

**The Hudson County Schools of Technology
Technology Plan
2004-2007**

**Frank Gargiulo, Superintendent of Schools
Joseph Sirangelo, Assistant Superintendent
Vincent McFadden, Asst. Superintendent
Gerald Letizia, Business Administrator
Richard Myrlak, Board Secretary**

**The Hudson County Schools of Technology
Board of Education**

**Eugene Drayton, Board President
Sebastian D'Amico, Board Vice President
Anthony Comprelli, Board Member
Peter Fishbach, Board Member
Reverend Edward Allen, Board Member
Graig Guy, Board Member
Thomas Murphy, Board Member**

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Executive Summary:

A Technology Task Force composed of the Superintendent, Assistant Superintendents, Business Administrator, Board Secretary, Principals and Technology Coordinator shapes and guides the district's technology growth both academically and administratively.

The overall planning process is a multifaceted model with input originating from all involved district groups and personnel, which ultimately comes to fruition at the district Technology Task Force level. This technology plan is an outgrowth of this process.

As educators, community leaders and administrators, it is incumbent upon the Hudson County Schools of Technology to support and encourage the thoughtful integration of effective technologies. Technology infusion must continue in both, the academic and technical curricula provided in our classrooms, the communications we foster in our learning community and the everyday method by which we conduct business in our administrative offices.

Our school district has taken great strides over the past decade is, in many ways becoming a model for the integration of technology into the daily work that our students, faculty and staff perform. In order to continue our success, the Hudson County Schools of Technology will invest wisely in technology, staff development and a support structure that will allow us to grow both academically and administratively. We will face the challenge of a Technical School District going through continuous process of change as we expand and enhance our programs and services

The following Technology Plan is intended to serve as the blue print that will allow our district to continue to make evolutionary strides in the integration of technology within the entire school environment. In addition this plan will be useful in establishing standards, procedures and policies with respect to the use and implementation of the ever-changing new technologies our school district will utilize. The integration of new technologies into all programs and curricula has been a significant factor in our success as a school district of choice within Hudson County. To continue and expand on our successes The Hudson County Schools of Technology is committed to supporting programs and efforts that will grow and enhance our technology environment.

These include:

1. Developing partnerships with the business community, as well as places of higher learning must continue to expand throughout the district.
2. Where appropriate continue to develop partnerships with schools and school districts within Hudson County.
3. Aggressively pursue grants that will enhance the ability of our students to achieve the Core Curriculum Standards as well as connect them electronically to the world outside of Hudson County

4. Continue to make significant investments in staff training to provide our educators with the capabilities to take advantage of relevant technologies.

The Hudson County Schools of Technology faces the challenges confronted by all organizations in a seemingly ever changing technological world. We have invested the needed resources to continue to be technology leaders, providing our students and community with a cutting edge learning environment second to none.

Demographics:

For generations Hudson County has been the first stop for waves of immigrants coming to the United States. In addition to bringing new languages, customs and mores these new populations have brought a need and a desire for education. This cultural diversity continues to provide our schools with both opportunities and challenges.

Located in northern New Jersey, and situated directly across the Hudson River from Manhattan the county has always been multicultural, urban and densely populated. It is the most densely populated county in New Jersey with a population of approximately 608,000 (U.S. Census Bureau, Census 2000). The county's current population make up consists of: 55.6% White, 13.5% African American, 9.4% Asian, and 39.8% Hispanic.

The median house hold income is \$40,293. This figure is well below the state wide family income of \$55,146. The county has almost twice the number of people living below the poverty level compared to the state, (Hudson 15.5 %, State 8.5%) as well as a much larger percentage of foreign born residents. The 2000 Census found that 38.5% of the people living in Hudson County is foreign born. The state as a whole has 17.5% foreign born.

To better understand the county's population density consider that Hudson County makes up less than .06% of the land area of the state but is home to 8% of the state's population.

HXST serves over 1400 full time students in two major building, (North Hudson Center and Jersey City Center). These students reflect the population make up of the county. Our adult night school program serves a significant number of foreign born adults who attend school to improve their English language skills as well as attain a high school diploma, (approx. 2000). Our Post-Secondary programs serve the needs of more than 300 adults needing additional employment skills.

The Mission:

District Mission

We are a dedicated, caring, multi-dimensional learning community providing quality educational opportunities that prepare our learners to succeed by offering unique, student-centered programs utilizing a creative, well-trained staff, challenging curriculum and state-of-the-art resources.

