

GREENVILLE COUNTY SCHOOLS
Technology Plan
2010-2014



Dr. Phinnize J. Fisher, Superintendent
William Brown, Director, Education Technology Services
301 Camperdown Way • Greenville, SC 29601
864.241.3100 • www.greenville.k12.sc.us

The development of Greenville County Schools Technology Plan: 2010 – 2014, based on Greenville County Schools Strategic Plan: 2008-2013, is a result of the contributions of the Greenville County School’s Technology Advisory Committee. The committee is comprised of a variety of stakeholders, including representation from Greenville County Schools and the community-at-large. The technology plan is updated annually to ensure the plan remains a relevant and current strategic plan. The plan is posted on the Greenville County Schools’ web site at <http://www.greenville.k12.sc.us/gcsd/depts/ets/>

Table of Contents

District Profile

Executive Summary

District Needs Assessment

District Vision and Mission Statements

Plans for the Five Individual Technology Dimensions

Technology Dimension 1:	Learners and their Environment
Technology Dimension 2:	Professional Capacity
Technology Dimension 3:	Instructional Capacity
Technology Dimension 4:	Community Connections
Technology Dimension 5:	Support Capacity

Information Technology Governance

Cumulative Benchmarks

Acknowledgements

Bibliography

Appendix

Appendix 1:	No Child Left Behind - Action Plan
Appendix 2:	Teacher Technology Proviso Professional Development Plan
Appendix 3:	Acceptable Use Policy
Appendix 4:	How E-Rate Areas have been addressed
Appendix 5:	Report on Last Year's Progress Benchmarks
Appendix 6:	FY09-10 ETS Budget
Appendix 7:	Refresh Schedule
Appendix 8:	Organizational Charts
Appendix 9:	SC-ISAC Report Card

I verify that all the above components for the School District of Greenville County's technology plan have been addressed.

Technology coordinator's name: Bill Brown

Technology coordinator's signature: Bill Brown Date: 4-8-2010

Superintendent's name: Phinnize J. Fisher

Superintendent's signature: Phinnize J. Fisher Date: 4-9-2010

THIS PAGE INTENTIONALLY LEFT BLANK

Quick Facts (figure 1.1):

51th largest school district in the nation

Largest district in South Carolina

Student Population

69,479 students

Pre-K & K4	1,528
K-5	32,523
6-8	15,419
9-12	20,009

School Sites:

105 School Locations

5 Child Development Centers

1 Life Long Learning Center

9 Special Centers

48 Elementary Schools

18 Middle Schools

14 High Schools

4 Career Centers

6 Charter Schools

1 Virtual High School

GCS Five Essential Goals

1. *Raise the Academic Challenge and Performance of Each Student*

2. *Ensure Quality Personnel in all Positions*

3. *Provide a School Environment Supportive of Learning*

4. *Effectively Manage and Further Develop Financial Resources*

5. *Improve Public Understanding and Support of Public Schools.*

District Profile

Long recognized as a leader in public education, Greenville County Schools is the largest school district in South Carolina and the 51st largest in the nation, according to the latest publication from the National Center of Education Statistics. Located in the northwestern part of the state, the district encompasses a geographic area of approximately 800 square miles and serves over 68,000 students at 105 locations. (See figure 1.1 for breakdowns)

According to the U. S. Census Bureau, the population of Greenville County is approximately 417,000 (2006). Of this group, approximately 75% are white; 20% are African-American; and 6% are Hispanic. Eighty (80) percent are high school graduates (2000) and 26% have a Bachelor's Degree or higher (2000). Median household income is \$42,500 (2004); 13% live below the poverty level (2004). Last year, 43% of our students qualified for free and reduced lunch. Greenville also serves 9.70% of ESOL students. The populations of students whose primary language is not English increases each year.

Good instructional practice has always been a focus for Greenville County. Sound pedagogy and the integration of technology throughout the curriculum are showing results. This past year, the dropout rate for Greenville County was 4.7% and the graduation rate was just over 70%.

Greenville County is committed to technology innovation in education. In 2004, the Board of Trustees approved money to refresh fifteen schools. This refresh plan has been developed and implemented over the last several years. Each year fifteen of Greenville County's schools are refreshed with the latest technology. To protect the investment of the district, all teachers must undergo technology training in compliance with the Teacher Technology proviso.

Technology is a vital part of the instructional and operational processes in Greenville County Schools. Teachers in Greenville

County are required to maintain and update websites in order to communicate effectively with parents in the digital age. The district webpage is updated daily with content to inform parents about activities and events taking place in the district. The operations department relies on technology to accomplish a number of administrative tasks. Over the last few years, more and more paper process has moved to electronic process in order to increase efficiency and productivity. Greenville County is committed to staying on the cutting edge of technology in order to provide our student's skills necessary to compete in a global, technology-oriented society.



GREENVILLE COUNTY SCHOOLS
Technology Plan
2010-2014





"We can close the gap and improve what happens in the classroom by using educational technology that is the same high quality everywhere."

-- Major Robert Owens

EXECUTIVE SUMMARY

In addressing the technological needs of our students, staff, and community, Greenville County Schools (GCS) has established a Technology Advisory Committee (TAC) to review, revise and/or update the District's technology plan. This committee will seek to promote and provide equity in educational opportunities for all students and to improve student achievement.

This document, which is aligned to state and national standards, as well as the GCS Strategic Plan, is defined to outline our understanding of how technology can assist GCS in achieving the following vision:

To participate in the ever-changing global community, Greenville County Schools will give students, educators, parents and stakeholders' access to information, which allows for the effective integration of technology into the learning process.

We envision a community, which promotes the transition of information into knowledge and the development of questioning learners.

While technology is a means of providing assistance, it is of value only to the extent to which student achievement and student support services are enhanced. To that end, this Technology Plan identifies certain benefits and outcomes such as:

- Administrators can expect to be better informed about school operations and district decision making.
- Educators can expect greater support in the development and implementation of instructional technology strategies.
- Parents and stakeholders can expect increased opportunities to participate in the educational process

along with a more efficient and equitable use of financial and human resources.

The GCS Technology Plan 2010-2014 presents five core technology dimensions derived from the guidance of *Technology in American Schools: Seven Dimensions for Gauging Progress – a Policymaker’s guide*, published by the Milken Exchange on Education Technology. These core technology dimensions must be addressed in order to improve student achievement through the use of technology as an integrated tool. All of the dimensions are designed to increase student achievement through the effective integration of technology into the core curriculum. Measurable goals, objectives and strategies, action steps, funding considerations and evaluation of objectives/benchmarks are given for each core technology dimension.

The five core technology dimensions and the goals set forth for these areas are as follows:

Learners and Their Environment: The district and schools will use research-proven strategies to provide home, school, and community environments conducive to our students’ achieving technology literacy by the end of the eighth grade and to raise the overall level of academic achievement.

Professional Capacity: The district and schools will develop ongoing and sustained professional development programs for all educators – teachers, principals, administrators, and school library media personnel.

Instructional Capacity: The district and schools will use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

Community Connections: The district and schools will enhance academic achievement and teacher technology proficiency through the use of technology, including assistive technology, by establishing and maximizing community involvement and community partnerships.

Support Capacity: The district and schools will develop strategies to provide the necessary physical infrastructure and supporting resources such as services, software and other electronically delivered learning materials, and print resources in order to ensure efficient and effective uses of technology.

These five technology dimensions are regarded as synergistic parts of a single system. Each of the goals is followed by recommended implementation strategies and considerations that reflect aspects of the particular core dimension. Provided in this document is a cumulative list of benchmarks that were designed to enable the Technical Advisory Committee to validate progress on an annual basis.

THIS PAGE INTENTIONALLY LEFT BLANK



“Our vision for effective technology integration is that technology use in the classroom would be seamless and invisible”

-- Dr. Fisher, Superintendent

DISTRICT NEEDS ASSESSMENT

The District’s Technology Needs Assessment is based on the Strategic Plan and the Continuous Improvement Priorities Action Plan.

Current Technology Needs

- Increase wide-area network (WAN) bandwidth
- Increase Internet bandwidth
- Increase instructional equipment (e.g. promethean boards, laptops, desktops, etc.)
- Continue school refresh program
- Expand wireless overlay to all schools

Current Technology Inventory

- Over 32,000 laptop and desktop systems
- Over 500 Microsoft Windows Servers
- 3,500 SMART Boards and Promethean Boards
- 9,000 voice over IP (VOIP) Telephones
- Redundant data center for mission critical applications
- 6,400 printers and multi-function print devices
- Over 5,000 teacher and school websites
- Wireless overlay at district offices and Title I schools
- Videoconference infrastructure, including an MCU with IP and ISDN capabilities, as well as 20 portable endpoints

Current Technology Support Strategies

- Centralized Help Desk
- One computer technician for every five schools
- Network and data center support staff centrally located
- One distance learning coordinator
- Five instructional technology facilitators

THIS PAGE INTENTIONALLY LEFT BLANK



Teachers

- Number – 5,034*
- Advanced Degrees – 58.5%*
- Average Years of Experience – 11.5*
- National Board Certified – 500*

Employees

- Total Employees – 9,138*
- Teachers – 55.1%*
- School Support Staff – 23%*
- School Administration – 2.3%*
- Food Service – 7.5%*
- Transportation – 5.5%*
- Maintenance – 1.5%*
- District Level Administration – .5%*
- District Level Support – 4.6%*



DISTRICT VISION AND MISSION STATEMENTS

Greenville County Schools is dedicated to providing educational experiences for children that are standards-based, challenging, and rigorous; that reflect a commitment to equity; that demonstrate an appreciation of diversity; that convey high expectations for students and staff; and that promote continuous improvement in student achievement at all levels.

The district defines its commitment to quality educational experiences for all students through the District Education (Strategic) Plan. The plan defines overall district direction, guides district and school priorities, and serves as the basis of human, financial, and operational decisions. The plan was originally developed in 1999 by a group of 60 individuals, including elected officials, corporate leaders, parents, principals, teachers, district staff, and other community members, under the direction of the Superintendent. The most recent plan update was conducted in the spring of 2008. The revised plan was reviewed by the district’s Board of Trustees at its June 2008 Committee of the Whole meeting and formally approved at the Board meeting in August of 2008.

The District Strategic Plan articulates a clear mission, vision, and set of beliefs that serve as the plan’s foundation.

Mission

We provide educational experiences, in cooperation with the home and community that prepare students for life-long learning and for ethical, productive participation in a democratic society and the global community.

Vision

To become an exemplary school district in which every child achieves to his or her maximum ability through a rigorous, engaging curriculum and systems of support that cultivate the potential and promote the well-being of every individual child.

Beliefs

We believe...

- All students can learn.
- Students are the center of the educational process.
- Students learn best in a safe, orderly, and inviting environment.
- Students should have competent teachers, principals, and support personnel.
- Parents' involvement and volunteer services support and enhance the teaching and learning process.
- Students should have equal access to educational opportunities.
- Students have the responsibility to be active learners.
- Curriculum and instruction should meet the needs of all students.
- Educational experiences should enable students to communicate effectively, solve problems competently, think critically and creatively, and act responsibly.
- Education is the shared responsibility of home, school, and community.

The strategic plan outlines five performance goals; goal 1 is intended as the priority goal, with goals 2-5 intended to support goal 1.

- Goal 1: Raise the academic challenge and performance of each student.
- Goal 2: Ensure quality personnel in all positions.
- Goal 3: Provide a school environment supportive of learning.
- Goal 4: Effectively manage and further develop necessary financial resources.
- Goal 5: Improve public understanding and support of public schools.

Each goal is supported by a series of objectives, key strategies and benchmarks through which progress can be measured.

Each school also participates in the annual strategic planning process. The unit of analysis at the school level is the school portfolio, consisting of a demographic profile of the school, a data-based academic needs assessment, identification of desired academic outcomes, an action plan and professional development plan for achieving outcomes, and a plan for measuring results. School and classroom goals are aligned to the District Strategic Plan goals.

Directly related to the strategic planning process is the district's comprehensive, data-based performance assessment system for the superintendent and for principals (PAS-A), teachers (PAS-T) and Instructional Coaches (PAS-IC). Each system has been designed to reflect the strategic plan goals and is based on a series of performance standards proven through research to define effective school leadership.

The analysis of assessment and other data is a key component of the planning process and guides plan development at all levels. The district maintains a comprehensive profile of the system, the students, and the community. Data are maintained electronically and are available at both the district and school levels. Student data are maintained through the state-required Student Information System and include individual and group demographics; a summary of achievement outcomes derived from various assessments, and non-achievement data related to attendance, discipline, and drop-outs. A comprehensive student locator system enables effective management of students' school assignments, the district's school-choice program, and the bus transportation system.

The Strategic Plan guides the allocation of all financial resources and the direction and development of the district's long-term and short-range general fund budget plans.

Eighty percent (80%) of the items included in the general fund budget have direct impact at the school level in the form of funding for salaries, utilities, supplies, and maintenance. Except for salary increases for existing district-level staff, all additions to the annual budget have been for services directly located in schools or in direct service to schools. The South Carolina Department of Education, through its InSite system, found that the district spends a significantly lower percentage of its budget on program management than do other districts across the state.

THIS PAGE INTENTIONALLY LEFT BLANK

“The South Carolina K-12 Technology Initiative has helped our great state become a leader in America in bringing Internet technology and exceptional educational content to our schools and libraries.”

*The Honorable John Courson, (R)
Richland-Lexington Counties*

*Senate Education Committee
Chairman*



PLANS FOR THE FIVE INDIVIDUAL TECHNOLOGY DIMENSIONS

Greenville County Schools will use research-proven strategies to provide home, school and community environments conducive to our student’s achieving technological literacy by the end of the eighth grade and to raise the overall level of academic achievement.

The five technology dimensions were derived from the guidance of *Technology in American Schools: Seven Dimensions for Gauging Progress – a Policymaker’s Guide*, published by the Milken Exchange on Education Technology (Lemke and Coughlin 1998). These dimensions of technology progress – which consists of:

Learners and Their Environment: This dimension emphasizes helping students use technology in ways that advance their understanding of the content in the state curriculum standards while improving their real-life problem-solving and inquiry skills. The environment should be one of shared learning and should be designed to enhance student academic achievement through scientifically based learning practices and modern technologies.

Professional Capacity: This dimension emphasizes strategies to develop ongoing and sustained professional development programs for all educators—teachers, principals, administrators, and school library media personnel. Utilizing a broad definition for the term professional capacity, this dimension is also aligned with the EOC action area called “Leadership and Coalition Building.”

Instructional Capacity: This dimension is the Executive Writing Committee’s further refinement of the Milken dimension “Professional Competency.” South Carolina’s “Instructional Capacity” dimension specifically targets the development of strategies to integrate technology into curricula and teaching and also explores ways to promote teaching methods that are

based on solid and relevant scientific research. This dimension also aligns with the EOC action area “Teacher Quality.”

Community Connections: This dimension emphasizes strategies for the development of partnerships and collaborative efforts to support technology-related activities and to maximize community involvement in education. This dimension promotes school and district partnerships with such entities as private schools, higher education institutions, public libraries, museums, nonprofit organizations, adult literacy providers, and business and industry in ways that will increase student achievement and teacher technology proficiency. This dimension aligns with the EOC action areas “Education for Economic Development” and “Community and Parental Support and Involvement.”

Support Capacity: This dimension seeks to combine the Milken progress dimensions “Technology Capacity” and “System Capacity.” South Carolina’s “Support Capacity” dimension emphasizes the development of strategies to provide the necessary physical infrastructure and supporting resources such as services, software and other electronically delivered learning materials, and print resources in order to ensure efficient and effective uses of technology. This dimension aligns with the EOC action areas “The Governance and Structure of the System” and “Efficient Use of Resources and Accountability.”

These five technology dimensions are regarded as synergistic parts of a single system. The framework they create emphasizes a combination of critical elements that are necessary for Greenville County Schools to effectively use technology to accelerate student achievement and learning.

Technology Dimension 1: Learners and their Environment

Greenville County Schools focuses on putting technology in the hands of students in order to provide a learning experience that is hands-on, relevant, and appropriate for a 21st Century Learning Environment.

Mobile laptop labs are just one of the technologies students have access to in all the district schools. Each school has up to twelve laptop carts available for classroom checkout, depending on the size of the school. Laptop labs can be used for anything from independent study to group projects and classroom work. The mobile labs give teachers the flexibility of taking the students anywhere on or off school grounds in order to provide them with a rich and relevant learning environment.

Interactive Whiteboards are another standard that observers will notice when walking into Greenville County Schools. The engaged learner is a successful learner. Students interact with the whiteboards on a daily basis and quickly become active learners instead of passive learners. Students in many schools also have access to student response systems. These systems, which work in connection with the Interactive Whiteboards, make students a part of the learning process and give teachers necessary feedback to customize learning for individual students as needed. The Interactive Whiteboards provide teachers with the tools to teach and assess with one system, making it easy to use. The ability to teach and assess as you teach can have a profound effect on student learning. Bob Marzano, one of the authorities in classroom assessment, recently completed a study to determine the impact of using the Interactive White Board and voting systems can have in the classroom. The ultimate conclusion was that good teachers can excel further by utilizing these tools and building on the best practices they are already incorporating into their every day teaching.

Students have access to a variety of software for remediation around the district. Greenville County Schools subscribes to Compass Learning which is aligned with MAP scores. Scores are compared at the end of the year to measure gains on the state assessment test. MAP, a partner of Compass is able to prescribe students lessons based on their MAP scores.

Students have access to a variety of new and emerging technologies to complete projects and problem based lessons. Through a structured process using video cameras, podcasting, and other technologies, students complete projects that incorporate real world skills such as interviewing, researching, writing, and public speaking. These technologies in the classroom foster creativity, team building, and 21st Century Skills. Learning how to utilize these technologies when students get out into the business world will be vital to their success. Students unable to appropriately use 21st century tools to reach consumers and audiences will be at a huge disadvantage over those who can.

Overall Goal for this Dimension: Student Achievement

Goal Area 1 – Raise the academic challenge and performance of each student

OBJECTIVES:

1. Provide the technology necessary to engage students in the learning process

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
1-1.1	Greenville County Schools will refresh technology in all schools on a five year basis (See Appendix 7)	Provide schools with an allocation of money for technology refresh	Long Range Facility Fund	Number of computers in building less than five years old
1-1.2	Instruction Technology will assist schools in obtaining grants for the purchase of technology to be used by students	Provide schools access to a grant writer and staff expertise on technology use in the classroom	Grants	Number of grants applied for and received
1-1.3	Greenville County Schools will provide all classrooms with Interactive Whiteboards in order to engage students	Secure Funding and continued training	Grants, ED Tech Funding, General Fund	Number of classrooms with Interactive White Boards
1-1.4	Instructional Technology will provide students access to 21st Century tools (web 2.0) with the goal of using them appropriately in a variety of situations	Provide teachers the training in order to integrate the tools in the classroom	ED TECH Grant, Grants	Number of teachers utilizing web 2.0 tools in their lesson plans and student projects incorporating web 2.0 tools
1-1.5	Instructional Technology will provide the students access to connect with students and teachers from around the country and	Provide equipment necessary to connect via distance	Grants	Number of teachers participating in Distance Learning

	world through Distance Learning	learning and provide appropriate training to teachers		lessons
--	---------------------------------	---	--	---------

2. Provide students the opportunity to participate in non-traditional instruction in order to accommodate all student needs

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
1-2.1	Students will participate in Virtual High School Courses for initial credit	Provide access to online courses	Virtual High School	Number of students successfully completing online classes
1-2.2	Students will participate in Credit Recovery programs to recover lost credit and stay on track to graduate	Provide access to a credit recovery system	Virtual High School	Number of students successfully completing credit recovery

Technology Dimension 2: Professional Capacity

Greenville County Schools is committed to ensuring that all teachers are technology proficient. In order to integrate technology into the classroom, teachers must understand technology integration as well as be able to perform the steps necessary to use the technology required. Teachers are required to be technology proficient through the Intel Teach to the Future Program. This program is a rigorous 60 hour, graduate level course focusing on technology integration using tools readily accessible to teachers. Once teachers receive initial certification, they must continue to keep up with their proficiency by taking 30 hours of courses every five years. Teachers have the option as to what courses they take based on their experience level with technology. The goal of this initiative is that teachers will grow in their knowledge of technology integration in the classroom. Instructional Technology is committed to releasing courses every three years in order to provide teachers with the latest best practice when it comes to integrating technology into the instructional process.

Instructional Technology with assistance from Systems Support and Administrative Computing hosts the Upstate Technology Conference each June. This conference is provided for teachers and focuses on classroom integration. Many of the workshops are conducted by current classroom teachers so that attendees can get a real world perspective on classroom integration. The two day conference offers over 200 sessions for teachers in different strands. Teachers can focus on the technology they want to improve in and focus on for the following year. This conference fosters collaboration among teachers from other schools and district around the state to meet student's needs in the 21st Century. The ability to collaborate with teachers outside the district provides teachers with ideas and experiences they may not be able to receive otherwise. Many of these connections form lasting collaboration and many classroom do projects with other teachers across the state and country.

Summer Academy is put on by Greenville County Schools during the month of July. Similar to the technology conference, Summer Academy offers teachers the opportunity to participate in technology integration workshops using technology available to teachers at their schools. Over the last few years, many of the sessions utilize technology as the vehicle for instructional delivery.

Throughout the year, teachers have access to workshops and professional development days using the Professional Development Registration System. Many schools host technology Tuesdays and Thursdays to foster technology integration in their school. Teachers' workdays are often used for technology workshops and hands-on learning for teachers on various technology software and tools.

