

# Cato-Meridian School District Technology Plan - 2007-2010

Submitted by:

2006-2007 Cato-Meridian School District Computer Technology Committee



**2006-2007**  
**Cato-Meridian School District Computer Technology Committee**

***District Representatives:***

		Member since
Deborah Bobo	Superintendent	2001
Crosby Lamont	Business Administrator	2006
Charles Ware	Board of Education	2005
Michael Lees		2006
Susan Hawker	Technology Coordinator	2001

***Community Representatives:***

Frank Sobierajski		2001
Jeffrey Grant		2001
Terri Mitchell	High School Business Teacher	2001

***High School Representatives:***

Joseph Coleman	High School Principal	2006
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***Middle School Representatives:***

Sean Gleason	Middle School Principal Technology Committee Chairperson	2001
Michael Burns	Administrative Intern	2006

***Elementary School Representatives:***

Ann Marie Dillon	Elementary School Principal	2003
Sara Pickett	Kindergarten Teacher	2001

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## **Cato-Meridian School District Technology Plan – 2007-2010**

### **1 PURPOSE**

#### **Overview:**

The Cato-Meridian School District Technology Plan serves as a guide for the overall Technology Program. It is a framework for implementing daily program operations and communicating long-term program expectations. It is based on guidelines established by the Board of Education to align school district policy, mission and goals with the program.

#### **District Mission:**

Our mission is to encourage growth of individual talent, confidence, and pride in an environment where each person can develop skills and attitudes to become a responsible, understanding, and productive member of a changing society.

#### **Vision:**

Technology Literacy provides our students with access to an ever-changing world dependent on information. In order to participate in our technological age effectively, students and staff must be information navigators, critical thinkers and analyzers, creators of knowledge and communicators using a variety of technologies. Integrating technological instruction throughout the curriculum provides the essential skills to meet state/national learning standards and prepares students for the 21<sup>st</sup> century. Technology resources will be pervasive in enhancing instruction, productivity, communication, research, problem solving, decision-making and creativity.

#### **Goals:**

1. Increase technology throughout the curriculum to enhance classroom instruction.
  - Provide teachers with access to ongoing professional development in order to integrate technology into curricula and instruction.

- Encourage teachers to integrate technology and information resources into their instructional strategies to motivate and engage students, as well as support student exploration, learning styles and educational development.
  - Provide samples of effective curricula and lesson plans aligned with the NYS Learning Standards and International Society for Technology in Education (ISTE) National Education Technology Standards (NETS) including the New York State Educational Department website.
2. Improve student achievement through the use of technology
- Throughout their educational experience at Cato-Meridian, technology use will enable students to access and analyze information, learn how to solve problems, develop higher order thinking skills and become self-directed, independent life-long learners.
3. Increase the use of digital content.
- Support and encourage the use of electronic resources as methods of collaboration among staff members, students and the community.
  - Provide high quality Internet access.
  - Continue to provide and increase availability of high quality computer resources (hardware and software).
  - Continually evaluate emerging technologies for district adoption.

## 2 PLAN GOVERNANCE

### District Policies

#### **Governing District Policies:**

3281 – Use of School-owned Materials and Equipment; 3320 – Confidentiality of Computerized Information; 5620 – Inventories; 5621 – Accounting of Fixed Assets; 6160 – Professional Growth/Staff Development; 6470 – Staff Use of Computerized Information Resources; 7341 – Internet Access; SECTION 8000 Instruction 8110; 8130; 8140; 8250; 8270; 8271; 8310; 8320; 8330; 8350; 8430; 8440.

### Responsibilities

#### Board of Education

- Formally adopt the original plan and revisions
- Approve fiscal resources to support the plan
- Monitor ongoing implementation of the plan
- Provide representative to the Technology Committee

#### Superintendent

- Oversee development, implementation, and maintenance of the plan
- Appoint chairperson of the Technology Committee
- Participate in the Technology Committee

#### School Business Administrator

- Align the plan with fiscal policies and procedures
- Develop accounting and reporting methods relevant to the plan
- Prepare budget to support the plan
- Oversee purchases under the plan

#### Principals

- Oversee implementation of the plan in respective school buildings
- Participate in the Technology Committee
- Monitor Individual Professional Growth Plans related to technology

#### Technology Coordinator

- Manages inventory of computers and related technology
- Oversees maintenance of computers and related technology
- Assists budgeting and purchasing of computers and related technology
- Participates in the Technology Committee

#### Teachers and Staff

- Utilize computers and related technology according to their job responsibilities
- Participate in the Technology Committee