District Vision

We envision a student directed learning environment that is responsive to the diverse needs of the community. We will provide safe, well-maintained, accessible state-of-the-art facilities enabling our caring, progressive staff to cultivate the academic and technical skills needed by the leaders of tomorrow.

Technology Vision

Our vision of the Hudson County Schools of Technology is a safe and energetic environment, where students and staff are in control and where technology is a natural extension of our learning community. The students and staff communicate effectively and are well trained on reliable, efficient and up-to-date equipment.

Technology Beliefs

We Believe...

....that technology enables us to grow.

....that efficient and dependable technology supports and enhances teaching and learning.

....that technology is a tool to enhance ones abilities and performance.

All of these statements are consistent with and carefully aligned to the goals objectives and activities set in this document.

Society has seen a rapid dependency upon technology development over the past years. From the introduction of the Apple IIe in 1983 to the current capabilities of the Internet, large scale data-networks, wireless devices, HDTV, etc., technology has been transformed from a marginal component in our lives and schools to an indispensable and pervasive ingredient in our lives as students, teachers and citizens. We no longer have to be computer programmers or technological wizards to realize the significance of technology and the importance of using it effectively.

As a technology focused district it is imperative for us provide our students with the opportunity to understand and explore technology in many forms. All of our staff members need to become as comfortable with technology as they are with chalk and books.

To make learning interesting and fun through the use of technology is a foundation of our approach to the infusion of technology into all curricula, both academic and technical. Administratively we must utilize technology to streamline the information process and to provide an efficient, accurate system for data retrieval and electronic correspondence.

A district network should be developed that will provide the capability to access and deliver voice, video and data in an efficient and cost effective manner to our students, their parents and the community at-large. Our curricula both academic and technical will benefit from this electronic environment that includes distance learning, on-line services, E-mail and Internet Access.

The Hudson County Schools of Technology believes that, in order to accomplish its mission, a collaborative effort for school improvement is necessary. Through the processes of school-based planning /shared decision-making, the school community will be empowered to: make intelligent decisions that will improve learning, have a positive impact on our learning environments, and provide better services and programs for all our students.

Our commitment to the use of technology for education excellence requires that we budget and plan for on an annual basis, the purchase, upgrade and maintenance of hardware and software. Our efforts must be closely coordinated to the state core curriculum standards, state technology benchmarks and national goals for technology. We must also provide the human resources needed to train our staff and maintain and support the technical infrastructure.

District Benchmarks for Technology Implementation:

- Develop a voice/video/data infrastructure in all buildings and all classrooms with internet/intranet access and provide remote access to staff/students and community from home.
- Maintain up-to-date technology facilities in all of our vocational, technical curricula and programs.
- Maintain at least a 3:1 student/multi-media computer ratio.
- Utilize distance learning technology to deliver the “real world” to any classroom or curricula area.
- Provide varied means of staff training on technology.
- Expand collaborative efforts by staff to meet student’s needs.
- Address the Core Curriculum Standards in all curricula areas, utilizing technology as a tool for instruction and attainment of the standards.
- Enhance communication among teachers.
- Facilitate communication between home and school.
- Provide secure and immediate access all appropriate records.
- Promote an awareness and understanding of new technologies and educational trends.
- Expand learning options for students through access to innovative online computer courseware.
- Decrease paper flow through use of e-mail and other technological resources.
- Increase student access to the computer as a tool for learning.
- Provide parents, teachers, and administrators more timely access to information about their student’s progress, attendance, homework assignments, and related topics.

Technology literacy for all students:

Over the Past decade the Hudson County Schools of Technology transitioned from a traditional vocational technical school program to a district supporting schools providing full academic curricula integrated into our vocational/technical programs. This transition has afforded us the opportunity to create an integrated and interdisciplinary educational environment in which technology and technology literacy is incorporated into all curricula areas. The district has recognized the critical importance of technology and information literacy as well as the integration and application of the NJ Core Curriculum Content Standards in all content areas.

All students regardless of gender, race, national origin, special need and religious affiliation have equitable access to educational technology in our schools and programs. In planning and budgeting all segments of the school population will be considered when technology implementation decisions are made. All special projects within the district have representation of the diverse population we serve. The Comprehensive Equity Plan developed by the district is our vehicle to monitor compliance on this issue.

All resources (State, Federal, Special grants) are utilized, where practical, to provide a unified approach not only to technology integration but all academic endeavors. Technology planning,

whether it is at the district level or at building and program level is aimed at the seamless integration of technology with all educational activities throughout the district.