Overall Goal for this Dimension: Quality Personnel

Goal Area 2 – Ensure quality personnel in all positions

OBJECTIVES:

1. Provide teachers with technology courses that focus on classroom integration and build on technology skills.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
2-1.1	Instructional Technology will provide graduate level courses for teachers to earn initial certification in technology	Offer 15-20 courses per semester and summer to accommodate all teachers needs	ED Tech Formula Grant	Number of teachers successfully passing Graduate Level Technology Courses
2-1.2	Instructional Technology will provide ongoing workshops in technology to increase the technology level and rigor of teachers	Create, edit, and review workshops on a yearly basis using the most current technology available for the 21 st century learner	ED Tech Formula Grant	Surveys from Workshops based on usefulness in the classroom. PAS-T Notebooks containing workshops and proof of certification
2-1.3	Instructional Technology will provide workshops for early childhood teachers that incorporate best practices and current research strategies	Offer 5 K4/K5 Intel Workshops for teachers	Ed Tech Formula	Surveys from Workshops based on Usefulness in the classroom Classroom Observations
2-1.4	Instructional Technology , with the help of the Curriculum Consultants will create workshops and courses using emerging	Create courses based on need and current available technologies	Ed Tech Formula	Surveys from Workshops based on Usefulness in the Classroom

	technologies to support the curriculum and current strategies by well known educational researchers (Marzano, Wiggins, Lucas, Gardner, etc)			Classroom Observations Authentic evidence required as part of the class
2-1.5	Instructional Technology will provide teachers with web resources and best practices to help with classroom integration of technology	TCubed Blog Updates Create and Maintain Technology Tutorials	N/A	Number of visitors to blog and website tutorials
2-1.6	Instructional Technology will provide teachers with instruction on web 2.0 tools	Access to blogs, wikis, and website resources	N/A	Number of visitors to blogs, wikis, etc.

2. Provide teachers with classroom assistance as needed to demonstrate technology integration in a real environment.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
2-2.1	Instructional Technology will model classroom integration of technology by taking over classrooms as requested by the school to model appropriate technology integration	Provide staff members to assist teachers in the classroom when integrating technology	Ed Tech Formula & General Fund	Time spent in the classroom by staff members assisting teachers in the integration process
2-2.2	Instructional Technology will observe teachers and evaluate teachers on technology integration effectiveness	Provide staff members to observe teachers during instructional audits in the	Ed Tech Formula & General Fund	Instructional Audits on the effective of Technology Integration

		area of technology integration		
--	--	--------------------------------	--	--

3. Ensure a high level of technology planning at the school level.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
2-3.1	Instructional Technology will assist schools in the development of technology professional development plans	Provide staff and resources necessary to produce a functional school technology plan	Ed Tech Formula & Refresh Funding through Capital Expense	Review and Evaluation of school technology plans by the Instructional Technology Staff and District personnel
2-3.2	Instructional Technology will assist schools in the infusion of technology throughout the curriculum and in all subject areas	Provide teachers time and expertise in the area of technology planning as it relates to the curriculum	Ed Tech Formula & General Fund	Review of weekly/monthly lesson plans for the integration of technology

Technology Dimension 3: Instructional Capacity

Currently, seventy-five percent of teachers have access to Interactive White Boards. These boards allow teachers to design lessons that are engaging for students and focus their attention on the curriculum being taught. When used appropriately, the student's role changes from passive learner to active learner. Engaged students are more likely to retain information and learn material than students who are passively participating in classroom instruction.

Many teachers have access to Student Response Systems. These devices give teachers immediate feedback on student understanding of material taught. Results can be downloaded after class to help the teacher plan and provide individual instruction to students struggling with material. The device also engages students in the process and holds them accountable for their learning. Teachers who utilize these devices on a regular basis will better be able to adapt their instruction to meet the needs of all their students.

In an effort to bring the real world into the classroom, Greenville County employs a full time Distance Learning Coordinator to promote and execute distance learning programs. These programs take the form of virtual field trips and guest speakers from around the world. Students in Greenville County regularly visit speakers and guests from all over the world using distance learning. International Baccalaureate schools have specifically used Distance Learning in order to bring global experiences into the classroom. Through these programs, students can connect with other students around the world and interact with other cultures and societies.

Extending the school day is important in the age of accountability. To assist teachers in reaching every student's needs, Greenville County provides access to Moodle as Learning Management Systems (LMS). Teachers have the ability to put their classes on the LMS so that students can access the content anywhere, anytime, anyplace. More teachers each year are realizing the benefits of putting classroom content on an LMS so students can access it in the same place every time. Students can be better organized by knowing where to find information they may have lost.

Using a variety of emerging technologies, teachers routinely rely on smaller technology devices to accomplish curriculum objectives. Over the last two years, teachers have begun integrating the video cameras into their weekly instruction to teach students how to work in groups, organize material, and produce a final product. Teachers use many of today's technologies such as podcasts, vodcasts, websites, digital cameras, blogs, wikis, and other web 2.0 tools to help students gain the skills necessary to be competitive in higher education and the work-force. Instructional Technology provides teachers the ability to check-out technology so they can use it in their classroom for projects.

Overall Goal for this Dimension: Academic Achievement

Goal Area 1 – Raise the academic challenge and performance of each student

OBJECTIVES:

1. Provide technology integration throughout the curriculum to improve instruction, engagement and achievement.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
3-1.1	Teachers will use resources to plan lessons that integrate technology	Update the Curriculum Connection and web resources for teachers	Ed Tech Formula & TITLE Money	Review and Evaluation of lesson plans to ensure the integration of technology
3-1.2	Teachers will use the Interactive White Boards as a venue to engage students in the learning process	Provide teachers with resources and training to effectively use the IWB's in the classroom	Ed Tech Formula	Observation of student engagement and interaction with the Interactive Whiteboards.
3-1.3	Teachers will use Student Response Systems when available and appropriate to gather data on student understanding and learning	Provide teachers with instruction and technology to integrate SRS's into classroom instruction	ED TECH Formula and Grants	Downloadable results from Student Response Systems
3-1.4	Teachers will analyze formal and informal assessment results to plan instruction	Provide teachers with the tools and resources necessary to make decisions about instruction	NONE	Student test scores and improvement from fall to spring assessments Benchmark Assessments

		based on assessment results		
3-1.5	Teachers will use web 2.0 tools to engage students, foster collaboration and use problem solving skills to accomplish curriculum objectives	Provide teachers with access to web 2.0 tools and resources necessary to integrate web 2.0 tools into the curriculum	ED Tech Formula	Review teacher lesson plans Observe student classrooms
3-1.6	Teachers will use technology tools built into technology proficiency courses to engage students in the learning process	Provide teachers with tools to check-out through the Instructional Technology Check-Out center	ED Tech Formula Grant and Media Services Budgets	Number of devices checked out and teacher lesson plans.

Technology Dimension 4: Community Connections

Communication must happen between multiple stakeholders in order for students to be successful. All teachers are currently required to maintain an up-to-date teacher website. Aside from teacher websites, teachers communicate with parents through email as well as blogs and wikis. Many teachers post projects and deadlines on wikis and blogs for students and parents to have access to throughout the year. Parents and students can participate on blogs and wikis through the comments section and be an active participant in the learning process.

Parents also have access to grades online using the district’s Parent Portal. Grades are available each progress and report card term. Many teachers also send home progress reports electronically to parents on a weekly basis. The new implementation of PowerSchool will provide parents the ability to see daily grades thus increasing communication between the classroom teacher and parents.

School websites also help keep parents informed about events and activities at the school. These websites often have video introductions by students as well as information about the school including report card data, special programs, faculty lists, and school statistics.

All schools in the district also have access to SchoolMessenger which is a telephone notification system. This system is utilized by schools to send out important information to parents about parent conferences, PTA Meetings, etc.

Overall Goal for this Dimension: Communication

Goal Area 5 – Improve public understanding and support of public schools

OBJECTIVES:

1. Provide the resources and knowledge necessary for teachers to communicate effectively with parents and the community.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
4-1.1	Teachers will maintain and update websites on a weekly basis	Provide workshops on teacher websites		Review of teachers websites for up-to-date material
4-1.2	Teachers will use web 2.0 tools to communicate with parents and students	Provide workshops on web 2.0 tools		Increased number of teachers using

		(wikis, blogs, etc)		web 2.0 tools for communication
4-1.3	Teachers will use electronic grade books to communicate student achievement with parents	Provide access and instruction to an electronic grade book		Weekly updates in electronic grade book

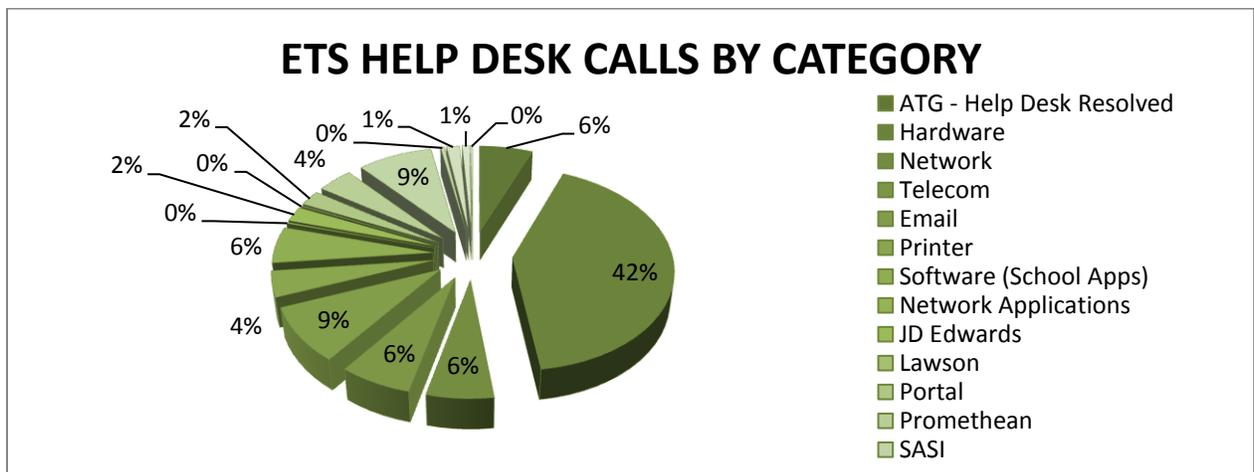
Technology Dimension 5: Support Capacity

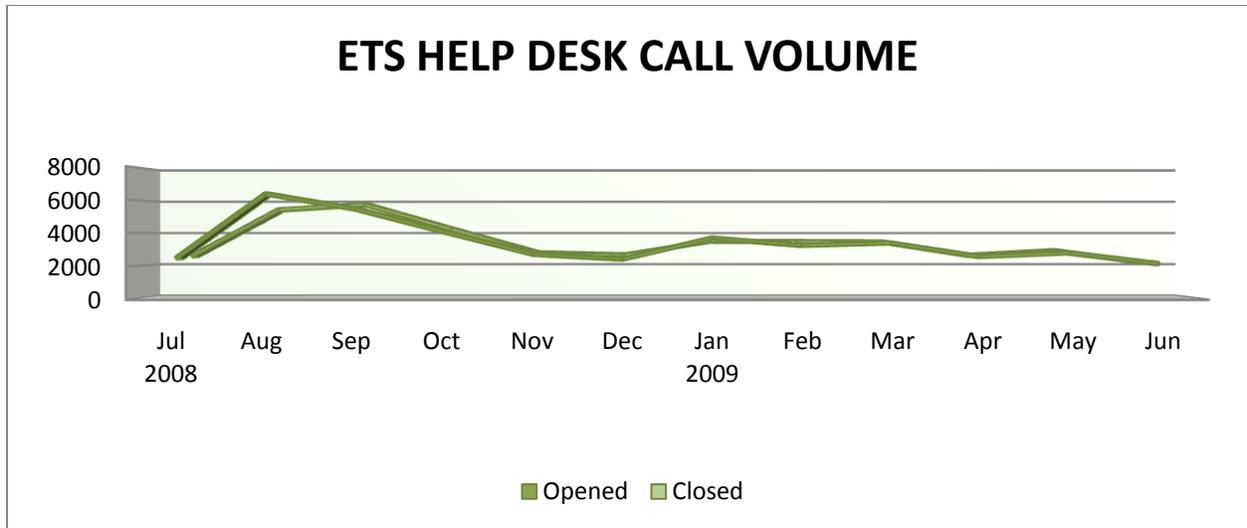
Wide Area Network – With the proliferation of web based applications, VOIP, distance learning, and other web based resources the demand for increased bandwidth continues to push the district infrastructure to its limits. Currently, all district locations are connected via 10megabit fiber optic Metro-Ethernet however; many sites have reached or even exceeded capacity.

Printers - Managing the printing needs in a district with over 100 locations can be a daunting task as well as expensive. In light of this challenge, the district has renewed a five year printer plan whereas all classrooms have been outfitted with a laser printer and each location will receive a copier/multifunction device based on student population counts. The only cost to the district is the price per page monthly bill that covers the cost of the machine, toner, and service.

VOIP - The district currently has over 9,000 voice over IP (VOIP) telephones in use as well as over 450 analog telephones lines that are used for faxes, emergency backup lines, and security/fire systems.

Service calls - Over 42,000 help desk calls were closed by the district’s technology department (ETS) between the period of September 21, 2008 and September 21, 2009.





Application and Report Related Integration and Support – The ETS Development group handles application integration and many reporting requirements for the District and State Department of Education requirements.

In 2008, ETS Development began aggressively tracking metrics for application and report-related HEAT calls. By doing so, the group has been able to proactively identify and correct potential issues before they become widespread. It also provides management with the ability to more effectively manage resources.

Support Metrics

Year	Incoming	Resolved
2008 (1.5 FTE)	2818	17 (2007 carry over) 2805 (Opened in 2008)
2009 (as of July 31, 2009) (1.5 FTE)	1059	971

Project Portfolio – Since 2004, ETS Development has deployed multiple application integration solutions to streamline and support the District’s business and educational programs and services. Since 2004, only 1 FTE has been transferred to development.

Year	Number of Projects Completed
2009	14
2008	8
2007	4
2006	7
2005	6
2004	10

Budget constraints – All State Agencies have recently been hit hard with budget reduction and Greenville County Schools has not been immune from the effects of these reductions. With this in mind it is the goal of the technology department to leverage technology to reduce operating costs wherever possible.

Overall Goal for this Dimension: Student Achievement

Goal Area 1 – Raise the academic challenge and performance of each student

OBJECTIVES:

1. Improve student performance through supervision of the Student Registration System and the Master Catalog as system administrator of both.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-1.1	Identify, review and address opportunities for synergy between the new SIS, PowerSchools, and student registration/master catalog	Complete GAP Analysis between the existing applications and the imbedding solution in PowerSchools	Due to the volume of work with other priority 1 initiatives, funding for additional development resources is needed either to work specifically on this project or to backfill permanent resources	Track the number of students that are not able to register for their actual school assignment for the next academic year during the student registration window
5-1.2	Continue to enhance existing applications and processes supporting the District's school choice programs to improve data flow, minimize redundancies and reduce the disconnect between student school assignments and the registration process	Work with application owners to identify required features and encourage integration of timelines for school choice programs and the student registration system	Due to the volume of work with other priority 1 initiatives, funding for additional development resources is needed either to work specifically on this project or to backfill permanent resources	Complete a feature implementation matrix tying application features to feature requests. Obtain timelines from application and process owners

2. Close the achievement gap among subgroups of students by supporting schools showing the greatest disparity among subgroups.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-2.1	Pursue Erate Funding for at risk and low achieving schools	When funds become available, file Erate for Title one schools	Funding unknown at this time	Purchase of equipment at steep discounted rates
5-2.2	Increase technical support capacity for disadvantaged schools	Continue to provide additional technicians via Special Ed and Title 1	Continue funding two FTE positions funded through Title 1 and one through Special Ed	Monitor service calls and service response times. Metrics will show reduced wait time

Overall Goal for this Dimension: Quality Personnel

Goal Area 2 – Ensure quality personnel in all positions

OBJECTIVES:

3. Improve district efficiency through the implementation of the Lawson ERP software.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-3.1	Partner with Lawson Software consultants and District personnel to ensure timely completion of project checkpoints and successful implementation of supporting applications and programs	Continue to use GAP Analysis and District personnel requests to drive the implementation of Lawson as well as to identify, define, develop and implement supporting processes and programs to ensure data integration and streamline processes	Continue funding three positions for the ETS Development team. These positions work on Lawson-related initiatives and backfill as needed for permanent FTEs assigned to Lawson A minimum of 3 to 4 additional FTEs are needed to continue to support Lawson during the implementation process and long-term	Weekly project meetings and conference calls monitoring the project plan, issues, and objectives

4. Monitor and improve employee performance

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-4.1	Employee Evaluations	Use new district employee	None	Complete evaluation on 3 yr cycle

		evaluation tool		
--	--	-----------------	--	--

5. To develop and implement a software solution addressing timeline compliance for the initial and reevaluation referrals for psychological evaluations, Child Find (Special Educations Tool Kit), and to improve the efficiency and accuracy of the discipline feral process (Incident Management System).

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-5.1	Develop a suite of modules designed to provide visibility into and management of special education processes critical to serving the needs of protected children	Identify core processes and statutory requirements. Develop requirements and design modules meeting those needs and providing flexibility for meeting changing statutes. Deploy each module in priority order.	Funding for this project is provided by Special Education	Regular review of project milestones and completion of prototype reviews with key stakeholders to ensure each module meets the identified requirements
5-5.2	Develop and implement an application for managing all discipline referrals within the District including the expulsion process	Complete extensive discovery process to identify processes for protected and regular education students Complete	Funding provided by Special Education	Project meetings to review tasks, issues, and progress ETS Development manages the testing effort to ensure that any issues are

		<p>comprehensive project documentation to ensure requirements are met</p> <p>Conduct two limited pilots for user acceptance testing and application validation</p> <p>Deploy full application to production for the Fall 2010 academic year</p>		<p>caught and addressed as rapidly as possible</p> <p>Identify key metrics and review regularly to ensure the project is on-track</p>
--	--	---	--	---

Overall Goal for this Dimension: School Environment

Goal Area 3 – Provide a school environment supportive for learning

OBJECTIVES:

6. Ensure that schools have an integrated, secure network infrastructure with dynamic bandwidth capacity to support fully converged networks that allow for communications, data collection and distribution, and distance learning.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-6.1	Bandwidth – state	Petition SC state department for increase bandwidth	Cost share based on K12 Technology Funding	Receive bandwidth increase
5-6.2	Provide district technology resources to students located at group homes	Connect group homes to Internet or District WAN	One time Infrastructure charges and monthly reoccurring communications line charges	Give students access to Plato and Compass systems
5-6.3	Internet bandwidth	Petition SC state department for increase Internet bandwidth	None	Receive bandwidth increase
5-6.4	Pursue higher speed alternative to State network for school internal data connectivity	Seek bids from local communication companies to provide higher network capacity than those provided by State Dept	Approximately 1.2 million per year but could potentially be reduced to half of this amount with Erate funding	Increase bandwidth to all district locations

7. Implement a disaster recovery plan for all points of failure in LANs and WANs, including redundant data storage, robust automated backup, and immediate hardware recovery.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-7.1	Exchange email system upgrade.	Upgrade current email system to better support disaster recovery.	\$200,000	Implementation of Email disaster recovery system
5-7.2	Backups	Refine backup strategies and purchase additional capacity	\$100,000	Reduction of backup times and increase capacity.
5-7.3	Disaster Recovery Site	Expand DR capabilities by installing web, and DNS system at DR site.	\$10,000	Systems installed

8. To provide training opportunities for representatives at each school and the district to learn and use data warehouse, dashboard, and virtual comparison group tools to analyze data and to make information decisions.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-8.1	Upgrade the existing data warehouse and reporting tool	Implement a project with selected vendor to upgrade the existing data warehouse and implement a new reporting and dashboard tool, "DASH"	Funding provided by Research Department	Weekly project meetings

9. Pursue an obsolescence and upgrade plan to replace and recycle equipment and software.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-9.1	School File Servers	Replace aging file servers at each school	\$700,000	File servers replaced
5-9.2	Replace aging UPS systems	Replace aging UPS systems at each school	\$300,000	UPS systems replaced
5-9.3	Remove old SAN storage device	Move home directories to new system	\$60,000	SAN storage device retired
5-9.4	Windows 7	Upgrade all district PCs to new Windows 7 operating system	\$1,500,000	All PCs upgraded to Windows 7
5-9.5	Switches/Routers	Replace aging switches and routers at each location	No budget can be determined at this time Erate funding	New equipment installed or upgraded
5-9.6	Wireless	Replace aging and install new wireless systems at various locations	No budget can be determined at this time Erate funding	New equipment installed or upgraded
5-9.7	VOIP System	Upgrade or replace VOIP telephone system	No budget can be determined at this time Erate funding	New equipment installed or upgraded
5-9.10	Next Generation Firewall Systems	Upgrade or replace existing firewalls to next generation firewalls	\$100,000	New equipment installed or upgraded
5-9.11	Mobile Device Encryption	Encrypt all hard drives installed in mobile devices	No budget can be determined at this time	All mobile hard drives encrypted

		with enterprise class encryption		
5-9.12	Database Encryption	Encrypt all data that contains Personally Identifiable Information (PII)	No budget can be determined at this time	All PII encrypted in databases
5-9.13	Centralized event logging and monitoring system	Install a centralized event logging and monitoring system	\$250,000	Equipment installed
5-9.14	ISO 27001 Certification Audit	Obtain ISO 27001 Certification Status	\$10,000-\$50,000	Successful audit

Overall Goal for this Dimension: Finance

Goal Area 4 – Effectively manage and further develop necessary financial resources

OBJECTIVES:

10. Lawson Enterprise Resource Planning (ERP) system.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-10.1	Expand the use of the Lawson ERP System	Work with vendor and District personnel to expand the capabilities of the Lawson ERP System	Fully funded	Semi-Weekly project meetings and conference calls monitoring the project plan, issues, and objectives

11. Leverage technologies to reduce operating cost and increase efficiencies.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-11.1	Antivirus – Spam	Evaluate and implement less expensive alternatives to current systems	Already budgeted, expect to reduce costs	Lower yearly maintenance costs
5-11.2	Remote support	Increase use of remote support to reduce mileage costs	None	Quicker response times as shown in Metrics and reduced mileage expenses
5-11.3	Reduce traditional telephone lines	Work with Security to evaluate IP based security	Unknown at this time. Potential upfront costs required but	Lower monthly reoccurring telephone bill

		systems to reduce monthly phone bill	short ROI times are expected.	
5-11.4	Explore lower cost connectivity solutions for district locations who's connectivity is fully funded by the district	Pursue wireless, private fiber, and low cost alternatives to traditional Metro-E circuits.	Unknown at this time. However the goal would be to significantly reduce monthly costs and upfront costs would have a short ROI	Reduced monthly bill for school connectivity
5-11.5	Reduce monthly telecommunications charges	Pursue Erate funding for telecom (landline and cellular) monthly charges	No budget required, expect to reduce costs	Lower yearly telecom charges costs
5-11.6	There shall be a Project Review Board responsible for reviewing and evaluating all projects; approving or disapproving each request, and prioritization of initiatives.	Conduct monthly project review board meeting facilitated by ETS	No new funding required.	This review ensures that projects are aligned with the strategic and technology goals of the district.