#### Technology Committee

- Consists of Superintendent, Principals, Computer Technology Coordinator, Teachers and Staff Representatives, Board of Education Representative, Members of the Public
- Evaluates technological solutions for operation applications in accordance with the plan
- Recommends hardware/software selection, solutions, procedures and other items related to the plan and how it effects the broad vision of technology for the district
- Reviews plan and procedures
- Recommends plan to the Board of Education

### **3 PROGRAM GOALS**

#### **INTENDED STUDENT OUTCOMES**

##### **Technology Foundation Standards for All Students**

The International Society for Technology in Education (**ISTE**) developed standards for students divided into six broad categories. These standards are called the National Education Technology Standards (**NETS**). Standards within each category are to be introduced, reinforced, and mastered by students. These categories provide a framework

for linking performance indicators within the Profiles for Technology Literate Students to the standards. Teachers can use these standards and profiles as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

1. Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

2. Social, ethical, and human issues

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

3. Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

4. Technology communications tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

5. Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.

- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
6. Technology problem-solving and decision-making tools
- Students use technology resources for solving problems and making informed decisions.
  - Students employ technology in the development of strategies for solving problems in the real world.

## **NETS for Students**

### **Performance Indicators**

A major component of the NETS Project is the development of a general set of profiles describing technology-literate students at key developmental points in their pre-college education. These profiles reflect the underlying assumption that all students should have the opportunity to develop technology skills that support learning, personal productivity, decision making, and daily life. These profiles and associated standards provide a framework for preparing students to be lifelong learners who make informed decisions about the role of technology in their lives.

Numbers in parentheses following each performance indicator refer to the standards category to which the performance is linked. The categories are:

1. Basic operations and concepts
2. Social, ethical, and human issues
3. Technology productivity tools
4. Technology communications tools
5. Technology research tools
6. Technology problem-solving and decision-making tools

## **GRADES Pre K - 2**

### **Performance Indicators:**

All students should have opportunities to demonstrate the following performances. Prior to completion of Grade 2 students will:

1. Use input devices (e.g., mouse, keyboard, remote control) and output devices (e.g., monitor, printer) to successfully operate computers, VCRs, audiotapes, and other technologies. (1)
2. Use a variety of media and technology resources for directed and independent learning activities. (1, 3)
3. Communicate about technology using developmentally appropriate and accurate terminology. (1)
4. Use developmentally appropriate multimedia resources (e.g., interactive books, educational software, elementary multimedia encyclopedias) to support learning. (1)
5. Work cooperatively and collaboratively with peers, family members, and others when using technology in the classroom. (2)
6. Demonstrate positive social and ethical behaviors when using technology. (2)

7. Practice responsible use of technology systems and software. (2)
8. Create developmentally appropriate multimedia products with support from teachers, family members, or student partners. (3)
9. Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories. (3, 4, 5, 6)
10. Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners. (4)

## GRADES 3 - 5

### Performance Indicators:

All students should have opportunities to demonstrate the following performances. Prior to completion of Grade 5 students will:

1. Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively. (1)
2. Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide. (1, 2)
3. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use. (2)
4. Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum. (3)
5. Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom. (3, 4)
6. Use telecommunications efficiently and effectively to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests. (4)
7. Use telecommunications and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom. (4, 5)
8. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities. (5, 6)
9. Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems. (5, 6)
10. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources. (6)

## GRADES 6 – 8

### Performance Indicators:

All students should have opportunities to demonstrate the following performances. Prior to completion of Grade 8 students will:

1. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use. (1)
2. Demonstrate knowledge of current changes in information technologies and the effect those changes have on the workplace and society. (2)
3. Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse. (2)

4. Use content-specific tools, software, and simulations (e.g., environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research. (3, 5)
5. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum. (3, 6)
6. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom. (4, 5, 6)
7. Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solutions or products for audiences inside and outside the classroom. (4, 5)
8. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems. (5, 6)
9. Demonstrate an understanding of concepts underlying hardware, software, and connectivity and of practical applications to learning and problem solving. (1, 6)
10. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems. (2, 5, 6)

## GRADES 9 - 12

### Performance Indicators:

All students should have opportunities to demonstrate the following performances. Prior to completion of Grade 12 students will:

1. Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs. (2)
2. Make informed choices among technology systems, resources, and services. (1, 2)
3. Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole. (2)
4. Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. (2)
5. Use technology tools and resources for managing and communicating personal/professional information (e.g., finances, schedules, addresses, purchases, correspondence). (3, 4)
6. Evaluate technology-based options, including distance and distributed education, for lifelong learning. (5)
7. Routinely and efficiently use online information resources to meet needs for collaboration, research, publication, communication, and productivity. (4, 5, 6)
8. Select and apply technology tools for research, information analysis, problem solving, and decision making in content learning. (4, 5)
9. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations. (3, 5, 6)
10. Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce, and disseminate information, models, and other creative works. (4, 5, 6)

