needs to be brought up to todays production standards and the equipment needs to have a warranty.	Summer 2012	
H.14 Additional TV Production Studio Equipment	There are components that need to be replaced and updated in the studio, including cameras, switchers, and controllers, as well as the need to acquire additional macs for video editing.	Summer 2012	
H.15 Replace Point of sale systems for lunch lines	The existing technology in those locations needs to be replaced corresponding with the computer replacement schedule for the specific building.	See replacement schedule.	

## Software

PC computers in the district are running Windows XP operating systems and Mac Computers are running version 10.5 or higher. Each computer also has MS Office 2000, XP, 2003, 2007, or open office installed on it. Email users access their school email and calendar via MS Outlook, or Outlook Web Access from the district's Exchange Server. The district's Student Information System is Zangle supported by programmers at Wayne RESA. Specialized grade level or subject matter software is available to students and teachers. For a complete list of software applications used in the district, see Appendix III.

### General Guidelines for Software Acquisition Proposals

- All proposals must clearly indicate all details and rationale
- All proposals must include a detailed description of the software
- All proposals must include a projected cost and a description of how those costs were developed
- All proposals must include a description of how they will improve the productivity or enhance student learning throughout the district
- All proposals must be submitted first to the building Principal for pre-approval
- All proposals must be approved by the District Technology Committee
- All proposals must attempt to use the REMC Statewide Bid to save on the purchase of software packages.

### Procedure for Software Proposals

- After receipt of a proposal that has followed the general guidelines, the District Technology Committee will review
- Proposals will be presented based upon the timeline below
- Proposals will be discussed at that time
- The District Technology Committee may then approve, recommend revisions, or reject a proposal
- Once approved, a proposal will be prioritized by the District Technology Committee.

### Timeline for Proposal

- |             |   |
|-------------|---|
| • September | District Technology Committee Member Selection  |
| • September | Organizational Meeting                          |
| • November  | Proposals are presented to Technology Committee |
| • February  | Proposals are presented to Technology Committee |
| • April     | Proposals are prioritized and publicized        |

## Technical Support

Hartland Consolidated Schools supports technology with a full-time District Technology Director, a shared Network Administrator with two other districts, two full-time Computer Technicians, a full-time Student Services Coordinator, and is currently supplemented by 24 hours per week of regularly scheduled computer technician support whom we share with another district. This shared services agreement has been in place for the past three years and is coordinated by our local ISD. At the elementary, a full-time Media Specialist acts as the first point of contact for most technology needs and is a building-level coordinator for technology. At the Farms Intermediate School, a teacher and the part-time Media Specialist, act as the point of contact and are responsible for building-level coordination. In the middle school, the part-time Media Specialist is the first point of contact and acts as a building coordinator for technology. At the high school the part-time Media Specialist is the first point of contact and building coordinator for technology. These building contacts are essential for timely responses to problems.

If a technology issue is too complex or time-consuming for the building contact to handle, a trouble ticket is generated. Once a ticket is opened, the issue remains in the database until the problem is resolved. Systems and procedures are in place to speed the repair process, including, computer imaging software, proper back-ups, and computer management policies on the individual workstations.

Our current level of technical support is minimal due to budget cuts in recent years. With the systems and procedures that have been put into place over the past several years, the extended technology staff has been able to manage the technological needs of district personnel. With the installation and implementation of the extensive interactive classroom technology and wireless throughout the district, we will need to closely monitor the abilities of our current staffing to continue to attend to the technological needs of the district. The Technology Director will continue to keep upper management aware of the department's ability to keep everything running efficiently.

## **Funding and Budget**

Goal: Provide a means for the maintenance, support, upgrade and growth of district technology.

Hartland Consolidated Schools is in the process of implementing a 28 million dollar school renovation bond. With these funds, Hartland Schools is conducting both minor and major remodeling to a number of its facilities. As part of the 28 million Bond, Hartland Schools committed 7 million dollars to technology improvement and replacement throughout the district.

