

COMMITTEE ON COMPUTING AND TELECOMMUNICATIONS

2006-07 Report

To the Academic Senate, Santa Cruz Division:

Main Activities

1. **Dark fiber to campus** - It will happen
2. **Data center in Delaware Street** - CCT supports it; asks ITS to look at various options
3. **Laptop requirement** - Should we make laptops a requirement on campus?
4. **Cruzmail** - Summary of problems and our recommendations
5. **Google Apps** - An interesting possibility for student email

1. Dark Fiber to Campus

- **The problem:** UCSC has only a leased 1GB connection to the rest of the internet
 - No true redundancy
 - Limited bandwidth
 - No ability to manage the connection
- **Largely solved:** UCOP committed to help with the cost of the connection. It will happen in 2-3 years. What this means for the campus:
 - Ability to cooperate across campuses and the US for data centers, fast access to resources, data sharing, ...

2. Data Center in Delaware Street Building

- **The problem:** we are running out of space in data centers, both for admin, and for research (clusters) computing.
- **The would-be solution:** A top-notch data center in the Delaware Street building would cost approx 12 M\$.
- **CCT thinks:**
 - Data center capability will be of strategic importance
 - CCT encourages ITS to consider alternative, and cheaper, solutions, such as:
 - Co-location with industrial partners
 - Lower reliability, suitable for research, but not for administrative computing (no back-up generators)

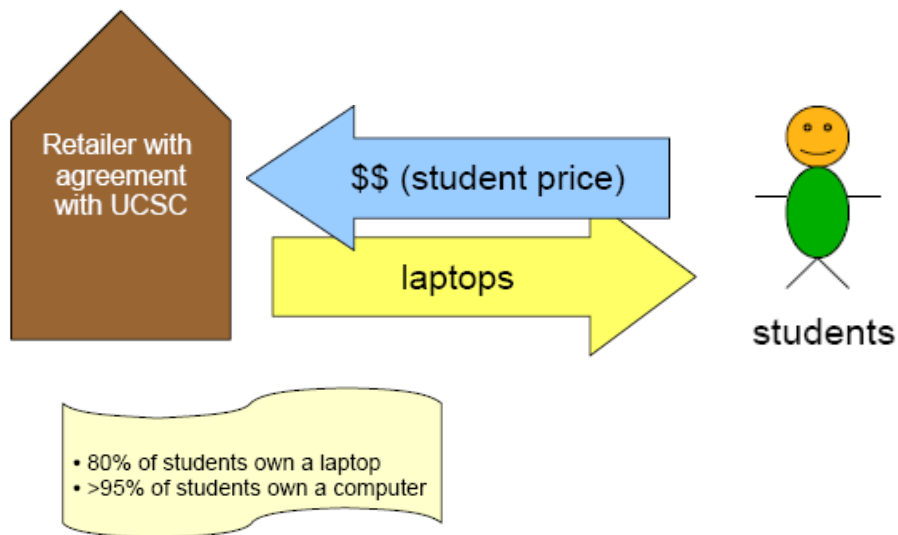
3. Laptop Requirement

Should we make laptops a requirement for undergrads?

- What this is NOT: a way of encouraging students and instructors to bring laptops to class.
 - The use of laptops in instruction is at the complete discretion of the instructor, as usual.
- What this IS: a way to
 - Raise financial help for students
 - Help bridge digital divide between wealthy and poor
 - Make laptop ownership easier

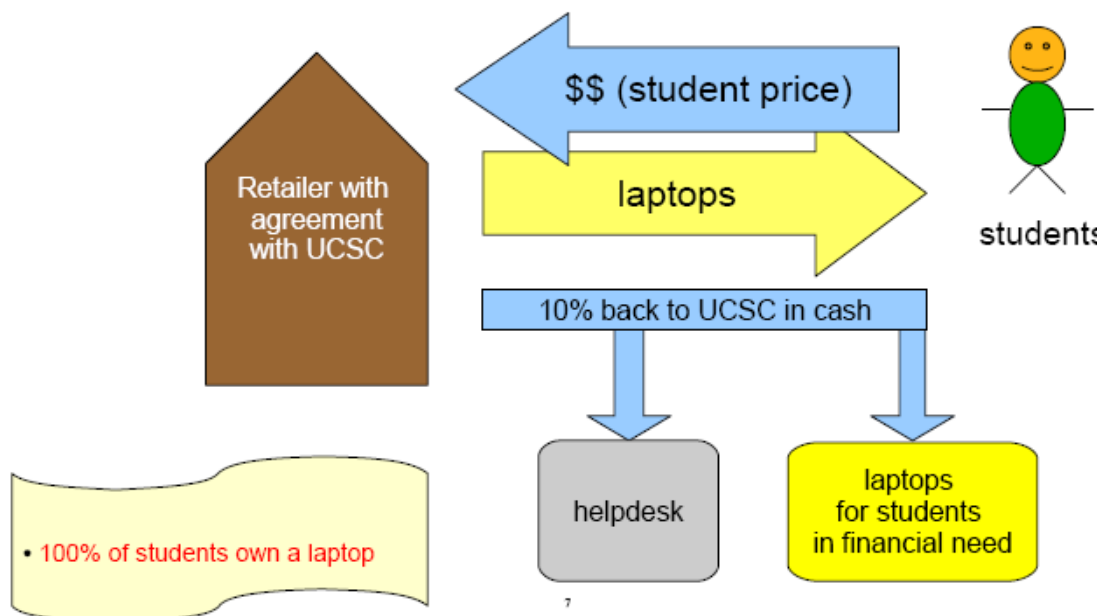
4. Laptop Requirement

How it would work: No laptop requirement



5. Laptop Requirement

How it would work: laptop requirement



6. CruzMail: Problems

The problems can be broken down in two categories:

- Failures in third-party (hardware) components
 - BlueArc storage, firewalls, NAS storage
 - Problem beyond scope of ITS management
- Misconfigurations
 - 2004, 2006: email lost due to filtering, rate limiting, ...
 - 2007: when a server failed, the other one alone could not handle the load.
 - Common thread: email and spam is increasing. The challenge is to stay ahead of the curve.

7. CruzMail: Recommendations

Technical:

- Rearchitect the storage system
- Explore more distributed server configurations
- Copy well-tried solutions in other institutions

Management:

Somebody should “own Cruzmail”: Create the figure of a *technical project manager*:

- Person with clear technical expertise and vision
- Can take decisions, including on policy (in consultation with committees, but with decision power)
- Is responsible for pushing issues through committees
- Has vision for campus-wide implications of service

8. Google Apps for Education

- **Email (Gmail style).** No ads for students
- **Calendar:** You can create calendars for classes and seminars, share them, add calendars to your own, ...
- **Shared documents and spreadsheets.** You can share them to viewers and to co-editors, fully versioned, ...
- **New apps** will be available...
- **Offered for students** and for faculty on trial basis
- **Cost:** 0 \$
- **Being discussed across the UC system** (UCD is very interested, UCB is not). A few other universities are using it.

9. Google Apps

Pluses:

- It gives us a recovery plan.
- Many students like the interface (*and already use Gmail*).
- Good collaboration tools (*calendar, shared documents, ...*)
- Facilitates providing email to students, alumni
- Faculty could use it on a trial basis (*but, no UCSC backups*)

Minuses:

- Not currently suited to staff/administration (*lacking in backup capability, assurances for subpoenas, ...*)
- Legal agreement still in process (*talks at UCOP level, concerns on: advance notice before terms change, ...*)
- Lock-in: what if conditions change? (*see above on advance notice*)

Respectfully submitted,

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May 15, 2007