# PROFESSIONAL DEVELOPMENT

## NETS for Teachers

Building on the NETS for Students, the ISTE NETS for Teachers (**NETS•T**), define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings. The District Technology Plan will be aligned with the Cato-Meridian Central School District Professional Development Plan (**PDP**), therefore supporting the district's annual professional performance review (**APPR**) model. This model is reflected in the Cato-Meridian Central School District mentoring program. Mentors and mentees may select a technology component as a part of their Individual Professional Growth Plan.

The District Technology Plan will assist in the integration of technology into instructional practice. The committee has recognized that a multi-level training effort will be needed to ensure successful staff development in technology.

The six standards areas with performance indicators listed below are designed to be general enough to be customized to fit the district guidelines and yet specific enough to define the scope of the topic. Performance indicators for each standard provide specific outcomes to be measured when developing a set of assessment tools. The standards and the performance indicators also provide guidelines for teachers currently in the classroom.

### I. **TECHNOLOGY OPERATIONS AND CONCEPTS.**

*Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:*

- A. demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Education [Technology Standards for Students](#))
- B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

### II. **PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.**

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

- . design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- A. apply current research on teaching and learning with technology when planning learning environments and experiences.
- B. identify and locate technology resources and evaluate them for accuracy and suitability.

- C. plan for the management of technology resources within the context of learning activities.
- D. plan strategies to manage student learning in a technology-enhanced environment.

### III. **TEACHING, LEARNING, AND THE CURRICULUM.**

*Teachers implement curriculum plans, that include methods and strategies for applying technology to maximize student learning. Teachers:*

- . facilitate technology-enhanced experiences that address content standards and student technology standards.
- A. use technology to support learner-centered strategies that address the diverse needs of students.
- B. apply technology to develop students' higher order skills and creativity.
- C. manage student learning activities in a technology-enhanced environment.

### IV. **ASSESSMENT AND EVALUATION.**

*Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies. Teachers:*

- . apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- A. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
- B. apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

### V. **PRODUCTIVITY AND PROFESSIONAL PRACTICE.**

*Teachers use technology to enhance their productivity and professional practice. Teachers:*

- . use technology resources to engage in ongoing professional development and lifelong learning.
- A. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- B. apply technology to increase productivity.
- C. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

### VI. **SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.**

*Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice. Teachers:*

- . model and teach legal and ethical practice related to technology use.
- A. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- B. identify and use technology resources that affirm diversity

- C. promote safe and healthy use of technology resources.
- D. facilitate equitable access to technology resources for all students.

## **SELF ASSESSMENT**

The standards listed above will be self-assessed by individual teachers based on a three point rubric scale determined by the following values:

**Fundamental Skill Development (One point value)** - will be needed for all instructional staff and administration to build initial understanding of equipment and software use. Topics would include computer operation and navigation, network login and access, word processing, fundamental levels of data management, printing functions, projection hardware and email. Computer use policies and procedures will also be covered in these sessions.

**Intermediate Skill Development (Two point value)** will be needed for instructional staff and selected other individuals to build greater capabilities in specific software and hardware use. Topics would include spreadsheet functions, databases and basic uses of graphical presentation software.

**Advanced Skill Development (Three point value)** will be provided for appropriate staff to build expertise in specific areas such as particular instructional software, curriculum management systems, multimedia systems, advanced presentation concepts and special administrative systems.

At each level, staff will have an awareness of the technology integration, how it is applied, and is able to self-assess their level of development. At each level, staff is able to make a connection to one of the four domains in the APPR (Instruction, Planning and Preparation, Classroom Environment, Professional Responsibilities).

The use of the following virtual learning websites will be encouraged at each level below:

<http://www.accelerateu.org>

<http://www.schooltools.us/>

<http://www.nassauboces.org/cit/vls>

<http://www.studyzone.org/>

<http://www.nylearns.org>

### **Arrangements for Professional Development**

Resources are available for the general staff development effort through such state-funded programs offered at BOCES. These programs can be custom-developed to address the needs of the Cato-Meridian staff, and represents a significant savings compared to the use of private instructors.

We have several learning opportunities offered on site by an outside training resource such as staff development training workshops consisting of beginner and advanced

courses in Microsoft Word, Microsoft Access, Microsoft PowerPoint, Microsoft Excel, Microsoft Publisher, Digital Cameras, Mygradebook – a web based grading program, Special Education Individualized Education Program (**IEP**) training.

