

ORANGE COUNTY  
BOARD OF EDUCATION

AGENDA ITEM ABSTRACT

Meeting Date: March 21, 2011

AGENDA  
ITEM No. 11-03-(2)-13

ACTION: (Y/N) N

SUBJECT: School Technology Report

INFO. CONTACT: Dr. Denise Morton/ Angie Veitch PHONE: (919) 245-4100

ATTACHMENTS: 1. Technology Update Report

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**PURPOSE:** To provide the Board of Education an update on the current state of the use of technology in the district. The report includes a shift to using Google Education during the summer of 2011, and future upgrades which will increase our bandwidth and upgrade our current servers.

**BACKGROUND:** With potential budget cuts being forecast at the state and federal levels, the technology division formed a representative committee of teachers, administrators and support staff to explore more efficient ways to reduce costs of delivering email, data storage, data bases, spreadsheets, etc. under the umbrella of Google Education. The committee met multiple times and voted unanimously to recommend the district move to Google Education beginning July 2011.

The technology division also discussed other areas which would produce greater efficiency and reduced costs. These discussions are important, particularly in light of decreased funding for technology from state and federal sources.

The attached report describes in detail the current and future direction of technology for the school district.

**FINANCIAL IMPACT:** Potential impact of savings and reductions in funding will be shared with the Board of Education as information is provided by the federal government and the state legislature.

**RECOMMENDATION:** The Superintendent recommends that the Board of Education receive for information purposes the school technology report.

## TECHNOLOGY UPDATE MARCH 2011

**Vision for technology in Orange County Schools** (Orange County Technology Plan 2009-2013):  
*We believe that technology nurtures and empowers the development of students to become self-directed learners; complex thinkers; quality producers; collaborative workers; and community contributors.*

### **Where we are now:**

The district has approximately 4200 computers, 56 servers and 200+ switches. Our current bandwidth is 25 MB for each secondary school and 10 MB for each elementary school. These all connect at Orange High School to a 125 MB pipe that accesses the Internet. (100 MB from NCREN and 25 MB from Time Warner.)

Every elementary classroom has three computers that are used as “centers” for instructional purposes. The middle and high schools have two “desktop” labs for teachers to schedule for use, in addition to the labs for CTE courses. All schools have wireless laptop carts available for teacher check out.

There are document cameras, digital cameras, flip camcorders, student response systems (clickers), gps capability, Vernier science probes, i-pods and TI 84 carts also available for teachers to check out and use with their lessons.

### **Where we are headed:**

1. OCS will be moving to Google Education on July 1, 2011. The reasons for going to Google Education are:
  - a. Google docs (word processor, data base, spreadsheet and presentation software) allows teachers and students to have “anywhere, anytime” access to their files;
  - b. teachers and students can easily share documents/files;
  - c. students can collaborate on the same file (project) at the same time;
  - d. e-mail will be managed and a backup will be made by Google. (The district will still archive email.);
  - e. storage for students and teachers files will increase to 8 GB. Currently, teachers are only allowed 200 MB due to lack of available backup and storage space. (Note: 1025 MB= 1 GB)
  - f. Google will be backing up and storing all files.
2. The district is upgrading from a Microsoft 2003 server to a Microsoft 2008 server; the Microsoft 2008 server program has a module that will allow the scanning of “non OCS” devices (smart phones, personal laptops, etc.) to ensure that these devices are safe to allow on the network.
3. Upgrade the bandwidth from 10 MB and 25 MB to 100 MB for all schools; there currently is a request for proposal (through e-rate) for pricing. Due to the free NCREN 100 MB connection to the Internet, OCS will be able to cancel the Internet and filtering fee currently paid to Time Warner Cable. NCREN will monitor our network usage and upgrade the connection to a higher bandwidth once OCS consistently reaches 60% of the 100 MB bandwidth.

### **How the technology department will reduce costs:**

1. Savings by going to Google Education:
  - \$60,000 that would have been spent for a storage system
  - \$1,100 annual maintenance contract on storage system
  - \$54 per computer ordered—Microsoft Office
  - \$8 per new user for exchange license (email)
  - \$1058 –24 x 7 maintenance contract for each exchange server (we have two for redundancy) per year

- In two years we would need to replace the two exchange servers—cost about \$16,000 + continued maintenance contracts.
  - Undetermined cost savings: techs and tech facilitators time spent with logins, email and Office software issues.
2. The district is “virtualizing” servers —this means several servers can be combined so that replacement costs and tech time will be lowered. The plan is to virtualize 3-4 servers per year.
  3. The upgrading to the 2008 server will also allow an “energy management” module to shut down all computers in the district at a certain time (7:00 pm each evening) to save on electricity.
  4. The district is replacing CRT monitors with LCD monitors. The estimated savings per year, per monitor, is \$12. (We are currently purchasing warranted LCD monitors for \$40 each through a certified “green” recycler.) The plan is to replace 150-200 per year.

**E-Rate**

E-rate will again increase for the upcoming 2011-2012 school year:

YEAR	ERATE
2009-2010	50%
2010-2011	65%
2011-2012	77.7%

This percentage represents a significant *discount* for internet and telephones costs (both VOIP and cell use.)

**Cloud Computing and the future:**

The Department of Public Instruction (DPI) has requested that all districts think of cloud computing as “shared services” that school districts may “opt in” to.

Some examples of these services may be:

- Virus protection
- Internet filtering
- Internet access
- Storage space
- Software programs

DPI has indicated that it does not want to become a network manager or technician and that they will only be offering these services at set rates. Due to the number of potential users, these rates should be significantly discounted compared to what we are currently paying. DPI has not yet tendered RFPs; cost savings cannot be predicted at this time.

**Concerns:**

Currently both Federal and State technology funds have been zeroed out.