Current curricular goals, strategies, and techniques support workplace readiness skills through integration of computer skills in the seven core curriculum content areas. This is accomplished within each academic area as well as through the integration of academic standards within our technical/vocational programs.

The line drawn between technology training and technology literacy often is blurred. In all of the district's technology programs from Automotive Repair to Video Production the history of technology and its impact on society as well as workplace readiness skills are included in the curriculum.

As we continue to grow and expand technology integration only becomes more critical to the success of our programs and activities. Over the next year the district will be establishing a number of new projects:

1) Hearing Impaired Program: This program will support a county wide population of hearing impaired students. Specialized technologies including infra-red audio transmission of audio will be installed and we will investigate the possibility of real time character generation for students enrolled.

2) Starting in September of 2004 a major technology initiative will begin in our Jersey City Center. One wing of the building will become the central location for district technology programs including: A+, N+, I+, Cisco Certifications, Microsoft Academic Academy, Dell Academy and Web design and administration.

3) Online Education: The district has initiated a number of on line courses for HCST students over the past two years. This experience has provided us with the skills and understanding to establish an online school within the Hudson County Schools of Technology. The first class of Hudson eSchool Academy will be enrolled in Sept. 2004 and will be provided with online courses taught by highly qualified teachers with on line instruction experience.

In setting high standards for all our students, we have recognized the role that technology plays in student assessment and have targeted areas of reinforcement. The district will continue to review ways to more formally evaluate student technology literacy at various grade levels as the New Jersey Core Content Curriculum Standards evolve.

Parental Communication:

The district web site along with each individual school web site provides information for parents and the general public. This information is updated on a regular basis with relevant information regarding all of our programs. The district website contains up to date electronic versions of the curriculum guides as well as Board Policies.

The Hudson County Schools of Technology maintains a thin client technology structure which allows students and parent/guardians to access the students data files of student work on a real time basis from anywhere they may have internet access. Parent/Guardian email addresses are requested on all applications and are frequently used for communications between principals, teachers and parents. We also provide all of our North Hudson teachers with voice-mail accounts that are used for parent/teacher contact.

As part of our student information system upgrade in 2005-2006 parents will have access to student information via the district's web interface to the Chancery SMS information system.

Adult Literacy:

With an enrollment of more than 2000 students HCST's Adult Evening High School, is the largest adult high school in the state. Each student is evaluated individually and is provided with a custom curriculum that includes elements of Technology Literacy. Students attend school at the district's North Hudson, Jersey City and a satellite center located in Harrison. Access to the districts technology is provided to staff and students of the program. The district works directly with the Hudson County Office of Health and Human Services and the Hudson County One-Stop Career Center to encourage enrollment in any HCST program appropriate for the student.

The district also has a long-standing Post-Secondary Program that includes a number of technology threads. These include: Computer Repair, Office Systems, A+ and N+ as well as CAD, Computerized Accounting and Desk-Top Publishing.

As the new Jersey City Technology Wing comes online (2004-5 school year) these programs will be expanded to include MCSE and CCNA.

Technology Inventory:

Overview

The school system has set student, staff and community online connectivity as a primary focal point. The district's Internet web site, <http://www.hcstonline.org> provides a gateway to the district's information and communications resources, school and community interaction and serves as the launching pad for world wide information exploration.

Access to technology is provided to all instructional staff in their classrooms. These instructor computers are used for attendance, research, lesson-plans, email communications with students, staff

and administration. Administrators and support staff also have immediate access to computers on their desks or within their offices.

Our two major sites are connected via a 10 MB ATM connection and the district as a whole utilizes a 45 MB OC3 which is used for all internal and WEB based connections that make up the part of an ATM Cloud. The links for the network are made via Cisco Router. The district serves as ISP and WEB host for three Hudson County School districts, Guttenberg, North Bergen and Weehawken.

The backbone in the Jersey City and North Hudson Centers consists of: 12 strand fiber, rg11 coax, and Category 5 wire for voice/data all run between the Main Distribution Frame (MDF) and Intermediate Distribution frames (IDF). The MDF room (cabinet) is connected to IDF's (cabinets) located in strategic points within each building that are determined by distance and security. Room connectivity is accomplished by running an adequate number of Category 5 cables for student and instructor use (for data/voice connectivity) and coax to the nearest IDF. The number of Category 5 cable runs is determined by the classroom functionality (i.e. academic classrooms, academic computer labs, technology classrooms, technology computer labs). The network backbone in each building was recently upgraded to Gigabit speed and depending on data requirements transmission speed to the classroom from each IDF can be one hundred or Gigabit. Over the next year we will upgrade a number of technology labs while attempting to provide academic classrooms with additional new systems. Data connections will be installed with planning and care so as not to affect the overall performance of the network.