**A Turnkey Training Model** will be used whenever practical. Principals will offer an opportunity to selected volunteers representing various grade levels or departments. These staff members will receive initial training and then train their colleagues and provide additional support where needed.

In addition several staff members have participated in the New York State Computer and Technology Education Conference (**NYSCATE**)

**Technology services provided by Cayuga-Onondaga BOCES Instructional Support Services (ISS), the Professional Development Unit (PDU), the Cayuga-Onondaga Teacher's Center and OCM BOCES include:**

Planning  
Instructional Development (**IDP**)  
Learning Technology Advisory Committee (**LTAC**)  
Technology Cohort  
School Library System  
Distance Learning  
Media Center

## **COMPUTER SOFTWARE**

**The Cato-Meridian School District will select and provide software necessary to attain the intended student outcomes and support the effective administration of the school district.**

### **Software Evaluation and Recommendation**

Any proposed subject specific software purchase will first be reviewed by the respective building principals and the technology coordinator. Appropriate software may be approved for purchase. Positive reviews and evaluations will be required for purchase recommendations.

### **Universal Instructional Software Types and Standards**

The district will provide the following standard software types on its instructional and administrative computers.

#### **Type: Word Processing –**

Standard: Microsoft Word, part of the Microsoft Office Suite, will be the standard word processing software for the district. All machines will have Microsoft Office installed.

**Type: Spread Sheet –**

Standard: Microsoft Excel - The installation is part of the Microsoft Office Suite.

**Type: Publishing Software –**

Standard: Microsoft Publisher will be the district standard for grades k-12.

Publisher installation is part of the Microsoft Office package. Adobe PageMaker is used for grades 9-12 curriculum.

**Type: Presentation Software –**

Standard: Microsoft PowerPoint will be the district standard for grades 5 – 12.

PowerPoint installation is part of the Microsoft Office package

**Type: Graphic Organizer Software –**

Standard: Inspiration for grades 5 – 12

Standard: Kidspiration for grades K – 4

**Subject Specific Instructional Software**

The district will provide software that has applications specific to particular instructional and administrative needs. For immediate consideration:

- Secondary math grades K –12: Efofex's FX Draw2 will be a district standard math-teaching tool.
- Math grades K – 12: support software for the textbook program used for math instruction.
- ELA grades K – 12: support software for the textbook program used in reading instruction.

**Software Funding**

State Aid Formulas provide a per student software allowance as a reimbursable aid. Additional cost will be 100% local effort.

The district will plan for and support the funding necessary to provide the software to fulfill the goals of this plan.

**HARDWARE - CONFIGURATION OF RESOURCES**

The Computer Technology Program of the Cato-Meridian School District will select and provide the computer hardware equipment necessary to attain the intended student outcomes and support the effective administration of the school district.

The following text describes the eventual configuration at the full realization of this plan. Implementation timeline will be directly related to the financial resource priority placed on achieving the end results of this plan.

## **District-wide Connectivity –**

All office and instructional sites are wired, supported and maintained for network access  
All district computers are networked through a server with a backup system. All units have an IP address. All users have a password ID.  
All units are Internet connected, supported and maintained.  
Firewall protection and Internet filtering is in place.  
All employees have a C-M e-mail address.  
All personnel and staff have access to information sites appropriate for their job responsibilities.

## **High School Status and Projection**

- General Lab in library area - 33 units available with projection capability for class instruction.
- Library research area – 13 units with internet capability and library software for reference work
- Business Education Lab – 25 units comparable to typical modern business office equipment
- Technology Lab – 20 units supporting CAD and design software compatible with “Project Lead The Way”
- Science Mobile Lab – 12 units supporting Science curriculum
- 1 Mobile Labs – 10 unit labs on carts transportable to any classroom space
- Guidance – 3 units for student use for college reference and application preparation
- Classrooms – 2 units for instructional use
- Hardware and software unique to curricular specialization
- Projection Devices for every classroom

## **Middle School Status and Projection**

- General Lab - 31 units available with projection capability for class instruction
- Library – 10 units with internet capability and library automation software for reference and research work
- Classrooms – 2 units for instructional use
- Technology Lab – outfitted to Project Lead the Way specifications
- Portable Lab – 25 unit lab on a cart transportable to any classroom space
- Projection Devices for every classroom
- Hardware and software unique to curricular specialization

## **Elementary School Status and Projection**

- General Lab - 26 units available with projection capability for class instruction and faculty development
- Classrooms – 5 units for instructional use
- Library – 3 units with internet capability and library software for reference and research work
- 2 Mobile Labs- 25 unit labs on carts transportable to any classroom space
- Projection Devices for every classroom
- Hardware and software unique to curricular specialization

## **COMPUTER AND INTERNET USE**

**The Computer Technology Program of the Cato-Meridian School District will provide necessary supervision, firewalls and filters to assure safe and appropriate use of its resources.**

### **Firewall**

The district will maintain a firewall to assure the denial of access to unauthorized users of district computer resources. The district currently uses the Watchguard system.

