ACKNOWLEDGEMENTS

The original District technology plan was written in March 1999, revised in June 2004, and now in June 2008. Individuals from various stakeholder groups including; members of administration, Tech Cadre, System Operator's(SysOp's), and the District technology department, contributed in varying degrees to these revisions:

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Introduction (Return to TOC)

The following pages provide background to the current revision to the Central Square Central School District Technology plan. This revision is the result of the natural need to update any plan as a result of the passage of time and changes in the context in which the plan is applied.

Since the next three-year cycle will, for Central Square, be a continuation of the work that we have done for the last three years, it is important that any reviewer be aware of this background. As we develop our plan for the next three years, we will make appropriate reference to these background sections.

The OCM BOCES is authorized by the SED to review and approve technology plans for districts in the OCM BOCES region. The SED requires that plans be updated and reviewed on a three-year cycle. This revision updates the original plan drafted by the district in July 1999 with revisions in May 2004, and an abbreviated revision that took place in June 2007. As a result, this revision is being submitted June 2008 for OCM BOCES review.

The most important reason for this revision is to continue to provide a working document that addresses the instructional and management needs of the district for the next three years. This plan revision, if it is done well, can serve as a guide to help us make good decisions about the selection, procurement, and use of technology while taking into account the ability of the district to finance the plan.

We now know much more than we did nine years ago about what is required to support a technology plan appropriate for the needs of an organization the size of the Central Square Central School District. This knowledge has come, in small part, from what was known about implementing a technology plan at the time the original plan was written. However, for the most part, what we know now is the result of our experience implementing past plans and in dealing with the plans shortcomings.

Scope (Return to TOC)

The scope of this plan revision is to not only address that which is necessary to satisfy the requirements of the reviewing agency, but also to produce a document that reflects the true needs of the district. The 2004 plan focused primarily on instructional technology competencies. As a result, it did not detail our existing infrastructure or our plans for improving the infrastructure, nor did it address the technology needs of our non-

instructional staff. This latest revision will, hopefully, reflect the technology needs of the entire Central Square educational community and the state of our infrastructure.

History (Return to TOC)

In the mid 90s, the district made a commitment to grow the technology infrastructure and resources of the district. This effort was, in part, driven by the need to investigate the appropriate application of technology to instruction.

In the mid to late 90s, our technology infrastructure included a number of aged standalone Apple computers in instructional spaces and a small number of networked PCs over which various BOCES services were accessed via ISDN over copper telecommunication lines. In 1994 a planned implementation began that included the installation of a FDDI fiber plant throughout most of the district, and Token ring was in place at Cleveland from an earlier implementation. The design point for this fiber plant was the eventual installation of five networked workstations in each classroom. Pressure from teachers, administrators, students, and the community in general, prompted the district to procure hardware and train teachers to integrate technology into their instructional processes. This was clearly recognized as a major undertaking that, once implemented, would remain a growing and permanent part of our budget.

Technology is expensive. As a result, the SED recognized the value in encouraging districts to make well informed investments in technology and, through several CoSers, has made it easier for districts to purchase hardware. The purchase of software, training, and other support is a bit more difficult. All of the 1994-96 purchasing of hardware was done in phases via BOCES leases, on the order of $1.2 million. Once started, the aid generated by this expense would almost perpetuate the process allowing the district to add hardware in phases. In 1999-2002 the Superintendent chose not to renew those leases, returning these funds to the general budget in an attempt to have zero increase budgets for taxpayers for a few years, thus ending Central Squares investment in keeping technology current. In 2005 the BOE asked the Superintendent to begin renewing the districts commitment to technology. They chose to do this with an annual referendum vote of 1%, which currently nets a little over $190,000 each year.

The previous plans mainly covered installing computers in classrooms and covering student technology competencies, but did not include the people, time, and financial resources needed to build and maintain the network necessary to support what would eventually became a network of nearly 2,000 workstations. Another shortcoming of the 1999 plan was the realization that, while the plan milestones would eventually call for as many as six workstations in each classroom, the fiber plant was really only able to support one networked workstation in each classroom. This shortcoming has created the requirement that the district begin to look for ways to upgrade the fiber network to at least a 1 gig backbone design within buildings, and delivering at least 100 megs of data to each workstation.

Through the three formal procurement phases of the mid-90's, and added to by various smaller initiatives including one Capital project, the district had purchased nearly 2,000 new computers up to the time of the 2004 technology plan. These purchases have almost all been made through formal BOCES lease financed projects. Each phase has included the purchase of not only computers, but also printers, scanners, cameras, network switches, cables and other equipment to make the installation complete. The district has also purchased computers, servers, switches, other equipment, and software directly from various OEMs using categorically aided hardware and software funds, grants and other revenue sources. We have also taken appropriate advantage of other technology CoSers for software, training, and project support.

We are now at the end of Phase III, which is the last phase covered by the 1999 technology plan. There is still much work to do before we reach a level of investment and infrastructure that meets all the technology needs of the district. The biggest challenge or deviation from the 1999 plan that this next revision will address, is the need to replace obsolescent technology.

Future phases will begin to address the process by which older equipment is upgraded or replaced. In other NYS districts this typically happens on a three to five year cycle. These future phases should also address building an instructional media or instructional television network throughout the district. Before this can be planned, we must develop an understanding of the nature of media and determine how it will be used instructionally. This is not a new need, but one that we have not, historically, been able to meet. Media literacy has recently entered our formal curriculum documents, so we have the simultaneous opportunity and responsibility to develop curriculum, training, and plan the hardware and software resources needed to support these milestones.

It is important that we first understand the nature of instructional media before we to plan the procurement and installation of equipment, training, and human resources needed to support it. To this end, we will need to begin to develop an administrative understanding of media literacy and then push this out to our instructional staff during the upcoming school year.

A final element will be the upgrade of our wireless link to AA Cole, Clevland, Brewerton, CS Middle, Hastings-Mallory, and the District Office. As of the 2007 addendum to this plan these buildings were all connected wirelessly with an Avarion 10mb Ethernet bridge to the High schools POP, which over distances such as Cleveland and Cole produces as little as 1-2mb rates. An upgrade to these radio's to more current "Back Haul" 802.11 b/g equipment will offer 54mb connections or better. This will allow these buildings to share the bandwidth delivered over the OC3 circuit installed on the High schools main campus in 2007. This is currently planned as a BOCES project during the 2008-2009 and 2009-2010 school years.

With this improved capacity between buildings and racks within buildings, and 100 meg capacity from the rack to each computer via CAT5e homeruns, we can support the planned instructional and non-instructional use of technology district wide.

New Plan Requirements (Return to TOC)

The 1999 plan was not bound by any requirements other than those imposed by the district itself. We did hire CNYRIC CLT to act as a consultant to help the District Technology Committee write the original plan. The CLT had experience at that time in helping district organize their approach to plan writing and, presumably, was able to identify the various plan elements that should be addressed in a well-organized technology plan.

The 2004 revision addressed specific deficiencies found in the 1999 plan by the CNYRIC review committee.

The process is now much more complicated. Following is a discussion of the various specific and general requirements of the new plan revision. These requirements fall into a number of categories and come from the following sources:

- Central Square Central School District Board of Education
- Need to upgrade the network
- OCMBOCES
- CNYRIC
- SED
- Federal DOE
- CIPA
- E-Rate
- NCLB
- Good management practices
- Lessons learned to date
- Deficiencies identified in the original plan

Deficiencies in the original plan include the fact that it did not address the resources needed to support a network with as many as six workstations in a classroom and that it in no way addressed the district's non-instructional computing needs. These needs will be included in the new revision. This is not an issue of fault, as the writers of the original plan were just not aware of these needs.

Central Square Central School District Board of Education

Like any Board, the Central Square BOE has approved a number of policies and procedures that impact on technology. Primary among them is the Acceptable Use Policy

(AUP). This policy was written during the summer of 2002 and approved by the Board in September 2002. A copy of the District AUP is available at Central Squares policy website.

