

**Indiana School for the Deaf  
3-Year Technology Plan  
July 1, 2008 – June 30 2011**

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**Section I – Overview**

**(I-1) Technology Vision, Mission and Goals**

**Technology Mission**

*The Indiana School for the Deaf (ISD) will provide access, training and an environment that fosters life-long learning using the latest tools of technology available for academic and social literacy within our bilingual education environment.*

**Technology Vision**

ISD students and staff have various modes of communication and learning; however, a common mode for communicating and learning among Deaf people naturally occur through the eyes. Thus, as visual learners, the environment at ISD, including classrooms, needs to contain the latest technologies available to enable the delivery of instruction visually to students seamlessly and effortlessly. Modern technology via computers provides Deaf students opportunity to acquire skill and excel in communications and provide additional tools to promote learning. This technological knowledge, skill and ability from our students and staff will prepare students for a smooth transition from academics to a college and/or work environment.

In addition, an important goal in the education of Deaf students is to provide full access to learning and an important step toward achievement of this goal is to provide technology in various forms. ISD must aim for students to succeed in the acquisition of bilingual education knowledge and skills including reading and writing, and to perform basic and higher-order problem-solving and thinking skills needed for productivity as lifelong learners. Thus, to promote a true bilingual education environment at ISD, technologies are to be available campus-wide and to be available for use at all times. The school's use of video conferencing, web cams, ISDTV, digital cameras, visual presenters, digital video cameras, and more, promotes true and equal access among members of the ISD and wider community. Every opportunity that allow for true and equal access using technology should be capitalized daily.

**Goals**

To promote full access and development of technological knowledge and skills, ISD will:

1. provide the necessary technology and resources that will be accessible by students and staff campus-wide;
2. promote the integration of technology across the curriculum and expect each student to use technology as a tool for learning;
3. develop standards and curriculum for the teaching and learning of technology;

4. provide creative and innovative technological options that promote school communications, teaching and learning for students, parents and staff.

## **(I-2) Current Technology Infrastructure and Infrastructure Plans**

### **Current Technology Infrastructure**

The ISD has made great technological advances for the past decade. ISD has made a solid commitment and significant investments in improving technology. Many students, parents, and visitors from other states recognize ISD as one of the leading schools in technology.

Currently there are over 500 Gateway and Dell desktop and laptop computers of various models, and 12 Apple MacBooks. There are over 250 Hewlett-Packard Deskjet and Laserjet printers located in all 18 active buildings; however they are being consolidated into 15 high-speed color Laserjets. In the residential halls, there are computer laboratories (6 – 10 computers) on each floor. All staff in all divisions, including but not limited to, dietitians, maintenance, health center, and business office staff have access to at least one computer and either a Laserjet or Deskjet printer.

Unfortunately, all our computers are “aging” and becoming obsolete. A significant number of computers have failed and were disposed of.

Due to fiscal constraints, we have made some strategic changes – which include, but not limited to, consolidating all our printing resources to our color Laserjets. Nearly all inkjet-based printers have been removed and “retired”. Our copiers have been upgraded to be network and scanner enabled.

The ISD offers quite a number of technology accessories that have been distributed to every division. These accessories include, but are not limited to, scanners, digital cameras, LCD projectors, laptop computers, web cams, and a large format printer.

All these computers are networked through 10/100-megabit Ethernet Category 5 wiring internally and 1 gigabit Ethernet fiber optic cabling externally (between buildings). All classrooms, residential halls, and offices are wired with one or two data jacks. To extend these data jacks to support multiple computers and devices, all locations use NetGear 10/100-megabit switches (5 or 8 ports).

Over 30 industrial-quality Cisco switches of various types provide all floor and campus networking services. These switches have become obsolete (but are still in use). We must plan for their replacement.

Three (3) high-speed T1 are used to connect the ISD to the Indiana educational backbone (INschools.NET) that is managed by Department of Education through its contractor Education Networks of America (ENA). The ISD also owns Cisco PIX firewall, but are co-managed by ENA and ISD.

The ISD has over 350 messageboard signs mounted in practically every hallway and rooms on campus. This messageboard system provides us with visual “public announcement” functions.