Current Best Practices in District

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
5-12.1	Use of SourceSafe as a repository for all production application code.	Ensure that all district developed software is archived and version controlled.	No budget required, expect to reduce costs	Reduce software bugs and reduced calls Help desk tickets.

5-12.2	Use and continued development of a code library to ensure consistency throughout the application portfolio.	Ensure that reusable code is developed, tested and stored for reuse.	No budget required, expect to reduce costs	Reduce software bugs and reduced calls Help desk tickets.
5-12.3	Expanded use of automated testing processes to increase the quality of production applications.	Ensure that all code is tested consistently.	No budget required, expect to reduce costs	Reduce software bugs and reduced calls Help desk tickets.
5-12.4	Use of team-based development model to allow for increased ability to seamlessly move resources from one project to another.	Ensure that all applications are as requested, supportable and sustainable.	No budget required, expect to reduce costs	Reduced development time and improved software quality.
5-12.5	Use of weekly peer code reviews to enhance the quality of software, increase standardization and provide professional development for development personnel.	Ensure that all applications are as requested, supportable and sustainable.	No budget required, expect to reduce costs	Reduced development time and improved software quality.
5-12.6	Use of a comprehensive Software Development Lifecycle Methodology and Project Management protocols for development and project governance.	Ensure that all applications are as requested, supportable and sustainable.	No budget required, expect to reduce costs	Reduced development time and improved software quality.
5-12.7	Continued development of a knowledge base to ensure consistency in information dissemination throughout the District for application and report-related issues.	Ensure that all applications are as requested, supportable and sustainable.	No budget required, expect to reduce costs	Reduced bug fixes and application redesigns.
5-12.8	Expanded use of prototype reviews throughout the project lifecycle to ensure application	Ensure that all applications are as requested,	No budget required, expect to reduce costs	Reduced bug fixes and application redesigns.

	owner/stakeholder buy-in.	supportable and sustainable.		
5-12.9	All applications must pass a thorough security analysis before release.	Ensure that all applications are secure.	Security scanning software upgrade and maintenance	Reduce rise and cost associated with security breaches.
5-12.10	All applications must go through a production turnover process to ensure that all applicable supporting departments and the application owner are in accordance with release of software.	Ensure that all applications are as requested, supportable and sustainable.	No budget required, expect to reduce costs	Reduced bug fixes and application redesigns.



“Technology itself is not the curriculum. Technology is a key that opens opportunities for students to learn in the classroom. It is a way in which we can bridge what in the past have been large gorges that have separated students from opportunity.”

John Dossey, Illinois State University

INFORMATION TECHNOLOGY GOVERNANCE

The properly governed use of information technology is essential to achieve the objectives and mission of GCS. Information systems are used to directly support instruction in such areas as:

- Student learning and instruction
- Grade, attendance, and discipline
- Testing

Information systems also support all activities that indirectly support instruction such as:

- Student health
- Finance
- Employee benefits
- Human resources
- Maintenance and operations
- Transportation
- Research
- Communications to parents and the community
- Crisis planning and response
- Business continuity

The term “Information Technology Governance” rather than “security” best describes the objective of this five year plan. Calder and Watkins clearly define IT governance:

We define IT governance as “the framework for the leadership, organizational structures and business processes, standards, and compliance to these standards, which ensures that the organization’s information systems support and enable the achievement of its strategies and objectives.”

This is a broader scope than the typical and often mistaken assumption that an organization can buy security with products and services. The internationally known organization IT Governance Ltd. states in its IT governance literature:

Information security is not just about anti-virus software, implementing the latest firewall or locking down your laptops or web servers. The overall approach to Information Security should be strategic as well as operational, and different security initiatives should be prioritized, integrated, and cross-referenced to ensure overall effectiveness.

This section outlines a five year plan for IT governance that is essential for GCS to achieve its mission. GCS can accomplish the GCS Information Technology Governance Five Year Plan by implementing an Information Security Management System (ISMS) based on international standards. This management system puts technology, processes, and procedures in place to make information security part of the fabric of all activities at GCS. Though implementing an ISMS is a finite project, it institutes ongoing practices that are essential for the confidentiality, integrity, and availability of information at GCS. Information security is not a destination, it is a process.

ISO 27001 and the ISMS

The GCS Information Technology Governance Five Year Plan incorporates the International Standards Organization standard 27001. This standard is accomplished by implementing the ISMS. ISO 27001 is an international vendor neutral standard of information technology governance that accomplishes the well-known triad of information security: confidentiality, integrity, and availability. It is technology neutral. GCS can apply it to existing and future GCS information technologies. ISO defines an ISMS as “that part of the overall management system, based on a business risk approach, to establish, implement, operate, monitor, review, maintain, and improve information security.”

Benefits of Risk Management

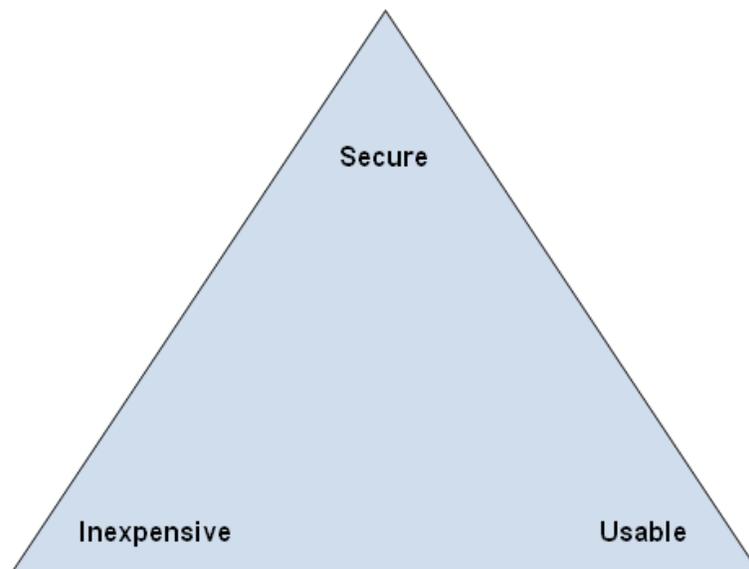
Using ISO 27001 for IT governance implements security based on risk to information assets. Using ISO 27001 also allows GCS to more easily acquire insurance in order to transfer risk and to reduce liability.

Consider the Problem

Most mistakenly perceive information security as a technical problem that can be solved with technology. Since the ETS Information Security group has been tracking security incidents at GCS, it has found that GCS user and ETS personnel errors and omissions and weak processes have attributed to many incidents. Also, many consider the biggest threat to information security to be the Internet. While the Internet is a threat, most incidents at GCS are attributed to GCS network users, or “internal threats.” These findings are consistent with all enterprise computing environments. ISO 27002 addresses not only technical security controls but GCS processes and user awareness.

Pick any Two

Security must be balanced with cost and usability. Often the most secure method of securing a system makes it difficult to use. This is particularly unacceptable with our student and many non-technical staff computer users. Security and usability can often only be accomplished at greater cost. This tension is shown in the graphic below. One can only attain two of the three attributes in meeting the information security challenge:



Unify and Improve Existing Security Efforts

There is no need to “re-invent the wheel” in many cases. GCS has already implemented security policies and processes. Implementing ISO 27001 will unify these efforts, improve them, and

create new policies and procedures where needed. David Ramirez writes of streamlining an ISO 27001 implementation in an Information Systems Audit and Control Association (ISACA) article:

ISO 27001 presents a new opportunity to articulate the policy to all the business areas and define a companywide framework. The main concept of a streamlined implementation relies on existing efforts and frameworks to connect and improve security. If a business area has already implemented controls, regardless of their compliance level, it is usually easier to improve existing models than to deploy a new one.

Overview of Objectives

The GCS Information Technology Governance Five Year Plan encompasses several broad categories of objectives. GCS cannot meet these objectives by only purchasing technology, but by sufficient manpower to implement and maintain the ISO 27001 ISMS.

Unify GCS IT Governance Efforts

Implementing ISO 27001 will bring various departments together in order to secure information. Information security is not an ETS only issue, but it takes awareness and “buy in” from all GCS departments. The Security Group already has a good working relationship with various departments. This relationship will strengthen under this plan.

Increased Prevention

Risk assessments and working with new information system projects to include security upfront is essential to include security in the fabric of a system. Another part of prevention is user security awareness training which is essential to the success of controls put in place.

Increased Detection

GCS must continue to expand regular vulnerability assessments and penetration tests to detect security issues before they are exploited. Security monitoring must also increase. This requires additional manpower and technology.

Increased Remediation

When there is a security incident, responding to an incident is an unplanned project consisting of a task to be accomplished in limited time with limited resources. Incident response involves detecting and correcting policies, procedures, and technical weaknesses that led to the incident.

Security Controls Based on Risk

Information security fiscal and human resources are limited. Therefore, GCS must apply resources based on risks so the greatest reduction of risk occurs with the wisest use of resources. This only occurs by implementing risk management as part of all IT governance at GCS. This involves a culture shift that the ISO 27001 ISMS will facilitate.

Managing Information as an Asset

GCS must inventory information systems assets in order to assess, reduce, and manage the risk to GCS information. GCS must implement an information system asset management system as part of the ISMS.

Security up Front

Attempting to secure a purchased or developed information system or application after it is implemented is ineffective and a waste of human resources. The procurement and application development processes at GCS must include security up front, not after the fact.

New Security Technology

New technology is available to significantly reduce risk to GCS information and continue to support the GCS mission. This plan foresees the addition of the following:

- A next generation firewall that supports authentication and authorization of communication services not based on TCP or UDP port, but on the characteristics of the traffic and the privileges of the user. This can better protect the GCS network from the Internet, but also reduce unsafe access to the Internet by students and staff. This same method can be used to isolate the critical core assets from the school networks. A Ponemon Institute study states of employee Internet access that “employees with workplace computer access are putting their organizations at risk by using certain applications that could involve the sharing of sensitive and confidential information.”
- Mobile device encryption that effectively encrypts information on laptops, notebooks, and portable storage such as flash drives. An enterprise wide centrally managed system will provide the best protection of information and productivity of users.
- Database encryption of sensitive information.

- Windows Server 2008 to maintain security and bring new security features to the GCS network. One key feature is the ability to set different password policies for different groups of users.
- Windows 7 for the desktop to maintain security and bring new security features to the GCS network.
- Centralized event logging and monitoring is essential for security event detection and incident response, and system maintenance. This involves the purchase of technology and additional manpower.

Additional Personnel

Since 2006 the Security Group demands have grown exponentially as GCS staff has become more aware of the need of security. Users and managers increasingly call on the Security Group to help perform tasks and implement systems securely. The Security Group has increasingly performed risk assessments on new systems and responded to security incidents and performed investigations. To implement the ISMS and meet the growing demand more personnel are needed. GCS must not sacrifice the long term vial task of implementing the ISMS to respond to short term urgent tasks such as incident response.

Increased Staff User Awareness

People are the weakest link in information security. The five year plan includes more resources for security awareness training.

Increased Student User Awareness

The Protecting Children in the 21st Century Act includes teaching children about Internet safety. GCS must develop an Internet safety program for GCS students using content from trusted sources like the International Information Systems Security Certification Consortium or (ISC)².

Plan Implementation Overview

Year 1

- Obtain board mandate to implement ISO 27001
- Hire and train additional personnel to assume existing tasks
- Fold existing security policies and procedures into the ISMS

- Implement information asset inventory system
- Inventory critical assets
- Perform risk assessment
- Produce statement of applicability
- Obtain budget approval for additional technology and personnel to provide new controls

Year 2

- Continue with ISMS implementation
- Design new controls based on risk
- Formalize existing controls into ISMS
- Continue to document and implement ISMS with policies, standards, and procedures

Years 3-4

- Continue implementation

Year 5

- Obtain ISO 27001 certification with external audit.

Information Technology Governance Objectives

The table below shows the IT governance objectives for GCS Information Technology Governance Five Year Plan based on ISO 27001. The ISO 27001 standard notation is listed with each objective as the reference number.

Objective: GCS management shall provide direction and support for information security in accordance with business requirements and relevant laws and regulations.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.5.1	A. An information security policy document shall be approved by management, and published and communicated to all users and relevant external parties. B. The information security policy shall be reviewed at planned intervals or if significant changes occur, to ensure its continuing suitability, adequacy, and effectiveness.	Continue to build on existing executive management support. Obtain formal Board of Trustee support for ISO 27001 plan. Begin implementing ISMS. Roll existing processes and policies into ISMS. Continue to evaluate and improve existing security policies.	No additional funding required	Creation of the policy document and approval by management and the Board

Objective: Manage information security within GCS.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.6.1	A. Management shall actively support security within GCS through clear direction, demonstrated commitment, and explicit assignment and acknowledgement of information security responsibilities.	Roll existing processes and policies into ISMS. Use ISMS to further define security responsibilities and create district wide information security	No additional funding required	Controls implemented

	<p>B. Information security activities shall be coordinated by representatives from different parts of GCS with relevant roles and job functions.</p> <p>C. All information security responsibilities shall be clearly defined,</p> <p>D. A management authorization process for new information processing facilities shall be defined and implemented.</p> <p>E. Requirements for confidentiality and non-disclosure agreements that reflect GCS requirements for the handling of information shall be identified and regularly reviewed.</p> <p>F. Appropriate contacts with relevant authorities shall be maintained.</p> <p>G. GCS' approach to managing information security and its implementation (i.e. control objectives, controls, policies, rules, processes and procedures for information security) shall be reviewed independently and at planned intervals, or when significant changes to the security implementation occur.</p>	committee.		
--	--	------------	--	--

Objective: Maintain the security of GCS information processing facilities and information assets accessed, processed, communicated to or managed by external parties.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.6.2	<p>A. The risks to the GCS information assets and information processing facilities from business processes involving external parties shall be identified and appropriate controls implemented before granting access.</p> <p>B. All identified security requirements shall be addressed before giving external parties access to GCS information assets.</p> <p>C. Agreements with third parties involving accessing, processing, communicating or managing GCS information or information processing facilities, or adding products or services to information processing facilities, shall cover all relative security requirements.</p>	<p>Audit existing access of external organizations to GCS information facilities.</p> <p>Implement controls where needed.</p>	No additional funding required	Agreements executed with all 3 rd parties

Objective: Maintain and achieve appropriate protection of information assets.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.7.1	A. All assets shall clearly be identified and an inventory of all important assets drawn	Implement information asset system and assess risk. Determine	No additional funding required	Assets identified and documented

	<p>up and maintained.</p> <p>B. All information and assets associated with information processing facilities shall be 'owned' by a designated part of GCS.</p> <p>C. Rules for the acceptable use of information and assets associated with information systems or services shall be identified, documented and implemented.</p>	<p>controls to manage risk.</p> <p>Document existing controls and determine priorities for new controls.</p>		
--	--	--	--	--

Objective: Ensure that information receives an appropriate level of protection.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.7.2	<p>A. Information shall be classified in terms of its value and legal requirements, sensitivity, and criticality to GCS.</p> <p>B. An appropriate set of procedures for information labeling and handling shall be developed in accordance with the classification scheme adopted by GCS.</p>	<p>Implement information asset system and assess risk. Determine controls to manage risk.</p> <p>Document existing controls and determine priorities for new controls.</p>	No additional funding required	Procedures developed

Objective: Ensure that employees, contractors, and third party users understand their responsibilities and are suitable for the roles they are considered for to reduce the risk of theft, fraud, or misuse of facilities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.8.1	A. Security roles and responsibilities of employees, students,	<p>Implement standards in HR.</p> <p>Implement</p>	No additional funding required	Standards implemented

	<p>contractors, and third party users shall be defined and documented in accordance with the GCS information security policy.</p> <p>B. Employees, contractors, and third party users shall agree to the terms and conditions of their employment contract which states their responsibility for information security.</p>	<p>standards in student Internet safety and security training.</p>		
--	--	--	--	--

Objective: Ensure that all employees, contractors, and third party users are aware of information security threats and concerns, their responsibilities, and liabilities in order to support GCS information security policy.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.8.2	<p>A. GCS management shall require employees, students, contractors, and third party users to apply security in accordance with established GCS policies and procedures.</p> <p>B. GCS users shall receive appropriate security awareness training and regular updates to GCS policies and procedures relevant for their job function.</p> <p>C. There shall be a formal disciplinary process for employees who have committed a security breach.</p>	<p>Implement standards in HR.</p> <p>Implement standards in student Internet safety and security training.</p>	<p>No additional funding required, training provided by internal staff</p>	<p>Review awareness training material and track training sessions</p>

Objective: Ensure that employees, contractors, and third party users exit GCS or change employment in an orderly manner.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.8.3	<p>A. Responsibilities for performing employment termination or change shall be clearly defined and assigned.</p> <p>B. Employees, contractors, and third party users shall return all GCS assets upon termination of their employment or contract.</p> <p>C. The access rights of users to information and information systems upon termination of employment, or contract, or student enrollment shall be removed upon termination of their employment, contract, or student enrollment, or adjusted upon change.</p>	<p>Implement standards in HR.</p> <p>Roll existing network account termination process into ISMS.</p>	No additional funding required	Develop and implement processes

Objective: Physical security to prevent unauthorized physical access, damage, and interference to GCS premises and information.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.9.1	<p>A. Security perimeters shall be used to protect information and information system facilities.</p> <p>B. Secure areas shall be protected by appropriate entry controls so that only authorized personnel</p>	<p>Audit existing physical security for information facilities.</p> <p>Identify and implement needed controls based on risk.</p>	No additional funding required	Prepare and submit audit documentation and recommendations

	<p>are allowed access.</p> <p>C. Physical security for offices, rooms and facilities shall be designed and applied.</p> <p>D. Physical protection against damage from fire, flood, earthquake, explosion, civil unrest, and against other forms of natural or man-made disaster shall be designed and applied.</p> <p>E. Physical protection and guidelines for working in secure areas shall be designed and applied.</p> <p>F. Access points such as delivery and loading areas and other points where unauthorized persons may enter the premises shall be controlled and, where possible, isolated from processing facilities to avoid unauthorized access.</p>			
--	---	--	--	--

Objective: Implement equipment security to prevent loss, damage, theft, or compromise of assets and interruption to GCS activities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.9.2	<p>A. Equipment shall be sited or protected to reduce the risks from environmental threats and hazards and opportunities for unauthorized access.</p> <p>B. Equipment shall be protected from power failures and other disruptions caused by failures in supporting utilities.</p> <p>C. Power and telecommunication cabling carrying data and supporting information services shall be protected from interception and damage.</p> <p>D. Equipment shall be correctly maintained to ensure its continued availability and integrity.</p> <p>E. All items of equipment containing storage media shall be checked to ensure sensitive data and licensed software has been removed or securely overwritten prior to disposal.</p> <p>F. Equipment or information shall not be taken off site without prior authorization.</p>	<p>Audit information facilities.</p> <p>Identify needed controls.</p> <p>Implement physical security into ISMS.</p>	<p>Funding may be required based on outcome of audit</p>	<p>Prepare and review audit documentation and recommendations</p>

Objective: Implement operational procedures and responsibilities to ensure correct and secure operation of information processing facilities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.1	<p>A. Operating procedures shall be documented, maintained, and made available to all users who need them.</p> <p>B. Changes to information processing facilities and systems shall be controlled.</p> <p>C. Duties shall be segregated to reduce the risks of unauthorized access or changes to systems.</p> <p>D. Development, test, and operational facilities shall be separated to reduce the risk of unauthorized access or changes to the operational system.</p>	<p>Additional manpower to document procedures.</p> <p>Additional network equipment to segregate development and test environments.</p>	<p>No additional funding required, equipment funding to be provided by projects</p>	<p>Documented procedures and test environments setup</p>