Like all policies, the AUP is somewhat general in nature and requires the help of various regulations and procedural documents before it can be implemented. These documents are all reviewed on a regular basis and shared with the general Central Square educational community in the fall through new employee orientations, homeroom sessions with students. The management of technology is a complex task and one that, from time to time, leads to the need to provide new or revised direction to the Central Square education community. This is done through newsletters, memos, meetings, and, when necessary, formal training. All provided through links on the district website.

A very clear need in the Central Square education community is for us to improve the reliability and efficiency of our data network. Regardless of the content, the faster that we can move data around our network, the more reliable and efficient it will be. As a result, the more likely it is that we will be able to use technology to support instruction. Our network was designed to support one computer at each fiber drop. While there are many drops throughout the district, the growing need for more computing capacity means that we may try to serve as many as eight computers by one drop. The result is that many users oftentimes experience delays, inefficiencies and instability in their access to networked services. In order for us to deal with the needs of our current network, and certainly any new installations in the future, we must identify cost effective ways to increase the bandwidth that we deliver to users.

Accepted Networking Industry best practices suggest that we redesign our network into a 3-Tier design. These tiers are: Core, Distribution (or Aggregation) and Edge. At the Network Core a high capacity Layer-3 routing switch has been installed to manage data flow between buildings, to core servers, and any data entering or leaving the District (for example traffic to and from the Internet). From the Core a multi-fiber trunk extends to buildings on our High School and Middle school campuses. While Wireless radios connect buildings that are not on the main campus of our High School, due mainly to distance between buildings and the cost of leasing fiber from phone companies. It would be our hope, as budget allows or Capital projects get planned, to upgrade this network infrastructure to a all copper Multi-Gigabyte frame.

In each building a Distribution (or Aggregation) switch is installed to manage data flow within the building, to any building servers, and any data entering or leaving the building. The Distribution Tier switches are being migrated using annual referendums, one building at a time from Layer-2 to Layer-3 devices with multiple fiber ports as required.

Edge devices (a combination of Un-managed and Layer-2 switches with multiple copper ports) have been installed in additional locations within a building and connect to the Distribution switch with fiber optic cable. Client computers are then connected to the

edge switch by CAT5e or CAT 5 copper cable which allow for the delivery of up to 100 mb/s of data to each computer.

It is our plan to upgrade all un-managed switches to Layer-2 and, as mentioned earlier, all building level Distribution Switches to Layer 3 so that we may begin to take advantage of their advanced features including Quality of Service (QoS), Security, Traffic Shaping, Remote Monitoring and Management, and IEEE 802.1q Virtual LAN (VLAN) Trunking.

Other than the obvious advantage of delivering more bandwidth to each computer, we also remove the very fragile and expensive to fix fiber connections from our workspaces and classrooms and replace them with inexpensive and easily repaired copper connections. This is a very practical goal and one that we must pursue. It is also very expensive and disruptive. As a result, unless we are able to do it as a capitol project, we must do this work in stages. A logical, phased installation as described above will be included in our plan.

OCMBOCES, CNYRIC, SED, DOE

The Oswego BOCES and CNYRIC are both service providing entities that we rely upon heavy for cost effective services in support of our instructional plan. At the same time, they are authorized by the SED and DOE to supervise our compliance with many of their regulations. Together we develop services that both meet our requirements and satisfy the regulatory needs of other entities. This is an unusual relationship, but one that works. In the case of this technology plan revision, the CNYRIC has been authorized to review and approve our plan against a series of criteria found in a series of NCLB and E-Rate compliant technology plan development documents.

CIPA

The Children's Internet Protection Act (CIPA) was signed into law on December 21, 2000. It has since been challenged and modified, but not in any way that changes its impact on public schools. The intent of CIPA is to protect children from Internet access through the district's network, to visual depictions that are obscene, pornographic, or (in the case of use by minors) harmful to minors. Specifically, schools are required by CIPA to put into place electronic measures that filter the content available to children on school computers connected to the internet according to a locally developed filtration profile. All Internet connected computers in a building, regardless of how they are connected or where they are located, must be filtered. The filtration will apply to Internet access by adults as well as minors. CIPA does allow for the filter to be disabled for adults engaged in bona fide research or other lawful purposes. Finally CIPA requires that the online activities of minors be monitored.

As a practical matter, it is impossible for our current filter to differentiate between minors and adult users of district equipment. As a result, adults experience the same type and

level of content filtration and use monitoring that our students experience. The exception to this is that from 3:15pm (after students have left the HS and MS) to 7:45am (before students arrive) the filters are turned down to a level that allows staff to access sites for research and to a lesser degree personal business. Content is still monitored when filtering is turned down and all access to pornographic content, hate sites, and hacker tools is blocked 24x7 for ALL users of our network.

The district has implemented formal filtering services through the CNYRIC. This process is modified through the use of block/unblock e-mail requests.

E-Rate

E-Rate, or the Schools and Libraries Universal Service Support Mechanism, provides for discounts on the purchase of telecommunications equipment and Internet access. There are many qualifications attached to it that impact a district's technology plan. The intent of these qualifications is to insure that the plan is complete and that students will benefit appropriately from the plan. These qualifications include:

- Clear goals and a realistic strategy for using telecommunications and information technology to improve education or library services.
- A professional development strategy to ensure that staff knows how to use these new technologies to improve education and library services.
- An assessment of the telecommunication services, hardware, software, and other services that will be needed to improve education and library services.
- A sufficient budget to acquire and support the non-discounted elements of the plan: the hardware, software, professional development, and other services that will be needed to implement the strategy.
- An evaluation process that enables the school or library to monitor progress toward specific goals.

The OCM BOCES has been authorized by the FCC, School Libraries Division (SLD), to review and approve our revised plan against these qualifications or requirements. Regardless of their source, the above list is a logical set of requirements that should be included in any plan regardless of the benefit that they derive.

NCLB

Among many other areas impacting the operation of schools, the No Child Left Behind (NCLB), legislation contains requirements that affect the way that school districts implement the use of technology as an instructional resource. Like E-Rate, NCLB contains very logical requirements; however, they are focused on the organization of technology dependent instruction as opposed to hardware and software support. The technology related requirements of NCLB include the following major elements and their descriptors:

1. Standards-based learning and student academic achievement through technology use
    - A description of goals aligned with challenging state standards for using advanced technology to improve student academic achievement.
    - A description of strategies for using technology to improve academic achievement and teacher effectiveness.
    - A description of how the district will integrate technology into curriculum and instruction, and a time line for this integration.
2. Access to advanced technology for effective teaching and learning
    - Steps the district will take to ensure that all students and teachers have increased access to technology and to help so that teachers are prepared to integrate technology effectively into curricula and instruction.
    - A description of the support resources, such as services, software, other electronically delivered learning materials, and print resources, that will be acquired to ensure successful and effective uses of technology.
3. Technology integration and use through effective professional development
    - Ongoing, sustained professional development for teachers, principals, administrators, school library media personnel to further the effective use of technology in the classroom or library media center.
4. Research-based technology programs and accountability measures
    - Promotion of curricula and teaching strategies that integrate technology that are based on a review of relevant research and leading to improvements in student academic achievement.
    - Accountability measures - a description of the process and accountability measures that the district will use to evaluate the extent to which activities funded under the program are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to reach challenging state academic standards.
5. Effective and integrative uses of resources for educational technology infusion
    - A description of the type and costs of technology to be acquired with provisions for interoperability of components.
    - A description of how the district will coordinate district funded technology-related activities supported with funds from other sources.
    - A description of how district will encourage the development and use of innovative strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance learning technologies, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources.
    - A description of how the district will use technology effectively to promote parental involvement and increase communication with parents.
    - Collaboration with adult literacy service providers.