Some of the major technology improvements include: The installation of district-owned fiber connecting our district to the remainder of the districts and ISD in Livingston County, primary computer replacement over a 5 year implementation plan, installation of classroom interactive technology in every classroom throughout the district, installation or replacement of sound-field technology in every classroom K-8 and installation of sound amplification in every other classroom 9-12, adding wireless throughout the district for both direct internet access to public devices and district network connectivity to all Hartland Schools devices, replace and expand some network infrastructure, and increase security with card access and video surveillance equipment.

## **Coordination of Resources**

### **Universal Service Fund (USF):**

Hartland Schools has applied for and will continue applying for universal service discounts under the universal service support mechanism, E-rate, which is a federal program created to provide discount reimbursements and assist most schools and libraries with obtaining affordable technologies, including telecommunications and internet access. Discounts are based on an individual schools' enrollment in the National School Lunch program. Hartland Consolidated Schools anticipates obtaining approximately \$29,919 annual average reimbursement from E-rate.

### **Grants:**

Hartland Schools will continue to seek out federal and state grants that will help in implementing our long-range technology plan. Any grant funds received will be disbursed according to the goals and objectives outlined in our technology plan. Accordingly, our plan will evolve as new technologies arise. To avoid duplication of funds, we will consistently update our technology plan to reflect technologies that have been acquired.

### **Bonds:**

Hartland Schools as been in the process of implementing four different Bonds at different times for various reasons for the past 15 years. Each of those Bonds have included technology components which have added to the technological arsenal of educational resources at Hartland Schools.

### **General:**

- Technology purchases will continue to take advantage of State-Wide REMC pricing and competitive bids on as much technical equipment as possible.
- Technology department, curriculum department, and building level funds will be coordinated to provide equitable funding for technology.

- Hartland schools will continue to participate in the shared services agreement with our Livingston Educational Services Agency. Currently, we employ two of our 6 technology staff through this agreement and as needs or opportunities arise, we will continue to do so, making the best use of district funds to support technology.
- Additional sources of funding for replacement of equipment and new acquisitions will be explored.

Budget Item	2011-2012	2012-2013	2013-2104
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## Revenues

General Funding	\$663,367.00	\$674,131.97	\$665,849.68
Bond Funds	\$3,013,300.00	\$2,904,500.00	\$557,600.00
E-Rate Funding	\$28,919	\$28,919	\$28,919
<b>Total Revenue</b>	<b>\$3,716,286.00</b>	<b>\$3,618,250.97</b>	<b>\$1,263,068.68</b>

## Expenditures

Salaries and Benefits	\$339,467.00	\$335,231.97	\$326,949.68
Tech Supplies and Repair	\$75,000.00	\$90,000.00	\$90,000.00
Contracted Services Student Services	\$114,868.00	\$114,868.00	\$114,868.00
Cont. Services (Consultants dsktp. and netwrk.)	\$75,000.00	\$75,000.00	\$75,000.00
Contracted Services Data Processing (DTE Poles)	\$1,000.00	\$1,000.00	\$1,000.00
Travel/Conference Computer	\$2,500.00	\$2,500.00	\$2,500.00
Data Processing Computer Supplies	\$7,200.00	\$7,200.00	\$7,200.00
Internet Connectivity	\$14,703.00	\$14,703.00	\$14,703.00
Install Wireless district-wide I.1 – I.8		\$543,900	
Replace core switch and extend network I.9 – I.16		\$271,700	
Extend Fiber/Connect to county I.17	\$250,300		
Replace Phone Switch at SSC, HMS, CES P.1 – P.3		\$90,600	
Replace/Install Sound Field CES, FIS, HMS, HHS, SSC P.4 – P.8	\$375,700		
Install Network Solution District-Wide V.1 – V.8		\$292,100	
Install card access security throughout district V.9 – V.10		\$266,100	
Extend Alarm at CES and replace Princ. keypad V.11		\$2,100	
Install Alarm System at RES, VES V.12 – V.13		\$32,000	
Replace PA at VES V.14		\$19,800	
Expand Video Surveillance at FIS, HMS, HHS, SSC, 51 Bldg. V.15 – V.19		\$153,500	
Video Broadcast Cart at all buildings V.21		\$115,200	
Comp. Replacement Summer 2011	\$250,000		
Comp. Replacement Summer 2012		\$979,700	
Comp. Replacement Summer 2013			\$549,100
Interactive Classrooms H.5 – H.12	\$2,137,300		
Replace Cable TV Equipment at high school H.13		\$42,600	
Additional TV Production Studio Equipment H.14		\$82,500	
Replace Point of Sale Systems H.15		\$12,700	\$8,500
Verizon Telephones	\$5,352	\$5,352	\$5,352
AT&T	\$67,896.00	\$67,896.00	\$67,896.00
Technology Upgrade and Replacement (Set aside and carried over)	\$0.00	\$0.00	\$0.00
<b>Total Expenditures</b>	<b>\$3,716,286.00</b>	<b>\$3,618,250.97</b>	<b>\$1,263,068.68</b>