Objective: Implement and maintain appropriate level of information security and service delivery in line with third party service delivery agreements.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.2	<p>A. It shall be ensured that security controls, service definitions, and delivery levels included in third party service delivery agreements are implemented, operated, and maintained by the third party.</p>	<p>Audit existing vendor agreements that provide services to GCS, particularly hosted applications.</p> <p>Ensure security is</p>	<p>No additional funding required</p>	<p>Audit reports</p>

	B. Changes to the provision of services shall be managed, taking into account the criticality of the business systems involved and the re-assessment of risks.	included in the agreements.		
--	--	-----------------------------	--	--

Objective: Implement system planning and acceptance to reduce the risk of systems failures.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.3	A. The use of resources shall be monitored, tuned, and projections made of future capacity requirements to ensure required system performance. B. Acceptance criteria for new information systems, upgrades, and new versions shall be established and suitable tests carried out during development and prior to acceptance.	Roll existing processes and procedures into ISMS. Formally document current processes.	No additional funding required, additional staff may be required as the number of resources increases	Develop acceptance criteria, monitor resources

Objective: Implement protection against malicious and mobile code to protect the integrity of software and information.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.4	A. Detection, prevention, and recovery controls to protect against malicious code and appropriate user awareness shall be implemented. B. Where mobile code is authorized, the configuration shall	Implement next generation firewall and content filter to reduce malware and unauthorized software. Implement next generation of	General Fund	Upgrade detection, prevention and recovery controls as needed and as technology changes

	ensure that it operates according to a clearly defined security policy.	endpoint security.		
--	---	--------------------	--	--

Objective: Implement backup to maintain the integrity and availability of information and information processing facilities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.5	A. Backup copies of information and software shall be taken and tested regularly in accordance with the agreed backup policy.	Audit and continue current backup plan, roll procedures into ISMS. Implement periodic tests of backups. Investigate short term backup to disk for business continuity.	No additional funding required	Testing completed

Objective: Ensure the protection of information in networks and the protection of the supporting infrastructure.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.6	A. Networks shall be adequately managed and controlled in order to be protected from threats, and to maintain security for the systems and the applications using the network, including information in transit. B. Security features, service levels, and management requirements of all network services shall be identified and	Define controls needed based on risk assessment and asset inventory. Document roles and responsibilities in ISMS. Procure log management system.	No additional funding required	Networks monitored and service levels established

	included in any network services agreement whether these are provided in-house or outsourced.			
--	---	--	--	--

Objective: Prevent unauthorized disclosure, modification, removal, or destruction of assets, and interruption to business activities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.7	A. Procedures shall be in place for the management of removable media. B. Media no longer needed is properly and securely disposed of, using formal procedures. C. Procedures for the handling and storage of information shall be established to protect this information from unauthorized disclosure. D. System documentation shall be protected from unauthorized access	Role existing procedures into ISMS.	No additional funding required	Develop procedures and standards

Objective: Maintain the security of information and software exchanged within GCS and any external entity.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.8	A. Formal exchange policies, procedures, and controls shall be in place to protect the exchange of information through the use of all types of communications facilities.	Audit existing exchange of information between GCS and external entities. Implement controls and procedures to	No additional funding required	Develop formal procedures or enhance existing procedures

	<p>B. Agreements shall be established for the exchange of information and software between GCS and external parties.</p> <p>C. Media containing information shall be protected against unauthorized access, misuse, or corruption during transportation beyond GCS physical boundaries.</p> <p>D. Information involved in electronic messaging shall be appropriately protected.</p> <p>E. Policies and procedures shall be developed and implemented to protect information associated with the interconnection of GCS information systems.</p>	<p>meet standard.</p> <p>Roll current procedures into ISMS.</p>		
--	--	---	--	--

Objective: Ensure the security of electronic commerce services and their secure use.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.9	<p>A. Information involved in electronic commerce passing over public networks shall be protected from fraudulent activity, contract dispute, and unauthorized disclosure or modification.</p> <p>B. Information involved in online transactions shall be protected to prevent incomplete transmission,</p>	<p>Roll existing application security process into ISMS.</p>	<p>No additional funding required</p>	<p>Security process rolled into ISMS</p>

	<p>misrouting, unauthorized message alteration, unauthorized disclosure, and unauthorized message duplication or replay.</p> <p>C. The integrity of information being made available on a publicly available system shall be protected to prevent unauthorized modification.</p>			
--	--	--	--	--

Objective: Implement monitoring to detect unauthorized information processing activities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.10.10	<p>A. Audit logs recording user activities, exceptions and information security events shall be produced and kept for an agreed period to assist in future investigations and access control monitoring.</p> <p>B. Procedures for monitoring use of information processing facilities shall be established and the results of the monitoring activities are reviewed regularly.</p> <p>C. Logging facilities and log information shall be protected against tampering and unauthorized access.</p> <p>D. System administrator</p>	<p>Determine systems to log. Procure or develop log management system.</p>	<p>General Fund</p>	<p>Implementation of log management systems and procedures</p>

	<p>and system operator activities are logged.</p> <p>E. Faults shall be logged, analyzed, and appropriate action taken.</p> <p>F. The clocks of all relevant information processing systems within GCS shall be synchronized with an agreed accurate time source.</p>			
--	---	--	--	--

Objective: Control access to information.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.11.1	A. An access control policy shall be established, documented, and reviewed based on business need and security requirements for access.	Formalize existing access control procedures into ISMS. Include access control for hosted systems.	No additional funding required	New policy developed

Objective: Implement user access management to ensure authorized user access and to prevent unauthorized access to information systems.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.11.2	<p>A. There shall be a formal user registration and de-registration procedure for granting and revoking access to all information systems and services.</p> <p>B. The allocation and use of privileges shall be restricted and controlled.</p>	<p>Formalize user commissioning into ISMS.</p> <p>Implement user self-service password management and password requirements.</p> <p>Formalize user access to</p>	No additional funding required	Automation of this process into current HR system

	<p>C. The allocation of passwords shall be controlled through a formal management process.</p> <p>D. Management shall review users' access rights at regular intervals using a formal process.</p>	<p>application such as Lawson, PowerSchools, and hosted web applications.</p>		
--	--	---	--	--

Objective: Prevent unauthorized user access and compromise or theft of information and information processing facilities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.11.3	<p>A. Users shall be required to follow good security practices in the selection and use of passwords.</p> <p>B. Users shall ensure that unattended equipment has appropriate protection.</p> <p>C. A clear desk policy for papers and removable storage media and a clear screen policy for information processing facilities shall be adopted.</p>	<p>Continue to expand user security awareness.</p> <p>Include security training for new application such as Lawson and PowerSchools.</p> <p>Implement user self-service password management and password requirements.</p>	No additional funding require	<p>Security awareness material developed and new self-service password management implemented</p>

Objective: Implement network access control to prevent unauthorized access to networked services.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.11.4	<p>A. Users shall only be provided with access to the services that they have been specifically</p>	<p>Implement next generation of firewall and network access</p>	No additional funding required	<p>Appropriate controls implemented</p>

	<p>authorized to use.</p> <p>B. Appropriate authentication methods shall be used to control access by remote users.</p> <p>C. Automatic equipment identification shall be considered as a means to authenticate connections from specific locations and equipment.</p> <p>D. Physical and logical access to diagnostic and configuration ports shall be controlled.</p> <p>E. Groups of information services, users and information systems shall be segregated on networks.</p> <p>F. For shared networks, especially those extending across organizational boundaries, the capability of users to connect to the network shall be restricted, in line with the access control policy and requirements of the business applications.</p> <p>G. Routing controls shall be implemented for networks and to ensure that computer connections and information flows do not breach the access controls policy of the GCS applications.</p>	<p>control technology for internal network to segregate network and services. Reduce exposure of core critical assets to school users.</p>		
--	--	--	--	--

Objective: Implement operating system access controls to prevent unauthorized access to operating systems.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.11.5	<p>A. Access to information systems shall be controlled by a secure log-on procedure.</p> <p>B. All users have a unique identifier (user ID) for their personal and sole use, and a suitable authentication technique shall be chosen to substantiate the claimed identity of a user.</p> <p>C. Password management systems shall provide an effective, interactive facility, which ensures quality passwords.</p> <p>D. The use of utility programs that might be capable of overriding system and application controls shall be restricted and tightly controlled.</p> <p>E. Inactive sessions shall shut down after a defined period of inactivity.</p> <p>F. Restrictions on connection times shall be used to provide additional security for high-risk applications.</p>	<p>Implement in ISMS. Audit operating system access with logging system.</p> <p>Implement user self-service password management and password requirements.</p>	<p>No additional funding required</p>	<p>Audits completed</p>

Objective: Implement application and information access control to prevent unauthorized access to information held in application systems.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.11.6	<p>A. Access to information and application system functions by users and support personnel shall be restricted in accordance with the defined access control policy.</p> <p>B. Sensitive systems shall have a dedicated (isolated) computing environment.</p>	<p>Assess access controls for applications.</p> <p>Formalize user commissioning into ISMS.</p> <p>Implement user self-service password management and password requirements.</p> <p>Formalize user access to application such as Lawson, PowerSchools, and hosted web applications.</p>	No additional funding required	Access restricted by established access control policy

Objective: Ensure information security when using mobile computing and teleworking facilities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.11.7	<p>A. A formal policy shall be in place and appropriate security measures shall be adopted to protect against the risks of using mobile computing and communication facilities.</p> <p>B. A policy, operational plans and procedures shall be developed for teleworking activities.</p>	<p>Implement specific policy and controls on mobile devices and VPN and remote access.</p>	No additional funding required	Mobile computing risk assessment completed

Objective: Ensure that security is an integral part of information systems.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.12.1	A. Statements of business requirements for new information systems, or enhancements to existing information systems shall specify the requirements for security controls.	Implement security requirements into all development and procurement for all systems and applications.	No additional funding required	New business requirements defined

Objective: Ensure correct processing in applications to prevent errors, los, unauthorized modification or misuse of information in applications.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.12.2	A. Data input to applications shall be validated to ensure that this data is correct and appropriate. B. Validation checks shall be incorporated into applications to detect any corruption of information through processing errors or deliberate acts. C. Requirements for ensuring authenticity and protecting message integrity in applications shall be identified, and appropriate controls shall be identified and implemented. D. Data output from an application shall be validated to ensure that	Q/A existing and new applications	No additional funding required	Q/A procedures developed and implemented

	the processing of stored information is correct and appropriate to the circumstances.			
--	---	--	--	--

Objective: Implement cryptographic controls to protect the confidentiality, authenticity, or integrity of information.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.12.3	A. GCS shall develop a policy on its use of cryptographic controls for protection of its information. B. Key management shall be in place to support the GCS use of cryptographic techniques.	Implement encryption based on risk assessment and information labeling. All sensitive data at rest or in transit on the internal or public networks must be encrypted.	General Fund	Policy developed and cryptographic controls implemented

Objective: Ensure the security of system files.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.12.4	A. There shall be procedures in place to control the installation of software on operational systems. B. Test data shall be selected carefully, and shall be protected and controlled. C. Access to program source code shall be restricted.	Role current processes and procedures into ISMS.	No additional funding required	Procedures and controls developed

Objective: Implement security in the development and support processes to maintain security of application system software and information.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.12.5	<p>A. The implementation of changes shall be controlled by the use of formal change control procedures.</p> <p>B. When operating systems are changed, businesses critical applications shall be reviewed and tested to ensure there is no adverse impact on organizational operations or security.</p> <p>C. Modifications to software packages shall be discouraged, limited to necessary changes and all changes shall be strictly controlled.</p> <p>D. Opportunities for information leakage shall be prevented.</p> <p>E. Outsourced software development shall be supervised and monitored.</p>	Implement change control process in ETS and auditing of changes	No additional funding required	Controls implemented

Objective: Implement technical vulnerability management to reduce risks resulting from exploitation of published technical vulnerabilities.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.12.6	A. Timely information about technical vulnerabilities of	Formalize existing process into ISMS.	No additional funding required	Subscribe to sources that provide timely

	information systems being used shall be obtained, the organization's exposure to such vulnerabilities evaluated, and the appropriate measures taken to address the associated risk.			information regarding vulnerabilities
--	---	--	--	---------------------------------------

Objective: Ensure information security events and weaknesses associate with information systems are communicated in a manner allowing timely corrective action to be taken.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.13.1	A. Information security events shall be reported through appropriate management channels as quickly as possible. B. All employees, contractors and third party users of information systems and services shall be required to note and report any observed or suspected weaknesses in systems or services.	Continue existing process and fold into ISMS.	No additional funding required	Develop appropriate escalation procedures and implement

Objective: Ensure a consistent and effective approach is applied to the management of information security incidents.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.13.2	A. Management responsibilities and procedures shall be established to ensure a quick, effective and	Continue existing process and fold into ISMS.	No additional funding required	Continue to enhance existing incident procedures

	<p>orderly response to information security incidents.</p> <p>B. Mechanisms shall be in place to enable the types, volumes and costs of information security incidents to be quantified and monitored.</p> <p>C. Where a follow-up action against a person or organization after an information security incident involves legal action (either civil or criminal), evidence shall be collected, retained and presented to conform to the rules for evidence laid down in the relevant jurisdictions.</p>			
--	---	--	--	--

Objective: Ensure information security aspects of business continuity management to counteract interruptions to business activities and to protect critical business processes from the effects of major failures of information systems or disasters and to ensure their timely resumption.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.14.1	<p>A. A managed process shall be developed and maintained for business continuity throughout GCS that addresses the information security requirements needed for the business continuity of GCS.</p> <p>B. Information security events that can cause</p>	<p>Update business continuity plan.</p> <p>Assign .5 persons to maintain BCP plan. Audit BCP for security issues.</p>	<p>No additional funding required</p>	<p>Business continuity plan updated</p>

	<p>interruptions to business processes shall be identified, along with the probability and impact of such interruptions and their consequences for information security.</p> <p>C. Plans shall be developed to maintain or restore operations and ensure availability of information at the required level and in the required time scales following interruption to, of failure of, critical business processes.</p> <p>D. A single framework of business continuity plans shall be maintained to ensure all plans are consistent, to consistently address information security requirements, and to identify priorities for testing and maintenance.</p> <p>E. Business continuity plans shall be tested and updated regularly to ensure that they are up to date and effective.</p>			
--	--	--	--	--

Objective: Ensure compliance with legal requirements to avoid breaches of any law, statutory, regulatory, or contractual obligations, and of any security requirements.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.15.1	A. All relevant statutory, regulatory and contractual	Determine all privacy and other legislation	No additional funding required	Documents created and reviewed for

	<p>requirements and the GCS approach to meet these requirements shall be explicitly defined and documented and kept up to date for each information system and the organization.</p> <p>B. Appropriate procedures shall be implemented to ensure compliance with legislative, regulatory and contractual requirements on the use of material in respect of which there may be intellectual property rights and on the use of proprietary software products.</p> <p>C. Important records shall be protected from loss, destruction and falsification, in accordance with statutory, regulatory, contractual and business requirements.</p> <p>D. Data protection and privacy shall be ensured as required in relevant legislation, regulations and (where applicable) contractual clauses.</p> <p>E. Users shall be deterred from using information processing facilities for unauthorized purposes.</p> <p>F. Cryptographic controls shall be used in compliance with all relevant agreements,</p>	<p>requirements for GCS information. Ensure security controls support compliance.</p>		<p>compliance with regulatory and contractual requirements</p>
--	--	---	--	--

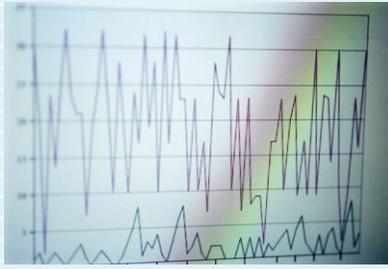
	laws and regulations.			
--	-----------------------	--	--	--

Objective: Ensure compliance of systems with GCS security policies and standards.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.15.2	A. Managers shall ensure that all security procedures within their area of responsibility are carried out correctly and achieve compliance with security policies and standards. B. Information systems shall be regularly checked for compliance with security implementation standards.	Implement in ISMS. Continue GCS security awareness.	No additional funding required	ISMS implemented

Objective: Maximize the effectiveness of and minimize interference to/from the information systems audit process.

Ref. Number	Strategy/Action	Action Steps	Funding Considerations	Evaluation of Objectives
A.15.3	A. Audit requirements and activities involving checks on operational systems shall be carefully planned and agreed to minimize the risk of disruptions to business processes. B. Access to information systems audit tools shall be protected to prevent any possible misuse or compromise.	Restrict access to audit tools, create risk assessment	No additional funding required	Risk assessment completed and access to audit tools restricted



"Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream which, fulfilled, can be translated into benefit for everyone and greater strength for our nation."

John F. Kennedy

CUMULATIVE BENCHMARKS

2010-2011

Learners and Their Environment

Twenty percent of Greenville County Schools will have completed technology refresh based on a five-year plan.

Ten percent of Greenville County Schools will utilize distance learning in the classroom.

Eighty percent of classrooms in Greenville County School will utilize either SmartBoards or Promethean boards.

Professional Capacity

Instructional Technology will offer one to five graduate level technology courses for teachers and professional staff.

Assist twenty percent of Greenville County Schools with technology professional development plans.

Instructional Capacity

Five percent of Greenville County Schools will have the capability to utilize Student Response Systems with their Promethean boards.

Increase the number of technology tools available for checkout by Greenville County Schools.

Community Connections

Teachers will update web sites on a weekly basis and utilizing in-house blogs to engage students and parents.

Twenty percent of Greenville County teachers will be trained on Web 2.0 tools and technologies.

Teachers will utilize electronic grade books and this information will be posted on the district's parent portal.

Support Capacity

Increase Internet bandwidth from 1.45 kilobits per second (kbps) per student to 6.50kbps per student.

Increase Wide-Area-Network (WAN) bandwidth from 21.06kbps per student to 40.00kbps

Upgrade twenty percent of the district's application servers to replace end-of-life servers.

Wireless overlay deployed in ten percent of Greenville County Schools.

2011-2012

Learners and Their Environment

Forty percent of Greenville County Schools will have completed technology refresh based on a five-year plan.

Thirty percent of Greenville County Schools will utilize distance learning in the classroom.

Eighty-five percent of classrooms in Greenville County School will utilize either SMART Boards or Promethean Boards.

Professional Capacity

Instructional Technology will offer five to seven graduate level technology courses for teachers and professional staff.

Assist twenty percent of Greenville County Schools with technology professional development plans.

Instructional Capacity

Seven percent of Greenville County Schools will have the capability to utilize Student Response Systems with their Promethean boards.

Increase the number of technology tools available for checkout by Greenville County Schools.

Community Connections

Teachers will update web sites on a weekly basis and utilizing in-house blogs to engage students and parents.

Twenty percent of Greenville County teachers will be trained on Web 2.0 tools and technologies.

Teachers will utilize electronic grade books and this information will be posted on the district's parent portal.

Support Capacity

Increase Internet bandwidth from 6.50 kilobits per second (kbps) per student to 10.00kbps per student.

Increase Wide-Area-Network (WAN) bandwidth from 40.00kbps per student to 60.00kbps

Upgrade twenty percent of the district's application servers to replace end-of-life servers.

Wireless overlay deployed in twenty percent of Greenville County Schools.

2012-2013

Learners and Their Environment

Sixty percent of Greenville County Schools will have completed technology refresh based on a five-year plan.

Fifty percent of Greenville County Schools will utilize distance learning in the classroom.

Ninety percent of classrooms in Greenville County School will utilize either SMART Boards or Promethean Boards.

Professional Capacity

Instructional Technology will offer seven to nine graduate level technology courses for teachers and professional staff.

Assist twenty percent of Greenville County Schools with technology professional development plans.

Instructional Capacity

Seven percent of Greenville County Schools will have the capability to utilize Student Response Systems with their Promethean boards.

Increase the number of technology tools available for checkout by Greenville County Schools.

Community Connections

Teachers will update web sites on a weekly basis and utilizing in-house blogs to engage students and parents.

Twenty percent of Greenville County teachers will be trained on Web 2.0 tools and technologies.

Teachers will utilize electronic grade books and this information will be posted on the district's parent portal.

Support Capacity

Increase Internet bandwidth from 10.00 kilobits per second (kbps) per student to 15.00kbps per student.

Increase Wide-Area-Network (WAN) bandwidth from 60.00kbps per student to 80.00kbps

Upgrade twenty percent of the district's application servers to replace end-of-life servers.

Wireless overlay deployed in thirty percent of Greenville County Schools.

2013-2014

Learners and Their Environment

Eighty percent of Greenville County Schools will have completed technology refresh based on a five-year plan.

Seventy percent of Greenville County Schools will utilize distance learning in the classroom.

Ninety-five percent of classrooms in Greenville County School will utilize either SMART Boards or Promethean Boards.

Professional Capacity

Instructional Technology will offer nine to eleven graduate level technology courses for teachers and professional staff.

Assist twenty percent of Greenville County Schools with technology professional development plans.

Instructional Capacity

Nine percent of Greenville County Schools will have the capability to utilize Student Response Systems with their Promethean boards.

Increase the number of technology tools available for checkout by Greenville County Schools.

Community Connections

Teachers will update web sites on a weekly basis and utilizing in-house blogs to engage students and parents.

Twenty percent of Greenville County teachers will be trained on Web 2.0 tools and technologies.

