

PERU CENTRAL SCHOOL DISTRICT INFORMATION TECHNOLOGY NETWORK RESOURCES PLAN ANNUAL REPORT FOR DECEMBER 2011



By A. Paul Scott, Interim Superintendent of Schools

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INFORMATION TECHNOLOGY NETWORK PLANNING & DEVELOPMENT TEAMS

Board of Education

Rod Driscoll, President; Donna LaRocque, Vice President;
Member Lisa Crosby; Member David Hall; Member
Cynthia Mills; Member Brian Post; Member Jonathan Ruff

Interim Superintendent of Schools

A. Paul Scott

School Business Administrator

Randolph B. Sapp

Program Administrators & Athletics Coordinator

Scott Osborne, Primary School Principal; Scott Storms, Intermediate School Principal
Cheryl Felt, Middle School Principal; Trevor Cameron, Middle School Assistant Principal
Chris Mazzella, High School Principal; Sanford Coakley, High School Assistant Principal
Irene Stephney, Director of Special Education & Data Warehousing Coordinator
Larry Ewald, Athletics Coordinator

Operations Supervisors

Jay Bouchard, Buildings & Grounds Services; Jeannine Kerr, Cafeteria Services
Howard Newton, Transportation Services & Campus Safety & Security Operations Liaison

Information Technology Network Technical Support Team for 2012

Colleen Rumsey, Grades 6-12 Computer Use Coordinator; Lori Clark, Computer Lab Assistant; Deb
Dubay, Jared Duquette*, Network Technician; Computer Lab Assistant; Chuck Henry*, Information
Technology Coordinator; Rachel Romanowicz, Computer Lab Assistant; John VanSplinter*,
Senior Network Technician

* Employed by the Northeastern Regional Information Center and serving at Peru CSD on a BOCES-aid funding basis.

YEAR 2012 PERU CSD GOALS FOR INFORMATION TECHNOLOGY

- A. Engage the architect, NYSED, NERIC and interested Peru CSD instructional and support staff to help the Peru CSD Board of Education and administration put to use as thoughtfully as possible the voter-approved EXCEL capital project monies allocated for information technology network updating and improvement, to bolster network capacity while maximizing available state aid for this important aspect of the EXCEL capital project.
- B. Continue updating and expanding the capacity of cross-campus information technology hardware & software systems to further promote student and staff creation and use of voice, data and video-based communications and innovative student and staff project work.
- C. Engage innovative student and staff use of the information technology network resources as part of increasing to 90% the graduation rate of Peru CSD students.
- D. Make thoughtful decisions regarding use of instructional time for student use of information technology resources, given a static schedule and many mandates for earning a diploma.
- E. Initiate some degree of Web-portal parent access at each grade span to offer student attendance and achievement summary reports, as an automated, Web-based continuously available channel of school-to-parent communications. This would supplement the customary professional practices of postal mailings, teacher-parent emails, phone-to-phone communications and parent-teacher conferences at Peru CSD.
- F. Sustain the expanded program of professional development for faculty and support staff use of Peru CSD information technology hardware and software systems resources launched summers of 2010 and 2011, with a tentative timetable of professional development in-service workshops for the next semester published prior to the end of the spring 2011 semester.
- G. Engage information technology workshop participants with the Peru CSD style single-sheet participant perceptions survey method of gathering timely feedback for each workshop.
- H. Publicly report annually on such staff professional development and corresponding increased student engagement within the annual Peru CSD grade span curriculum data books summarizing student achievement, professional development and performance results associated with state accountability testing and increased student success for that grade span.
- I. Call [back] to service the ad-hoc task force & information technology network support team to continue during winter 2012 the dialogue established in recent years, focused on continuous improvement of the information technology network & associated resources.

PERU CSD RETURN ON INVESTMENT: IMPROVEMENT OF INFORMATION TECHNOLOGY SINCE 2001

1. Replaced aging workstations with new energy efficient models, thereby bolstering student/staff access to updated hardware and software platforms, while reducing district energy use with each wave of workstation replacements.
2. Upgraded operating systems and anti-virus systems which offer central management controls, thereby increasing reliability while reducing maintenance and labor costs.
3. Deployed power setting software across campus, allowing central management and reporting capability. This allows for configuration of power settings on workstations that increase the energy efficiency of the district's network.
4. Installed printer management software which allows for monitoring and better control of printing across the district. This allows feedback and greater awareness of associated printing costs [paper and toner] for the district, grade spans, departments and teams.
5. Consolidated and re-assigned laser printers to departments and teams rather than purchasing ink-jet printers, to reduce service calls and per-page printing costs.
6. Purchased workstations from a single vendor via State Contract - or even better pricing to reduce labor costs and diagnostic equipment needed for maintenance.
7. Deployed a Web-based student data management system summer/fall 2008 which offers interoperability among school offices, operations departments and data warehousing.
8. Updated the network's hardware and software 'backbone' to increase network security, bolster network reliability & capacity while decreasing cost of maintenance.
9. Deployed an up-to-date Internet Protocol phone system summer/fall 2008, adding features such as portable phone communications across campus, and allowing the addition, subtraction and modification of telephones, extensions and voice mail boxes in-house; rather than via service contract through a third-party vendor.
10. Consistently contracted for BOCES-aided services to reduce cost by leveraging state aid to fund service and support of Peru CSD information technology equipment [such as network switches and routers] and software systems [such as Internet content filtering].