The district maintains its primary Data Center in its North Hudson Center. The center provides a controlled environment for our investment in over 50 file servers and an IBM AS400 that provide students, faculty, staff, and administrator's access to their specific information needs.

This environment functions as the district Network Operations Center (NOC) as well as the Data Center, storing and providing all of the districts information and data services. The following is a partial list of the services provided, hosted and supported through the HCST Data Center:

- Central source for all of academic and administrative software applications
- Media streaming of district audio and video productions as well as WHIT radio, (Web based Radio Station)
- Student Information System servers (Chancery, WinSchool)
- Student Medical Records
- E-mail services (Microsoft Exchange) for staff, instructors and as of Sept. 2004 all full time day students
- District Library Management system
- Controls Microsoft Active Directory Services
- Host location for district Web servers and Web development
- Host location for District's online education services, (BlackBoard)
- Data storage for all students, staff and administrators
- District content filtering services

- District Virus protection services
- Centralized upgrades for district computer OS and software
- District Food Services data collection
- Human Resources Information System
- District Help Desk system
- District SQL data services development and management

District file servers utilize Windows 2000 or 2003 as their operating system. All district PC desktop systems are currently running Microsoft 2000. Our Active Directory environment allows all staff and students to log on to any appropriate system and have immediate access to the Internet, district “eLibrary” of on line resources and catalogs and most importantly allows everyone access to their centrally stored data files. Using Microsoft Terminal Services and Citrix MetaframeXP the district has also created an “eDesktop” environment which gives students and staff the ability log in and have access to files and applications from any computer that has Internet Access. There are currently two labs using Apple Macintosh computer, (DTP and Audio-Tech) and will continue to use Apple technology integrated into the district information environment. One of our administrative offices is migrating from Macs to PC over the next year or two.

During the summer of 2004 a Storage Area Network (SAN) will be installed in the Data Center. The SAN provides the district with almost unlimited storage growth and will allow us to make more efficient use of our existing servers as well as speed up access to storage and back-ups of all forms of digital information. Use of the SAN in our North Hudson facility interconnected with a large scale storage device in our Jersey City Center will allow for off-site backup of all critical data as part of our disaster Recovery/Business Continuation Plan.

Administrative staff and faculty have remote access through Virtual Private Networks, VPNs. This form of connectivity allows staff access to files and services through an authentication process.

During 2004-05 and beyond we will expand our use of Virtual Local Area Networks, (VLANs) to improve security of data by isolating traffic by user type as well as optimizing the network by separating network traffic by type and location. VLANs will be used to provide specific pathways for Voice Over IP, video conferencing, video distribution and foreign language audio instruction, etc.

The district has begun the process of establishing secure wireless connectivity in both of our major centers. All laptops purchased over the last year have built in wireless capability. As the installation of wireless security services is completed lap tops and other wireless devices will have the same connectivity as any other computer on the HCST Network. We will also develop policies to allow for student’s who own their own compatible laptop computers to log into the network. Network security is a major concern in this area and services will be developed with an emphasis on this area.

Over the past 2 years the district has begun using the BlackBoard Learning Management System to provide online courses to students in a number of programs. We hope to expand the use of

Blackboard not only for online courses but as a central repository of course content that instructional staff will build gradually over the next few years. In September of 2004 the district will be opening an online school program. The Hudson eSchool Academy will open with a carefully selected group of students and provide them with a rich and user-friendly learning environment with strong parent involvement and experienced highly qualified instructors. The program will be monitored carefully and grow cautiously.

Currently the district utilizes Centrex phone service deployed via Verizon's switched public network. We will be replacing Centrex service with IP phones through the 2004-05 school year.

To comply with the Children's Internet Protection Act (CIPA) the district currently utilizes St. Bernard's IPrism filtering technology. In conjunction with IPrism we will be deploying a gateway based product to provide additional defense against virus/spam at the firewall. (Mcafee's Webshield). These systems are monitored to ensure that sites (and content) deemed inappropriate are blocked from student/staff access and that the latest anti-virus/spam protection measures are in place. Contracts are renewed yearly and will be done so through 2007. Since students will be provided with hcstonline.org accounts an email monitoring system will also be put into effect.

