

Update on Technology Initiatives
November 4, 2009

a. Active Directory – Completed

Active Directory was activated during the summer replacing Novell eDirectory servers and services. Active Directory has more compatible integration options and allows us to provide single sign-on to more applications using just one username/password combination per user.

All computers have been reloaded with up-to-date software and are managed through Active Directory. Existing Windows servers were joined into the Active Directory system to allow for streamlined management and improved security.

b. Multi-dimensional Learning Space

MOODLE - Completed, integration with other components near completion

Moodle (Modular Object Oriented Digital Learning Environment) system has been migrated from hosted service provider to internal servers. Moodle production and test servers have been setup. (<http://Moodle.Glenbrook225.org/>). Moodle is integrated with Active Directory.

GOOGLE APPS - near completion

Google Apps (<http://start.glenbrook225.org/>) is the second component of the Digital Learning Space. Google Apps integration (single sign-on using our own Active Directory username/password login credentials) with Active Directory is near completion and required special conversion of Active Directory passwords to be compatible with Google Apps.

c. Email for Staff and Students

The district administration is recommending that Microsoft Exchange become the primary email system for the district. Please see email memo.

d. SIS Implementation - On time, on track

Our internal programmer team is working on the SASI-to-SchoolLogic data conversion scripts, which will be used to extract existing data from SASI and load into the new SchoolLogic system. This initial data conversion will provide the SchoolLogic learning and training platform for our technology trainers and staff.

Our internal programmer team is also working on the SPED module program logic and data fields. The programs data flowcharts are mapped and documented using Visio, Visual Studio and version management software. These documents/revisions are stored in a shared SharePoint project space.

- e. Emergency Notification System Conversion – completed

AlertNow has been implemented. AlertNow service is updated with current data from our SASI and iVantage systems every day. This process is fully automated. The students, parents and staff contact information is regularly updated each day.

- f. Parent/Student Portal Development - pending SIS Implementation timeline

This portal feature is a component of the new SchoolLogic SIS portals.

- g. Wireless Access Expansion – Completed

Wireless Guest network access is available district wide in all locations. Guests can login after providing an email address at a guest portal login page. The login screen provides access to the district policies and acceptable use agreements. Guest access is allowing only Internet access. Web servers for internal use are not accessible to guests. All Internet access is filtered by our CIPA compliant content filtering solution.

- h. Service Desk Software Implementation - In progress.

The service desk software is installed and configured. (<http://servicedesk.glenbrook225.org/> - not accessible via the Internet until go-live). The next step is providing technology advisors and technology trainers access to the service desk software to identify any additional needs and develop any training materials needed. Full implementation throughout the district is planned for Thanksgiving week.

i. Technology Access for Low-Income Students

The technology refresh included various alternative technology solutions:

Netbooks:

GBN and GBS now provide Asus Netbook computer systems running Windows XP and the standard district applications on a checkout basis in the IMCs. Students can use these systems in the IMC after handing in their student ID cards.

j. Remote Access Upgrade – completed

Staff and Students have ability to access the district network via the Internet. Remote Access is provided via two technologies: VPN and Microsoft Remote Desktop services.

VPN access:

The VPN access is based on SSL VPN using a web page to login. (<http://vpn.glenbrook225.org/>). This service is single sign-on with the users Active Directory password/username. VPN provides network access to the staff member as if they were in the schools.

Remote Desktop:

Remote Desktop Services provide each user with a remote desktop sessions. Users access this service using the Microsoft Remote Desktop Client software. This remote desktop provides all standard applications like GroupWise, J-School or SASI.

k. Website Conversion – Completed

The District and School Websites have been migrated to the new SharePoint web servers. The original web domain of xxx.Glenbrook.k12.il.us is automatically redirected to <http://www.Glenbrook225.org/>. We are now tweaking settings and assist departments with content updates and site setups, as they will update their respective areas continuously.

l. Electronic Textbook Pilot program - Discontinued/cancelled

After piloting and testing existing e-book reader platforms (like Sony eBook, Amazon Kindle) the test committee determined that the technology is not ready for use in our schools at this time.

m. Electronic Platform for Professional Development - In planning phase

The technology platform has been identified. Moodle and Google Docs will be used.

n. Electronic Platform for Curriculum Collaboration - In planning phase

The technology platform has been identified. Moodle and Google Docs will be used.

o. Equipment Standardization – Completed

The equipment has been standardized in various ways:

Faculty and Staff have received standardized Notebook or desktop equipment. The platforms supported by the district include Macbooks, iMacs, HP desktops and HP notebooks and Asus Netbooks. The district strives to purchase from those product lines/models as long as they are available.

Other areas of standardization include SMART boards, Epson Projectors and printers.

p. Computer Replacement - on track and on time

Equipment has been replaced according to the equipment refresh plan that was established last year and used for the lease agreement that the board approved. Faculty notebooks are on a three year lease purchase, certain lab computers and other systems have been replaced last year as well with a remaining balance to be replaced in the next year. Both GBN and GBS will need to replace approximately 200 computer systems each next year under this upgrade rotation.

q. Business Software

The business department has begun research for business software. We are working closely together to ensure technology and standards are compatible with existing systems.

r. Computer Re-Imaging - Completed - See the Active Directory line item above.

