Remote re-image support

- Began outlining architecture for remotely re-imaging computers
- First successful automated remote imaging 7/11/07

This is an important advancement for us. We used to have to have someone present at your computer to re-image it. Now school techs can re-image your computer and get you up and going from miles away.

94+% of all district computers were imaged over the summer – a monumental task.

Final numbers aren't calculated but **hundreds of computers upgraded from Windows 2000 Professional to Windows XP Professional**
Microsoft security updates for Windows 2000 have ended. XP provides additional security and also does a better job finding hardware drivers.

Active Directory updates

- Updated Active Directory (core account / computer database) to version 2003 to support rollout of Windows 2003-based servers
- Deployed 10 new Windows 2003-based servers (Tebughna, Susan B. English, Skyview, Homer High, KCHS, Sohi, Nikiski HS, Nikolaevsk, Homer Flex, and Kenai Alternative.)

Purchased Ethernet Switches and some routers for IP phone implementation at the same schools as listed above. (done together to maximize E-rate 2-in-5 rule)

IP Phones installed at:

- Kenai Alt
- Kaleidoscope
- Nikiski- North Star
- Nikiski HS
- KCHS
- Kenai Middle
- Mountain view
- Aurora Borealis
- Kenai Youth Facility
- Homer Flex
- Hope
- Tebughna
- Susan B. English
- Ninilchik
- Nikolaevsk

Wiring

- Network wiring at new Connections offices at District Media Center
- Kitchen and work room wired at Chapman
- Nikiski HS weight room - and re-pulled the theater eliminating thin-net cable.
- Re-wired KCHS theater area
- Wired additional offices at Homer Middle

Year 8 Tech Plan II schools

- 580 computers installed at Mountain View, Nanwalek, Nikiski-North Star, Nikolaevsk, Port Graham, Soldotna El, Susan B. English, Tebughna, and Voznesenka.
- Administrator laptops to Year 8 Tech Plan II schools plus these additional schools: Kachemak Selo, K-Beach, Ninilchik, Paul Banks, Razdolna, Redoubt, Sterling, Tustumena, and West Homer

103 additional Title 1 purchased computers placed

378 Dell GX150 computers sold to the public.

- Sales held in Soldotna, Kenai, Homer, Seward, Seldovia, Port Graham, and Nanwalek.
- Many of the remaining 200 or so GX150s replaced by Tech Plan computers and not sold to the public were cannibalized for parts.

Student Nutrition Services/QSP point of sale Software

- Upgrades to backend infrastructure (software updates to allow automated balance transfer / moves)
- Upgrades to client (including "image-safe" logic to correctly move database upon re-imaging)
- Bring all client OSs to Windows XP (using new remote-imaging techniques)
- Updated software now supports patron school transfers and balance moves

**08-2007: Balance transfer since removed by DBS due to issues with updated software. Pending fix by company.

Implement WUS3 (Windows Update Services)

- Upgraded existing WSUS2 servers to WUS3
- Rolled in Office 2002/2003/2007 updates and automatically install on appropriate clients

On boot-up computers will automatically check our Windows Update Services Server to see that they have current updates of Windows and Office

SRP implemented (Software Restriction Policies)

- Define granular control of executable code across infrastructure (no execution from My Docs / Shared folders, etc. / install or setup from CD generally restricted)
- No "L" drive software allowed

This significantly reduces our exposure to viruses, spyware, and adware

FixSpybot removed – covered now by WSUS 3
Tons of policy removals (Streamlined our Windows Group Policies)
Removed UpgradeLoaderForPreY4Images (shouldn't be needed any longer)

- This script ran on boot-up. The new image eliminated the need for this operation.

Angel LMS / Horizon Wimba

- Installed and deployed Angel Learning Management System with Horizon Wimba LiveClassroom for Distance Delivery
- Implemented Single Sign On to allow Angel users to sign in using their existing Windows accounts

- Integrated with account system to provide automated transfer of current student accounts into the Angel architecture

DNS Infrastructure changes (replaced XDNS with Bind9 VM)

- includes move to more secure DNS software for external-facing query resolutions

(reduced risk of DNS amplification attacks, cache poisoning and anonymous recursion)

Spam server changes

- upgrade spamassassin from 3.1.3 to 3.2.1
- upgrade mailscanner from 4.55 to 4.61
- Various OS updates
- SPAM is annoying to everyone, but Eric Soderquist has done a great job filtering out the junk to keep our mailboxes clean.
  - During summer 75%-80% of incoming email is SPAM
  - During the school year 50-65% of incoming messages are SPAM
- Now processing 20k messages/day (not including MTA rejected messages)

Finance / HR / Payroll software
The new APECS.net software went live on February 6, 2008. The success of this multi-year project rests on the work of many of the district's employees, particularly those most closely related to the project that have named themselves "Team Kenai" through the project; Melody Douglas, Laurie Olson, Lynne Sandahl, Lana King, Jim White, and our project leader, Patty Campbell.

The district has been using software developed in-house since April 1987. The conversion to APECS.net is the final information system to be migrated off the last in a string of Burroughs/Unisys mainframes that the borough and school district have been sharing for nearly 30 years. The APECS.net software was developed and is marketed by Educational Solutions Development (esd-sys.com) from Chicago.

Wireless Radios increase remote school bandwidth

It took most of the year to get the planning and implementation worked out but in May Ted Notter, KPBSD network person, was able to **increase bandwidth to Russian villages Razdolna and Kachemak-Selo** by using Homer Electric Association's Bradley Lake facility as a relay point.

None of our end-of-the-Bay schools can see each other, but all can see the Bradley Lake facility directly across the bay from the schools. So HEA's Bradley Lake building is acting as a relay station allowing us to get Razdolna and Kachemak-Selo's traffic bounced back to Voznesenka where it can ride into Homer on the existing ACS data circuit.

How it works is: we have an antenna on the Razdolna school that shoots a signal across the bay to HEA's Bradley Lake facility. Same thing for Kachemak-Selo. At Bradley Lake we have two antennas receiving the signals from those two schools. We then combine their signals into one stream and through yet another antenna send the signal back across the bay to Voznesenka. All three schools' network traffic then comes into Homer on Voznesenka's T1 data circuit.

FCC E-Rate program

On March 25, 2008, 13 months after our first question from USAC Program Integrity Assurance on our 2007 E-Rate application, we received notice all $751,133.57 we requested for telecom and Internet funding was awarded. Funding for our 2007 equipment requests was awarded at $25,563.99.

The district was also selected for a Selective Review Information Request (SRIR) on our 2007 Form 471 application. The SRIR requires we prepare detailed documentation on bidding procedures.

contracts, resource planning , budget, etc., basically any documentation that supports any Form 471 entry. We're given 30 days to respond and it takes all of that to prepare the response – two three inch binders.

If this weren't enough, we were selected for an e-Rate financial audit by KPMG LLP on all funds received during the 2007 E-Rate funding year. Providing the extensive documentation required was very, very time-consuming. We came out very well on the audit.

It has been a very tiring year in regards to E-rate. We have certainly seen more than our share of scrutiny. But from 1998 to 2006, the E-Rate program has put over $4.2 million into district coffers.