The district maintains maintenance contracts to cover all of the district core switches and routers and will continue to do so through 2007. Any new computers are ordered with 3 year warranties to minimize maintenance costs.

Technical support is provided by 3 technical support specialists and a network administrator and WEB developer. Additional technology staff needed to support the server/network environment and new projects will be hired as needed to maintain network connectivity on a continuous basis.

The district continually strives to research and provide the latest applications and tools available to both students and staff to encourage learning and enhance administrative functions. We believe when fully implemented and with training of staff and students the technology structure we are striving for will bring The Hudson County Schools of Technology very close to achieving the states ultimate goal:

All students, no matter which district or school they attend, will be able to achieve the Core Curriculum Content Standards because they will have unlimited access to people, to a vast array of curriculum and instruction, and to information and ideas -- no matter where they exist.

Excerpt from the [NJ Educational Technology Plan](#)

The District is aware of the State Department of Educations initiatives including the NJ SMART (New Jersey Standards Measurement and Resources for Teaching) and is positioning our IT environment to handle Data Driven Decision Making. The upgrade to a new version of our student Information System over the next two years will bring us up to SIF compliance and enable to participate in any

State DOE programs. Non-instructional use of technology to establish more efficient record keeping systems continues to grow. Payroll and HR enhancements for more accurate data entry have been developed. The Business office and central office staff have moved to a Thin Client environment which provides quick and dependable access to network and AS400 information.

We look forward to the day when all aspects of the district's data environment become integrated in a seamless and secure network that will give staff access to any and all information needed to make informed and data driven decisions.

Equipment Life Cycles

The district's computers have a life expectancy of 4-5 years. All attempts are made to use computers and servers until they lose all functionality for district use. More powerful computers purchased for courses such as CAD, Video Production are moved into academic classrooms when they are no longer able to handle more data intensive programs. The use of Thin Client terminals is also an attempt to lengthen life cycles and reduce costs. In many cases access to terminal services requires the use of less powerful and thus more reasonably priced computer. In fact a number of outdated computer systems have been converted to terminals, thus extending their life cycles.

All non-functional computers and monitors are disposed of using NJ DEP regulations. Unused network equipment that has been replaced is being stored and will be auctioned during the upcoming school year.

Professional Development:

The biggest challenge to providing professional development activities is finding the time to schedule events. Our staff is fully involved with the instructional process and often works with a number of different student populations and programs. The district will continue to investigate staff development options that do not interfere with the daily instructional schedule and provide an adequate level of SD to continue to upgrade staff technology skills including:

1. Training during the first and last days of the school year when schedules are more flexible
2. Saturday courses for which staff, (instructional and non-instructional) will be compensated to attend
3. The creation of a summer institute for district staff and administrators to share initiative and be updated on current trends and directions in technology and their impact on education
- 4) Encourage additional participation in NJ ELITE for district administrators
- 5) Create spaces at each center that are made available for technology training on a regular schedule.

The district's technology staff development initiatives are based on the following:

1. The integration of appropriate technologies should be across the curriculum, (academic, technical/vocational)
2. Recognition that technology is a tool to accomplish educational goals and integrated into daily use within the content areas.

3. Staff development as a personal process beyond informational level introductions of new material and information.

The district utilizes Action Research as its primary form of Professional Development and much of that research is in the area of technology integration and personnel development.

In our most recent survey of instructional staff as to technology proficiency, we found that district instructional staff rated themselves at the following levels:

Beginner

Intermediate

Advanced

Two major district wide staff development initiatives are:

1) Faculty enrollment in New Jersey City University's Masters in Educational Technology program. Approximately 12 faculty members have obtained their degrees and 7 more are currently enrolled.(faculty receive full tuition reimbursement for these courses)

2) Vocational/Technical instructors are provided with the necessary training for them to maintain and expertise in their fields.

These initiatives will continue along with increasing appropriate training sessions in the use of district technology resources.

The Research:

The staggering rate of technological advances in society demands that schools set the requisite direction to prepare students for the future with the skills and abilities to:

- 1) Access and use information from many sources and in many formats
- 2) Have the ability to evaluate and judge the relevancy and quality of information
- 3) Synthesize and manipulate information into useful and constructive knowledge
- 4) Learn how to effectively use technological tools for productive and creative work and recreation

To provide students with these abilities the Hudson County Schools of Technology endeavors to develop environments which empower the learner to explore, analyze and synthesize information for personal growth and fulfillment, as well as the opportunity to contribute to our community and society.

