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
     o No true redundancy
     o Limited bandwidth
     o 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:
     o 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:
     o Data center capability will be of strategic importance
     o 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.
     o The use of laptops in instruction is at the complete discretion of the instructor, as usual.
   - What this IS: a way to
     o Raise financial help for students
     o Help bridge digital divide between wealthy and poor
     o Make laptop ownership easier

4. Laptop Requirement
How it would work: No laptop requirement

- 80% of students own a laptop
- >95% of students own a computer

5. Laptop Requirement

How it would work: laptop requirement

- 100% of students own a laptop
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,

COMMITTEE ON COMPUTING AND TELECOMMUNICATIONS

Larry Andrews
John Deutsch
Gary Glatzmaier
Minghui Hu
Raphael Kudela
Ethan Miller
Luca de Alfaro, Chair

Xinlu Zhang, SUA Representative

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