With Active Directory we implemented a replacement for Novell ZEN named Microsoft System Center Configuration Manager (SCCM) and an Apple Mac compatible system called CASPER. Both SCCM and CASPER allow us to provision operating system images and application software for both Mac and PC to all computer system types (Macbook, iMac, Netbooks, HP Notebooks, Desktops, older MPC computers).

The software imaging and maintenance tasks have been assigned to the new service desk personnel as a year round responsibility. Software can be tested for compatibility using virtual desktops running multiple operating systems and configurations. Software can be deployed in repeatable automated processes.

Reimaging of a system takes just a few hours and is highly automated.

s. Online Form Submission/Approval - ongoing – various areas

Roll-out of iVantage includes demographic data maintenance, attendance tracking. HR will build out additional workflows as needed.

The service desk software will be used to support electronic workflows and approval flows in regards to technology. There is integration needs with the financial/business processes. This area is in the early planning stage.

t. Human Resources Software (iVantage) Implementation

iVantage has been implemented and became the primary provider for staff data to other systems. J-school is now dependent on iVantage for personnel data and demographic data. iVantage is used to update the District web sites, Moodle and AlertNow for staff specific contact information.

u. Other significant work accomplished

1. Off Campus Network Access

Off Campus (OCC) has received upgraded Internet connectivity using Comcast Cable Services. This new service provides up to 50 MB download and 10 MB upload speeds over the previous 1.5 MB Up/Download T1 service. OCC connects back to the district offices via the Internet.

We have installed firewalls at OCC and District office to securely tunnel all traffic through our Internet filtering appliance to ensure CIPA compliance.

2. Network connections to the new Passport Plaza building and upgrade for the connection between District office and GBS.

The trenching for the new fiber connection to Passport plaza is in progress.

The replacement of fiber between GBS and District Office is underway. 50% of the current fiber connections are damaged and unusable and limited in speed. The replacement will provide enhanced speeds and redundancy for GBS and capacity for Passport plaza to connect back to District office.

3. Technology Infrastructure Concerns

a. Uninterruptable Power Supply (UPS) and Generator backed electrical services needed for data closet to ensure network availability during power outages. This is becoming critical, as network connectivity is the foundation to accessing all educational technology resources. We are working with the maintenance departments at both schools and district architects to develop a plan for needed upgrades.

b. Internet Services

Currently the District office provides Internet access to all District locations. We utilize approximately 65 ~70% of the capacity (100 MB capacity). Redundancy of this service is desirable as more and more resources are Internet based.

We need to review how we can implement highly available Internet access. The resulting strategy will be reflected in our e-Rate filings of USAC Form 470.

4. TV Trailer Purchase/Donation

A former GBS student contacted the district with an opportunity to purchase a TV broadcasting / production system on a 50 ft truck/trailer. Several staff member have visited the company and inspected the trailer and equipment. Additional visits are planned to determine if this equipment fits into the educational programs at GBN and GBS.

Technology Department

Email System Migration

November 4, 2009

Email System

Situation:

The District uses Novell GroupWise as the standard email platform for faculty and staff (approximately 700 accounts). Currently we do not provide student email accounts.

The District migrated from a Novell network to Microsoft Active Directory to leverage compatibility with various products and services. This includes single Sign-on capabilities and integration into one master directory service.

While GroupWise has been very robust and reliable over the years it has fallen behind other products in regards to usability and features. The GroupWise email clients for Mac and PC are not equal and the Web interface is limiting in several aspects.

Archival Requirement:

With recent legislation concerning electronic communications the district must be able to archive and retrieve email messages. This new legal requirement exceeds the district's past practice of only providing data backup for restore purposes in case of technical outages of the server equipment. The new standards impose much higher standards in data retention and recoverability. The district is held accountable to produce data when FOIA requests or other legal requests are made. The accountability raises the question of where our email data is stored, how it is secured and how access is controlled. Regardless of the email system used, the district will have to purchase and deploy a third party archival appliance to comply with legal standards.

The Strategy:

Based on discussions among the tech staff and administrative team, Microsoft Exchange will become the primary email of the district prior to the 2010-2011 school year. With the district's migration to Microsoft Active Directory we have also acquired Microsoft Exchange email server, which is used by approximately 90% of all corporate email environments. The license to use Exchange Server is included in our Client Access Licenses for all of our Windows desktop client licenses.

Exchange server is closely integrated with our Active Directory and resides in our network. This approach to use internal resources ensures clear ownership and accountability regarding the above-mentioned legal requirements. Exchange server provides build in archiving capabilities.

The newest version Exchange Server 2010 is also compatible with Apple Mac computers and provides a very powerful web based interface across all browser standards. Exchange also provides calendaring services and distribution list services. Email alerts and notifications from internal systems (J-School payroll paystub notices, service desk ticket updates) remain internal to the network.

We plan to bring student emails online during the 2nd semester of this school year and migrate staff at the end of the school year. Technical aspects of providing student email will require further discussion, but is provided for within current board policies. All staff and students will have an email identity on the Exchange server at the beginning of the next school year.

GroupWise costs are \$6000 per year in support and maintenance. This cost can be eliminated.