Through an integrated approach, curricular applications of new technologies engage the individual in his/her own learning experience (Butzin 1992). Project-based learning (eg. Blumenfeld, et.al. 1991) and other forms of pedagogy rooted in constructivism (eg. Duffy & Jonassen 1992) suggest that embedding technology in the core tasks of schooling and its integration into everyday practice is a strenuous but worthwhile process. Furthermore, when technology is treated as part of the intellectual fiber rather than something new and essentially apart, its demands on the school system become more rational (Blumfeld, Fishman, Krajcik, Marx, & Soloway 2000). Unlike previous

computer technology, such as integrated learning systems (ILSs) (Newman 1992) or drill-and-practice software, which are self-contained and controlled entirely from within the school or within the classroom, the Internet is a classroom technology that requires coordination between the classroom and the outside world to work (Cuban 1986).

The district encourages the development by students of multimedia projects that explain, enhance, and elaborate classroom knowledge. Interdepartmental projects are encouraged. Cooperation between academic and technical programs and between a number of technology programs provide students with authentic learning environments and student driven cooperative learning. The district recognizes that instruction is a very dynamic undertaking, an interactive system comprising teacher, students, and materials, i.e., curriculum and technology (Cohen and Ball 1999). Technology is a tool to be utilized by all participants as a vehicle to achieve the academic goals of the various curricula while at the same time encouraging our core philosophy of inquiry and student centered learning.

The Funding Plan:

The Hudson County Schools of Technology continues to support technology within the district with a \$ 1.4 million dollar central office budget and approximately \$ 1 million in school level technology appropriations for 2004/2005. Budgets for 2005-2007 are expected to reduce at the Central office level and increase anticipated at the building level

Major targeted expenditures (district technology budget) for the next three years:
2004-2007

- ◆ Maintain and enhance filtering as required by CIPA, as well as spam and virus protection.
- ◆ Maintain Service and Maintenance Contracts as well as software subscriptions including Microsoft, IBM, Chancery, Cisco, Dell and EMC.
- ◆ Jersey City Center, Technology Wing start up costs
- ◆ Maintain telecommunications, data services and Internet access at appropriate levels
- ◆ New construction technology startups, to be determined by construction dates

Listed below is a summary chart showing revenue resources. Examples of revenue blended resources are:

Carl Perkins Vocational Funding
No Child Left Behind (NCLB)

Technology Plan Checklist for NJ School Districts/(2004-2007)				
Three Year Technology Plan Funding Table				
ITEM	FEDERAL	STATE	LOCAL	Erate

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	FUNDING	FUNDING	FUNDING	
Total Budget Revenue Source percentage 2004-2005 Expected constant 2005-2007	1%	45%	54%	
Technology Equipment	x	x	x	
Network Capacity	x	x	x	X As permitted telecommunication s
Filtering Software	x	x	x	
Maintenance Policy and Plans	x	x	x	
Staff Training	X	X	x	

Technology Goals and Objectives 2004-2007:

The district goals have reflected the state's goals for educational technology - as well as the national educational technology goals.

National Educational Technology Goals

Goal 1: All students and teachers will have access to information technology in their classrooms, schools, communities and homes.

Goal 2: All teachers will use technology effectively to help students achieve high academic standards.

Goal 3: Research and evaluation will improve the next generation of technology applications for teaching and learning.

Goal 4: Digital content and networked applications will transform teaching and learning.

Educational Technology Goals State of New Jersey

Goal 1: Students will attain the educational technology and information literacy skills that will assist them in achieving the Core Curriculum Content Standards and to succeed in the workplace of the 21st century.

Goal 2: Educators will attain the skills and knowledge necessary to effectively use educational technology to assist students to achieve the Core Curriculum Content Standards.

Goal 3: Students, teachers and administrators will have access to educational technology in all learning environments, including classrooms, media centers, schools, and other educational settings, such as community centers.

Goal 4: New Jersey school districts will establish and maintain the technology infrastructure necessary for students and educators to access electronic information and to communicate freely via technology

Hudson County Schools of Technology

Goal 1: The Hudson County Schools of Technology will continue its commitment to technology education by providing sufficient funds to implement appropriate district technology initiatives supported by district, building and program level plans.

Goal 2: The Hudson County Schools of Technology will continue to maintain and upgrade a district wide technology infrastructure of a comprehensive voice/video/data network to all classrooms, educational support areas and administrative offices.

Goal 3: Hudson County Schools of Technology students will attain the educational technology and information literacy skills that will assist them in achieving the Core Curriculum Content Standards and to succeed in the workplace of the 21st century.