The ISD offers a campus-wide closed circuit TV through the ISDTV network. The heart of this ISDTV network resides in the TV Studio, which is now being enhanced with leading edge technologies. The TV Studio offers three levels of production environments for students. The programs are broadcast to 35 wall-mounted TV monitors located around campus. ISDTV presents various programs, which include student-supplied news, announcements, public information, classroom demonstrations, and other information. The programs are created either at the professional-grade TV Studio or by staff and students using various tools (such as PowerPoint) from any of the school's computers.

Our 11 server-based "farm" in the Technology Center drives the ISDNet network environment. This server farm provides services including, but not limited to, Internet filtering, staff and student email systems, file server, CD Tower, intranet server, database server, TV broadcast server, software distribution server and Enterprise Ghost (workstation disk imaging) server.

In addition, ISD offers web content through three platforms, Internet-based [www.deafhoosiers.com](http://www.deafhoosiers.com) and [www.deaf-kids.org](http://www.deaf-kids.org) and an intranet-based @ISD web site. The former two sites contain content appropriate for the general public while the latter contains content that is appropriate for students and staff only

### **Future Infrastructure Plans**

Plans to continue advancing technology at ISD include the following:

- Replace our obsolete and discontinued campus-wide Cisco switches with more current equipment.
- Replace "aging" and obsolete computers.
- Implement Wireless technologies on all parts of campus.
- Mount to ceilings our LCD projectors in all our classrooms.
- Mount to ceilings our LCD projectors in all our common areas in Caskey gym, KRC, auditorium, Elementary & Preschool gyms, and library.
- Auditorium
  - Implement rear-projecting-enabled shim screen.
  - Implement a FM sound loop with a number of headsets.
  - Implement improved visual-communication system between the stage and light room.
  - Implement remotely-controlled wall-mounted video cameras.
- Install web cams on all of our computers.
- Rollout Windows Vista and Office 2007.
- Improve Professional Development Training.
  - Build and maintain Professional Development "rooms" with resources.
  - Mandatory & optional technical workshops for various staff groups.
  - Integrate technology into curriculum instruction.
- ISDTV
  - Replace our homegrown campus-wide TV cable infrastructure to provide ISD with regular cable channel lineup.
  - Additional camcorders, tripods.
  - Additional video editing equipment.
  - Closed captioning equipment.

- Ceiling Lighting system.
- Replace ISDTV monitors with Flat-panel HDTVs.
- Make ISDTV more bilingually accessible.
- Wire in more power outlets.
- Provide smart media converters/adapters to all digital equipment holders.
- Acquire additional technology center support tools (sniffer, cable tester, etc.).
- Replace campus entrance Billboard sign with an electronic one.
- Acquire portable Public Access system (to be used in KRC, Elementary/Preschool Gyms, outdoors, etc.).
- Overhaul our messageboard system using more user-friendly and more accessible network software.
- Implement VoIP technologies.

### **(I-3) How Technology will be used to support teaching and learning**

These technologies will be used to support and promote student mastery of the Indiana Academic Standards, and programs and services provided by ISD. The delivery of instruction to our students is visually, which in effect enables bilingual learning using ASL and written English. An important aspect of this preparation, integration of literacy and communication skills into each area of the curriculum will be facilitated by the use of technology. In addition, technology will aid in the development of students' higher order thinking skills and creativity.

VoIP technologies aim to improve communications, reduce costs, gain operating efficiencies, increase school safety, and support the deployment of new applications now and into the future.

### **(I-4) Telecommunication services (such as PBX, VoIP, etc...) that fall outside of basic telephone services.**

VoIP technologies aim to improve communications, reduce costs, gain operating efficiencies, increase school safety, and support the deployment of new applications now and into the future. With the increasing costs of service, equipment, maintenance, and deployment of traditional telecommunications infrastructures, Voice over IP leverages the simplicity and benefits of converged networks. Additionally, Voice over IP technologies will allow the Indiana School for the Deaf to pursue interactive communication via voice, video and text between the classrooms, administration, and the community.

## **Section II – Building Plan**

### **(II-1) How technology and the Internet will be integrated into the curriculum**

Students will access specific information when conducting research on a variety of topics using the Internet, including learning to use a search engine for locating information. Sample activities include:

- Use the Internet to find weather daily. Students keep log of daily high & low temperatures and build graphs to chart temperatures.