Good management practices

Like all IT organizations, those that operate in an academic environment are bound by the laws of the land, laws of physics, and practices that enhance efficiency. Schools, being diverse in the nature of their requirements, are an especially difficult environment in which to deliver IT services. We have found that, if we stay focused on supporting instruction, we are able to make the decisions needed to efficiently provide technology services to our organization. This sometimes means that we have to make difficult decisions about what to implement and when. We are also bound to deliver technology services in an environment that is safe and secure for all users, especially, students. These requirements result in our spending time and money on resources (such as network infrastructure) that may, to many, look like we are not at all supporting instruction. The real challenge here is not in knowing what to do; as we have IT staff who are well trained, but it is making our general school community aware of what we are doing, why, and, especially, how it will effect instruction.

Lessons learned to date and deficiencies identified in the original plan

After three years, we have learned much about building and running a large academic network. As a result of these lessons, we have also been able to identify a number of deficiencies in the 1999 and 2004 plans. It is our hope to remediate these deficiencies in the revised plan. These lessons learned and deficiencies have already been mentioned in the history section above. The major deficiencies include:

- The previous plans only addressed the needs of our instructional staff. We have since realized that we have a large number of hardware, software, and training needs among our non-instructional support staff that have been ignored. As a result, we have been mainly reactive to their needs. In this revised plan, we hope to address the technology needs of the entire Central Square educational community.

- A major flaw in the previous plans were that, while the district fiber network was designed to provide the bandwidth needed to support only five computers with server based applications, and no IP printing, in each classroom, changes in instructional technology have called for as many as six to nine computers and other networked devices in each classroom. As a result, our current fiber plant will not provide the bandwidth needed in most classrooms. The remedy is very expensive and time consuming. District Technology staff are working through a phased installation of network upgrades that will begin to address this deficiency.

Vision Statement (Return to TOC)

Like any well-organized plan, the Central Square CSD technology plan is based on a vision statement. The original statement was:

> **To help teachers and students learn to use the right technology, the right way at the right time to meet instructional goals.**

Based on the deficiencies identified in the original plan, the revised vision statement is:

> **To help staff and students learn to select and use the right technology, the right way at the right time to meet instructional goals and do the work of the district.**

Role of District Technology Committee (Return to TOC)

The role of the District Technology Committee has evolved over time. They were the authors of the original plan. Once the plan was implemented, they became the point of contact between the District Technology Department, District Administration and building level staff. The Central Square CSD is a large community and it is very difficult for one person or even a small group to have an authentic conversation with this community as a whole. The District Technology Committee, like many other district level advisory committees, helps to maintain this very important level of authenticity in the communication of information.

Since the original plan had an instructional focus, so to did the committee. It was made up of teachers and administrators. Since the scope of the plan has evolved to include members of the Central Square CSD community, so to should the representation on the District Technology Committee. Membership representation to this committee fluxes, however we attempt to look for committee members from unrepresented constituencies to include, students, parents, non-instructional staff, community, business, and higher education. These may be difficult openings to fill, but we feel that it is very important to seek input from these groups as we move forward with technology.

The following table represents the current and planned committee representation.

Representing	Current	Planned
District Office Administrators	Yes	Yes
BOE	Yes	Yes
Building Administrators	Yes	Yes
AA Cole	Yes	Yes
Brewerton	Yes	Yes
Central Square Intermediate	Yes	Yes
Central Square Middle	Yes	Yes
Cleveland	Yes	Yes

Hastings-Mallory	Yes	Yes
Millard Hawk	Yes	Yes
P.V. Moore High School	Yes	Yes
Non-Instructional Staff	No	Yes
Students	No	Yes
Community	Yes	Yes
Business	No	Yes
Parents	No	Yes
Higher Education	No	Yes

Current Plan Review and Revision Process Timeline (Return to TOC)

The plan review process is relatively straight-forward. The goal is to get final approval of the revised plan from the SED in June. Backing up that date against known process milestones provides a significant amount of time to write, review and rewrite the plan to meet both the SED requirements as well as achieve a plan that can be used by the district to guide it through the next three years.

The district recognizes that the real worth of the plan is as a guide. To that end, the plan must be reviewed on at least a yearly basis to insure that it reflects the needs of the district as modified by time, budget, changes in technology, changes in need and circumstance. This review is conducted during the summer as District Technology staff review the previous year and prepare for the next school year. It is reviewed again in preparation for the yearly technology update presented to the BOE in March/April prior to each years new budget planning meetings.

Based on lessons learned from these reviews, formal policy changes, additions, or deletions are made and the revised procedures are sent to the BOE for approval.

Milestone	12/3	1/7	1/14	1/21	1/28	2/4	2/11	2/18	3/2	3/9	3/16	3/23	3/30	4/7	4/14	4/21	4/28	5/4	5/11	5/18	5/25	6/1
Develop/Update Budget																						
Write Draft revisions to Plan																						
Review With Technology Committee																						
Initial Submittal to BOCES																						
Review by BOCES																						
Revise Per BOCES Comments																						
Review with BOE																						
Revise Per BOE Comments																						
Submit to BOCES																						
Approved By BOCES																						
Approved By SED																						
Implementation of Approved Plan																						

Alignment with Federal, State, BOCES and Local Standards and Curriculum

(Return to TOC)

The purpose of technology is to support instruction. Instruction is defined, in part, by the various federal, State, and local standards documents that control what we teach and when. It makes sense then that the use of technology should be aligned with these documents to insure that we do, if fact, use technology to support instruction.

Technology appears in all of the standards documents in two ways. One is when technology is, itself, the subject of the outcome. Examples of this can be found in the MST Standard 2,5, and 7. The second way that technology appears in the standards is as one of the recommended tools that might be used to meet an, otherwise non-technology based, outcome. Examples of this can be found in ELA Standards 1 and 3 and MST Standard 1, 3, 4, and 6.

District Instructional Staff began researching and writing a K-12 Technology Competency guide during the 2002-2003 school year. The purpose of the K-12 Technology Competency guide was to begin a process by which we can integrate technology skills and align them with technology dependent outcomes found in the various standards and curriculum documents used throughout the district. This process is underway currently with revisions to each curriculum.

The Director of Instructional Technology is both a participant on and advisor to the various curriculum review committees working in the district. For example, the Director of Instructional Technology worked with the Assistant Superintendent for Instruction to help these various groups understand the role that technology can play in instruction. All new curriculum documents are being created using a model developed by a consultant with whom we have been working since the 2003 spring. Through the work of these committees, technology continues to emerge as both an opportunity to support instruction and a challenge to the district to help staff learn the potential of technology and how to integrate it into their regular instructional processes.

Staff Development and Training

(Return to TOC)

Other than to acknowledge the need for it, we, like most districts, have struggled to adequately train our staff. Several sources suggest that as much as 30% of a district's technology budget should be applied to training. The SED and BOCES confirm this estimate in their Model Schools and other CoSer guidelines. Currently most of this training is only available during the school year via Services such as model school and the Teachers center. Until we can afford to budget the salaries of Technology Integration Specialists, we will likely not be able to approach such a lofty target.

Funds that directly support technology training are included in the district wide staff development budget. The amount actually budgeted each year for technology training has varied. While much lower than the amount that was in the 1999 plan budget, and certainly less than 30% of the current technology budget, what we spend on training each year is, to a great extent, controlled by time. There is an enormous amount of pressure put on teachers to attend training. If the funds were available, and teachers participated in all the training that they are, theoretically, suppose to take, they would spend a significant amount of time out of the classroom. As a result, they would not be able to attend to their primary job. Teachers in Central Square are very sensitive to this fact and, as a result, are reluctant to commit to the training that we all know they need. This is a practical reason why it makes sense to centrally plan all training and provide the same alignment in our training that we try to provide among our curriculum documents. The more important reason why we centrally budget for and plan training via our PDC is to make sure that technology is correctly integrated into all instruction. This doesn't happen unless our technology staff also participate in the curriculum review and general training planning process.