## **Monitoring and Evaluation**

Goal: Provide a means for measurement and refinement during implementation.

Because technology continues to change, it is important to annually review the technology plan. The evaluation process will identify successes and weaknesses which will allow the Technology Committee to make adjustments and improvements as needed. The entire plan will be reviewed annually assisting the committee in determining hardware and software needs. In addition, annual evaluation is necessary to monitor the extent to which technology is being used in the classroom to enhance student learning.

The District Technology Committee will meet a minimum of four times during the school year to review and discuss the progress of the technology plan. The committee, with input from the technology staff, will review and evaluate the process of curriculum integration, staff professional development, hardware and software acquisition and implementation, and the ability of the district to financially meet the needs of the plan.

### **Curriculum**

To evaluate curriculum integration, Hartland Schools will rely heavily on empirical evidence. Principals and teachers will be surveyed to determine the extent of technology use and integration taking place in buildings. An increase in the use of technology by staff and students will indicate that the technology plan has been at least in part successful. The committee will also use data collected from the 8<sup>th</sup> Grade Technology Literacy Assessment, and MEAP to determine the plan's effectiveness at the various school buildings in the district.

### **Professional Development**

The effectiveness of training opportunities will also be reviewed. Workshop evaluation forms and the number of participants signed up for voluntary training will be considered. An increase in participation for voluntary workshops will indicate these types of classes should be offered. Teachers and staff will periodically be surveyed to determine their interest in technology training topics, and adjustments to the course offerings will be made accordingly.

### **Infrastructure**

The functionality of existing hardware and network systems will be continually evaluated. The committee will consider the number of technology repairs logged and the response time necessary to address repair issues. Fewer numbers of repair tickets, quicker response times, and fewer technicians will be one indication of productive equipment, a functional network, and more knowledgeable tech and educational staff.

### **Funding and Budget**

The technology committee will monitor the technological needs of the district with respect to the budget allocation for technology. The ability of the fund allocation to meet the technological needs of the district on an annual basis will be an indication of adequate funds being supplied to support the technology. Should funds not be adequate, the technology committee will make recommendations for budget adjustment so needs can be met.

Efforts and goals that have been deemed unsuccessful by the District Technology committee based upon the above criteria will be addressed. District Staff will be consulted and different strategies will be implemented to achieve goals not met. Revisions to the plan and budget adjustments will be made as needed.

## **Hartland Consolidated Schools**

# **Acceptable Use Policy**

Hartland Consolidated Schools (HCS) offers staff and students access to a computer network for educational and instructional purposes. In addition, HCS offers staff and students access to the Internet. Internet access is intended to promote, enhance, and support educational goals and objectives. To gain access to the HCS network and the Internet, all students under the age of 18 must obtain parental permission. All staff and students must sign the Acceptable Use Policy. A copy of the AUP signed by the student will reside at the building in which the student attends. A copy the Acceptable Use Policy signed by a staff member will be kept at the personnel office. Students 18 and over may sign their own forms.