Goal 4: Staff Development opportunities in technology integration will continually be made to all staff and specific needs of staff will be identified for targeted staff development training.

Goal 1: The Hudson County Schools of Technology will continue its commitment to technology education by providing sufficient funds to implement appropriate district technology initiatives supported by district, building and program level plans.

Objective 1A: Schools, programs and department annual budgets will include the cost of technology initiatives

Objective 1B: The Technology Services Dept. will develop a district wide budget yearly to maintain district/school initiatives not funded at the school / department level.

	ACTIVITY	TIMELINE	RESPONSIBILITY	EVALUATION
1.1	School / department level technology meetings	Sept-June Yearly	Principals, Directors, appropriate staff and Technology Services Staff	Agendas
1.2	School technology budget development	Oct-Feb Yearly	Principals Department Liaisons Technology Services Staff	Work papers
1.3	District technology budget development	Oct-Feb Yearly	Technology Coordinator	Work papers
1.4	E-rate Applications submitted	Nov-Feb Yearly	Technology Coordinator	470/471 forms completed and submitted
1.5	District Budget adoption	April Yearly	School Business Administrator	Adopted Budget
1.6	Technology Services	Quarterly	Technology Coord/ Technology Task Force	Agendas
1.7	District Tech Plan Update/Review	May-June Yearly	Technology Coord.	Report to Superintendent

Goal 2: The Hudson County Schools of Technology will continue to maintain and upgrade a district wide technology infrastructure of a comprehensive voice/video/data network to all classrooms, educational support areas and administrative offices.

Objective 2A: The Technology Services Dept. will budget for any infrastructure upgrades needed on a yearly basis to maintain 100% connectivity to all rooms in the district.

Objective 2B: A technical support staff will be maintained to provide tech support to all buildings.

	ACTIVITY	TIMELINE	RESPONSIBILITY	EVALUATION
2.1	Support and upgrade existing intranet/internet facilities. Recommend upgrade purchases. Maintain maintenance plans on equipment	Ongoing	Technology Service Dept. Network Administrator	Schematics Inventories contracts
2.2	Upgrade individual classrooms and network segments to meet current Network Standard	Ongoing	Technology Services Dept.	Schematics Inventories contracts
2.3	Develop standards for future equipment purchases and infrastructure upgrades	July04- November04	Technology Services Dept Principals Technology Task Force	Infrastructure Standards published and available
2.4	Provide technical support staff for district LAN/WAN and school level support	Ongoing	Technology Coord.	BOE Postings/ Appointments Evaluations
2.5	Maintain Tech-support request system	Ongoing	Technology Services	Online system reports
2.6	Work with Principals and Dept. Heads to assist in developing building/program plans	Ongoing	Technology Services Dept. Coordinator, Network Admin	Operational Plans
2.7	Monitor deployment of VOIP phone system	Ongoing	Technology Coord. Principals, Directors, Tech Support/Tecom. Staff.	Billing records Contracts/Verizon
2.8	Apply for E-Rate Funding for Infrastructure if discount applies	Ongoing	Technology Coord	E-Rate forms
2.9	Implement JCC Technology Wing infrastructure	Ongoing	Technology Coord., JCC Principal, District Admin. And instructors	Meeting agendas Feasibility Studies
2,10	Apply for Erate funding for	Nov.-Jan.	Technology Coordinator	470's/471's

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	infrastructure support	Annually		
2.11	Investigate feasibility of private fiber-optic network	July 06-07	Technology Consultan	Study results

Goal 3: Hudson County Schools of Technology students will attain the educational technology and information literacy skills that will assist them in achieving the Core Curriculum Content Standards and to succeed in the workplace of the 21st century.

Obj. 3 A: Appropriate Technology Curriculum guides will be updated to match NJ Core Content Curriculum Standards.

Obj.3.B Students will utilize technology and computer software for communications and collaboration as well as in support of academic and technology/vocational programs.

Obj. 3.C Student created work will be preserved to provide a view of student growth and achievement for teachers, students and parents.