### **Filters**

The district will maintain an Internet filter for each district computer that restricts the user from unauthorized and inappropriate sites. The district currently uses the X-Stop filtering system. The district will maintain a Spam filter for district email that restricts the user from inappropriate email. The district currently uses a Barracuda spam filter.

### **Antivirus**

Norton Antivirus software will be purchased, licensed and installed on the server with all district machines supported through the client version.

### **Supervision**

The district will have a signed agreement from each computer user pledging to self-monitor his/her computer use and limit it to the purposes aligned with district goals. Student use of district computer resources will be monitored by supervising staff members. A district license of Geneva-Logic Vision and Surf-Lock is present in all labs, allowing the supervising teacher to monitor existing connected computers.

## **4 DATA COLLECTION, ANALYSIS AND REPORTING**

### **Inventory**

The Computer Technology Coordinator maintains a complete running inventory of the hardware and computer related equipment resources of the district. An annual inventory report is submitted to the Technology Committee and the Superintendent. The report lists all district computer-related property, including the dates of acquisition. It provides a status report on the running condition of the district's computer resources.

### **Inventory Analysis**

The Technology Committee reviews the computer and related equipment inventory and uses the analysis to plan budget recommendations for equipment purchases and replacement schedules.

## **Reporting**

The Technology Committee reports, or provides for such report, to the Board of Education on the state of the technology program in the district. The program is annually reviewed and evaluated in the budget preparation process.

# **5 IMPLEMENTATION**

## **General Priorities**

Implementation of the Technology Plan is planned for several budget years evolving into a stable annual investment. The initial phases are to acquire the resources and provide the training to bring Cato-Meridian School District to full realization of the technology plan. Then the annual task will be in maintaining the resources at a level sufficient to continue to meet standards of quality in instruction, communication, and information management throughout the district.

## **Funding Strategies**

Funding for technology program support will be in the annual Cato-Meridian School District Budget and appropriate grant sources.

## **Sources**

The plan considers only traditional state-aid reimbursement expectations combined with a local effort applied yearly. It depends on the district committing the aid reimbursements from technology expenses, budgeted appropriately, back to revenue supporting technology expenses the next year and not allowing them to be swallowed up as general revenue from the state. The budget revenues supporting technology expenses will come from several sources:

New York State – State-Aid currently provides over eighty percent (80%) of all revenues supporting our budget expenses. Under current state-aid regulations, expenses for computer hardware and software are reimbursed at 100% up to a maximum amount based on enrollment to the district in the year after the expense is incurred. Purchases through BOCES are reimbursable at 81.6%. By managing the technology spending judiciously, the district will leverage reimbursement revenue returns so that the Technology Plan can be funded over time with a reasonable local contribution. It is imperative that technology expenditures are managed so that State-Aid dollars are maximized.

Local Tax Revenue – Local taxes currently fund approximately twenty percent (20%) of all revenues supporting our budget expenses. Local tax dollars were used in the initial expense phase of funding in order to leverage the expense driven reimbursements in subsequent state-aid revenues. Initially, in the 01-02 year \$150,000 was proposed and rejected as a local investment in instructional technology. The approved budget for 2001-02 included a local tax share of \$40,000. The 2003-04 budget year included a local share

of \$12,000 which remained the same for the 2004-05 budget. With expected generated revenues this yielded a Technology Budget of \$105,000 for the 2004-05 year. The 2005-06 year offered a technology budget of \$150,000, the 2006-07 year \$214,000 and an anticipated \$328,000 technology budget for the 2007-08 budget year.

Other Non-Tax Revenue Sources – Money from donations, grants, and special projects could provide some single source, one-shot revenues, but it is not something that can be meaningfully included in the district planning because of its uncertain nature both in amount and timing.

## **6 EVALUATION**

Evaluation of the Technology Program, its effectiveness and adherence to the Technology Plan, will be completed and reported annually.

### **Data Collection**

The District Technology Committee will be responsible for collecting the evaluation data and completing the analysis necessary to prepare an annual program evaluation report in accordance with the district program evaluation template.

### **Reporting**

The Technology Committee's Program Evaluation Report will be submitted to the Superintendent as required to support appropriate oversight.