- Use the Internet to find different versions of news events (nation & local) (such as CNN.com, the IndyChannel.com or MSNBC.com) and compare.
- Students make a list of favorite (easiest to use) search engines. Keep in their notebooks for future reference.
- Research on one subject related to the subject discussed in each class on Internet. Gather information and develop for presentations using PowerPoint.
- Learn how/where the World Wide Web came from and how it works.
- Set up a “Scavenger Hunt” using the Internet to find and print out information that is related to topics discussed in class.
- Students will research for background information (thumbnail and sketch): biographies of people named in their history chapters and develop their presentations in PowerPoint.
- Science students will use the Internet to gather real data about the weather, volcanoes, earthquakes, hurricanes, tsunamis and build graphs using Excel.
- Students will research and find Deaf Mathematicians and their work in mathematics. Put the information collected from the Internet on a PowerPoint presentation.
- Preschool: As projects develop, students type words they need. Students search for clip art pictures of the word they chose. (For 18 mo. old and younger – their teacher will assist with navigations. For 4-5 years old or older – students will navigate independently)
- Locate “interactive” websites that show an event or process unfolding.

Students will be taught to use a variety of software programs

- Elementary: Kidspiration, Learning to Type, Word
- Middle: Word, Excel, PowerPoint
- HS: Excel, PowerPoint, Photoshop

Students will converse in English through interactive chat using both formal and informal English.

Students will videotape themselves on a regular basis. Some of activities students will do are:

- in ASL classes, use video camera/webcam and save work on computer and share with others as appropriate
- Older students videotape their storytelling projects for younger student/classes.
- Students video each other on a specific skill/task. They will work together – providing feedback to one another.
- ASL storytelling after reading a book once every quarter/semester.
- A student can develop a story through ASL hand shapes (ABC's) on video.
- Present a PowerPoint slide show with inserted student-produced movies based on a unit of instruction. (e.g., Students present their Deaf Mathematics PowerPoint presentation and be videotaped.)
- Elementary age students watch classics and then retell the stories while being videotaped.
- Signing/explaining news stories on campus' closed circuit ISDTV.
- For applied curriculum classes: Use video cameras on community trips to record their activities.

- Videotape science labs and have students sign/explain what they did and learned.
- Preschool: Students become used to having a video cameras in their classroom. Tape a lesson. Use as a review of the day (wrap-up) before dismissal.

Elementary and Middle School students will take Accelerated Reader reading practice quizzes, literacy skills quizzes and vocabulary quizzes which is web-based, on the computer (after reading books)

Students will be provided opportunities for hands-on experiences using technology across the curriculum. This will be accomplished by teachers delivering the curriculum and by students learning to use technology.

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

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

Thus, students will:

- demonstrate a sound understanding of technology
- become proficient in the use of technology
- use technology tools to enhance learning, increase productivity, and promote creativity
- use productivity tools to collaborate in constructing technology enhanced
- models, prepare publications, and produce other creative works
- use telecommunications to collaborate, publish, and interact with peers,
- experts, and other audiences
- use a variety of media and formats to communicate information and ideas effectively to multiple audiences
- use technology to locate, evaluate, and collect information from a variety of sources.
- use technology tools to process data and report results
- evaluate and select new information resources and technological
- employ technology in the development of strategies for solving problems in the real world

## **(II-2) Professional Development strategies used in providing in-service to teachers and staff**

The Office of the Principal, which includes the Principal, Assistant to the Principal, and Curriculum Director will coordinate professional development activities.

Our teachers will be provided with professional development

- on using Renaissance Place which hosts Accelerated Reader twice a year (first session via a professional development day, then followed with individual sessions as needed)
- on using NWEA MAP to interpret students' academic progress as well and to use resources/tools for instruction twice a year (first session via a professional development day, then followed with individual sessions as needed)
- on utilizing data base of internet resources made available from the Indianapolis-Marion County Public library once a year
- on using technology equipment/program such as video cameras, digital cameras, picture slide shows, etc. once a year

The Professional Development program will include training in integrating technology into the core of the Indiana Academic Standards and into elective offerings provided by ISD. This will include teachers using this knowledge and skill to provide a seamless integration of "electronic tools" that appropriately "engage the learner" to mastering program and academic standards. Examples could include process writing; research utilizing the online resource library and viewing appropriate websites.