Obj. 3.E Grants and other sources of funds will be sought to support the infusion of technology and advance the districts vision and mission

	ACTIVITY	TIMELINE	RESPONSIBILITY	EVALUATION
3.1	Review / Update curriculum guides	Oct.-Feb Yearly	Technology Staff, Principals and Dept. Liaisons	Completed curriculum guides
3.2	Work with bulding/program level staff to implement technology solutions	July-June Yearly	Technology staff and school and program staff	Meetings Agenda/Project plans
3.3	Maintain networked academic and technical software	July-June Yearly	Technology Support staff	Tech support reports
3.4	Pursue appropriate Grants and other sources of support	As needed July-June Yearly	Grant / Project Leaders Technology Staff Support	Meeting agendas Grant / Project Plans
3.5	Maintain technology environment that provides for storage of and easy access to student, faculty and staff work securely	Sept-June Yearly	Technology Staff	Maintenance of data center
3.6	All students have access to all technology related activities and equipment	July-June Yearly	Technology Coordinator Principals Affirmative Action Officer	Comprehensive Equity Plan Compliance and review
3.7	Parental communication	July-June Yearly	Technology Coordinator Principals, Site and district web developers	District Websites,
3.8	Develop student guides to district technology environment	Yearly As needed	Technology Coord. Technology support staff	Publish print and web version

Goal 4: Staff Development opportunities in technology integration will be provided to all staff and specific needs of staff will be identified for targeted staff development training.

Objective 4A: Staff technology proficiency levels will increase to intermediate level in 2005-06 and continue to rise towards the advanced level through 2007.

	ACTIVITY	TIMELINE	RESPONSIBILITY	EVALUATION
4.1	Survey development	July-October Yearly	Technology Coord. Tech Support Staff Principals Human Resources Supervisor	Surveys
4.2	Survey deployment	October- February	Technology Coord. Human Resources Coordinator Tech Coordinators	Written and Online survey
4.3	School / District training courses	July-June Yearly	Technology Coordinator Principals Human Resources Coordinator Central Office and departmental staff	Course postings Attendance sheets Professional Improvement Plans Evaluations
4.4	Administrators trainings	Ongoing	Technology Coordinator	Agendas Workshop evaluations
4.5	Develop and publish Teacher Technology Manual	Sept. 2004, Updated when needed	Technology Services Dept.	Publish Hard Copy and web version
4.6	Annual Teacher Orientations	Sept. Yearly	Technology Services Staff, Principals	Workshop evaluations

Evaluation Plan:

Evaluation of the technology plan centers on the achievement of the stated activities in the plan as well as an ongoing evaluation of progress toward our goals

This will be accomplished by:

- ◆ Continuous evaluation of technology by staff at program, building and district level
- ◆ Annual review
- ◆ Review by Strategic Planning Committee yearly (April) of district technology plan.
- ◆ Yearly update of district technology plan (May/June).
- ◆ Report yearly (June/July) to Board of Education at a public meeting on status of technology within district with reference to technology plan benchmarks, goals and objectives.

We will additionally complete the table below yearly when reviewing the district technology plan to reflect data to support continued achievement of the benchmarks for technology infusion throughout the district.

Benchmark Table

	Benchmark	2004-2005	2005-2006	2006-2007
1	Develop a voice/video/data infrastructure in all buildings and all classrooms with internet/intranet access and provide remote access to staff/students and community from home.			
2	Maintain up-to-date technology facilities in all of our vocational, technical curricula and programs.			
3	Maintain at least a 3:1 student/multi-media computer ratio.			
4	Utilize distance learning technology to deliver the "real world" to any classroom or curricula area.			
5	Provide varied means of staff training on technology.			
6	Expand collaborative efforts by staff to meet student educational needs			
7	Address the Core Curriculum Standards in all curricula areas, utilizing technology as a tool for instruction and attainment of the standards.			
8	Enhance communication among teachers.			
	Facilitate communication between home and school.			
	Provide secure and timely access to appropriate school records.			

	Promote an awareness and understanding of new technologies and educational trends.			
	Expand learning options for students through access to innovative computer courseware.			
	Decrease paper flow through use of electronic mail and other technological resources			
	Increase student access to the computer as a tool for learning.			
	Provide parents, teachers, and administrator's access to more timely information about student's progress, attendance, homework assignments, and related topics.			

The Future:

As stated in the research noted earlier in this document, The Hudson County Schools of Technology does “recognize that instruction is a very dynamic undertaking, an interactive system comprising teacher, students, and materials, i.e., curriculum and technology.” (Cohen and Ball 1999). Technology is a tool to be utilized by all participants as a vehicle to achieve the academic goals of the various curricula while at the same time encouraging our core philosophy of student inquiry and student-based projects.

This technology plan is intended to be just that, a plan to guide our direction as we integrate the use of technology as a tool to achieve our goals both in and out of the classroom environment.

Appendix A: State Inventory 2003