The Superintendent will provide periodic reports to the Board of Education pertaining to any pertinent program issues.

### **Revision of the Plan**

The annual evaluation and revision of the Technology Plan will be completed by a designated subcommittee from the district Technology Committee. The Technology Committee is responsible for continuing attention to the plan.

## **7 COMMUNICATION**

Information outputs related to the Technology Plan will be integrated into the district's communication efforts. Information is forwarded to all relevant constituencies including students, parents, district employees, and the public at-large. Communication locally used to achieve this in addition to our telephone PBX system include cellular phones, email, district and departmental newsletters both mailed and posted on the school's website, [www.catomeridian.org](http://www.catomeridian.org).

### **Telephone**

A telephone PBX system maintained by Kama Communications is currently in place with enhancements to be completed during the Excel Project during the 2007-08 school year.

**Long Distance**

Our long distance carrier contract is currently with Verizon.

**Cellular Phones**

Our cellular phone contract is currently with Verizon wireless and provides 9 cell phones for district use.

**School Website**

The district website can be reached by typing <http://www.catomeridian.org> in any browser. HostCentric, a web hosting company, currently maintains the servers which host our website. We are transitioning to a web hosting package from the parent company SchoolCenter. The SchoolCenter program allows for the development and maintenance of a fully functioning website for our school, providing secure access enabling authorized users the ability to create and maintain their own web pages.

**Email**

We currently host our own email server. Ipswich's Imail Server 2006 is used to provide web based email to all faculty and staff.

## **8 NETWORK CONFIGURATION**

**Central New York Regional Wide Area Network**

The CNYRIC at OCM BOCES has designed and implemented a systematic phase out of the traditional OC3/ATM network. The replacement will be conversion to a regionally installed and supported Ethernet Wide Area Network that will be available for all 4 Central New York BOCES and the 50 Component school districts therein.

The design is to provide a bundled service which will provide a minimum 100mb Ethernet point to point connection from a single designated hub location at each district to their local BOCES. The local BOCES will provide point of presence (POP) services and high speed connectivity to the CNYRIC for Internet, centralized filtering and firewall and contract application or support services from the CNYRIC. This will also support local application services from the BOCES to their component school districts such as Distance Learning, Instructional applications, School Library services or video streaming.

This service provides the bundled services in an annual fixed cost for 5 years to allow for static budget planning. It also allows upgrades to the Ethernet network up to 1 gigabit of bandwidth at an identified cost structure that will remain within the 5 year time frame.

Our current network consists of a fiber backbone, fiber cable connecting the High School and Middle School buildings with fiber connected between all wiring closets. Ethernet

connections are used between the wiring closets to the desktop. Wiring closet hardware configurations are as follows:

**High School Main Communications Closet**

**Middle School Main Communications Closet**

Baystack 450-24, 24 Port 10/100 Meg Ethernet Switch  
Baystack 450-1SX, 1 Port 1000 Base –FX  
Allied Telesyn 6 Port GB Switch, AT-9006SX/SC  
Allied Telesyn GB modules (qty. 2)

**High School Library Communications Closet**

**High School C Wing Communications Closet**

**High School Library Lab Communications Closet**

**Middle School IDF#1 Communications Closet**

**Middle School IDF#2 Computer Lab Communications Closet**

**Elementary School IDF#1 Communications Closet**

**Elementary School IDF#2 Communications Closet**

**Bus Garage Communications closet**

*One or more of the following Nortel switches:*

Baystack 450-24, 24 Port 10/100 Meg Ethernet Switch  
Baystack 450-1SX, 1 Port 1000 Base –FX  
Baystack 470-24, 24 Port 10/100 Meg Ethernet Switch  
Baystack 5510  
Allied Telesyn AT-FS7241

## Cato-Meridian Central School District Federal Grants 2006-07

FUND	TITLE	SED PROJECT#	BUDGET
FA	TITLE I	0210400290	\$259,628.00
FB	EARLY GRADE CLASS SIZE REDUCTION	0417040016	\$51,812.00
FC	CPSE ADMINISTRATIVE	0232040090	\$3,310.00
FD	TITLE IV, PART A SAFE & DRUG FREE SCHOOLS	0180040290	\$5,584.00
FH	TITLE IIA TEACHER/PRINCIPAL TRAINING/RECRUITMENT	0147040290	\$61,995.00
FI	IDEA PART B 611	0032040090	\$241,644.00
FK	PRE-K	0400040290	\$109,648.00
FP	IDEA PART B 619	0033040090	\$9,324.00
FS	TITLE V PART A INNOVATIVE PROGRAMS	0002040290	\$5,222.00
FT	TITLE II PART D	0292040290	\$2,744.00
(2006-2007) TOTAL			<b>\$750,911.00</b>