The 2004 Plan included the beginnings of what has become the District Technology Training Cadre. We now have teachers teaching other teachers the skills that they have learned in their own classroom. While very difficult to organize, manage and quantify, the skills that we all learn from each other are probably the most significant, because they are learned at a time when they are most relevant and from someone who we trust an with whom we can be honest. Even though our friends from Oswego BOCES Model Schools and CLO are long time teachers with a considerable amount of credibility with our staff, we are generally less willing to admit our deficiencies to someone in a formal training relationship than we might be to someone next door who we see everyday.

While created out of necessity, our approach to training works for us. With our Tech Cadre we are able to provide large group technology training. It is our goal to some day have Technology training specialists who can teach small groups or individuals for those who either aren't ready for the skill or have no reason to apply it once they get back to the classroom. With "Just In Time, Just Enough Training", it might take longer to get people trained, but it is more efficient and certainly more authentic.

Through the district Professional Development Committee (PDC) each year we have offered Technology Training on staff development and Superintendents days. Throughout the year, our PDC Committee members, Curriculum Consultants, and others compile a list of general technology training needs.

We most often rely on outside trainers for our non-staff development days. We work closely with the Model Schools and CLO staff at the Oswego BOCES, and the Oswego County Teacher Center to include their offerings into the training opportunities that we offer staff. We also rely on the Model Schools and CLO to be presenters during our PDC

Conference Days and in our Open Registration classes. We also take advantage of corporate training webinars when we purchase new software products to train our Tech Cadre people, so that they can return to their buildings and train other staff.

In summary, while we do not necessarily meet the 30% benchmark for funds spent on technology training, we are confident that our approach meets the current training needs of our staff, as well as the reality of time available for them to participate in this training. We are; however, able to leverage many formal and informal relationships into significant training milestones that are very difficult to quantify in budget terms. More importantly, we have achieved the goal of integrating the planning and delivery of technology training into our general training plan in support of an integrated curriculum. This approach to training will continue in this revision to the 2004 Plan. We also include an assessment of the training needs of our non-instructional staff to support their needs. Fortunately, their needs are less varied than our instruction staff and we can apply the traditional tools training model to their training plan.

Network Description (Return to TOC)

The Central Square CSD network has evolved since 1995 both in response to the goals of the plan and as a result of changes in technology. Prior to 1995, each building was a standalone LAN with little connectivity among buildings other than in the sharing of access to BOCES services. Most classroom computers were standalone PCs or MACs with some very small LANS in the business and technology instructional labs in the secondary buildings. In 1994, and not as a part of any formal technology plan, the district awarded a contract to install an optical fiber based network throughout the district. Each classroom and office space was wired with 4 multimode and 2 single mode optical fiber runs and inexpensive 10 Meg media converting hubs. The critical design points were also 10 Meg fiber delivering 10 megs of data to one computer. While this was a major, and very expensive, project, it did not, nor does it yet, support the connectivity required. Additionally, fiber is fragile and expensive to fix. A typical classroom is not a very fiber friendly place. As a result, damage to the fiber plant has grown to be a large network maintenance and reliability challenge, not to mention expensive. Deficiencies in our existing fiber network design will have to be addressed in future building renovations and with advances in copper connectivity we should be able to achieve this at an affordable rate.

It is our feeling that instruction should drive the design of the network. Obviously, there are network design elements that are common to all high-end networks that can't be compromised. We do feel that, where possible, it is important to include the classroom teacher, building administrator, and students in the design of those network elements over which we have some control. This could be as simple as asking the teacher in a particular room where they would like to have a computer jack installed. This type of conversation takes time, but we have learned that it helps us to get buy-in from teachers and other users where we have the option to do so.

Following are some approximate statistics that describe our current network:

Users	6,000 (5,000 students, 1,000 staff)
PCs	1,800
Macs	100
Servers	25
Network OS	Microsoft server 2000, MS Server 2003 enterprise
Desktop OS	W2000, WinXP and OS9/OS10
Fixed Labs	1 at each K-5 building, 3 at CSMS, 7 at PVM HS
Mobile Labs	0
Model Classrooms:	
Established 2006	6 in K-5 Classrooms (Brewerton Elem), 0 Grades 6-12
	2 in K-5 Libraries or Labs (HME and Clv)
Planned for 07-08	6 in K-5 Classrooms (Hastings Elem and CSI), 0 Grades 6-12
	2 in K-5 Libraries or Labs (MHP)

In the past year there has been a shift back toward whole group instruction and so teacher have had a growing need for time in a lab. Because of this shift there is a growing need for more lab time and therefore more computer labs. Currently our MS and HS only have one lab that is generally available to the entire instructional population, All others are dedicated to a department or course of study. There is a need for at least one more lab in each building, but beyond the cost of doing this we have a severe space shortage.

Each network user belongs to a group that has a particular set of rights and privileges associated with their anticipated needs. These rights and privileges can change, subject to need and a review by the building administrator and District Technology staff. User access is safely and securely managed through a unique combination of user names and passwords.

Each user is issued secure storage space on their building server. All of their data is stored on the building server where it can be automatically backed up on a daily basis and restored, if necessary.

We operate a virus detection package on the network that will scan all files, including email attachments, for computer viruses. Generally, we do not allow anyone to connect non-district owned and managed equipment on our network. We have made exceptions for Teacher owned laptop's that have XP Pro and we are allowed to add our Anti-virus too.

We continue to install more local laser printers. Laser printers, while initially more expensive, are much easier to network and are less expensive than ink jet printers to operate. Most of these printers are black and white only. We are also installing high-end

color laser printers in each building. They are located in a space where their use can be monitored by office or library staff, but are still accessible by the building staff.

In order for us to move forward with our technology plan, we must address the fact that Network hardware on our fiber network does not provide the bandwidth needed to support todays media rich content with multiple workstations in each classroom. This is, in part, due to the limitations of the current 10 Meg FDDI fiber and the fact that five of our outlying buildings still connect back to the main data room at the High School (HS), via 1mb wireless radio's. The remaining buildings on the main campus are connected back to the main data room over a fiber connection.

At the same time, we also need to address the fragile nature of optical fiber connections. Changes in network technology in the last few years have resulted in what may look to some like a step backwards. We are now able to transmit up to 1 Gig of data over CAT5e copper cable. Copper cable is also much cheaper than optical fiber to install, better suited for a classroom environment, and easier and cheaper to repair if it is broken. We have discussed the possibility of rewiring

Our network operating system is Microsoft. Our Servers are split with aapproximately 50% having Server2000 and the remaining having Server2003 Enterprise. Our desktop operating system is approximately 60% W2000 (PC), 30% WinXP, 5% OS 9 or 10 (Macs), and another 5% other OS's. In support of the safety and security requirements of CIPA, as well as good network management practice, our PC desktop is heavily monitored with applications such as Aristotle and Altiris. And internet content is filtered by our BOCES X-Stop filter.

We try to keep our software applications common across all platforms and user groups. This allows for ease of reimaging and it also allows us to more efficiently purchase software licenses. We do have some applications that are only installed in the primary and special area classrooms and several that are only installed in special education classrooms. Managing software in an academic environment is most challenging in that users want us to install a large number of applications, many of which are not well suited for a W2000 networked environment. This process is controlled largely through Board policy and regulation, but each case is reviewed by the Director of Instructional Technology, and is considered as a possible 'future standard'.

Partially as a cost savings measure we are beginning to look at open source applications such as Open Office 2.1 in place of Microsoft Office. We will soon install Open Office in Hastings-Mallory classrooms to get real time experience with students and teachers using it. Obviously, the goal is to explore other options and reduce what we spend on yearly software subscriptions to either reduce the overall technology budget or shift these funds to the purchase of other instructional applications.