## **CIPA Compliance**

The Hartland Consolidated Schools has and will continue to comply with the requirements of the Children's Internet Protection Act, as codified at 47 U.S.C. § 254(h) and (l). The district is committed to assuring the safe conduct of all students while online and has a comprehensive policy about the proper use of our technological resources. At the beginning of each school year, students and staff are made aware of the district's Acceptable Use Policy. In addition, each student must sign an Internet use agreement before they are allowed access to the Internet both when they enter the district and each time they are promoted to a new building. It is the district's intent to preserve network bandwidth and improve network response times by limiting Internet access to educational-related sites. The filtering software used to block and filter access to the Internet from pornographic and obscene sites is LightSpeed, ensuring compliance with district policies and maintaining a positive environment.

## **Internet Services**

Access to the Internet expands classroom and library media resources. These enable staff students to explore thousands of libraries, databases, and other information resources. These resources can be used for individual and group projects, collaborations, curriculum materials and idea sharing.

## **Internet Responsibilities**

With access to the Internet comes responsibility. HCS has installed an Internet filtering application and Cisco PIX Firewall to help protect students from inappropriate material while they are accessing Internet resources at school. Filtering is effective but not perfect. Staff must be vigilant in monitoring student use of technology systems and prepared to enforce the guidelines found within this policy (AUP). Parents and guardians of minors are responsible for setting and conveying the standards that their children should follow when using any media and information sources. Students are responsible for appropriate behavior when using electronic resources. When signing the Acceptable Use Policy the students and parent agree to abide by the policies set forth by HCS.

HCS is held harmless and released from liability for ideas and concepts that students gain by their use of the Internet.

## **District Network Services**

Each staff member and student is provided with a network account, which allows access to district network services. This access to network services is provided for those who agree to act in a considerate and responsible manner. Access is a privilege, not a right. Network accounts provide for a limited

amount of personal storage space on the HCS network for files related to the pursuit of education, which should be maintained by periodically clearing out older files.

It is important for staff and students to keep passwords secure and private. However all users should be aware that teachers and administrators have the right to review files to maintain system integrity and to be sure that the system is being used according to the HCS district policy.

Hartland Schools employs an extensive back-up of data each night. Copies are stored both on-site and off-site for additional security. For details, see the Disaster Recovery Plan. (Appendix VI)

### **District Network Access Responsibilities**

Individual users of the district computer networks are responsible for their behavior and communications over those networks. Users will only use their personal user ID to log in to the HCS network (some elementary students will use classroom IDs). When signing the AUP users agree to comply with district rules and policies.

HCS makes no warranties of any kind, either expressed or implied, for the provided access. The staff, school and HCS are not responsible for any damages incurred, including, but not limited to, the loss of data stored on HCS resources, to personal property used to access HCS resources, or for the accuracy, nature or quality of information stored on HCS resources.

### **Restrictions**

The following activities are not permitted on the HCS electronic resources:

- Accessing, uploading, downloading, transmitting, displaying or distributing obscene or sexually explicit material.
- Accessing, uploading, downloading, transmitting, displaying, or distributing unauthorized files or applications of any kind (including but not limited to games, IM clients, and Internet Proxies).
- Transmitting obscene, abusive or sexually explicit language.
- Damaging or vandalizing computers, computer systems, computer networks or computer files.
- Debilitating, disabling or altering computers, systems or networks.
- Creating, downloading, or distributing computer viruses or parts of computer viruses.
- Violating copyright or otherwise using another person's intellectual property without his or her prior approval and/or proper citation.
- Using another person's account, password, folder, work or files.
- Intentionally wasting computer network or printer resources.
- Using the HCS network or equipment for commercial or political purposes.
- Violating local, state or federal statutes.

### **Consequences for Improper Use**

Inappropriate use of the HCS network will result in the restriction or cancellation of the users account. Violations of the AUP may lead to disciplinary and/or legal action, including but not limited to suspension or expulsion, or criminal prosecution by government authorities.

# Hartland Consolidated Schools Acceptable Use Policy Agreement

## User Agreement

As a user of the Hartland Consolidated Schools computer network, I agree to comply with the Acceptable Use Policy (AUP). I will use the HCS network and the Internet in a constructive and appropriate manner. Should I commit any violation, my access privileges may be revoked, and disciplinary action will be taken.