Teachers and academic leaders will provide input into the professional development plan. Various methods will be offered that might include, but will not be limited to, training sessions, and peer coaching and support. Opportunity for input will be provided and collected on workshop topics and content needed to effectively integrate technology across the curriculum.

The professional development program will be designed with a goal of staff having the appropriate competencies and continuous support needed to use educational technology in order to deliver and support instruction. Training program for teachers shall include the following goals:

- a) Develop working knowledge and skill in the available equipment and software in order to help students meet high academic standards.
- b) Improve the recording of student progress using the available technology and software.
- c) Acquire the various technological resources available to enhance student learning.

VoIP services will allow Indiana School for the Deaf to maintain typical use of standard telecommunications equipment without the need for specialized training to maintain the equipment, infrastructure, or extensions. Additionally, end user and administrative training will be available and provided for by the chosen vendor as an integrated part of the deployment. As new applications and functionality become available, additional resources and knowledge will be supplemented by the chosen vendor as necessary.

### **(II-3) Process of how the need for the Internet, telecommunication and other technology will be assessed**

To evaluate the technology use and effectiveness at ISD in regards to the Internet, telecommunication and other technology, the following strategies will be used:

- Through subject-based curriculum committees, they will determine the classroom technology standards (equipment, programs, etc) in order to meet the academic standards—they submit their requests to the Principal's Education Team (with consultation from the Tech Center staff)
- Discussions among education staff on which technology/programs have most/positive impact on students learning
- Supervising teachers review lesson plans incorporating technology
- Use NWEA MAP to measure students' academic progresses

Principals and teachers will review Lesson Plans in courses that use technology resources and comparable tools and assess integration of technology into the curriculum.

Review of assessments of scores students will be used as one way to measure the effectiveness and impact of the technology program.

The level of technology usage for each school will be measured using statistics from ISD Technology Center, online database providers and reports on data storage.

Program evaluations that will include information regarding number of teachers trained to use technology, and the number of students enrolled into courses requiring the use of technology.

Formal and informal observations and feedback will be monitored to gauge the progress regarding use and effectiveness of the technology program.

Indiana School for the Deaf will assess the capabilities and functionality of products and compare not only against alternate VoIP services, but also against the traditional communication services available. The assessment will include evaluation of hardware, software, service levels, and maintenance of available services. The assessment will focus on the features, functionality, flexibility, and cost of such services.

#### **(II-4) Strategy of how overall program will continuously be assessed and evaluated**

ISD will collect and analyze data from a variety of sources to gauge the effectiveness of the technology plan:

- a) Measure accessibility of the technology and resources that is available campus-wide by conducting review of technology usage for each school that will be measured using statistics from ISD Technology Center, online database providers and reports on data storage.
- b) measure the integration of technology across the curriculum and expect each student to use technology as a tool for learning by conducting:
  1. number of teachers attending professional development training opportunities
  2. review of lesson plans indicating integration of technology into courses
- c) develop standards and curriculum for the teaching and learning of technology by conducting:
  1. completing development of standards and curriculum that teaches effective technology use

2. review of the number of students taking technology-related classes
  3. observations on number of students completing theme projects, assignments and portfolios using technology
- d) provide creative and innovative technological options that promote school communications, teaching and learning for students, parents and staff including:
1. review of programming options offered through websites, ISDTV, message boards and other available options
  2. review of comments by students, staff and community regarding accessibility and effectiveness of school websites and ISDTV

The Director of Technology for the Indiana School for the Deaf will continuously evaluate the progress of network convergence and the roll-out of applications to enhance communications and the educational experience. The Director of Technology will be responsible for making any changes to the goals and objectives of network convergence, including the formal Technology Plan.

### **Section III – Budget**

	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>
<b>Hardware</b>	\$55,000	\$60,000	\$65,000
<b>Software</b>	\$35,000	\$40,000	\$40,000
<b>Prof Development</b>	\$ 2,000	\$ 2,000	\$ 2,000