STAFF DEVELOPMENT FOCUS FOR WINTER 2012 FORWARD:

1. Continue workshops on various software tools and Peru CSD productivity packages.
2. Continue to offer additional 'Moodle' workshops.
3. Continue engaging faculty and school office teams with ESchoolData workshops winter/spring 2010.
4. Continue offering beginner email management workshops and a more advanced email management workshop for experienced email system users.
5. Continue scheduling and offering interactive whiteboard technology workshops, given the extensive deployment of such hardware & software tools now well underway.
6. Once a revised & revamped Peru CSD Web site is piloted & deployed, schedule and offer workshops on use of a more contemporary, more user-friendly content management software tool as the cross-campus tool for establishing & updating Peru CSD Web pages [details below].
7. Provide some of these workshops [above] winter 2012 forward, featuring such workshops on early dismissal days and via the 2012 Peru CSD Summer Academy.

ANTICIPATED YEAR 2012 PRIORITIES FOR SOFTWARE SYSTEMS

- A. Replace our legacy 'Front Page' Web page software package with a contemporary, more user-friendly content management software tool as the cross-campus tool for establishing & updating Peru CSD Web pages managed by Peru CSD faculty and staff.
- B. Aim for a winter or spring 2012 launch of that new content management tool, thereby allowing faculty members summer 2012 to revisit and revamp their Web pages via use of that new tool.
- C. Continue piloting with the NERIC use of the SharePoint software system that features a Web-based edition of 'Office 2010' as one appropriate successor to our legacy 'Office 2003' productivity software suite.
- D. Initiate to some extent the parent portal to the ESchoolData student data management system.
- E. Migrate the Windows 7 operating system, to replace our legacy Windows XP environment.
- F. Continue the practice of establishing and periodically revisiting a multi-year timetable of replacements/updates of campus workstation sets in particular classrooms/labs/offices, based on emerging priorities, dependability/reliability of particular workstations, service contract schedules and other practical matters associated with network asset management.
- G. District office meetings with the library media specialists winter 2012 to launch discussion of a prospective successor online public access catalog software system to the legacy Mandarin system. Be certain to outline any known advantages, disadvantages, upsides, downsides and budget impacts.
- H. Continue striving for equity of classroom teacher access to information technology hardware and software systems, across grade levels, grade spans and across campus, to the extent advisable, feasible and practical, given the economic downturn across the nation & state.

FORECASTED PRIORITIES FOR HARDWARE SYSTEMS THRU 2012

Peru CSD has strived during the past decade to keep pace with the expanding interest among students, faculty, support staff and administrators to integrate information technology systems with instructional programs, individual and team-based projects and key administrative, support and communications functions across campus. Peru CSD intends to continue striving to keep pace, since it's forecasted the nature and scope of requests will continue to expand. Progress continues, although at a slower pace during the past year, due to decreased state aid revenues and a challenging financial situation for public education, locally, regionally and statewide.

In synchronization with the EXCEL capital project, extensive information technology updating and re-deployment **in the grades 6-12 facility** was a top priority during 2010. A similar scope of updating and re-deployment **in the grades K-5 facility** was a top priority for 2011.

Peru CSD is continues to explore a new technology, rapidly gaining popularity in the commercial market, called **virtualization**. Traditionally, a server-class computer was purchased to carry out a single task. For example, a single server would provide email services. Another server-class computer would host the Website. However, rarely would each server utilize use its 'full capacity' doing that primary task.

Virtualization allows a particular function customarily handled by a server-class computer to be transformed into to a software-based server system [also called a 'virtual server']. A server-class computer can host multiple virtual servers. By consolidating multiple tasks to a single server-class computer, a large array of server-class computers are no longer required. This saves operating costs such as electricity, maintenance, and eventual replacement. In addition, 'virtual servers' are easy to store, move, and archive. If the server-class computer associated with a 'virtual server' encounters a hardware failure, the virtual server can be moved to another piece of hardware and restored to normal operation with greatly reduced 'down-time'. Peru CSD will be moving ahead with this more contemporary, reliable approach to server functions. We'll use 'virtual servers' for email and other essential functions which call for maximized 'uptime' and minimized 'downtime'. That will reduce costs and help Peru CSD increase reliability of our information technology network.

As to other priorities for hardware systems infrastructure, Peru CSD priorities include **expanding capacity for network connections to encompass five or more workstations and/or other networked devices per classroom**, including the necessary switching capability.

Students should be provided with adequate access to **file storage**. To this end, Peru CSD is engaging with the NERIC to research and test Network Attached Storage [NAS] devices. These NAS devices allow for easily scalable storage that can be increased as demand for storage increases across campus. In addition to providing added storage, such NAS devices could be used to bolster the existing electronic archival strategy. The current server hardware in district is aging and will require replacement. Instead of replacing the servers individually, Peru CSD intends to research and test virtual server capability. Virtual server capability would allow a reduction in the number of physical servers, reducing energy consumption and maintenance in parts and labor

While updating network infrastructure is important, classroom and program space technology innovation is vital as well. The current interactive whiteboards technology is evolving towards High Definition Interactive Television systems. These high definition televisions have a touch sensitive surface allowing teachers and student to interact with the displayed media. Peru CSD will begin to research these new program space technologies.