STAFF MEMBER       STUDENT

User (print): \_\_\_\_\_

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

Staff Position/Homeroom Teacher: \_\_\_\_\_

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

## Parent Agreement

As parent or legal guardian of the student above, I have read and understand the HCS Acceptable Use Policy.

\_\_\_\_\_ I grant permission for my child to access networked computer services and Internet resources. I understand that he/she is expected to use good judgment and follow rules and guidelines when using the HCS network and Internet resources. I agree to comply with the HCS Acceptable Use Policy.

\_\_\_\_\_ I do not grant permission for my child to access Internet resources while at school. I understand that my child will still have access to the HCS network and is expected to follow the rules and guidelines for the appropriate use of the network as stated in the HCS Acceptable Use Policy.

Parent Name: (print) \_\_\_\_\_

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

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

# Appendix I

## Technology Standards and Benchmarks for Teachers

(Based upon NETS for Teachers)

<b>A. Basic Technology Operations and Concepts</b>	
<i>Standard</i>	<i>Example</i>
A.1. Teachers will be able to use voice, video, and data networks to communicate with colleagues, administrators, parents, and students	Email Word Processing Newsletters Voice Mail Use of Video in Classroom Web Pages Presentation software (SMART Notebook, PowerPoint, etc)
A.2. Teachers will be able to use terminology related to technology to effectively communicate problems, issues, and ideas	Communicate with Tech Staff Share Technology-Related Ideas with Colleagues
A.3. Teachers will be able to use computers and software to increase productivity	Collaborate and share lesson ideas (Email, Web) More effective means of communication (Email) Create, Save, Modify documents more effectively
A.4. Teachers will utilize computer systems responsibly and ethically	Follow guidelines in AUP
A.5. Teachers will be able to use technology for the purpose of locating, collecting, processing, and interpreting data	Web Email Word Processing Spreadsheet Database Video
A.6. Teachers will be able to use technology for problem solving and decision making	Web Email Word Processing Spreadsheet Database Video
A.7. Teachers will demonstrate continual growth in technology knowledge and skills as technology continues to change	Attend training sessions Use new technologies as they are introduced and endorsed by the school district
<b>B. Planning and Designing Learning Environments and Experiences</b>	
B.1. Teachers will be able to apply the use of technology to support teaching in their grade level or subject area and produce professional products	
B.2. Teachers will be able to plan, explore, evaluate, and deliver instructional units that integrate a variety of technologies	
B.3. Teachers will be able to use software and research techniques for learning and application in curricular areas	
B.4. Teachers will be able to plan activities supported by technology that support the diverse needs of learners	

### **C. Teaching, Learning, and the Curriculum**

C.1. Teachers will be able to use the Web and Email for research and communication in support of their curriculum

C.2. Teachers will be able to conduct research and evaluate on-line sources of information for curricular enhancement

C.3. Teachers will be able to apply technology to develop students' higher order skills and creativity

C.4. Teachers will be able to utilize technology to support student's diverse learning styles  
Multimedia

### **D. Assessment and Evaluation**

D.1. Teachers will utilize technology in the assessment of student learning

D.2. Teachers will use technology to assist with the collection, analysis, and interpretation of data

D.3. Teachers will evaluate and determine students' appropriate use of technology resources for learning, communication, and productivity

### **E. Productivity and Professional Practice**

E.1. Teachers will continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning

E.2. Teachers will show effective use of Gradebook Software

E.3. Teachers will show effective use of Attendance Software

E.4. Teachers will use technology to support lifelong learning

### **F. Social, Ethical, Legal, and Human Issues**

F.1. Teachers will model and teach legal and ethical practice related to technology use

F.2. Teachers will promote the safe and healthy use of technology resources

F.3. Teachers will facilitate equitable access of technology for all learners

# Appendix II

## Technology Standards for School Administrators

### Framework, Standards, and Performance Indicators

I. Leadership and Vision – Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.

Educational leaders:

- A. facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision.
- B. maintain an inclusive and cohesive process to develop, implement, and monitor a dynamic, long-range, and systemic technology plan to achieve the vision.
- C. foster and nurture a culture of responsible risk-taking and advocate policies promoting continuous innovation with technology.
- D. use data in making leadership decisions.
- E. advocate for research-based effective practices in use of technology.
- F. advocate on the state and national levels for policies, programs, and funding opportunities that support implementation of the district technology plan.