Maintenance, Evaluation and User Support (Return to TOC)

With a growing network of over 1,800 workstations and 6,000 users, we have a large need to manage and perform a number of maintenance operations. Unfortunately, much of this equipment is older and only about 50% is currently under warranty. Repairs are managed either directly through the original equipment manufacturer (OEM), or through the BOCES. Unplanned maintenance is managed through the district helpdesk. Planned maintenance is, typically, scheduled for breaks and during the summer; however, occasionally, it has to be done during the regular school day. In this case, we try to keep the disruption to a minimum.

Evaluation of our maintenance needs is a challenge for us. In 2007 we began use of a new online helpdesk and inventory package from Oswego BOCES. The tool has helped us to streamline the tracking of work requests and we believe over time, perhaps within a year, it will help us plan our preventative maintenance, evaluation and replacement operation through its complete and dynamic physical inventory of all of the equipment in the district. Our inventory of equipment is updated as it is received allowing us to track the current location of equipment by building and room location. We also are able to remove equipment by SN as it is taken out of service. By relating this physical inventory data with our service and repair data, we can do a better job of managing whole classes of equipment to determine when to upgrade, relocate, or discard it.
We started a physical inventory during the summer of 2003, giving us a record of all of our computer and AV equipment with each piece being tagged with either a CSSD or BOCES unique bar code sticker. Eventually we would like this database to be automatically updated by a portable PDA based scanner that can be carried by our technicians. As they make changes that affect the recorded information in the database, these changes would be made in the database when the PDA/scanner is synchronized to the network.

With the exception of additional labs and some office locations, we have installed most of the equipment that we will need. While the workstation count may not go up, over time, we will be faced with the need to make wholesale replacements of large numbers of workstations resulting in the need for a formal replacement plan. We have been unable to fund the purchase of these new (replacement) workstations through the same lease programs that we used to purchase the original workstations in 1997-1998. For nearly 8 years no hardware budget has been available, except for a HS capital renovations project and $80,000 Categorical aid budget. However, in 2005 the district introduced a annual 1% referendum for technology which produces approximately $185-195,000 annually. Although this amount has proven capable of addressing the needs of a 20 room elementary building, it will take 12-15 years to address our districts Computer needs alone, and not helping with the A/V or other technology needs. A return to a regular budget of at least $5-600,000 annually has been suggested to the BOE, so that the district might be capable of achieving a 5 year obsolescence plan.

In some cases, we may only replace the CPU and continue to use the existing monitor, keyboard, mouse and other equipment. In other cases we may replace the entire installation with smaller footprint desktops with the goals of both upgrading the equipment and creating more room on the desk or table.

Most of this maintenance is done by our in-house staff of four Computer Specialists. We do have a .4 FTE BOCES Tech working in the district and will continue to do so in the future. The maintenance activities of this staff are scheduled through our BOCES helpdesk database. Tickets are input by our SysOp's and the Director of Technologies Secretary who also acts as the Help desk phone line. The Computer Specialist self manage their daily activities based on a set of building assignments, priorities, and their knowledge of the needs of each building. The Director of Technology also monitors calls and looks for opportunities to gain efficiency and serve special needs in buildings as identified by the building administrators.

We constantly have a backlog of work to do and deciding what to work on is often a challenge. In some cases we have no choice, as the fault is affecting connectivity for large numbers of users. In general, our work priority order is:

- Network/Servers
- Food Service
- HVAC
- Labs
- Libraries
- Offices
- Individual Classrooms and Users

We do talk to building staff to determine if they need us to deviate from this order to support special projects in the building.

It goes without saying that the operation of the network will always take priority over the end user locations described above. Each day, outside of regular school hours, key District Technology staff remotely access and assess the health of the network. Based on this assessment, we may already have our initial tasks defined for us when we arrive each morning.

User Safety and Security (Return to TOC)

User (especially student user), safety and security have become very important network design criteria. This is, in part, a result of the normal considerations taken into account when any network is designed, but it is largely driven by the requirements of the Children's Internet Protection Act (CIPA). For many older networks running pre-W2000 on the desktop, it is very difficult to achieve the safety and security called for in CIPA. Nearly 100% of our PC desktops are now all Windows 2000 or XP and the Macs are OS

9.0 or 10.2. In both cases we can very securely lockdown our workstations providing the safety and security required by CIPA.

Like all networks, ours is constantly under attack from a variety of outside forces. We currently maintain a Sonicwall firwall and a OmniPeek Network analyzer to monitor both internal and external traffic. We also maintain A keystroke monitor from Seargent Labs that allows us to monitor malicious or inappropriate use of our PC's. In addition, we run a BOCES hosted Internet content filter, X-Stop and apply a number of rules to the way that we configure our email gateway to strip off potentially problematic content.

Our biggest security, and resulting safety, risk is from within. Without educating our users about how to safely use our network resources, we negate many of the hardware and software interventions that we have installed. In spite of ongoing training in the proper use of our network resources, we do occasionally have a user perform an operation that puts our network at risk. Like any good teacher, we treat these as teachable moments and try to help the entire user community learn from the experience.

These interventions are not always received with open arms. Our user community generally has a standalone point of view to computing. As a result, some resent the confinement that these security and safety measures create when they compare their access at school to that which they have at home.

Acceptable Use Policy and Data Network User Guide (Return to TOC)

Like all well managed IT dependent organizations, we have an acceptable use policy (AUP), that outlines proper user behavior while accessing district technology. This policy is an active, Board approved, policy that will continue to go through revision as time and condition warrants. Like any policy, it is generic in nature and requires a number of district and building level regulation and procedure documents to help administer the policy. We remind users, at each log-in via a pop-up box, of their agreement to follow these policies.

Copies of the Acceptable Use Policy and Regulation are provided at
Student http://www.cssd.org/district/policy/4526.html
Staff http://www.cssd.org/district/policy/4528.html

District Technology Department (Return to TOC)

While all staff play a role the creation, delivery, and maintenance of district technology services, the district Technology Department is key to all of these roles. The District Technology Department has grown from a small staff of one part time TOSA, to a staff of five full time employees and one part time BOCES employee since 1998. This growth, has not kept pace with the growth of our network. As a result, each Computer Specialist

manages an average of 600 workstations. A more realistic goal is a 1:200 ratio. In order to attain this ratio, we would have to add a considerable number of pure technology staff. To help meet the need for technology support we have the role of SysOps in each building to deal with the low end service calls as well as a number of other technology based needs. Finally, as the concentration of computers increases so to will our need to provide integration support. To begin addressing this we have developed a Cadre of Teacher trainers in each building. Typically two people who are willing to be the first to try new things and then take them back to their colleagues at staff meetings and PDC staff development days. The necessary renewal of obsolete technology can't all happen in one year, but it will remain a recurring request each year with the hope that we can grow as our budget will allow.

The District Technology department is separated into administrative staff, pure technology staff, and technology integration staff. However, at this time there are now fulltime integration/training staff. This role is filled by parttime volunteers as a part of our District Technology Cadre Teacher Trainers. The purpose of each group is self explanatory by title; however, the following guide may help identify their specific roles.