**Cato-Meridian School District Technology  
Three Year Proposed Budget**

	<b>2006-07 (current)</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
State Aided Hardware	\$ 18,264	\$ 17,710	\$ 17,447	\$ 17,092
State Aided Software	\$ 17,721	\$ 17,102	\$ 16,920	\$ 16,583
Staff Development	\$ 20,000	\$ 25,000	\$ 30,000	\$ 35,000
Technology Repair Service (Cay-Onon Boces)	\$ 3,390	\$ 3,661	\$ 3,954	\$ 4,270
Technology Parts (Cay-Onon Boces)	\$ 2,700	\$ 2,910	\$ 3,149	\$ 3,401
Internet (Distance Learning/Internet/ Added Bandwidth)	\$ 72,000	\$ 88,000	\$ 104,000	\$ 120,000
OCM Services	\$ 174,785	\$ 214,785	\$ 254,785	\$ 294,785
<b>Title II Part D, Competitive Grant in conjunction with Cayuga-Onondaga Boces:</b>				
Professional Development	\$ 16,500	N/A	N/A	N/A
Equipment	\$ 25,000			

## Self-Evaluation Technology Skill Level Inquiry

In our continuing effort to effectively improve and integrate technology and curriculum needs to meet NYS standards, please complete the following self-evaluation technology skill level inquiry. Using the following competency descriptions, please rate yourself according to your current knowledge and skill level as a fundamental, intermediate or proficient user of educational technology on the following Core skills.

**Fundamental Skill Development (One point value)** - will be needed for all instructional staff and administration to build initial understanding of equipment and software use. Topics would include computer operation and navigation, network login and access, word processing, fundamental levels of data management, printing functions, projection hardware and email. Computer use policies and procedures will also be covered in these sessions.

**Intermediate Skill Development (Two point value)** will be needed for instructional staff and selected other individuals to build greater capabilities in specific software and hardware use. Topics would include spreadsheet functions, databases and basic uses of graphical presentation software.

**Advanced Skill Development (Three point value)** will be provided for appropriate staff to build expertise in specific areas such as particular instructional software, curriculum management systems, multimedia systems, advanced presentation concepts and special administrative systems.

<b>Core Skills</b>	<b>No Experience (0)</b>	<b>Fundamental (1)</b>	<b>Intermediate (2)</b>	<b>Advanced (3)</b>
<p><b>I. TECHNOLOGY OPERATIONS AND CONCEPTS.</b>  <i>Teachers demonstrate a sound understanding of technology operations and concepts.</i></p>				
<p><b>II. PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.</b>  <i>Teachers plan and design effective learning environments and experiences supported by technology.</i></p>				
<p><b>III. TEACHING, LEARNING, AND THE CURRICULUM.</b>  <i>Teachers implement curriculum plans, that include methods and strategies for applying technology to maximize student learning.</i></p>				
<p><b>IV. ASSESSMENT AND EVALUATION.</b>  <i>Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.</i></p>				
<p><b>V. PRODUCTIVITY AND PROFESSIONAL PRACTICE.</b>  <i>Teachers use technology to enhance their productivity and professional practice.</i></p>				
<p><b>VI. SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.</b>  <i>Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice.</i></p>				

\* The computer is internet ready  
 ^ The computer is equipped for multimedia

Computer Assessment 2007	Pentium II		Pentium III		Pentium 4		Macintosh		Future Planned Purchases		
	Desktops	Laptops	Desktops	Laptops	Desktops	Laptops	Desktops	Laptops	2007 - 2008	2008 - 2009	2009 - 2010
<b>Elementary School</b>											
<i>Classrooms</i>	7		24*^		10*^	2*^			26		
<i>SPED Classrooms</i>			1*^		6*^	1*^					
<i>Lab</i>									26		
<i>Library Media Centers</i>					2*^						
<i>Mobile Labs/Carts</i>						20*^					
<i>Administrative/Other offices</i>			1*^		6*^	2*^					
<b>Middle School</b>											
<i>Classrooms</i>			15*^		21*^	6*^					
<i>SPED Classrooms</i>					9*^	4*^					
<i>Computer Lab</i>					32*^	1*					
<i>Technology Lab</i>			1*^		5*^	1*^					
<i>Library Media Centers</i>			2*^		5*^						
<i>Mobile Labs/Carts</i>											
<i>Administrative/Other offices</i>			4*^		2*^	1*^					
<b>High School</b>											
<i>Classrooms</i>			26*^		18*^	3*^	1*^				
<i>SPED Classrooms</i>					12*^	5*^					
<i>Library Lab</i>					33*^						
<i>Science Lab</i>					12*^						
<i>Technology Lab</i>	1		2*^		17*^	2*^					
<i>Business Lab</i>					24*^	1*^					
<i>Library Media Centers</i>					13*^	1*^					
<i>Mobile Labs/Carts</i>				11*^							
<i>Administrative/Other offices</i>			1*^	1*^	9*^	1*^					
<b>District Office</b>			1*^		1*^						
<b>Business Office</b>					4*^						
<b>Other Locations</b>		127	3*^		2*^						
<b>Servers</b>					5*^						
Approximately 48 additional units will be purchased for the district									Approximately 100 units will be purchased for the district		
Approximately 48 additional units will be purchased for the district									Approximately 100 units will be purchased for the district		