II. **Learning and Teaching** – Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.

Educational leaders:

- A. identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement.
- B. facilitate and support collaborative technology-enriched learning environments conducive to innovation for improved learning.
- C. provide for learner-centered environments that use technology to meet the individual and diverse needs of learners.
- D. facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills.
- E. provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology.

III. **Productivity and Professional Practice** – Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others.

Educational leaders:

- A. model the routine, intentional, and effective use of technology.
- B. employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community.
- C. create and participate in learning communities that stimulate, nurture, and support faculty and staff in using technology for improved productivity.
- D. engage in sustained, job-related professional learning using technology resources.
- E. maintain awareness of emerging technologies and their potential uses in education.
- F. use technology to advance organizational improvement.

IV. **Support, Management, and Operations** – Educational leaders ensure the integration of technology to support productive systems for learning and administration.

Educational leaders:

- A. develop, implement, and monitor policies and guidelines to ensure compatibility of technologies.
- B. implement and use integrated technology-based management and operations systems.
- C. allocate financial and human resources to ensure complete and sustained implementation of the technology plan.
- D. integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage resources.
- E. implement procedures to drive continuous improvement of technology systems and to support technology replacement cycles.

V. **Assessment and Evaluation** – Educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation.

Educational leaders:

- A. use multiple methods to assess and evaluate appropriate uses of technology resources for learning, communication, and productivity.
- B. use technology to collect and analyze data, interpret results, and communicate findings to improve instructional practice and student learning.
- C. assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to inform personnel decisions.
- D. use technology to assess, evaluate, and manage administrative and operational systems.

VI. **Social, Legal, and Ethical Issues** – Educational leaders understand the social, legal, and ethical issues related to technology and model responsible decision-making related to these issues.

Educational leaders:

- A. ensure equity of access to technology resources that enable and empower all learners and educators.
- B. identify, communicate, model, and enforce social, legal, and ethical practices to promote responsible use of technology.
- C. promote and enforce privacy, security, and online safety related to the use of technology.
- D. promote and enforce environmentally safe and healthy practices in the use of technology.
- E. participate in the development of policies that clearly enforce copyright law and assign ownership of intellectual property developed with district resources.