Teachers will utilize electronic grade books and this information will be posted on the district's parent portal.

Support Capacity

Increase Internet bandwidth from 15.00 kilobits per second (kbps) per student to 30.00kbps per student.

Increase Wide-Area-Network (WAN) bandwidth from 80.00kbps per student to 100.00kbps

Upgrade twenty percent of the district's application servers to replace end-of-life servers.

Wireless overlay deployed in forty percent of Greenville County Schools.

2014-2015

Learners and Their Environment

One hundred percent of Greenville County Schools will have completed technology refresh based on a five-year plan.

One hundred percent of Greenville County Schools will utilize distance learning in the classroom.

One hundred percent of classrooms in Greenville County School will utilize either SMART Boards or Promethean Boards.

Professional Capacity

Instructional Technology will offer eleven to thirteen graduate level technology courses for teachers and professional staff.

Assist twenty percent of Greenville County Schools with technology professional development plans.

Instructional Capacity

Fifteen percent of Greenville County Schools will have the capability to utilize Student Response Systems with their Promethean boards.

Increase the number of technology tools available for checkout by Greenville County Schools.

Community Connections

Teachers will update web sites on a weekly basis and utilizing in-house blogs to engage students and parents.

Twenty percent of Greenville County teachers will be trained on Web 2.0 tools and technologies.

Teachers will utilize electronic grade books and this information will be posted on the district's parent portal.

Support Capacity

Increase Internet bandwidth from 30.00 kilobits per second (kbps) per student to 40.00kbps per student.

Increase Wide-Area-Network (WAN) bandwidth from 100.00kbps per student to 150.00kbps

Upgrade twenty percent of the district's application servers to replace end-of-life servers.

Wireless overlay deployed in fifty percent of Greenville County Schools.



"You must be the change you want to see in the world"

Gandhi

ACKNOWLEDGEMENTS

Technology Advisory Committee

Authors (Technology Services)

Bill Brown	Executive Director
Jim Alexander	Director, Technology Services
Jeff McCoy	Director, Instructional Technology
Dan Boehm	Director, Administrative Computing

Contributors (Technology Services)

Tim Cushman	Technology Facilitator
Tim Van Heule	Distance Learning Coordinator
Kevin Merritt	Technology Facilitator
Fran Mauney	Technology Facilitator
Cathy Arnold	Technology Facilitator

Contributors/Reviewers (Teaching and Learning)

Lynn Talton	Secondary Science Consultant
Debbie Barron	Secondary English Consultant
Jane Snyder	Gifted & Talented Coordinator
Kyle Rollins	Elementary Science Consultant
Thomas Riddle	Secondary Social Studies Consultant
Cathy Hale	Elementary Math Consultant
Dianne Lee	Fine Arts Coordinator
Penny Bostain	PE Coordinator
Debbie Carrero	Foreign Language/Magnet Coordinator

Contributors/Reviewers (Community)

Al Gossett	Vice President, Integral Solutions Group
Perry Duck	Director MIS, Interim Healthcare

THIS PAGE INTENTIONALLY LEFT BLANK



“Television didn’t transform education. Neither will the Internet. But it will be another tool for teachers to use in their effort to reach students in the classroom. It will also be a means by which students learn outside of the classroom.”

John Palfrey

BIBLIOGRAPHY

EOC. 2001. Don’t Fail Your Children: Long-Range Plan. Columbia: South Carolina Education Oversight Committee.

ETS. 1997. Computers and Classrooms: The Status of Technology in U.S. Schools. Princeton, NJ: Educational Testing Service.

KPMG Consulting. 2000. State of South Carolina Education Technology Evaluation Project.

Lemke, Cheryl, and Edward C. Coughlin. 1998. Technology in American Schools: Seven Dimensions for Gauging Progress—A policy. Santa Monica, CA: Milken Exchange on Education Technology.

Sun, Jeff, et al. 2000. Planning into Practice: Resources for Planning, Implementation, and Integrating Instructional Technology. Durham, NC: SEIR*TEC.

International IT Governance: An Executive Guide to ISO 17799/ISO 27001, Alan Calder and Steve Watkins, 3.

Information Systems Audit and Control Association, Streamline ISO 27001 Implementation: Reducing the Time and Effort Required for Compliance, David Ramirez.

THIS PAGE INTENTIONALLY LEFT BLANK



"We will continue to have brick and mortar schools, but the limits of the walls will and are dissolving through digital connectivity."

Michelle Rhee

REQUIRED APPENDIXES

Appendix 1: No Child Left Behind – Action Plan

Appendix 2: Teacher Technology Proviso Professional Development Plan

Appendix 3: Acceptable Use Policy

Appendix 4: How E-Rate Areas have been addressed

Appendix 5: Report on Last Year's Progress Benchmarks

Appendix 6: FY09-10 ETS Budget

Appendix 7: Refresh Schedule

Appendix 8: Organizational Charts

Appendix 9: SC-ISAC Report Card

Appendix 1 – No Child Left Behind Act – Action Plan

The No Child Left Behind Act (NCLB) goal which states that “every student shall be technologically literate by the time the student finishes the eighth grade, regardless of the student’s race, ethnicity, gender, family income, geographic location or disability,” initiated the development of the district’s NCLB Action Plan.

NCLB, Title II, Part D, identifies several goals that must be addressed in the district’s action plan:

1. The primary goal is to improve student academic achievement through the use of technology in elementary schools and secondary schools.
2. To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.
3. To encourage the effective integration of technology resources and systems with teacher training and curriculum development to establish research-based instructional methods that can be widely implemented as best practices by State educational agencies and local educational agencies.

1. *A description of how your district will use federal funds including Enhancing Education through Technology (E2T2) competitive and/or formula funds to improve the academic achievement, including the technology literacy, of all students attending the schools served and to improve the capacity of all teachers teaching in these schools to integrate technology effectively into curricula and instruction.*

The Intel Teach to the Future Program is used to certify teachers as technology proficient. Level One of the Intel Teach to the future course focuses on giving teachers the basic skills in the Office Suite to integrate technology into the classroom. This course focuses on the Microsoft Suite only.

Level 2 of the Intel Teach to the Future course utilized 21st Century Skills and web 2.0 tools to show teachers the value of integrating technology in the 21st Century. It is vital that teachers understand the needs of today's learners. Without this understanding, teachers cannot prepare students for future learning or future success in the 21st century, global job market.

The Intel Courses and Several others offered to teachers incorporate 21st Century Learning and best practices when it comes to instruction and learning. These courses also integrate instructional strategies and use brain-based research to ensure that technology is being integrated effectively and not just as an add-on.

In order to reach the maximum number of teachers' necessary, Greenville County has fifty-six adjunct teachers on board to teach the various offerings of courses to teachers. These adjunct teachers work in conjunction with the Instructional Technology staff to implement the courses effectively. Each of the courses requires that teachers attend all training sessions and produce a final product at the end in order to validate that they have learned how to effectively integrate technology. The variety of leveled course offerings ensures that all teachers can find success in technology integration courses.

One of the biggest benefits that comes from the Technology Integration Courses is the ability to create and share lessons with teachers in their school and district. The district is currently implementing a system provided through Discovery Education to allow teachers to upload content to their servers. This content is available to teachers in their school and they can also submit content for district approval to become available to all teachers in the district. This level of collaboration will allow teachers to further expand their technology experience and also receive feedback to better improve their lessons and units.

The Technology Integration Courses have been successful and many teachers are voluntarily taking additional technology workshops, provided by Instructional Technology, to stay on top of the ever-changing technology in education. Instructional Technology will continue to review, edit and create new courses on a yearly basis to ensure that teachers have access to the most up-to-date tools and strategies to integrate technology.

2. *A description of your school district's specific goals for using advanced technology to improve student academic achievement aligned with challenging state academic content and student academic achievement standards. This explanation should include a description of the curriculum and teaching strategies that integrate technology effectively into curricula and instruction, based on an intensive review of relevant research.*

Following are our district's goals for using advanced technology to improve student achievement, as described in our district technology plan. As you can see, these goals specifically target student achievement as defined by state and district standards and professional development for teachers.

1. Greenville County Schools (GCS) will use research-proven strategies to provide home, school, and community environments conducive to our students' achieving technological literacy by the end of the eighth grade and to raise the overall level of academic achievement in South Carolina.
2. GCS will provide curriculum development and professional development to

increase the competency of all Greenville County educators so that research-proven strategies and the effective integration of instructional technology systems can be used to increase student achievement.

3. GCS will use current and emerging technology to create learner-centered instructional environments that enhance academic achievement.

Instructional Technology focuses on professional development because there is a significant amount of research that indicates that hardware, networking, and software alone do not impact student achievement. In order for technology to increase student achievement, it must be combined with effective teaching. Not only must teachers be trained on basic technology skills, in order to master integration, but they must also receive on-going instruction, support, and opportunities for collaboration. In addition to national research supporting our focus on professional development, local initiatives also support a model focused on professional development.

The goal of Instructional Technology is to train teachers to a level that is high enough to allow them to integrate technology in an effective manner throughout their teaching. Level One of this integration demonstrates that teachers know how to use technology themselves to be productive and deliver content. This can evidence itself through the use of an Interactive Whiteboard to deliver content or using a grade book to track student progress.

Level Two of integration is a higher level and demonstrates that teachers not only know how to use the technology to deliver content and be productive, but also how to get students involved using the technology. This level is more difficult, but when mastered, will provide a more engaging environment for students and provide better results. Students, when engaged in the learning process will learn more and retain more information because they are "doing". Usually, level two integration will push students into the higher level of Bloom's Taxonomy so that they are analyzing, Applying and Creating. In Level Two, the teacher becomes a facilitator of the learning process and not the sole content delivery vehicle.

3. *A description of the steps your district will take to ensure that all students and teachers in schools served by the local education agency have increased access to educational technology.*

The District will ensure that all students and teachers in schools have increased access to educational technology in the following ways:

- GCS currently has approximately 4,500 teachers and administrators. At this time, the District only funds one FTE in the Instructional Technology

department. The remainder of the department is completely funded through “soft money.” A portion of the Ed Tech funds will be used to pay the salary for additional full time employees. This employee spends the majority of their time in schools providing instruction and support to teachers and administrators. They also provide after school in-service training for school faculties.

- Instructional Technology currently works with 35 technology instructors. These instructors are teachers who provide technology classes after school hours. To ensure that all teachers have access to and an opportunity to partake in the free technology classes, the classes are located in schools across the county.
- At Principal request, Instructional Technology staff will provide specific on-site training either during or after school hours. In the future, this on-site training will be coupled with the delivery of software, as appropriate. All training is developed to be consistent with District Student and Teacher Technology Standards, as well as our District Technology plan.
- Many schools in our District do not have access to up-to-date computers and equipment for training purposes. We are currently working to provide computers for teachers that participate in instructional technology training.
- Instructional Technology’s free technology classes have always provided software, paper resources, or equipment to participants of the classes. Teachers who attend all required classes receive software, equipment, or some other resource to assist them with integrating the technology once they are back in the classroom.
- GCS has completed a massive construction plan that provides new facilities for district teachers and students. Additionally, those schools that were not in the building plan were upgraded to ensure that they will be able to serve students and teachers at the same level as new construction schools.
- GCS has implemented a telephony plan in all schools which placed a telephone on every teacher’s desktop using VoIP.
- GCS continues to renew a cost per copy printer contract that provides every classroom with a laser printer.

4. *A description of how your district will use the E2T2 competitive and/or formula funds (including the combining of these funds with monies from other federal,*

state, and/or local sources) to help ensure that students in high-poverty and high-needs schools have access to technology and to ensure that teachers are prepared to integrate technology effectively into curricula and instruction.

GCS is only eligible for E2T2 formula funds and uses these funds for support of instructional technology programs. The funds currently fund the development of Technology Integration courses and also pay for the adjunct teachers to deliver these courses to the 5,000 plus teachers in the district. Any left-over funds is used to purchase additional software and equipment for the training of teachers.

GCS will target Title I schools to ensure effective, instructional use of existing equipment and software. This will be done by providing technology training to staff and assisting them in the classroom. In previous years, GCS placed an Instructional Coach in every elementary and middle school. Instructional Technology provides technology training to Instructional Coaches so they may assist their teachers with using technology. Additionally, Title 1 has funded three Instructional Technology Facilitators to work with Title One schools. These facilitators provide technology workshops to the Title One Schools and work with the classroom teachers in a one on one basis when needed.

5. *A description of how your district will provide ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel serving the local education agency, to further the effective use of technology in the classroom or library media center, including, if applicable, a list of the entities that will be partners with the local education agency involved in providing the ongoing, sustained professional development.*

Greenville County will provide ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel in the following ways.

- Free Technology Courses – GCS’s Instructional Technology department provides free technology courses to all teachers in Greenville County. These courses range from Computer Basics to Creating Instructional Website and focus on integrating technology into the curriculum standards, and are aligned with our county’s Teacher and Student Technology Standards. Each year, Instructional Technology plans more than 60 courses to be taught in a variety of locations so that teachers from across our large district can access the courses without leaving their community.
- Graduate Level Technology Courses--Graduate Level Technology Courses are available to teachers to enhance their knowledge and skills when it comes to classroom integration. Special workshops are also held for

Media Specialists that focuses on technology used specifically in a Media Center Setting. Technology workshops are customized as needed to meet the needs of the various groups in the county.

- Furman University – Instructional Technology has worked very closely with the Education Department at Furman University for the last five years. Additionally, Furman provides graduate credit to district at a discounted rate on selected courses. In special cases, Furman allows GCS to create courses for specific needs and select the professor of record.
- Roper Mountain Science Center –Roper Mountain Science Center (RMSC) is part of GCS and receives funding from the school district. Instructional Technology works closely with RMSC’s technology lab manager. Not only do we use the RMSC lab regularly, the lab manager is assisting Instructional Technology by acting as editor and producer of the documentation developed for use in our district technology workshops. Additionally, the lab manager is managing materials distributed for use in our technology workshops.

6. *A description of the type and costs of technologies to be acquired for your technology program through the use of E2T2 competitive and/or formula funds, including supporting sources such as services, software, and digital curricula. Your explanation should include specific provisions for interoperability among the components of such technologies.*

All of the spending of Ed Tech funds center on providing professional development for our teachers. Our goal is to provide a variety of professional development opportunities to allow greater opportunity for teacher participation.

7. *A description of how your district will integrate technology (including software and other electronically delivered learning materials) into curricula and instruction to support standards-based learning and provide a timeline for such integration.*

All Instructional Technology programs are centered on professional development for teachers designed to assist them in integrating technology into the curriculum. Our primary goal is to provide teachers with the knowledge, tools, and resources necessary to integrate technology into the curriculum and support standards-based learning. More specifically, we are implementing the following programs/projects to achieve our goal. In terms of a timeline, all of these projects have already begun and are on-going.

- Instructor Training - Instructional Technology maintains 35 full-time teachers, media specialists, curriculum coordinators, and instructional coaches to provide after school technology workshops to Greenville

County teachers. These instructors work over the summer to develop workshop course content aligned to Greenville’s Teacher and Student Technology Standards.

- Technology Workshops – All workshops are designed to guide teachers to a better understanding of how to integrate the specific technology into their curriculum. In many workshops, teachers actually design an integrated lesson plan for use in the classroom.
- On-site Training – At Principal request, Instructional Technology staff will provide specific on-site training either during or after school hours. As mentioned above, in the future this on-site training will be coupled with the delivery of software, as appropriate. All training is developed to be consistent with District Student and Teacher Technology Standards, as well as our District Technology plan.
- Title I Training – Instructional Technology will provide targeted assistance to our Title I schools. These schools typically have a significant amount of equipment and software, but are lacking in the areas of professional development and support. To aid in this support, Title 1 has funded a full-time Instructional Technology Facilitators to work specifically with Title 1 schools.
- Instructional Coach Training – All Greenville County elementary and middle schools have a fulltime Instructional Coach. Additionally, this fall, GCS will add Curriculum Resource Teachers (CRTs) at every high school. The Instructional Coach/CRT facilitates whole-school improvement activities focused on improving the academic achievement of all students. In collaboration with teachers and other district personnel, Instructional Coaches/CRTs address the instructional needs of an individual school while ensuring alignment with district-wide principles and procedures for high quality professional development and continuous improvement of student performance. Instructional Technology staff will provide training to these coaches to ensure that they are comfortable integrating technology into the curriculum and assisting their teachers with technology-related issues.

8. A description of how your district will encourage the development and utilization of innovative strategies for the delivery of specialized or rigorous academic courses and curricula through the use of technology, including distance learning technologies, particularly for those areas that would not otherwise have access to such courses and curricula due to geographical isolation or insufficient resources.

Greenville County Schools approved a Distance Learning Coordinator position for

Instructional Technology in 2004. This position was filled in 2007. This person will be working to initiate distance learning initiatives for both teachers and students.

Currently Greenville County Schools' Roper Mountain Science Center is utilizing distance learning for its Science Plus Institute. They have a contractual person that is working with this program and will work closely with the new personnel. Instructional Technology continues to maintain the Virtual High School started several years ago. The Virtual High School offers students the ability to take courses in a virtual environment in order to catch up or get ahead.

9. *A description of how your district will ensure the effective use of technology to promote parental involvement and increase communication with parents, including a description of how parents will be informed of the technology being applied in their child's education. Explain how these strategies will allow parents to reinforce at home the instruction their child receives at school.*

Instructional Technology works to reach Greenville County parents in a variety of ways. All Greenville County teachers are required to create and maintain a webpage. The purpose of this webpage is to improve two-way communication with Greenville County parents. All teachers are required to post their yearly syllabus on their website and to provide an email address so that parents can contact them easily. In addition, many teachers use these websites to post homework assignments and show classroom activities and student work.

GCS maintains a highly informative district website (www.greenville.k12.sc.us) to communicate with parents and the community at large. Additionally, Greenville County Schools has a cable television program called "The Schools Channel". The Schools Channel is a partnership between the Greenville Education Network and Greenville Technical College to broadcast school and District video programs and an information bulletin board. District programming on The Schools Channel airs every day from 5:30 until 8:30 a.m. and 3:30 until 6:30 p.m. You'll also see school and district videos and informational slides on Saturdays and Sundays between 10:00 a.m. and 12:00 p.m.

All of the programs and initiatives provide Greenville County parents information about how technology is being used to assist their child in achieving the high academic standards of Greenville County and South Carolina. Being better informed about their child's day-to-day learning provides parents with the information they need to discuss and reinforce their child's knowledge acquisition. Teacher web pages, in particular, provide parents with specific information about what their children do in class each day, as well as a way to access teachers directly for more information.

Education Technology Services also provides Internet Safety workshops to parents as

requested by the individual School's PTA Organizations. These workshops focus on getting parents involved in their child's internet browsing experiences in order to protect them from the dangers of the internet. The goal of these workshops is education, not censor technology usage. Getting parents involved and making them aware of the dangers will prepare them for the warning signs of things to look for in their child's behavior and actions.

- 10. *A description of how programs in your district will be developed, where applicable, in collaboration with adult literacy service providers, to maximize the use of technology.***

GCS's Lifelong Learning program provides low-cost training to all Greenville County residents in a variety of areas including English Literacy, GED, and Computer Technology.

- 11. *A description of the process and accountability measures that your district will use to evaluate the extent to which the activities in your technology plan, including those activities funded under the E2T2 program, are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to meet challenging state academic content and student academic achievement standards.***

In 2000, GCS adopted its education plan, which was put in place to guide all district programs and initiatives. The education plan's primary goal is to accelerate significantly the academic achievement of each student. It also has four supporting goals: (1) ensure quality personnel in all positions, (2) provide an optimal school environment, (3) secure and manage financial resources responsibly, and (4) improve public understanding and support of the school district's needs, achievements, and actions.

In 2001, the district published its strategic plan, Priorities for Performance, which outlined ways in which the district performance goals would be evaluated. Education Technology Services initiatives fall under performance Goal 3, Provide a School Environment Supportive of Learning. This report can be found on our district website at <http://www.greenville.k12.sc.us/district/admin/edplan/>. All programs and initiatives implemented by Instructional Technology are consistent with this plan.

- 12. *A description of the supporting 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.***

GCS maintains the Education Technology Services (ETS) department which consists of Instructional Technology, Systems Support, and Administrative Computing.

Instructional Technology is staffed by a director and two facilitators for professional development and instructional support. Systems Support consists of a director and eighteen field technicians and two call center support specialists. The Systems Support department is responsible for technical support for hardware, software, and networking. Administrative Computing consists of a director, six SASI support personnel, four programmers, two data base administrators, and three data processing specialists/telephony support.

On the software side, GCS provides Anti-Virus software on every computer in the district to ensure virus-free usage for all users. Additionally, GCS uses and supports SASI/Powerschool, JD Edwards/Lawson, Email for all employees, and a variety of instructional software for classroom use. Our district maintains online applications as well, including the district website, intranet, BoardDocs for school board meetings, and Destiny for online media centers.

Appendix 2 – Teacher Technology Proviso Professional Development Plan

During the past several years, Greenville County School District has been working hard to implement a rigorous technology plan in order to meet the needs of our students and teachers. Data gathered from an online survey (2002-2003) indicated that teachers lack the technology skills necessary to successfully implement technology into their curriculum. Teachers are uncomfortable using technology in their classroom and therefore lack the confidence to make technology integration successful. The state department issued a proviso that states all districts must devise a way for their teachers to meet technology proficiency. As a result, GCSD searched for a way to help our teachers become technology proficient. The Intel Teach to the Future Program emerged as result.