Contact	Title	Phone/Email	Contact For
Nancy Tomaino	Department Secretary		general departmental contact, to initiate a service call
Yvonne Meury	Computer Specialist	668-4231 x-1235 440-7219 Ymeury@cssd.org	general network administration, X-Stop, new/revised user accounts, server and connectivity issues
Brian Taylor	Assistant Network Technician	668-4231 x-1235 Btaylor@OswegoBOCES.org .4 FTE BOCES (Mon. & Tues.)	general network administration, X-Stop, new/revised user accounts, server and connectivity issues
Kathleen Plete	Computer Specialist	440-7218 Kplete@cssd.org	general hardware and software installation and other service issues (Food Service Database focus)
Alice Lee	Computer Specialist	440-9785 Alee@cssd.org	general hardware and software installation and other service issues (PC focus)
Dean Schlueter	Computer Specialist	440-7216 Dschlueter@cssd.org	general hardware and software installation and other service

			issues. Network Printing and Hardware repair (PC focus)
Jacques Monica	Director of Technology	668-4352 Jmonica@cssd.org	All questions

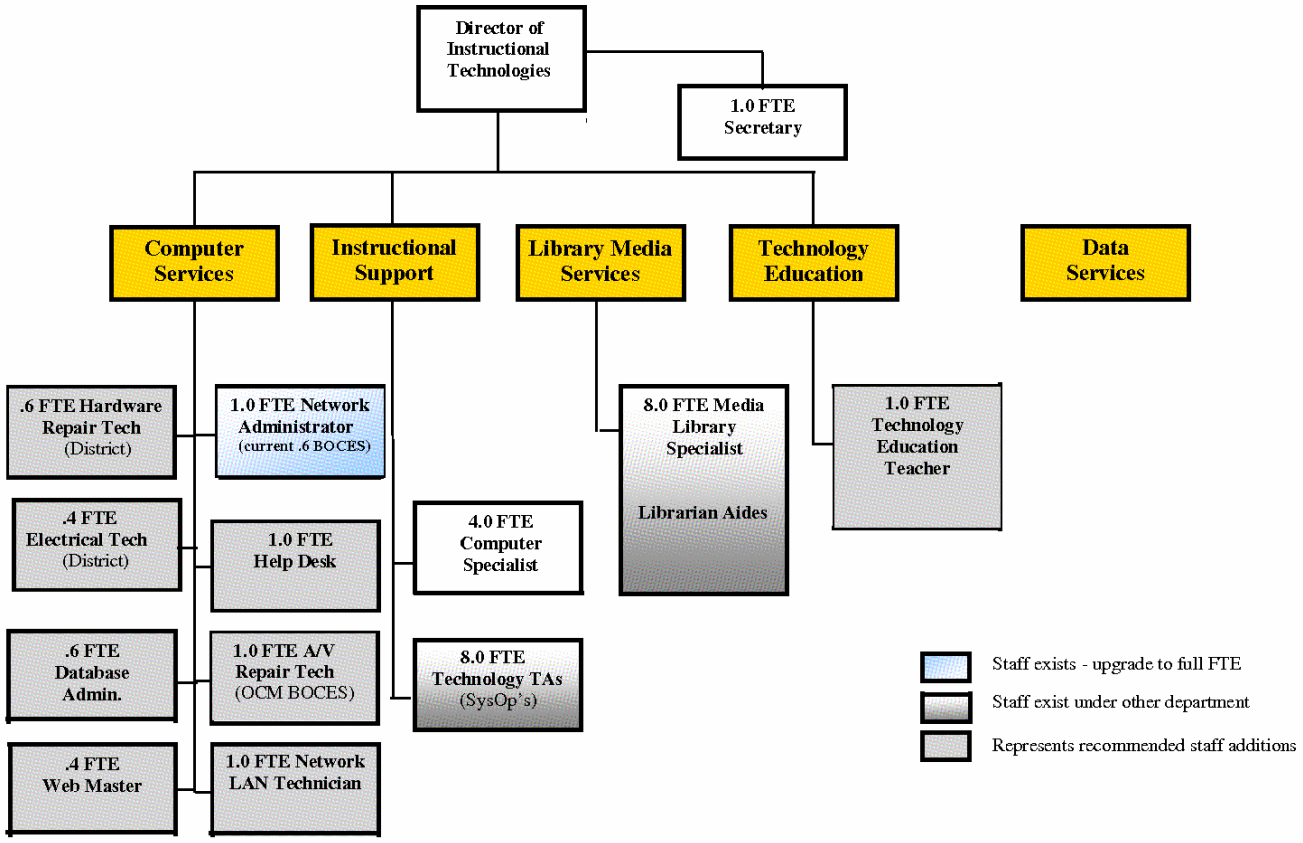
One specific area of need that has grown in the last two years that remains under supported is adaptive technology. With nearly 1,000 identified students in the district, we are asked to install and maintain a growing list of very need specific software and hardware. In order for this to be managed correctly, we need specially trained staff who have an understanding of both the technology and the disabilities that it is addressing. This need is shared by both The District Technology Department and Pupil Services Departments. Attempts to add this staff have not survived the budget process in the past and it will continue to be a challenge for the Technology Department alone to meet these needs.

The district designs, presents, and administers a large amount of staff development related training. The tracking of this training is currently not centralized and, as a result, it is difficult to summarize the training that any one staff member might have participated in during a specific period of time. This need has become even more important with NCLB and the 175 hour training requirements for new teachers.

We have looked at web based software packages that allow us to track all forms of staff development. The CNYRIC supports My Learning Plan. This is a very well designed web based package that addresses many of the training administration needs that we have. We made an initial review of the product in 05/06 and implemented it during the 2006-2007 school year.

It is important that the Central Square educational community know what to expect from each of the entities that make up this community. Schools have a fairly good idea what the more traditional elements of their organization do and what they can expect from them. Since technology is fairly new, schools are just beginning to define the roles that technology staff play in our organizations. While the role of instructional technology was fairly well defined in the original 1999 plan, it did not address all of the technology needs of the district. We hope to identify all the needs and begin to develop, as a part of this revision, a plan to meet all of these needs. These needs will always be evolving, but hopefully we will be able to have the right staff in terms of training and number in place to satisfy these needs.

CENTRAL SQUARE **CENTRAL SCHOOL DISTRICT INFORMATION TECHNOLOGY DEPARTMENT**
Proposed Staffing Model



Equity (Return to TOC) Our district spans a very diverse demographic as well geographic area. We are a rural district in transition to a more professional bedroom community of Syracuse. We are very cognizant of our roots and still maintain a large rural poor population. So we are very sensitive to issues of equity. We attempt to maintain equity of access to technology primarily by keeping the computer to student ratio low. NEW technology, while desired, isn't as important to us as access to technology. Currently we have a nearly 5 to 1 student to computer ratio with 100% of classrooms having access to the internet and a basic set of tools such as a word processing suite. Also when we purchase our instructional software we purchase it for all buildings. Recent purchases of Everyday Math On-line, Learning.com, School Island, and in the 07-08 school year Read Naturally, serve as examples. Many of our instructional software programs are web based providing access not only at school but at home. For the handful of students that do not have computers at home, we have tried to encourage after school access to computers for them.

Alliance and Partnerships (Return to TOC) Our lack of sufficient budget to support a 3 or 5 year plan for obsolescence has required us to forge several partnerships with local businesses. Through these partnerships we have secured donated equipment sufficient to replace nearly a full third of our most dated equipment or roughly 500 PC's and MAC's in 2 years (2006-2007 and onward). Businesses such as Upstate medical, Obrien and Gere, STS superform, have been the primary donors, but we have also leveraged via Oswego BOCES other Districts returned equipment that is in good working order and half the age of our current dated technologies. These alliances have been almost exclusively in the form of Computer and monitor donations, but there have also been a few monetary donations as well. Until our budget can better support our Instructional technology needs we will continue to pursue these avenues on an as needed basis to keep us from falling too far behind.

Ongoing Plan Evaluation, Review, and Revision (Return to TOC)

A plan is a beginning, but it does not necessarily define your ultimate destination. This has been the case for this Plan and it will probably be the case for any revisions to it. We are committed to making technology part of our instructional support network rather than for technology to stand alone as a separate physical and organizational entity. There are times; however, when this may not seem to be the case, as the process of supporting network connectivity and the many pure technology tasks that go into it appear to be far removed from instruction. As long as supporting instruction remains our long term goal, we are confident that our daily decisions about how we allocate human and other resources will also be in support of instruction. As a result, we will evaluate any technology plan against the same criteria that we use to evaluate our entire instructional

program. It is recognized that there will always be the pure technology goals needed to support any network regardless of the product that it manages.