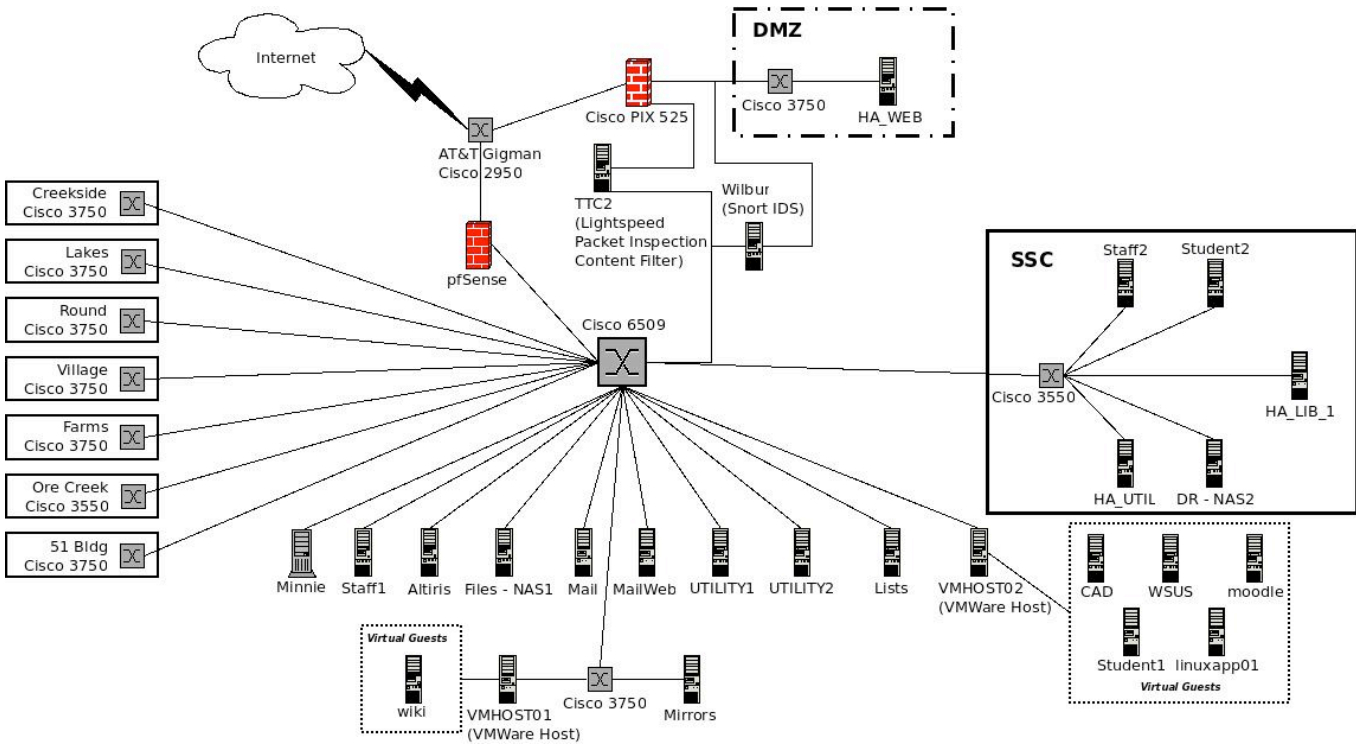
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# Appendix III HCS Software

Program	# of License	Building
Acrobat Reader 9.0	Free	HCS
Adobe Acrobat Professional 8.0	3	SSC, HMS
Adobe Acrobat Professional 9.0	9	HCS
Adobe Creative Suites Prem 4	Site	HHS
Adobe Illustrator 10.0.3	15	HHS
Adobe InDesign 2.0	15	HHS
Adobe In-Design CS	1	HHS
Adobe PageMaker 7.0	70	HHS
Adobe Pagemaker 7.0.2	1	HHS
Adobe Photoshop 7.0	15	HHS
Adobe Photoshop CS	1	HHS
Adobe Photoshop CS2	10	HHS
Adobe Photoshop Elements 2.0	35	HHS
Adobe Photoshop Elements 4.0	3	HCS
Adobe Photoshop Elements 7.0	20	SSC
Altiris	2200	District
CAD	60	HS
Camtasia Studio	40	FIS
Clock Shop	50	LES, RES, VES, FIS
Coin Critters	50	LES, RES, VES, FIS
Corel Graphics Suite 11	15	HHS
Exchange Server 2007	2500 CALs	
FrontPage 2000	11	HMS
FrontPage 2002	22	HMS
Ghost7.5 Corp Ed.	150	CES
Graph Club	Site	CES, LES, RES, VES
Intermapper	1	Tech
Kid Pix Delux	150	CES
Kid Pix Studio	Site	LES, RES, VES
Kidspiration	165	Elementary

Program	# of License	Building
Kidspiration	120	CES
Lan School	Site	FIS, HMS, HHS
Macromedia Contribute Pub Server	Site	HS
Macromedia DreamWeaver MX	18	HCS
Macromedia Studio 8 HS Site	Site	HS
Macromedia Studio MX	7	HCS
Mapmakers Toolkit	Site	FIS
Mavis Beacon Teaches Typing 16	5 Lab	FIS, HMS, SSC
Neighborhood Map Machine	Site	CES, LES, RES, VES
NumberMaze	Site	LES, RES, VES
Office 2003 Professional	50	SSC
Office 2007 Professional Plus	1500	HCS
Office XP Pro	1200	HCS
OmniPage Pro	2	HMS
Read Write Type	1	HCS
Reading Blaster 6-9	1	HCS
Snag-It	40	FIS
Star Reader 2.2.2	Site	Elem and Farms
Symantec Antivirus Corporate	50	HCS
Symantec BackUp Exec Cont Prot Svr Bun	1	HCS
Symantec BackUp Exec Win Agnet	7	HCS
Synchroneyes	Site	HCS
Synchroneyes Individual Lab	4 Lab	FIS, HMS
Trackit Server	600 User	HCS
Type to Learn 3	Site	CES, LES, RES, VES
Ultimate Writing & Creativity	200	CES, LES, RES, VES
Visio	3	HCS