## Peripheral Assessment 2007

The yearly purchase of additional video projection units, scanners, combo vcr/dvd players and digital cameras is addressed within our budget.

<i>Peripheral Devices (by type)</i>	<i>Printers</i>	<i>Scanners</i>	<i>Digital Cameras</i>	<i>Video Projection Devices</i>	<i>Assistive / Adaptive Devices</i>	<i>Video Cameras</i>	<i>TV Monitors</i>	<i>VCR's</i>	<i>DVD Players</i>
<b>Elementary School</b>									
<i>Classrooms</i>	9	2	2	16	1		5	6	1
<i>Labs</i>									
<i>Library Media Centers</i>	1								
<i>Mobile Labs/Carts</i>									
<i>Administrative and Other Locations</i>	9	1	2						
<b>Middle School</b>									
<i>Classrooms</i>	10	6		13			6	4	3
<i>Labs</i>	3	1		1	1				
<i>Library Media Centers</i>	1					1			
<i>Mobile Labs/Carts</i>				1					
<i>Administrative Offices</i>	8		3						
<b>High School</b>									
<i>Classrooms</i>	12	5	2	14	1		14	14	11
<i>Labs</i>	5	1		3					
<i>Library Media Centers</i>	1	2				2			
<i>Mobile Labs/Carts</i>				1					
<i>Administrative Offices</i>	17	1	2						
<b>District &amp; Business Offices</b>	6	1							
<b>Other Locations</b>	2						1	2	

## Network Assessment 2007

*Switches are replaced and/or added as needed to maintain a fully functional network classroom environment.*

<i>Network and Telecommunications</i>	Allied Telesyn <i>AT-FS7241</i>	Nortel Baystack <i>450-24T</i>	Nortel Business Policy Switch <i>2000-24T</i>	Nortel Baystack <i>470-24T</i>	Nortel Baystack <i>470-12T</i>	Nortel Baystack <i>5510-24T</i>	MAC 560	Allied Telesyn <i>AT-9006SX/SC</i>	Barracuda Spam Filter	Watchguard Firewall	Cisco Wireless Access Points <i>AIR-CT55131AG-A-K9</i>
<b>Elementary School</b>											
<i>1<sup>st</sup> floor wiring closet</i>		1		1							
<i>2<sup>nd</sup> floor wiring closet</i>				1							
<b>Middle School</b>											
<i>Maintenance wiring closet</i>		1		1				1			
<i>IDF 1 2<sup>nd</sup> floor wiring closet</i>		1									4
<i>IDF 2 Computer Lab closet</i>	2										
<b>High School</b>											
<i>Main Library wiring closet</i>		3		1		1	1		1	1	2
<i>IDF A wiring closet</i>		1	2								
<i>IDF B wiring closet</i>			2								
<i>IDF C wiring closet</i>			2								
<i>IDF D wiring closet</i>		1						1			
<b>Bus Garage</b> <i>wiring closet</i>					1						

## E-Rate Requirements Verification Sheet

### Requirement 1

An establishment of clear goals and realistic strategies for using telecommunications and information technology to improve education and/or library services.

Page(s):

5	6	14	15	16	17	18			

### Requirement 2

A professional development strategy ensuring staff will know how to use information technology to improve education and/or library services.

Page(s):

7	8	9	10	11	12	13	14	15	

### Requirement 3

Included assessment of telecommunications services, hardware, software, and other services that will be needed to improve education and/or library services.

Page(s):

15	16	17	18	27	28	29			

### Requirement 4

District provided budget to acquire and **maintain** the hardware, software, professional development, and other services that will be needed to implement the technology plan strategy.

Page(s):

18	19	20	23	24					

### Requirement 5

An evaluation process enabling the district to monitor progress towards specified goals and make mid-course corrections as needed.

Page(s):

14	20	25	26						