The Intel Teach to the Future Program is used to certify teachers as technology proficient. Level One of the Intel Teach to the future course focuses on giving teachers the basic skills in the Office Suite to integrate technology into the classroom. This course focuses on the Microsoft Suite only.

Level 2 of the Intel Teach to the Future course utilized 21st Century Skills and web 2.0 tools to show teachers the value of integrating technology in the 21st Century. It is vital that teachers understand the needs of today's learners. Without this understanding, teachers cannot prepare students for future learning or future success in the 21st century, global job market.

The Intel Courses and Several others offered to teachers incorporate 21st Century Learning and best practices when it comes to instruction and learning. These courses also integrate instructional strategies and use brain-based research to ensure that technology is being integrated effectively and not just as an add-on.

In order to reach the maximum number of teachers' necessary, Greenville County has fifty-six adjunct teachers on board to teach the various offerings of courses to teachers. These adjunct teachers work in conjunction with the Instructional Technology staff to implement the courses effectively. Each of the courses requires that teachers attend all training sessions and produce a final product at the end in order to validate that they have learned how to effectively integrate technology. The variety of leveled course offerings ensures that all teachers can find success in technology integration courses.

One of the biggest benefits that comes from the Technology Integration Courses is the ability to create and share lessons with teachers in their school and district. The district is currently implementing a system provided through Discovery Education to allow teachers to upload content to their servers. This content is available to teachers in their school and they can also submit content for district approval to become available to all teachers in the district. This level of collaboration will allow teachers to further expand their technology experience and also receive feedback to better improve their lessons and units.

The Technology Integration Courses have been successful and many teachers are voluntarily taking additional technology workshops, provided by Instructional Technology, to stay on top of the ever-changing technology in education. Instructional Technology will continue to review, edit and create new courses on a yearly basis to ensure that teachers have access to the most up-to-date tools and strategies to integrate technology.

Appendix 3 – Acceptable Use Policy

Book:	Policies
Section:	E - Business Management
Title:	Data Management: Data Security
Number:	EFE
Status:	Active
Legal:	
Adopted:	11/11/1986
Last Revised:	11/11/1986
Last Reviewed:	

Policy Detail

The administration will develop appropriate rules to ensure the security and integrity of all data and computer resources, hardware, software, and related materials. These rules should cover such matters as access to and procedures for the use of all data systems.

Book: Rules
Section: E - Business Management
Title: Data Management: Data Security
Number: EFE
Status: Active
Legal:
Adopted: 11/11/1986
Last Revised: 10/02/2007
Last Reviewed:

Policy Detail

I. Introduction

Every employee at GCS is expected to be familiar with and consistently follow the baseline control measures that this rule defines. These security measures, sometimes called “standard of due care controls”, are the minimum controls required to prevent problems like fraud and embezzlement, sabotage, errors and omissions, system unavailability, and various legal problems, such as allegations of negligence, breach of fiduciary duty, and privacy violation.

II. Legal Requirements

GCS management is committed to complying with applicable information security legislation and relevant information security standards and requirements. These include, but are not limited to the following:

- The Family Educational Rights and Privacy Act (FERPA)
- Children’s Internet Protection Act (CIPA)
- Health Insurance Portability and Accountability Act (HIPAA)
- Individuals with Disabilities Education Act (IDEA)

Users of the network are responsible for respecting and adhering to local, state, federal, and international laws. Any attempt to break those laws through the use of GCS information systems may result in litigation against the offender by the proper authorities. If such an event should occur, GCS will fully cooperate with the appropriate authorities to provide any information necessary for the civil and/or criminal litigation process.

III. Employee Technology Acceptable Use Rule

The purpose of this directive is to provide GCS employees with guidance on the proper

use of the district's information technology resources, including but not limited to the Internet, the Intranet, e-mail, the Portal, and the district's network and supporting systems and the data transmitted on these systems.

The use of the district technology resources is a privilege granted to employees for the enhancement of job-related functions. Employees may have limited access to these resources for personal use, if they comply with the provisions of this rule. Violations of this rule may result in the revocation of this privilege. Employees may also face disciplinary action up to and including termination, civil litigation, and/or criminal prosecution for misuse of these resources.

A. Information Security Awareness:

Each year every staff member must review the Information Security Awareness materials on the GCS Portal web site.

B. Prohibited Uses of GCS Computer Resources:

- Unauthorized or excessive personal use.
- Use of GCS computer resources to infringe the intellectual property rights of others.
- Use of GCS computer resources for personal profit.
- Use of GCS computer resources to further political causes.
- Staff shall not upload or otherwise transfer out of the district's direct control any software licensed to the district or data owned or licensed to the district without explicit written authorization. Failure to observe copyright or license agreements may result in disciplinary action from GCS or legal action by the copyright owner.
- Staff shall not use IT resources to reveal confidential or sensitive information, student data, or any other information covered by existing state or federal privacy or confidentiality laws, regulations, rules, policies, procedures, or contract terms. Staff who engage in the unauthorized release of confidential information via the district's IT resources will be subject to sanctions in existing policies and procedures associated with unauthorized release of such information.
- Staff shall not download executable software, including freeware and shareware, unless it is required to complete their job responsibilities.
- Staff shall not use district IT resources to intentionally disable or overload any

computer system or network, or to circumvent any system intended to protect the privacy or security of the district's IT resources.

- Staff shall not access, store, display, distribute, edit, or record sexually explicit or extremist material using district IT resources.
- Violation of this rule may result in immediate disciplinary action. The incidental and unsolicited receipt of sexually explicit or extremist material, such as might be received through email, shall not constitute a violation of this section, provided that the material is promptly deleted and neither stored nor forwarded to other parties.
- Staff is prohibited from accessing or attempting to access IT resources for which they do not have explicit authorization by means of user accounts, valid passwords, file permissions or other legitimate access and authentication methods. It is a violation of district rule to grant another individual access to any district accounts that have been authorized to you; or use another individual's district authorized accounts, user-ids and/or passwords.
- Staff shall not add, modify, repair, remove, reconfigure or otherwise tamper with any device on the network infrastructure including, but not limited to: wireless network devices, workstations, printers, servers, cabling, switches/hubs, routers, etc. Changes to any element of the network infrastructure are the responsibility of authorized personnel under the auspices of the GCS Technology Department.

C. User Passwords

Staff members receive a unique user ID for GCS network and computer use. The accompanying password is not to be shared. Staff may change their password at any time and may be required to change it at regular intervals.

D. Access to Equipment Rooms

Staff members may only be allowed access to sensitive areas such as server rooms, wiring closets, etc, after they have verified the credentials and need for access of the person requesting access.

E. Sensitive Information

Staff members may not disclose sensitive information to persons not authorized to receive it. This includes non-public information such as Social Security Numbers, credit card numbers, bank account numbers, health information, or confidential student data. Sensitive hardcopy information must be securely stored according to GCS policies and be destroyed by shredding when no longer needed.

All employees who have access to or may have access to personally identifiable student records shall adhere to all standards included in the Family Educational Rights and Privacy Act (FERPA), Health Insurance Portability and Accountability Act (HIPAA), and other applicable laws and regulations, as they relate to the release of student information.

F. Limited Personal Use

Occasional and incidental personal use of the district's IT resources and Internet access is allowed subject to limitations. By the allowance of such use, however, the GCS does not grant any ownership, privacy, or expectation of privacy to any person in the contents of any messages or other Internet activities involving GCS resources or equipment.

Personal use of the Internet is prohibited if:

- It materially interferes with the use of IT resources by the district; or
- Such use burdens the district with additional costs; or
- Such use interferes with the staff member's employment duties or other obligations to the district; or
- Such personal use includes any activity that is prohibited under any district (including this rule), state or federal statute or policy.

G. E-Mail

Each employee is responsible for the content of all text, audio or images that they place or send over the Internet. Fraudulent, harassing or obscene messages are prohibited. All messages communicated on the Internet should have your name attached. No messages will be transmitted under an assumed name. Users may not attempt to obscure the origin of any message. Information published on the Internet should not violate or infringe upon the rights of others. No abusive, profane or offensive language may be transmitted through the system. You may not use another's email address to send email messages.

Harassment of any kind is prohibited. No messages with derogatory or inflammatory remarks about an individual or group's race, religion, national origin, physical attributes, or sexual preference will be transmitted.

E-mail messages are considered public records and are therefore legally discoverable.

H. IT Resource Monitoring

GCS may install software and/or hardware to monitor and record all IT resources, usage, including email and Web site visits. The district retains the right to record or inspect any and all files stored on district systems.

Staff shall have no expectations of privacy with respect to district IT resource usage. Staff is advised that serious disciplinary action may result from evidence of prohibited activity obtained through monitoring or inspection of electronic messages, files, or electronic storage devices. Illegal activity involving district IT resource usage may be referred to appropriate authorities for prosecution.

I. Consequences

Violators of the GCS Employee Technology Acceptable Use Policy may be subject to disciplinary action, charge backs for time and materials to repair GCS damaged IT Resources or otherwise harmed through the addition, removal, reconfiguration, or any other changes not specifically authorized by Technology.

IV. Student Acceptable Use Policy Agreement

The School District of Greenville County provides computer, network, email, and Internet access to students as part of the learning environment. While these systems have the power to deliver a huge number of resources to our classrooms, their ability to serve students depends on the responsible and ethical use of them by every student.

“Acceptable use” of these systems is use that is consistent with the instructional goals of the District. If you break “acceptable use” rules, you may lose the privilege to use both classroom computers and/or the Internet. Further disciplinary and/or legal action may be taken at the discretion of school administration.

The District takes reasonable precautions by using filtering software to keep inappropriate Internet sites and email out of the classroom. The District does not supervise individual email accounts, a Parent Portal is available that permits the supervision of your child’s email account.

Please note that parents may choose for their child not to have access to the internet at school; however, students who do not have access to the internet will not be able to access email or web based programs that teachers may be using in class. Your child has agreed to the terms and conditions of this document upon acceptance of the school district handbook. Violation of any of the terms or conditions will result in disciplinary action and/or involvement of law enforcement.

Treat computer equipment with care and respect – Willful destruction of any computer equipment or software will be considered vandalism, and may warrant the involvement

of local law officials.

Any written text, graphics or executable files created, downloaded, displayed, or exchanged with another student or teacher must be for education-related purposes only.

Do not use school computers for illegal activities such as planting viruses, hacking, or attempted unauthorized access to any system.

Do not bypass or attempt to bypass any of the District's security or content filtering safeguards.

Do not use school computers for commercial purposes.

Follow copyright laws at all times – See District copyright policies for more information. If you have questions about the legality of using software, text, graphics, or music you find online, ask your teacher or media specialist for guidance.

Keep your password secret – You will be held responsible for all computer activities associated with your password. For example, if you share your password with your friend and he/she signs on as you and breaks one of the rules outlined above, you may be held responsible.

All online communication must be polite and not threatening or offensive in any way – All students in grades 3-12 are issued email accounts. The District has the right to review any email sent or received using District equipment and email accounts. Email accounts should be used for educational and district purposes only.

Do not give out personal information on the Internet. Never give out your phone number, social security number, full name, age, home address, or any other personal information.

Home directories are provided to students for educational related work. Students should not store personal or non-school related work in home directories. The District reserves the right to review the contents of a student's home directory.

Please contact your school if you do not want your child to have access to the Internet and email.

V. GCSD “ Internet Safety Policy”

This rule includes provisions to address access by minors to inappropriate matter on the Internet and World Wide Web; the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communication; unauthorized access,

including so-called “hacking” and other unlawful activities by minors online; unauthorized disclosure, use, and dissemination of personal identifications regarding minors; and measures designed to restrict minors’ access to materials harmful to minors.

A. General Access. The smooth operation of the network, Internet, and e-mail services relies on the proper conduct of the end users who must adhere to strict guidelines. These guidelines are provided so that students and staff are aware of their responsibilities when using these technologies. In general, this requires efficient, ethical, and legal utilization of the network resources. Because access to the network provides connections to other computer systems located all over the world, users (and parents of students who are users) must understand that neither the District nor any District employee controls the content of the information available on the systems. Every effort will be made by the District to monitor and restrict ready access to known objectionable sites; however, the District does not condone the use of controversial or offensive materials and cannot be held responsible for such use.

B. Technology Protection Measures. In compliance with the Children’s Internet Protection Act (“CIPA”), 47 U.S.C. § 254 (h), the District uses technological devices designed to filter and block the use of any of the District’s computers with Internet access to retrieve or transmit any visual depictions that are obscene, child pornography, or “harmful to minors” as defined in the CIPA. Adult users of a District computer with Internet access may request that the “technology protection measures” be temporarily disabled by the chief building administrator of the building in which the computer is located for bona fide research purposes or other lawful purposes not otherwise inconsistent with this administrative rule.

C. Annual Responsibilities. Prior to accessing the network, Internet, or e-mail services, students and staff will receive instruction on the appropriate use of these services. Students and staff members must sign a form annually acknowledging that they have read and understand this Administrative Rule, that they will comply with the guidelines set forth herein, and that they understand the consequences for violating these guidelines.

D. Terms and Conditions of Use

1. Acceptable Use. The purpose of the District’s educational network is to support research and education by providing access to unique resources and the opportunity for collaborative work. All use of the network, Internet, and e-mail services must be in support of education and research and consistent with the educational objectives of the District. Use of other networks or computing resources must comply with the guidelines governing those networks. Transmission of any material in violation of any federal or state laws or regulations is prohibited; this includes, but is not limited to, copyrighted material, threatening or obscene material, or material protected by trade secret. Access to computer systems and networks owned or operated by the District imposes certain

responsibilities and obligations on users and is subject to District policies and local, state, and federal laws. Acceptable use is always ethical, reflects honesty, and shows restraint in the consumption of shared resources. It demonstrates respect for intellectual property, ownership of information, system security mechanisms, and the individual's rights to privacy and freedom from intimidation, harassment, and unwarranted annoyance.

2. Procedures for Use

1. Administrators and teachers may access the Internet or e-mail for educational or work-related purposes at any time, which is not disruptive and does not interfere with the performance of other responsibilities by the employee.

2. The District will notify parents/guardians about the District network, related safety issues, and issues governing its Internet through a general letter to all parents. Parental permission is not required for use of the Internet, but parents will be notified they have the right to file a Parent/Guardian Denial Form available from the school principal if they do not want their child(ren) to have access to Internet resources.

3. A student's parent or guardian must sign a Student E-mail Account Agreement in order for that student to be granted an individual e-mail account. The parent/guardian may withdraw approval at any time through a written request directed to the student's teacher or principal.

4. All computer, Internet usage and e-mail usage by District employees and students must be consistent with the Greenville County School District mission and policies.

3. Rules Governing Use

Permitted Uses of Internet and E-mail

- **Users** will utilize the system for educational and professional or career development activities only, except as permitted in Article III (F).
- **Users** may download text and other non-executable files attached to e-mail messages or from the Internet for school-related business only.
- **Users** will check their e-mail frequently, delete unwanted messages promptly, and stay within their e-mail quota. Be aware that the system administrator may delete e-mail at any time.
- **Users** will subscribe only to high quality discussion group mail lists that are relevant to their educational or professional/career development.

General Prohibitions

- **Users** may not use the District system for commercial purposes, defined as offering or providing goods or services or purchasing goods or services for personal use. Greenville County School District will not be responsible for any obligations resulting from any unauthorized use of the system.
- **Users** may not use the system for political activities.
- **Users** will not post chain letters or engage in spamming. Spamming is sending an unnecessary message to a large number of people.

Personal Safety

- **Students** will not post or e-mail personal contact information about themselves or other people unless it is in conjunction with a specific teacher-approved assignment or approved college/career communication. Personal contact information includes address, telephone number, school address, etc.
- **Students** will not agree to meet with someone they have met online without their parent/guardian's approval.
- **Students** will promptly disclose to an administrator, teacher, or other school employee any message they receive that is inappropriate or makes them feel uncomfortable.

Illegal Activities

- **Users** will not attempt to gain unauthorized access to the e-mail system, the District Web pages, or any other computer systems through Greenville County School District e-mail and/or Internet and/or network access. Users will not attempt to perform functions that exceed their authorized access. This includes attempting to log in through another person's account or access another person's files. These actions are illegal.
- **Users** will not make deliberate attempts to disrupt the computer system performance or destroy data by spreading computer viruses or by any other means. These actions are illegal.
- **Users** will not use the District system to engage in any other illegal act, such as arranging for a drug sale or the purchase of alcohol, engaging in criminal gang activity, threatening the safety of another person, or any other activity that violates existing District policies or procedures. Reference to such activities will not even be made in a

joking manner or as a prank.

- **The District** will notify law enforcement should illegal activities take place.

System Security

- **Users** will not share their account information (User ID and/or password) or attempt to log in to another user's account. Any sharing of User ID or password will result in immediate restriction or removal of account privileges. The only potential exception is the sharing of information with IT staff if requested for troubleshooting purposes.
- **Users** will immediately notify the IT staff if they have identified a possible security problem (students should notify a teacher and/or principal). Do not actively seek security problems but immediately report any potential issues that are found.
- **Users** will not download or install any unauthorized software or install any unauthorized hardware.
- **Users** will not run any executable files attached to an e-mail message.
- **Users** will not knowingly use portable data storage devices, which contain viruses or in any other way knowingly spread computer viruses.

Use of Appropriate Language

Restrictions against inappropriate language may apply to public messages, private messages, and material posted on Web pages.

- **Users** will not use obscene, profane, lewd, vulgar, rude, inflammatory, threatening, disrespectful, or gang related language or symbols.
- **Users** will not post or e-mail information, which could cause damage or a danger of disruption.
- **Users** will not engage in personal attacks, including prejudicial or discriminatory remarks.
- **Users** will not harass another person. Harassment is persistently acting in a manner that distresses or annoys another person. If a user is told by a person to stop sending messages, he/she must stop.
- **Users** will not use any language in an e-mail that threatens another person, whether it

is the recipient of the message or a third party.

- **Users** will not knowingly or recklessly post false or defamatory information about a person or organization.

Access to Inappropriate Material

- **Users** will not use the District system to access or send material that is profane, lewd, vulgar, indecent, libelous, or obscene, e.g., pornography, that advocates illegal acts, or that advocates violence or discrimination towards other people, e.g., hate literature.

- **Adult Users** who mistakenly access inappropriate information or images should immediately report this to ETS. This will initiate proceedings to have the materials blocked.

- **Students** who mistakenly access inappropriate information or images should immediately report this to the attending teacher. ETS should be notified if it is deemed warranted. This will protect the users against an allegation that they have intentionally violated the Acceptable Use Policy.

- **Students** are expected to follow parental guidance regarding limitation of access to additional types of inappropriate materials.

Respect for Privacy

- **Users** will not repost or e-mail a message that was sent to them privately without permission from the person who originally sent the message.

- **Users** will not post or e-mail private information about another person.

E. Penalties for Improper Use.

An employee who violates the terms of this administrative rule or otherwise misuses e-mail or the Internet to access or send inappropriate material will be subject to disciplinary action, up to and including discharge. In addition, the privilege of accessing the Internet and e-mail services also will be subject to cancellation. Students who violate the terms of this administrative rule or who otherwise misuses their access to e-mail or the Internet also will be subject to disciplinary action in accordance with the District Student Behavior Code. Internet and e-mail access privileges also may be cancelled. Violations of the laws of the United States or the State of South Carolina also may subject student or employee users to criminal prosecution. If a user incurs unauthorized costs, the user, as well as the user's parents if the user is a student, will be

responsible for all such costs.

F. Warranty.

The District makes no warranties of any kind, whether expressed or implied, for the service it is providing. The District will not be responsible for any damages suffered by any user. This includes loss of data resulting from delays, non-deliveries, misdirected deliveries, or service interruptions caused by the system's negligence, user errors, or omissions. Use of any information obtained via the Internet is at the user's own risk. The District specifically denies any responsibility for the accuracy or quality of information obtained through its services.

G. Security.

Security on any computer system is a high priority, especially when the system involves many users. If a student or employee believes he/she has identified a security problem on the network, he/she must notify the administrator for the school or ETS. Do not demonstrate the problem to other users. Attempts to log on to any network as a system administrator will result in cancellation of user privileges. Any user identified as a security risk or having a history of problems with other computer systems may be subject to severe restrictions, cancellation of privileges, or other disciplinary and/or legal action.

H. User Privacy.

E-mail messages sent or received via a District-issued e-mail account and all other electronic files created using District resources or stored with District resources are property of the District. The District reserves the right to examine, restrict, or remove any material that is on or passes through its network, just as it does any other work or material generated or brought to school by staff or students. Access to electronic information related to any student or staff member will be governed by the same policies that would apply to that information if it were not in electronic form.

I. School Board Policies.

All documents on the District's server(s) must conform to Board policies and regulations, as well as established school guidelines. Copies of Board policies are available on Board Docs. Persons developing or maintaining Web documents are responsible for complying with these and other policies. Some of the relevant issues and related Board policies include the following:

1. Electronic transmission of materials is a form of copying. As specified in District policy, no unlawful copies of copyrighted materials may be knowingly produced or transmitted

via the District's equipment, including its Web server(s).

2. Documents created for the Web and linked to District Web pages must meet criteria for use as an instructional resource.

3. Any links to District Web pages that are not specifically curriculum-related must meet the criteria established in the District Internet Authorized Use policy. Any other non-curricular materials should be limited to information about other youth activities, agencies, or organizations which are known to be non-sectarian, exclusively devoted to community interests or child welfare, non-profit, and non-discriminatory. Web page links may not include entities whose primary purpose is commercial or political advertising.