In order for us to be supportive of instruction, we need to be apart of the planning for instruction. District Technology staff participate in all curriculum review committees as either members of the committee or as advisors to the committee members. We also participate in the long range planning of most staff development activities. Through our participation on these many instructionally based committees, we are able to maintain an instructional focus to our activities and integrate them into any revisions to the technology plan. Elements of the plan are reviewed, as necessary, during the regular technology committee meetings. Participants on the committee communicate the results of these discussions to the buildings or constituency that they represent and the Director of Technology and Administrative members of the committee communicate information from the buildings to the central office staff and Board.

The plan contains long range goals that we have come to call phases. Over time the milestones that make up each phase may remain relatively constant; however, the schedule by which they are accomplished may change subject to progress in related areas, the availability of funding, and the evolution of technology. The Director of Technology and District Technology Committee review the plan at least yearly and it is updated each summer. The status of the plan and any necessary changes are communicated to staff and the Board in the late fall.

As a result of this review, procedural changes are communicated through revisions to the Data Network Users Guide and, if necessary, formal changes to the various technology related Board policies and procedures are recommended.

It is very difficult to associate any specific event with a change in student behavior or achievement. This is also true of any investment in instructional technology. A review of the literature provides a dearth of research that will show any relationship. This fact not withstanding, the world of work and the management of many human processes has been enhanced by technology. As a result, there is no doubt that equipping students with a basic technology literacy and set of technology tools is, in and of itself, a necessary and valid goal. To this end we have begun to develop a skills inventory. This inventory is a complex document in which we have begun to identify technology dependent goals from various curriculum documents and specifically identify the skills needed to accomplish this goal. By associating the technology skill with the grade level and curriculum goal, we attain the alignment needed to plan the delivery of the technology skill and curriculum goal. In Central Square this is not so much a static document, but rather a process that is maintained in a database. As these alignment relationships change or skills are added, removed or refined, the relationships can be changed through a manipulation of the database. This data is maintained in a large Access database. A copy can be requested from the District Technology Department. We hope to extend this database to all of the

new curricula as they are developed. A schedule of the curriculum review and revision process is provided as attachment 15.

In the end, the evaluation and revision of the district technology plan will be closely aligned with our review of all instruction and it is that review that will drive any changes needed in the technology plan. This is with the exception of the evaluation of our pure technology infrastructure. While its design will be enhanced to support instruction, we are also bound by the many rules and regulations that control the design of any network regardless of the data that it delivers.

Communications (Return to TOC)

Central Square is a large, moderately diverse community and the correct way to communicate with one segment of our community may not work with another. We are lucky to have a number of very talented people working to integrate technology into instruction and who also have the respect of their peers and the trust that results from this respect. Obviously, the best way to communicate a message is face to face and it is through these people that we do our best communication. Unfortunately, sometimes the message is complex and the audience is large. In these cases we look to these for alternate methods of communication. Like most districts we employ the following:

- Face to face
- Small formal meetings
- Meeting minutes
- Participation on various advisory committees
- Public hearings
- Formal and informal training sessions
- Memos
- Letters
- Reports
- Newsletters
- The District website
- Email
- Press releases
- Formal notices in our official newspaper of record
- Phone calling
- Signage
- Staff participation on local and regional boards
- Academic, athletic, and cultural performances
- Board elections
- Budget and proposition votes
- Commercial television
- Newspapers

We do not have a full time public relations officer to act as our liaison to these many forms of the local communications so we attempt to coordinate most communication through the district Superintendents offfice. We also do not have a district web master, The Director of I.S. has taken on most of these roles and a 'volunteer' web master has been identified in each building. They manage the district and building website pages and help staff create content for their individual pages that link to the district website.

Regardless of the message or the media, communication within the district is covered by a number of building and district policies and regulations.

The RIC is making a number of web based services available to district that will not only enhance communication, but also make the processes that they manage more efficient. These services include: My Gradebook, My Learning Plan, and IEP Direct.

As web based products, we deliver them via the web and users are able to access these services and the data that they make available. The district has already started using IEP Direct resulting in a more efficient and uniform process by which we create and maintain IEPs. IEP Direct also allows us to appropriately share student information in a controlled access environment that both respects the confidentiality of the data while at the same time providing teachers, administrators, parents, and others appropriate access to this information.

We currently use My Gradebook at our middle school and in the 06/07 school year began piloting GradeQuick at the elementary level. The goal of the pilot is to train key staff in each Elementary building in the use of 'a electronic grading program' so that they can become a building resource when it becomes the required method of reporting grades in the 2007-2008 school year. After a few years of use it is our hope that through this on-line communication tool, teachers will be able to keep parent informed of their child's progress in a timely fashion so that parents can intervene as necessary. One of the challenges of an electronic gradebook is that elementary grades, and the report cards that result from them, are annotated in nature. This type of data is difficult to summarize and aggregate in any way that makes sense. Through the RIC, we will look at other elementary options and adopt them as they become available. The Director of Instructional Technology has begun to work with individual elementary and secondary teachers to discover ways to apply technology to student assessment and the management of data that results from this process.

In 2007 we began implementing My Learning Plan to take advantage of both the efficiency with which it automates the process of administering various training events as well as its ability to summarize and display process data. These reports can be used to manage the training process and help us to make decisions about how to spend our training funds.

Finally, we use Follett library automation software in all our libraries. Our High School collection, has the added feature to give parents and students the ability to access the library electronic card catalog via the web.

Relationship with BOCES, CNYRIC and others (Return to TOC)

The district purchases a number of BOCES and CNYRIC services. The day-to-day relationship between the district and technology related service providers at the BOCES and CNYRIC is managed by the District Technology Department. In addition to District Technology staff, district office and building level administrators participate in managing the long term and commercial relationship with the BOCES and CNYRIC.

Like most districts, we rely on the BOCES for these services as well as the aid that they generate. There is a significant level of technology expertise at the CNYRIC and a growing level among the many districts that the CNYRIC serves. Together we are a very experienced community of IT professionals relying on each other for help in solving the many problems that we face.

District staff participate on many committees and other civic organizations within the community. In some cases, they do so as formal representatives of the district. In others, they do so as private citizens living in the community. This form of outreach is essential to creating and maintaining good relationships with other organizations. The district encourages this type of activity. Examples include:

- The Chamber of Commerce
- PAC-B (public television station)
- Library Board
- ????????others

Budget and Financing (Return to TOC)

Technology is funded through many sources. They include:

- The District Technology Department Budget
- The general district instructional and non-instructional personnel budgets
- The various buildings and grounds budgets
- Categorically aided hardware and software budgets
- Annual District Voter referendum
- Title Grants
- Other grants

Each of these sources has specific limitations on the type and amount of spending that they will support and that expenses be correctly associated with them. Generally, this is

the responsibility of administrator tasked with managing each budget line. The coordination of this effort falls on Director of Instructional Technology to insure that funds are spent correctly on hardware, software, training, and other resources that are consistent with our technology plan, can be installed on our network, and can be supported by District Technology Staff. Without this coordination we could purchase what appears to be a good resource that will support instruction only to find that we can't install it or support it.

An example of this relationship is the purchase of technology related support for textbooks. Many textbooks include support that must be accessed via some form of technology. If the selection of a textbook is contingent upon this support being available, then District Technology Staff must be involved in the process before it is purchased. If this is not the case, we run the risk of buying a textbook series that can't be supported. This is one example of many of the organizational growing pains that we have, and will continue to, experience as we become more dependent on technology to support instruction.

The following is a detailed list of the Central Square School Districts budget for the next three years. At the current funding rate it is adequate to fund replacement of obsolete Instructional computing technologies in three of our eight Instructional buildings with no financing for other forms of instructional technology (i.e. A/V equipment) or for the three non-instructional buildings. At this current funding rate we are only able to support a 10 year replacement model at best.

