Instructional Support Group (ISG)  
Kevin Mullally, Manager (kevinm@eecs)

Agenda for CNIL – Feb 14, 2012

I. Status Report
   • Salaries vs equipment replacement: competing for same S&E funds
   • Increasing reliance on donations; inconsistent equipment replacement cycle
   • How to be “agile” but also plan ahead? (ie course fees: a year in advance)

II. Discussion
ISG Budget Allocation + Donations

<table>
<thead>
<tr>
<th></th>
<th>FY 08-09</th>
<th>FY 09-10</th>
<th>FY 10-11</th>
<th>FY 11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>$600K</td>
<td>30</td>
<td>218</td>
<td>74</td>
<td>45</td>
</tr>
<tr>
<td>$500K</td>
<td>171</td>
<td>168</td>
<td>122</td>
<td>124</td>
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<tr>
<td>$400K</td>
<td>383</td>
<td>310</td>
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<td>$300K</td>
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<td>$200K</td>
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<td>$100K</td>
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<tr>
<td>$K</td>
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- donations
- S&E
- FTE
ISG Staff Reductions vs Course Enrollment

EECS Fall enrollments

- Fall 2008: 4842
- Fall 2009: 5278
- Fall 2010: 5819
- Fall 2011: 6399
ISG Staff Reductions

ISG career staff hours/week

<table>
<thead>
<tr>
<th>FY 08-09</th>
<th>FY 09-10</th>
<th>FY 10-11</th>
<th>FY 11-12</th>
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</thead>
<tbody>
<tr>
<td>226</td>
<td>210</td>
<td>196</td>
<td>156</td>
</tr>
<tr>
<td>6 staff</td>
<td>furloughs</td>
<td>1 layoff, some voluntary LWOP</td>
<td>1 open staff position</td>
</tr>
</tbody>
</table>

Feb 14, 2012

EECS Instructional Support Group
Less Funding, Less staff time per student

- Student/staff ratio
- Dollars/student

FY 08-09: $58, 43
FY 09-10: $46, 50
FY 10-11: $39, 58
FY 11-12: $32, 89
Computers – new…

<table>
<thead>
<tr>
<th>Location</th>
<th>Details</th>
<th>Grant Details</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>140 Cory</td>
<td>35 i7 PCs; TI grant (2012)</td>
<td></td>
<td>$40K</td>
</tr>
<tr>
<td>353 Cory</td>
<td>24 i7 PCs; Intel grant (2012)</td>
<td></td>
<td>$30K</td>
</tr>
<tr>
<td>Icluster</td>
<td>26 servers; Intel &amp; Google grants (2007, 2012)</td>
<td></td>
<td>$105K</td>
</tr>
<tr>
<td>330 Soda</td>
<td>30 dual-quad Xeon, Tesla; Intel grant (2010)</td>
<td></td>
<td>$90K</td>
</tr>
<tr>
<td>200 SDH</td>
<td>30 MacsPros; Apple grant (2009)</td>
<td></td>
<td>$135K</td>
</tr>
<tr>
<td>Sun servers</td>
<td>2 SPARC T5220s; SUN AEG grant (2009)</td>
<td></td>
<td>$42K</td>
</tr>
<tr>
<td></td>
<td>2 Opteron X4600; SUN AEG grant (2009)</td>
<td></td>
<td>$23K</td>
</tr>
</tbody>
</table>

Total value of Instructional computers: $1M
..and old

Renovate 105 Cory:  new PCs, furniture, wiring, etc (2002) … $50K
Linux servers:  old Broadcom systems (2003) … …… $30K
Video streaming:  Netshow01 - Windows only (2003) … … $10K
Solaris servers:  Cory, Pulsar, Quasar (2004) … …… $90K

For a 5-year replacement cycle:  $1MK/5 = $200K per year
New Equipment Wish List

3 Sun SPARC (UNIX) servers ($30K each)

3 X86 (UNIX or Windows) servers ($12K each)

Virtual Hosting server:
- 1 Sun Fire X4450 Server w/ 24-core cpu, 64-GB RAM ($24K)
- 100-user license for Thinsy VM server software ($???)
- Students in several programming classes would be issued a persistent virtual computer on which they could safely develop programs that have special security or performance risks. Users could include EE122 (network protocols), CS186 (database and WEB servers) and CS161 (computer security), etc.

New lab for EE149 (or EE128 if displaced by EE149)
Services & Planning

- SunRays & 4 Solaris servers are old: what next?
- Competition for newest systems
- Be more "agile" about deploying new servers
- Video Streaming and CMS WEB servers
- Masters in Eng, other new classes?
Instructional Support Group (ISG) Discussion

1. Demand on current clients, servers, rooms

2. Current limitations/Constraints - License, attached HW, GPU/graphics demand

3. Funding options - Dept, Corporate, Grant, OE, lab fee

4. Historical funding/staffing per student credit hour

5. Service model - drop-in display, client Pcs, Timesharing

6. Future directions
Instructional Support Group (ISG)

End of presentation

References:

http://inst.eecs.berkeley.edu/~kevinm/budget
https://inst.eecs.berkeley.edu/~inst/reports
http://inst.eecs.berkeley.edu/~inst/iesglabs.html
Recent Events

1) service interruption on Feb 8/9

   LDAP and disk access failures affected all UNIX users for several hours on
   Wednesday night (6am-11pm); disk access failures affected CS186
   through 9am the next day; they had an assignment due.

2) EE241 request for use of Icluster

   Prof Nikolic requested use of some Icluster systems for custom Synopsys
   tools; previously used by CS250 (Asanovic); now used by CS294-1
   (Canny). Controversy over rights to use systems.

A common factor:
unexpected migration from Solaris to Linux (for Postgres, Synopsys)