Researchers from Aachen University have created the “BendDesk”, in which the desk and screen are combined into a single multi-touch display.

hci.rwth-aachen.de/benddesk
## Upcoming Calendar

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/28</td>
<td>12/29</td>
<td>12/30</td>
<td>12/1</td>
<td>12/2</td>
<td>12/3</td>
<td>12/4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Lec: Farewell + Feedback (Lab: Online Final) Beyond Blocks Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12/2</td>
<td>Project due @ 11:59pm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>12/5</th>
<th>12/6</th>
<th>12/7</th>
<th>12/8</th>
<th>12/9</th>
<th>12/10</th>
<th>12/11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12/5</td>
<td>12/6</td>
<td>CS Ed Day (best CS10 projects shown in AM)</td>
<td>12/8</td>
<td>12/9</td>
<td>12/10</td>
<td>12/11</td>
</tr>
</tbody>
</table>

- **Final Project Demos**
  - 306 Soda Hall
  - 10:30am-2pm

- **Final Exam**
  - A1 Hearst Annex
  - 11:30am-2:30pm
Administrivia: Become active!

- **Online Exam details**
  - No exam handed out unless you’ve filled in both HKN + AP survey
  - No “study sheets” needed / allowed since you have access to BYOB

- **Final Exam details**
  - Only bring pen(s), three 8.5”x11” handwritten sheets (writing on both sides).
  - Leave backpacks, books, calculators, cells & pagers home!
  - Everyone must take ALL of the final!

- **If you did well in CS10 and want to be on staff?**
  - Usual path: Lab Assistant ⇒ Reader ⇒ TA
  - LA: sign up w/Jenny Jones in 395 Soda before 1st week of semester
  - Reader/TA forms: [www.cs/~juliea/](http://www.cs/~juliea/)
  - I strongly encourage anyone who gets an A- or above in the class to follow this path…
Clickers were worth the time spent

a) Strongly Agree
b) Moderately agree
c) Neutral
d) Moderately disagree
e) Strongly disagree
Exciting Future Implications

- Need to revisit chronic unsolved problem
  - Parallel programming!!
- Implications for applications:
  - Computing power available >>> (choose your favorite supercomputer from a decade ago) on an economical die inside your watch, cell phone or PDA
    - On your body health monitoring
    - Google + library of congress on your PDA
- As devices continue to shrink…
  - The need for great HCI (human-computer interfaces) is as critical as ever!
Taking advantage of Cal Opportunities

“"The Godfather answers all of life’s questions”
- Heard in “You’ve got Mail”

- Why were we the #2 Univ in the WORLD?
  - Research, reseach, research!
  - Whether you want to go to grad school or industry, you need someone to vouch for you!
    - …as is the case with the Mob

- Techniques
  - Find out what you like, do lots of web research (read published papers), hit OH of Prof, show enthusiasm & initiative

http://research.berkeley.edu/
Opportunities Spring 2011

- **CS61A** (1st course in CS major)
  - Structure and Interpretation of Computer Programs
- **CS9 series** (learn a second language)
  - I would recommend Python next, CS9H
- **GamesCrafters** (Game Theory R & D)
  - Develop SW, analysis on 2-person games of no chance.
    (e.g., go, chess, connect-4, nim, etc.)
  - Req: Game Theory / SW Interest
- **MS-DOS X** (Mac Student Developers)
  - Learn to program Macintoshes.
  - Req: Interest. Owning a mac helps, not required.
  - Taught as a DeCal by MS-DOS X veterans
- **UCBUGG** (Recreational Graphics)
  - Develop computer-generated images, animations.
  - Req: 3D interest
  - Taught as a DeCal by UBUGG veterans
Review: 5 components of any Computer

In the future, what’ll be the most important computer component?

Computer
- Processor
  - Control ("brain")
  - Datapath ("brawn")
- Memory
- Devices
  - Input
  - Output

a) Control
b) Datapath
c) Memory
d) Input
e) Output
Peer Instruction Opinion

- “Forget cloning. Forget TVs on your wrist watch. The biggest invention of the next 100 years will be the ability to directly connect your brain to a machine, aka wet computing.” – Dan Garcia
  
  - A macaque monkey at Duke University can already control a robotic arm with thought.
  - DARPA interested for mind-control robots & flying
  - Virtual Reality achieved with proper I/O interfacing…

Jose Carmena, UCB EECS Prof
Research: Brain-Machine Interface
www.eecs.berkeley.edu/~carmena/
Penultimate slide: Thanks to the staff!

- **TAs**
  - Luke Segars
  - Jon Kotker

- **Readers**
  - Stephanie Chou
  - Courtney Wang
  - Daisy Zhou

- **Development & LAs**
  - Colleen Lewis
  - George Wang
  - Glenn Sugden
  - Brandon Young
  - Gideon Chia
  - Wayland Siao
  - Aloni Cohen
  - Pierce Vollucci
  - Navin Eluthesnen
  - Christian Pedersen
  - Carrie Cai
The Future for Future Cal Alumni

- What’s The Future?
- New Millennium
  - Ubiquitous & Quantum Computing, Nanotechnology, 10 M “volunteer” CPUs, the Parallel revolution...
  - Rapid Changes in Technology
  - World’s 2nd Best Education
  - Never Give Up!

“The best way to predict the future is to invent it”
– Alan Kay

The Future is up to you!