Category	**2007-2008**	**2008-2009**	**2009-2010**	**Source of Monies**
Computers (by type)				
A. Upgrades	$35,000	$30,000	$30,000	Categorical Aide
B. New Replacements for obsolete computers	$150,000	$155,000	$155,000	Local Referendum for Technology
C. Repair of computers	$90,000	$100,000	$100,000	Oswego BOCES A/V Repair
D. School Lunch	$7,500	$10,000	$10,000	School Lunch Budget
Number of computers listed above that are Internet ready	100%	100%	100%	
Number of computers listed above equipped for multimedia	100%	100%	100%	

Peripheral Devices				
A. Printers	$5,000	$5,000	$5,000	Oswego BOCES A/V Budget - Replacements only
B. Network Printing device lease and services	$246,869	$246,869	$246,869	Ricoh Digital Printing
B. Assistive/Adaptive Devices	$2,000	$2,000	$2,000	Special Ed. Grants
C. TV Monitors	$2,000	$2,000	$2,000	Oswego BOCES A/V Budget - Replacements only
D. VCR/DVD Players	$1,000	$1,000	$1,000	Oswego BOCES A/V Budget - Replacements only
E. Projection Devices	$3,000	$2,000	$2,000	Oswego BOCES A/V Budget - Replacements only
F. Air WAN Radio's	$0	$0	$30,000	Upgrades to current system
Software (list by type)				
A. Antivirus	$10,000	$10,000	$10,000	Categorical Aide
B. Network Monitoring	$3,000	$3,000	$3,000	Categorical Aide
C. Instructional	$25,000	$25,000	$25,000	Categorical Aide & Referendum
D. Test Prep	$12,000	$12,000	$12,000	Categorical Aide
E. Instructional support	$10,500	$10,500	$10,500	Title II Grants
F. District Helpdesk	$3,495	$3,495	$3,495	BOCES service
G. Business Office Personnel & Purchasing	$55,150	$65,000	$65,000	BOCES service
H. Non-Instructional support software	$16,080	$16,000	$17,000	Transfinder, WinSnap(food service), etc.
Network Equipment				
A. Switches	$20,000	$20,000	$20,000	Categorical Aide & Referendum
B. Routers				
C. Servers	$15,000	$15,000	$15,000	Local Referendum for Technology
Number of rooms wired for internal connections	100%	100%	100%	

Telecommunication Links				
A. Network Telecommunications Circuit and Equipment leases	$56,993	$62,000	$65,000	
B. Network Telecommunications Service fee's	$3,653	$3,750	$3,750	
G. Network Connection Line Cost	$48,975	$49,000	$49,000	
F. Internet Bandwidth	$6,400	$9,600	$12,800	
C. Long Distance	$2,500	$2,500	$2,500	
D. Local Phone	$99,000	$100,000	$100,000	
E. Service fee's for E-rate processing and other base services	$6,779	$7,000	$7,000	
H. Cell-Phone costs	$11,000	$10,000	$10,000	
Instr. Staff Trng				
BOCES training	$9,765	$10,000	$10,000	

Plan Goals (Return to TOC)

The District Technology Committee has developed the following general goals for the next three years.

Goals

1. To continue to develop the Model Classrooms.
2. To define network wide software standards.
3. To define a hardware replacement schedule.
4. To define the need for new administrative and instructional software and hardware and plan a procurement and installation schedule to satisfy these needs.
5. To grow our technology integration training plans and better align them with our revised curricula.
6. To upgrade our network to support current and anticipated future needs.
7. To include the needs of our non-instructional staff in our hardware and software acquisition and training plans.

NCLB and E-Rate Checklist Cross Reference (Return to TOC)

The following two tables display the requirements of NCLB and E-Rate as they apply to the revised district technology plan. Following the requirement are comments appropriate to the requirement with any necessary hyperlinked references to other document or attachments. These comments, along with the milestone plan, comprise the district's revised plan. As noted in the beginning of this document, our plan is more of a continuation of what we have done for the last three years than a new plan. The plan hasn't changed that much, what has changed is how we document it. These last two sections are an attempt to satisfy these new reporting requirements.

Technology Plan checklist

Specific checklist item
District Response
A) a description of how funds will improve student academic achievement, including technology literacy, of all students attending LEA and improve capacity of all teachers to integrate technology effectively into curriculum and instruction
Title II, Part D, Question 1
B) a description of the applicant's specific goals for using advanced technology to improve student academic achievement, align with State academic content and student academic achievement standards
Title II, Part D, Question 2
C) a description of steps ensuring all students and teachers in LEA have increased access to educational technology, including how (also in combination with funds from other sources), LEA will give students in high-poverty and high-needs schools, or identified under section 1116, access to technology; and prepare teachers to integrate technology effectively into curriculum and instruction
Title II, Part D, Question 3
D-1) a description of how LEA identifies and promotes strategies integrating technology effectively into curricula and instruction, based on a review of relevant research, and leading to improvements in student achievement as measured by challenging State standards
Title II, Part D, Question 5a
D-2) a description of how the LEA will ensure ongoing, sustained professional development for teachers, administrators, and school library media personnel served by the LEA to further the use of technology in the classroom or library media center
Title II, Part D, Question 5b
D-3) a list of sources(s) of ongoing training and technical assistance available to schools, teachers and administrators in the LEA, such as NYSED, BOCES, Teacher Centers, NYSC&TE, regional educational laboratories or institutions of higher education

The Central Square CSD is a very active component of the OCM BOCES and CNYRIC. We participate in many of the training and technical assistance services that they provide to include:

- Model Schools Program
- Center For Learning Technologies
- Special Education and Training Resource Center
- Quality Schools
- Curriculum Resource Center
- School Library System
- IEP Direct
- Schedule Finder
- My Gradebook
- SIS
- SolStar
- Various student services
- MUNIS
- Project Management and Installation Services

Other public training and assistance services

- Oswego county Teacher Center
- Central New York Directors of Technology
- New York State Computers and Technology in Education

Private training and assistance services

Vendor training to include: CSES (old IKON)

E) a description of the type and cost of supporting resources, such as services, software, print resources and digital curricula, to be acquired to ensure effective use of technologies acquired under this section; including specific provisions for their interoperability
Title II, Part D, Question 9
F) a description of how the LEA will coordinate the technology provided pursuant to the subpart with technology-related activities carried out with other grant funds available for technology from Federal, State and local resources
Title II, Part D, Question 11
G) a description of how the applicant will integrate technology, including software, into curricula and instruction, and a timetable for such integration
Title II, Part D, Question 4
H) a description of how LEA will encourage development and use of innovative strategies for delivery of specialized or rigorous academic courses, including through technology such as distance learning to areas without access to such materials, through

geographical isolation or insufficient resources
Title II, Part D, Question 7
I) description of how applicant will use technology to promote parental communication and involvement, including how parents will be informed of the technology being applied in their child's education so that they will be able to reinforce at home the instruction their child receives at school
Title II, Part D, Question 6
J)a description of how programs will be developed, where applicable, in collaboration with adult literacy service providers, to maximize the use of technology
Title II, Part D, Question 8
K) describe process and accountability measures for ongoing evaluation of how technologies funded under this subpart will: A). be effective in integrating technology in curricula and instruction B) will increase ability of teachers to teach, and students to meet challenging State academic content standards and student performance standards
Title II, Part D, Question 12
L) a description of supporting resources (service, software, other electronically delivered learning materials, and print resources) to be acquired to ensure successful and effective uses of technology
Title II, Part D, Question 10
M) an explanation of how teachers from all participating districts are involved in the planning, development, implementation and evaluation of the plan
Teachers from the Central Square CSD participate with other teachers in the region in a variety of ways. They include district and BOCES sponsored forums and those that teachers participate in on their own. Through the work of these organizations, teachers participate in the planning, development, implementation, and evaluation process of a number of regional plans.