4. All communications via District Web pages will comply with the District Acceptable Use for Network, Internet, and E-mail Services Policy and the District Student Behavior Code. Offensive behavior that is expressly prohibited by this policy includes religious, racial, and sexual harassment and/or violence.

5. Any student information communicated via District Web pages must comply with District policies on Data Privacy and Public Use of School Records.

J. OTHER

1. Material on a Web page reflects an individual's thoughts, interests, and activities. Such Web pages do not, in any way, represent individual schools or the District, nor are they endorsed or sanctioned by any individual school or the District. Concern about the content of any page(s) created by students or staff should be directed to the building principal of that school or to that school's media specialist.

2. Given the rapid change in technology, some of the technical standards outlined in this regulation may require change throughout the year. Such changes will be made with approval of the Superintendent. This regulation may be updated on an annual basis or more frequently if required.

VI. Access Control Rule

Public information is available at the GCS web site, and Internal Use Only information is available on the GCS internal web sites without a login. Access to Confidential or other sensitive information is granted only when a legitimate business need has been demonstrated and access has been approved in advance by the information Owner. Access to special hardware and software must be restricted based on business need. Education Technology Services ("ETS") will develop and maintain specific written procedures regarding access control.

VII. Systems Application and Development Rule

ETS will develop and maintain specific written procedures for systems application and development. All systems and applications development and/or changes must adhere to GCS security policies, rules, and standards.

VIII. Education Technology Systems Operations Rule

ETS shall develop and maintain specific written procedures for systems operations, including system security.

Appendix 4 – How E-Rate Areas have been addressed

The goal of Greenville County Schools is to reduce our telephone bills, upgrade and replace existing servers, and add computer drops to classrooms that do not meet our district technology plan specifications. Greenville County Schools working with our local Telco has installed fiber to every school site to increase bandwidth. This has allowed us to implement a Voice Over IP (VOIP) telephone system and reduce our overall telephone costs. Additionally, this infrastructure will allow us to implement new distance learning initiatives for our teachers and students. The upgrade and replacement of the existing servers will allow our schools to offer more programs and applications over the network and will reduce the amount of time needed for a technician to service machines. Additional computer drops will allow all schools to move forward in their goal of putting computers, printers, and phones in all classrooms. This will allow teachers and students more opportunity to use technology to teach and advance student achievement.

One of the major investments Greenville County Schools is making is in its building plan. In April 2002, The School District began implementing its Program Management Agreement with Institutional Resources to oversee the construction and renovation of schools. The agreement provides funding through BEST, a non-profit foundation established by the School Board, which provides for the completion of the District's Facilities Plan in four years (by 2006 school year) versus a minimum of 23 years through traditional funding. The plan provides "equal" school facilities for all students across the district – east, west, north, and south. Currently, 30,000 students attend school in modern facilities. The other 50% of students deserve the same quality school buildings! There is no tax increase. Millage for school construction has been and will remain at 42.5 mills. It should decrease after 2007. Under traditional funding, taxes have increased over the past ten years and would have likely continued to do so.

Schools were completed by the 2006 school year versus minimum of 23 years using traditional funding. Even 23 years is unlikely as costs continue to increase due to State and Federal government requirements. This agreement allows the school district to meet school facility needs in four years versus never catching up! The District has saved money through avoidance of increasing construction costs due to inflation, standardization of school design, elimination of changes to scope of projects that increase costs, bulk purchase of building materials, and cost effective designs that reduce maintenance costs.

Financing this plan works somewhat like a mortgage or an installment purchase. Schools are built and the cost is paid off over time similar to a house payment. The District continues to own legal title to all property and existing school buildings. Buildings are leased to BEST, the non-profit funding corporation set up by the School Board, for a term that ends when all payments are made or 50 years, whichever comes first. BEST agrees to provide new buildings and improvements and to sell these to the District in return for payments over 25 years. The process to construct schools remains "design, bid, build" as required by Procurement Code. To address the schools not in the district's building plan, the School Board has voted to invest in

upgrading these schools' technology infrastructure so that they would be equal to the new construction schools. Additionally, Greenville County Schools has implemented a Voice Over IP (VOIP) telephone system to put a telephone on every teacher's desktop.

Prior to 2003, Greenville County Schools was the recipient of a Technology Innovation Challenge Grant, Village Green. The grant was awarded in 1997 and ended in 2002. This opportunity provided a major investment for the district. Eighteen schools participated in the grant, which provided cabling, infrastructure, computers, and professional development. Village Green provided Greenville County Schools the opportunity to jump-start its technology goals.

Other initiatives that allowed for Greenville County Schools to invest in technology include our district's technology plan, our state's teacher technology proficiency requirement, and our Title 1 projects. This revised technology plan provides opportunity for growth and advancement for both teachers and students in Greenville County. The state's teacher technology proficiency mandate requires that all teachers demonstrate proficiency in using technology as a classroom teaching tool. To ensure that our teachers meet this requirement Greenville County Schools is requiring all district teachers to go through the 40 hour Intel Teach to the Future professional development program. This program teaches participants to create a technology integrated unit plan to take and use in their classroom. Our goal continues to be to train 1000 teachers a year for the next 4 years. After the first year, we have trained more than 1000 teachers. Our Title 1 program and Education Technology Services are working with Title 1 middle schools to provide laptops to sixth grades for classroom use.

Greenville County Schools is committed to moving forward in the area of technology and is securing and using resources to ensure that our schools have the technology necessary to prepare students for their future.

In 2000, GCS adopted its education plan, which was put in place to guide all district programs and initiatives. The education plan's primary goal is to accelerate significantly the academic achievement of each student. It also has four supporting goals: (1) ensure quality personnel in all positions, (2) provide an optimal school environment, (3) secure and manage financial resources responsibly, and (4) improve public understanding and support of the school district's needs, achievements, and actions.

In 2001, the district published its strategic plan, Priorities for Performance, which outlined ways in which the district performance goals would be evaluated. Instructional Technology initiatives fall under performance Goal 3, Provide a School Environment Supportive of Learning. This report can be found on our district website, programs and initiatives implemented by Instructional Technology are consistent with this plan.

Appendix 5 – Report on Last Year’s Progress Benchmarks

Last year Education Technology Services spent a considerable amount of time and resources on the implementation of the Lawson ERP system, handling over 42,000 service calls, project management of the Powerschool project and routine day-to-day maintenance for over 32,000 systems.

Lawson is a comprehensive and tightly integrated enterprise resource planning (ERP) solution that provides a full range of finance, payroll, purchasing and human resources functionality that replaced the aging JD Edwards system. Administrative Computing provided all the support and conversion of existing applications and continues to provide support for the new Lawson system. Systems Support installed all the hardware and software necessary to run Lawson. Instructional Technology was responsible for all the training on both the finance and human resource modules.

Education Technology Services completed the implementation of a backup or redundant data center which presently houses redundant systems for mission critical applications. This year we intend to expand the number of applications available at the backup data center. Applications currently located at the primary and backup data centers include:

- Internet connectivity
- VOIP Phone Systems
- Lawson/Timelink
- Security applications

Applications under consideration to be housed at both data centers include:

- Voicemail
- Email
- Powerschool

We continue to evaluate the Software as a Service (SaaS) model which will allow us to off-load services and reduce costs. Both SchoolMessenger and our Anti-SPAM services are now located off-site and provide access anywhere, anytime from any location.

Appendix 6 – FY09-10 Budget

GREENVILLE COUNTY SCHOOL DISTRICT
ETS GENERAL FUND BUDGET REPORT
 FY 2009-2010

Account	Description	Budget	Revised Budget
	746 Technology Support		
50311-0000	Instructional Services	\$0	\$0
50312-0000	Instructional Programs Improvement Services	\$0	\$0
50315-0000	Management Services	\$0	\$0
50316-0000	Data Processing Services	\$0	\$0
50318-0000	Audit Services	\$0	\$0
50319-0000	Legal Services	\$0	\$0
50323-0000	Repairs and Maintenance Services	\$0	\$0
50325-0000	Rentals	\$212,173	\$212,173
50332-0000	Travel	\$800	\$800
50340-0000	Communication	\$0	\$0
50345-0000	Technology	\$0	\$0
50350-0000	Advertising	\$0	\$0
50395-0000	Other Professional and Technical Services	\$0	\$0
50399-0000	Miscellaneous Purchased Services	\$0	\$0
50410-0000	Supplies	\$0	\$0
50445-0000	Technology and Software Supplies	\$20,000	\$20,000
50470-0000	Energy (Electric, Gas, and Other Heating Fuels)	\$0	\$0
50510-0000	Land	\$0	\$0
50520-0000	Construction Services Buildings Capitalize	\$0	\$0
50530-0000	Improvements Other Than Buildings	\$0	\$0
50540-0000	Equipment Over 5000	\$0	\$0
50545-0000	Technology Equipment Over 5000	\$0	\$0
50580-0000	Mobile Classrooms	\$0	\$0
50640-0000	Organization Membership Dues and Fees (Professional)	\$0	\$0
50650-0000	Liability/Tort Insurance	\$0	\$0
	Total for Dept 746	\$232,973	\$232,973

Account	Description	Budget	Revised Budget
	747 User Support		
50316-0000	Data Processing Services	\$0	\$0
50318-0000	Audit Services	\$0	\$0
50319-0000	Legal Services	\$0	\$0
50323-0000	Repairs and Maintenance Services	\$0	\$0
50332-0000	Travel	\$2,902	\$2,902

50340-0000	Communication	\$0	\$0
50345-0000	Technology	\$0	\$0
50350-0000	Advertising	\$0	\$0
50360-0000	Printing and Binding	\$0	\$0
50395-0000	Other Professional and Technical Services	\$0	\$0
50399-0000	Miscellaneous Purchased Services	\$0	\$0
50410-0000	Supplies	\$3,646	\$3,346
50445-0000	Technology and Software Supplies	\$24,476	\$24,476
50490-0000	Other Supplies and Materials	\$0	\$0
50510-0000	Land	\$0	\$0
50520-0000	Construction Services Buildings Capitalize	\$0	\$0
50530-0000	Improvements Other Than Buildings	\$0	\$0
50540-0000	Equipment Over 5000	\$0	\$0
50545-0000	Technology Equipment Over 5000	\$4,000	\$4,000
50580-0000	Mobile Classrooms	\$0	\$0
50640-0000	Organization Membership Dues and Fees (Professional)	\$0	\$0
50650-0000	Liability/Tort Insurance	\$0	\$0
	Total for Dept 747	\$35,024	\$34,724

Account	Description	Budget	Revised Budget
	753 Management Info Services		
50311-0000	Instructional Services	\$0	\$0
50312-0000	Instructional Programs Improvement Services	\$0	\$0
50315-0000	Management Services	\$109,000	\$109,000
50316-0000	Data Processing Services	\$150,000	\$150,000
50318-0000	Audit Services	\$0	\$0
50319-0000	Legal Services	\$0	\$0
50323-0000	Repairs and Maintenance Services	\$0	\$0
50325-0000	Rentals	\$0	\$0
50332-0000	Travel	\$1,200	\$1,200
50340-0000	Communication	\$0	\$0
50345-0000	Technology	\$0	\$0
50350-0000	Advertising	\$0	\$0
50360-0000	Printing and Binding	\$0	\$0
50395-0000	Other Professional and Technical Services	\$0	\$0
50399-0000	Miscellaneous Purchased Services	\$0	\$0
50410-0000	Supplies	\$6,400	\$6,400
50445-0000	Technology and Software Supplies	\$20,583	\$20,583
50450-0000	Warehouse Inventory Adjustment	\$0	\$0
50460-0000	Food Purchases	\$0	\$0
50461-0000	Food USDA Commodities	\$0	\$0
50462-0000	Food Commodity Distribution Charge	\$0	\$0
50490-0000	Other Supplies and Materials	\$0	\$0

50510-0000	Land	\$0	\$0
50520-0000	ConstructionServices Buildings Capitalize	\$0	\$0
50530-0000	Improvements Other Than Buildings	\$0	\$0
50540-0000	Equipment Over 5000	\$0	\$0
50545-0000	Technology Equipment Over 5000	\$273,116	\$273,116
50570-0000	Depreciation	\$0	\$0
50580-0000	Mobile Classrooms	\$0	\$0
50640-0000	Organization Membership Dues and Fees (Professional)	\$0	\$0
50650-0000	Liability/Tort Insurance	\$0	\$0
50670-0000	Sales Tax on Adult Meals	\$0	\$0
50690-0000	Other Objects	\$0	\$0
50791-0000	Indirect Costs	\$0	\$0
	Total for Dept 753	\$560,299	\$560,299

Account	Description	Budget	Revised Budget
	754 Systems Support		
50312-0000	Instructional Programs Improvement Services	\$0	\$0
50316-0000	Data Processing Services	\$0	\$0
50318-0000	Audit Services	\$0	\$0
50319-0000	Legal Services	\$0	\$0
50323-0000	Repairs and Maintenance Services	\$0	\$0
50325-0000	Rentals	\$0	\$0
50332-0000	Travel	\$23,775	\$23,775
50340-0000	Communication	\$200,000	\$200,000
50345-0000	Technology	\$173,000	\$173,000
50350-0000	Advertising	\$0	\$0
50395-0000	Other Professional and Technical Services	\$0	\$0
50399-0000	Miscellaneous Purchased Services	\$0	\$0
50410-0000	Supplies	\$0	\$0
50445-0000	Technology and Software Supplies	\$389,000	\$389,000
50510-0000	Land	\$0	\$0
50520-0000	ConstructionServices Buildings Capitalize	\$0	\$0
50530-0000	Improvements Other Than Buildings	\$0	\$0
50540-0000	Equipment Over 5000	\$0	\$0
50545-0000	Technology Equipment Over 5000	\$0	\$0
50580-0000	Mobile Classrooms	\$0	\$0
50640-0000	Organization Membership Dues and Fees (Professional)	\$0	\$0
50650-0000	Liability/Tort Insurance	\$0	\$0
	Total for Dept 754	\$785,775	\$785,775

Account	Description	Budget	Revised Budget
	762 Media Services		

50312-0000	Instructional Programs Improvement Services	\$0	\$0
50316-0000	Data Processing Services	\$0	\$0
50318-0000	Audit Services	\$0	\$0
50319-0000	Legal Services	\$0	\$0
50323-0000	Repairs and Maintenance Services	\$0	\$0
50332-0000	Travel	\$2,088	\$2,088
50345-0000	Technology	\$1,200	\$1,200
50350-0000	Advertising	\$0	\$0
50395-0000	Other Professional and Technical Services	\$0	\$0
50399-0000	Miscellaneous Purchased Services	\$0	\$0
50410-0000	Supplies	\$9,623	\$9,623
50420-0000	Textbooks	\$91,200	\$91,200
50430-0000	Library Books and Materials	\$145,000	\$145,000
50445-0000	Technology and Software Supplies	\$145,866	\$145,866
50490-0000	Other Supplies and Materials	\$0	\$0
50510-0000	Land	\$0	\$0
50520-0000	Construction Services Buildings Capitalize	\$0	\$0
50530-0000	Improvements Other Than Buildings	\$0	\$0
50540-0000	Equipment Over 5000	\$0	\$0
50545-0000	Technology Equipment Over 5000	\$10,000	\$10,000
50580-0000	Mobile Classrooms	\$0	\$0
50640-0000	Organization Membership Dues and Fees (Professional)	\$0	\$0
50650-0000	Liability/Tort Insurance	\$0	\$0
	Total for Dept 762	\$404,977	\$404,977
	Total ETS	\$2,019,048	\$2,018,748



GREENVILLE COUNTY SCHOOL DISTRICT
FY 2009 - 2010

Internal Budget Report - no filters
Current Year-To-Date

Location: 703 Dept Supt for Operations	Original Budget: \$1,127,772.66	Current Commits: \$0.00
Company: 8500 ETS E-rate Reserve	Revised Budget: \$1,127,772.66	Net Amount: \$1,127,772.66
	Current Actual: \$0.00	

<u>Function</u>	<u>Description</u>	<u>Original</u>	<u>Revised</u>	<u>Current</u>	<u>Commits</u>	<u>Net</u>
254	Operation&Maintenance of Plant	\$1,127,772.66	\$0.00	\$0.00	\$0.00	\$0.00
Acct Unit:	703.254.01.000 O&M of Plant ETS E-rate	\$1,127,772.66	\$0.00	\$0.00	\$0.00	\$0.00
50540	Equipment Under 5000	\$1,127,772.66	\$0.00	\$0.00	\$0.00	\$0.00
50540-0099	Equipment Under 5000	\$1,127,772.66	\$0.00	\$0.00	\$0.00	\$0.00

<u>Function</u>	<u>Description</u>	<u>Original</u>	<u>Revised</u>	<u>Current</u>	<u>Commits</u>	<u>Net</u>
266	Tech&Data Processing Services	\$0.00	\$1,127,772.66	\$0.00	\$0.00	\$1,127,772.66
Acct Unit:	703.266.01.000 Tech&Data Process Svcs ERATE	\$0.00	\$1,127,772.66	\$0.00	\$0.00	\$1,127,772.66
50545	TechnologyEquipment Under 5000	\$0.00	\$1,127,772.66	\$0.00	\$0.00	\$1,127,772.66
50545-0099	TechnologyEquipment Under 5000	\$0.00	\$1,127,772.66	\$0.00	\$0.00	\$1,127,772.66

Appendix 7 – Refresh Schedule

5-Year Technology Refresh Schedule

Greenville County Schools

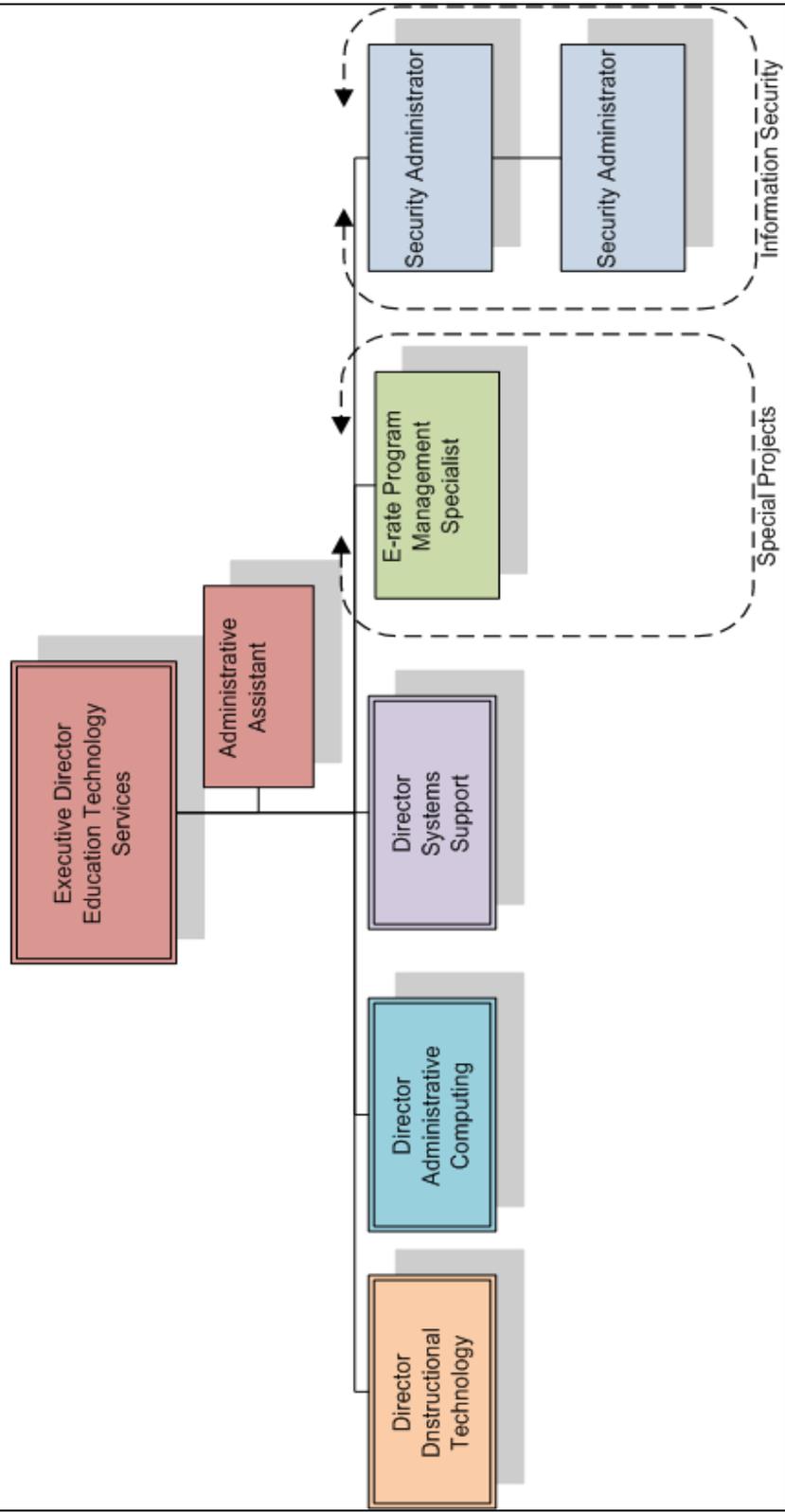
<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
Hollis Academy	Cherrydale	Blue Ridge High	Beck Academy	Lake Forest
Alexander	Pelham Road	Carolina Academy	Berea High	Augusta Circle
Westcliffe	Sara Collins	Greer High	Riverside MS	Brushy Creek
East North Street	Tigerville	Greer Middle	Gateway	Eastside
Ellen Woodside	Brook Glenn	Grove	Thomas E Kearns	Greenbrier
Fork Shoals	Buena Vista	Hillcrest High	Bell's Crossing	Berea Middle
Mauldin High	Sue Cleveland	Hughes Academy	Greenville High	Greenville Acad.
Woodland	Monaview	Lakeview	Hillcrest MS	JL Mann
Mauldin ES	Duncan Chapel	Mauldin Middle	League	Mountain view
Robert E. Cashion	Welcome	Plain	Heritage	Oakview
Simpsonville	Fountain Inn	Sevier	Riverside High	Mitchell Road
Stone Academy	Armstrong	Tanglewood	Southside	Northwood
Blythe Academy	Crestview	Travelers Rest High	Taylors ES	Skyland
Paris	Bryson ES	Wade Hampton	Bryson Middle	Summit Drive
Slater Marietta	Bethel	Washington Center	Sterling	Woodmont MS
Ralph Chandler	Blue Ridge MS	Woodmont HS		Berea ES
Gordon ES	Northwest			
	Chandler Creek			
	AJ Whittenberg			