# Appendix IV Network Diagram



# **Appendix V**

## **Hartland Consolidated Schools**

### **Electronic Data Disaster Recovery Plan**

In the event of a disaster, the Hartland Consolidated Schools recognizes that certain data processing functions must be restored in as short a time frame as possible. Student information and records, employee information and records, staff and student data necessary for completion of course work and operational data must all be restored.

#### **Backup Procedures:**

##### **Student Information**

Backups of all student information (Zangle) is stored on equipment at Wayne County RESA and are subject to the back-up and disaster recovery plan of Wayne County RESA.

##### **Data Files**

Full tape backups of staff and student files occur on the first Friday of every month. Differential backups to attached disk storage occur daily, and a differential backup to tape occurs weekly. Staff and student files are also replicated throughout the work day to the disaster recovery server located at the Support Services Center. The live data is located in the Data Center in the High School. Tape archives are generated monthly and kept offsite for a year.

##### **Email**

Full tape backups occur nightly. Tape archives are generated monthly and kept offsite for a year.

##### **Personnel and Payroll**

Files for personnel and payroll are stored on equipment at Wayne County RESA and are subject to the back-up and disaster recovery plan of Wayne County RESA.

#### **Disaster Recovery Procedure**

For situations when the disaster recovery plan must be used, the following steps would be employed:

1. Identification of affected systems.
2. Replace any hardware necessary.
3. Attempt to recover affected systems without use of disk or tape backups.
4. Use onsite tape backups for restoration.
5. Use offsite disk backups for restoration.
6. Use offsite tape backups for restoration of most current data.
7. If data is unable to be recovered using the previous steps, contact a company and arrange a service agreement to coordinate replacement of hardware and restoration of data.

#### **Insurance**

All electronic equipment used to store data is insured. By the end of each fiscal year, a current inventory is provided to the district's business office for submission to the insurance agent.

**Contacts**

<p><b>Dell Computer Company</b>  Nancy Kelly  Account Manager  248-594-3224  <a href="mailto:Nancy_kelly@dell.com">Nancy_kelly@dell.com</a></p>	<p><b>Network Services  Servers and Cisco Gear</b>  Inacomp Services  Farmington Hills, MI  248-477-5091</p>	<p><b>Network Services</b>  Gracon Engineering  Okemos, MI  517-349-4900</p>
<p><b>Library Server</b>  Follette Software  800-722-7424 or 815-344-8700</p>	<p><b>Veritas Back-up Exec</b>  Agreement Number 100523  Customer Number 152661  Serial Number B8325526920</p>	<p><b>OnTrack Data Recovery</b>  1-800-872-2599</p>
<p><b>Wayne County RESA</b>  Help Desk Support 734-334-1358</p> <p><u>Optiman (ISP)</u>  Dave Preston  734-334-1351  <a href="mailto:presto@resa.net">presto@resa.net</a></p> <p><u>Network/Server</u>  Vince Pizzo  (734) 334-1591  <a href="mailto:PizzoV@resa.net">PizzoV@resa.net</a>  Ann Marie Susalla  <a href="mailto:SusallA@resa.net">SusallA@resa.net</a></p> <p><u>Supervisor</u>  Jim Rarus  734-334-1349  <a href="mailto:RarusJ@resa.net">RarusJ@resa.net</a></p>	<p><b>Content Filtering/SPAM  Blocker</b>  Lightspeed Technologies  Regular Number: 800-444-9267  After Hours: 661-301-5714  Main Number: 973-688-0060</p>	<p><b>Surveillance Cameras</b>  Interstate Security  Rick  586-412-1202</p>