Year 1 has never been refreshed

Year 1 anticipated start 2010-2011

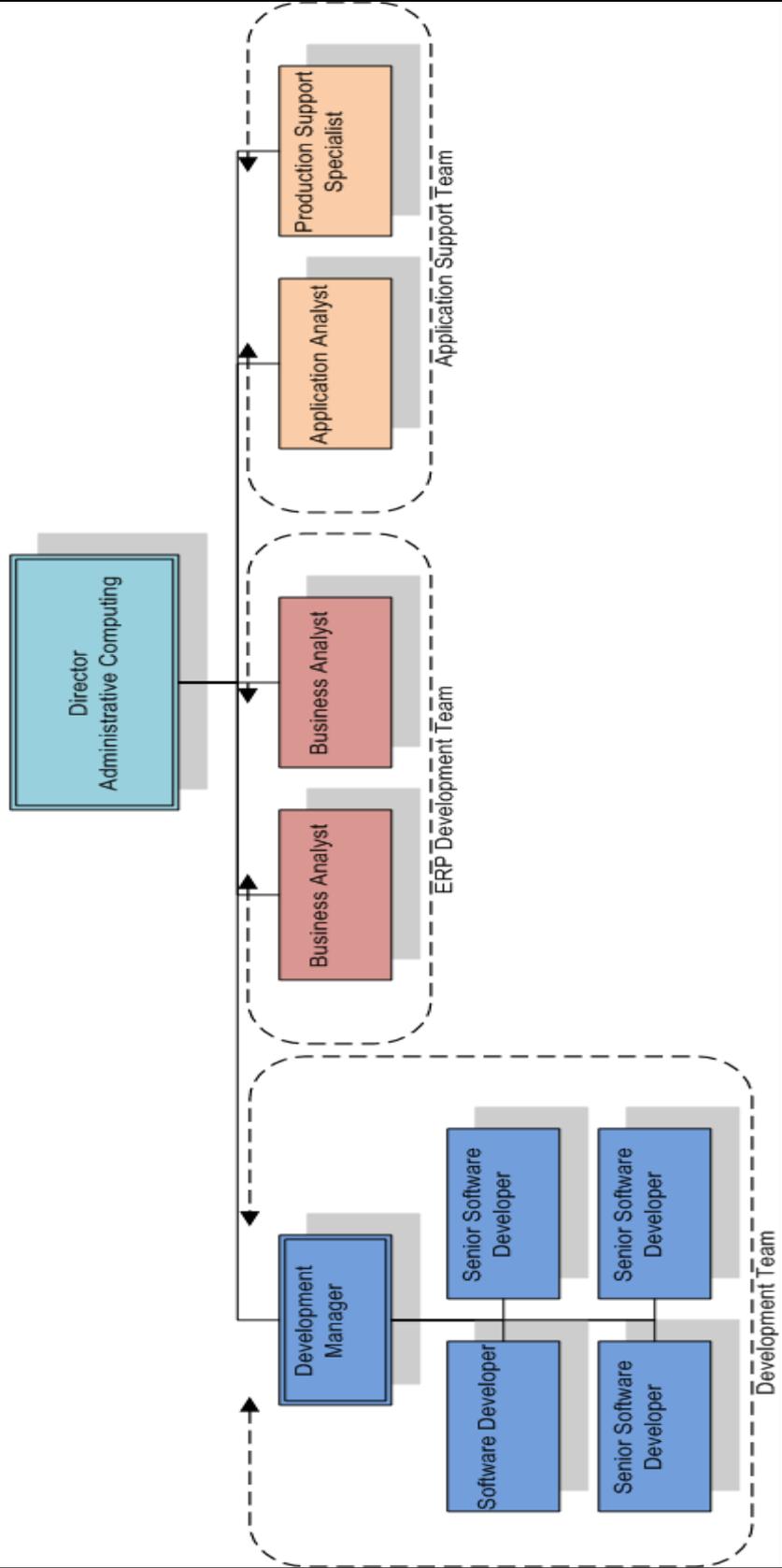
Appendix 8 – Organizational Charts

Education Technology Services 08/26/2008



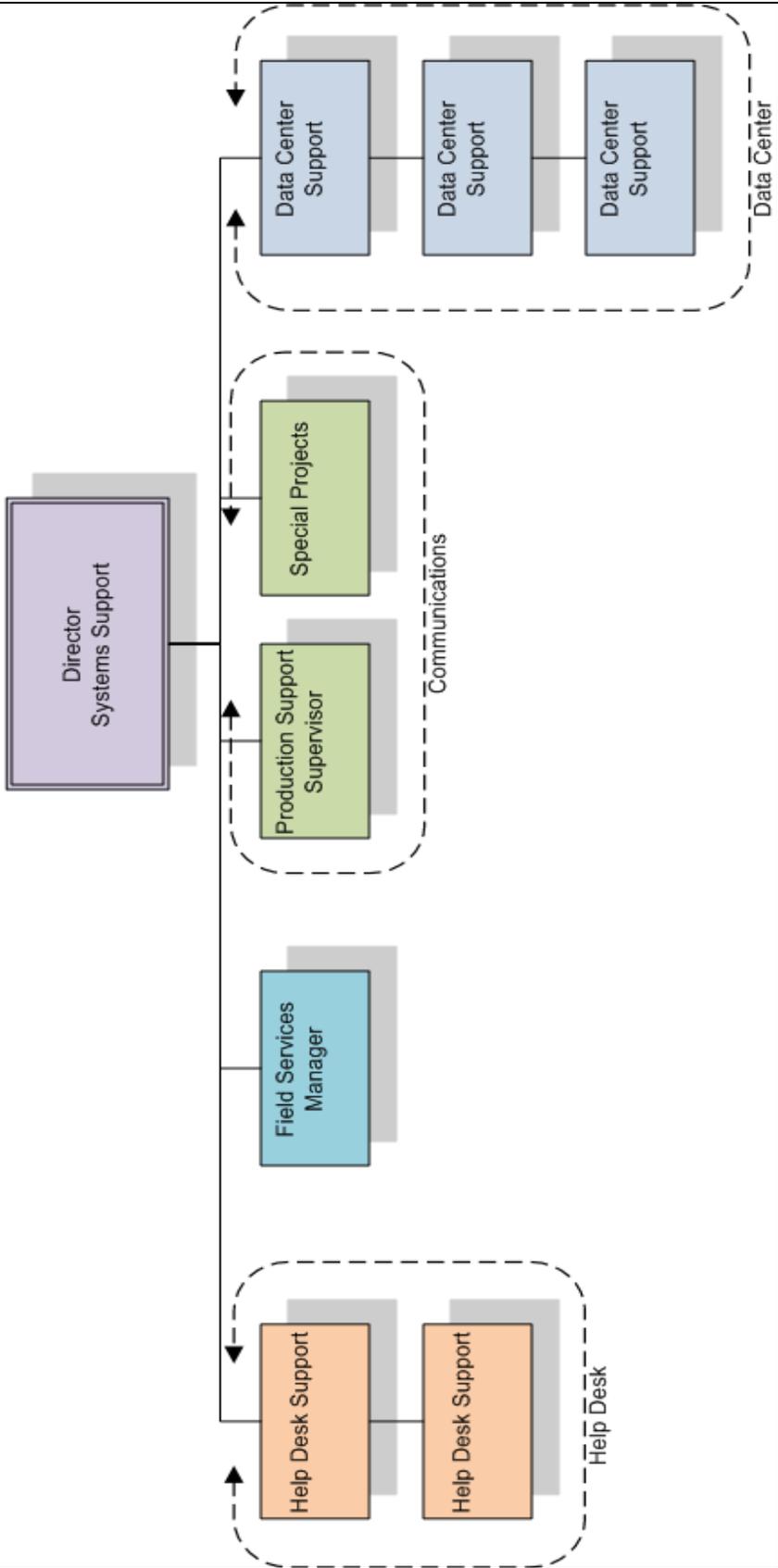
Education Technology Services – Administrative Computing

08/26/2008



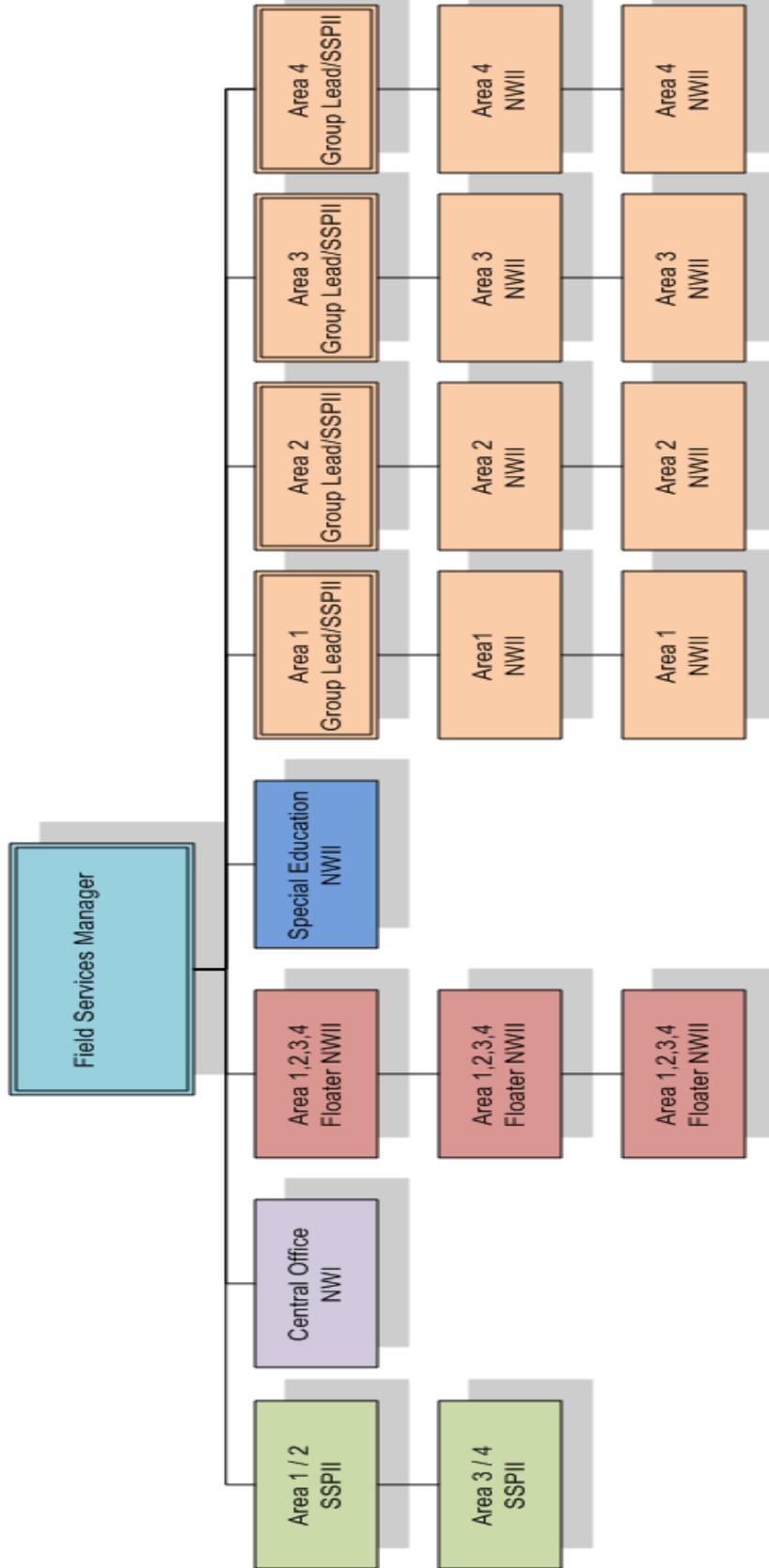
Education Technology Services – Systems Support

08/26/2008

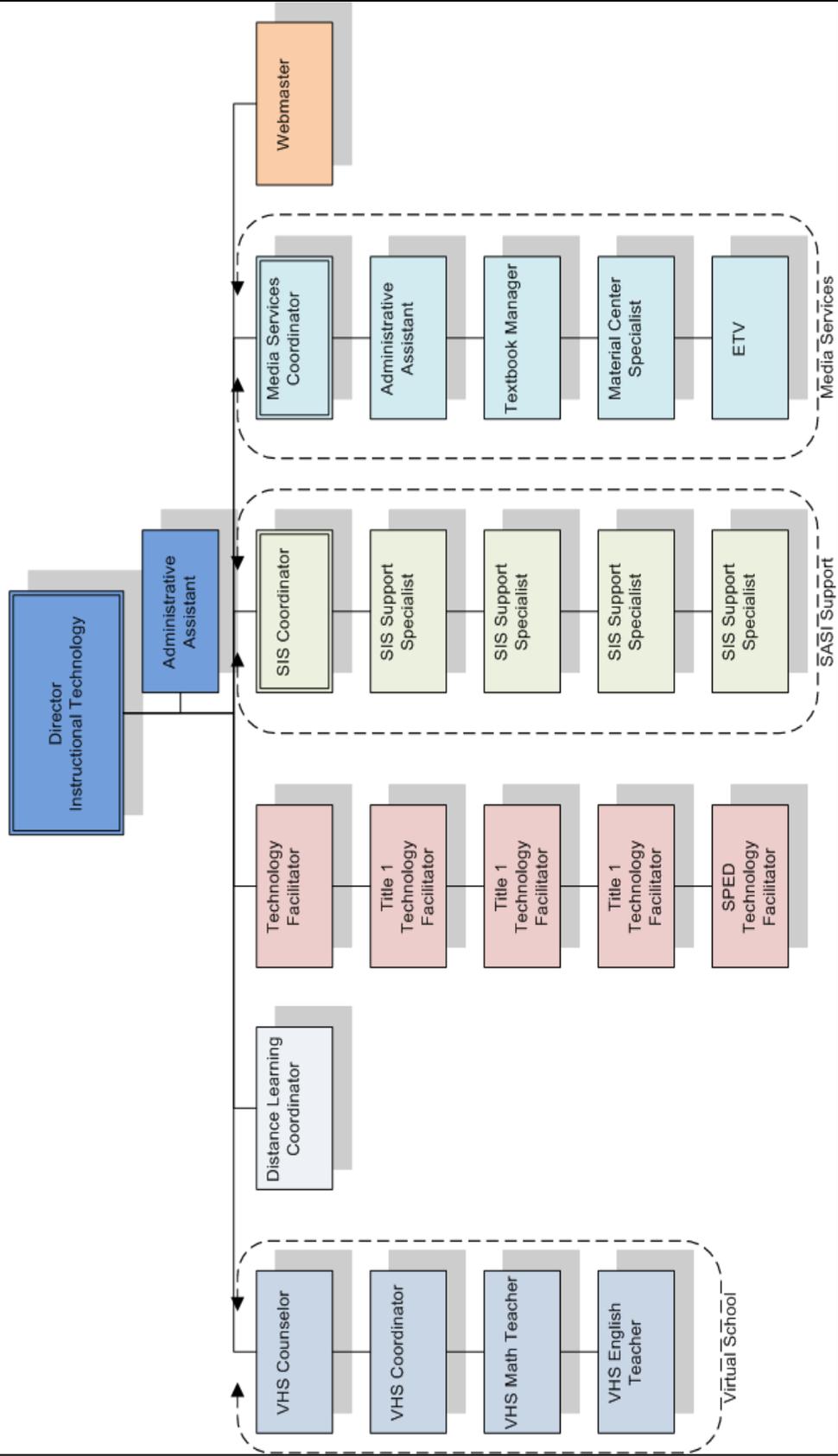


Education Technology Services – Field Services

08/26/2008



Education Technology Services – Instructional Technology
08/26/2008



Appendix 9 – SC-ISAC Report Card



South Carolina Information Sharing and Analysis Center

Memorandum To: K12 E-Rate Committee
From: SC-ISAC/SOC
Subject: Initial Network Utilization Summary – Greenville
Report Date: Thursday, February 5, 2010

The following analysis / rating is based on the effectiveness of four fundamental criteria:

- ✓ Perimeter controls – Managing security and bandwidth at the perimeter
- ✓ Unauthorized traffic – Minimizing unauthorized traffic due to human actors and/or malware
- ✓ Bandwidth efficiency – Minimizing wasted bandwidth due to configuration issues
- ✓ Security controls – Implementing measures to anticipate and minimize security issues.

Analysis was performed to determine the network utilization efficiency and security posture on the district’s external (Internet) connection. Intrusion Detection System (IDS) events, firewall logs (where available), network access rules and industry best practices were all used in this analysis process.

The overall rating for your organization for this period is: [A]
Peak bandwidth utilization for the current period ending 05-Feb-10: [103]

Checked criteria indicate they fully meet the requirements. Because of the dynamic nature of bandwidth utilization and organizational security a district may meet the security control criteria without meeting the bandwidth management goals. These areas were picked for their impact on both areas but primarily their impact on bandwidth management. They were not intended to indicate a complete security plan nor all that can be done to control bandwidth utilization.

[X] **Perimeter Controls**

Perimeter firewall(s) operate with effective ingress and egress rules

- [X] Ingress rules appear to be implemented effectively.
- [X] Egress rules appear to be implemented effectively.
All ingress and egress should be denied or dropped by default, and then rules minimally added to permit services and/or systems in order to meet organizational requirements. Perimeter defenses should be periodically audited and tested to ensure effectiveness.

IDS/IPS appears to be monitoring all Internet traffic and operating effectively

- The CyberSentry server meets the requirement for IDS/IPS monitoring.
CyberSentry is operating
- [] Inline
- [X] Parallel mode

[X] Unauthorized Traffic

[X] Critical malware prevention/correction is effective
Trojan, worm, backdoor, botnet, password/information stealing or other critical malware has been detected within this network and is visible via CyberSentry monitoring.

[X] Other malware prevention/correction is effective
Significant levels of malware are operating within this network. While not as critical as some malicious software, this still impacts information security, system management / reliability, and operational readiness. In general, the same controls that correct and prevent more critical malware will be effective with spyware / malware.

Core services are documented and effectively managed

[X] No Undocumented web services

[X] No Undocumented DNS services

[X] No Undocumented mail services

[X] No Undocumented proxy services

[X] No Other undocumented services

If these are legitimate services, please report them as managed and/or monitored by your organization's technical services and this can be reflected in future reports. Otherwise, please disable and/or uninstall unauthorized services.

Note: In most cases SC-ISAC can configure the IDS to operate in Flex-Response mode to disrupt the improper utilization of bandwidth such as P2P, chat, anonymous proxy, etc.

[X] Bandwidth Efficiency

[X] A caching web proxy is installed, managed, and used
This organization does not appear to have an effective caching web proxy installed and in general use. In many cases, Cyber Sentry may be configured to operate as a web proxy at no cost.

[X] DNS and mail is limited to internally managed services
Excessive traffic appears to be traversing the firewall from multiple systems, reducing bandwidth efficiency. In general, ensuring systems are configured to use internal servers as appropriate, with blocking (egress) rules at the perimeter will correct this issue.

[X] Excessive suspicious / unknown traffic is effectively minimized
Unknown / suspicious traffic should be identified for better bandwidth management. The SC-ISAC can monitor and identify many types of traffic, but if this field is not checked, the organization needs to work with SC-ISAC to better identify traffic as legitimate or inappropriate based on district policies.

[X] 80% or more of Internet traffic is HTTP
Lower percentages reflect poorly on management of bandwidth. Or may be indicative of infections or other Malware such as Peer-to-Peer software.

[X] Security Controls

[X] Reduction of wasteful / malicious software

Little or no adware, phishing or organizations with a high number of machines running spyware, peer to peer software, unapproved chat / e-mail, and other questionable software will usually have higher rates of security incidents and lower bandwidth efficiency.

[X] Responsive to security reports, notifications, and bulletins

Your organization should be receiving daily reports sent to the "securityalerts@school.domain" e-mail address. Additionally, the SC-ISAC sends notifications and bulletins to this address. Organizational response to security issues and feedback to note any responses is critical to continuous improvement in security processes.

[X] Web filtering

Other than noting whether an organization seems to have effectively implemented this external policy SC-ISAC has no specific recommendations.

[X] Mail filtering

Email filtering is in place and appears to be blocking hazardous messages with malicious content.

[X] Antivirus

Well-managed antivirus solution is in place and operational.