DESIGNING SOLUTIONS TO GLOBAL GRAND CHALLENGES: OR, DOUG ENGELBART’S UNFINISHED LEGACY

DOUGLAS ENGELBART
AUGMENTING HUMAN INTELLECT
• Stanford Research Institute (SRI) in the 1960s
• 1962 Paper “Conceptual Model for Augmenting Human Intellect”
  – complexity of problems increasing
• Known for?
  – mouse
  – did so much more…

ENGELBART’S CRUSADE
“The complexity of a lot of the problems [in the world] and the means for solving them are just getting to be too much. The time available for solving a lot of the problems is getting shorter and shorter. So the urgency goes up… The complexity/urgency factor had transcended what humans can cope with. I suddenly flashed that if you could do something to improve human capability to cope with that, then you’d really contribute something basic.”

ENGELBART’S UNFINISHED LEGACY:
THE CLASS
• Co-teaching a small class this Spring at the Stanford d.School
• Expose students to Engelbart’s long-term agenda
• Lead students on design of information technology to have impact on problems in
  – environment
  – health
  – education

STUDENTS: TAKE UP THE LEGACY.
DESIGN TO ENHANCE HUMANITY.
Apply by March 20th

The better we get at getting better, the faster we will get better.”
  – Douglas Engelbart

Las Vegas Water District has paid residents nearly $200 million to remove grass
[NY Times, Aug 11, 2013]
“China melting snow to meet freshwater demand”
[Guardian, Dec 2010]
More than 7% of Chinese children are obese,
2nd only to the US
[China National Task Force on Childhood Obesity, 2008]
Conformity and efficiency rather than innovation?

68% of US 8th graders can’t read at grade level & most will never catch up [BDA bestiary translation]

Conformity and efficiency rather than innovation?

68%的美国8年级学生不能达到——且数十年之后大部分未来难以达到——教学期望水平

Who are We?

• Professor in Computer Science at Stanford
  – formerly professor in Information Science at Cornell NYC Tech, CSE at the University of Washington & EECS at UC Berkeley
  – spent 3 years as Director of Intel Labs Seattle
• PhD in CS from Carnegie Mellon ‘96
• HCI w/ focus on informal input (pens, speech, etc.), crowdwork, web design (tools, patterns, etc.), & Ubiquitous Computing (Ubicomp)
• Office Hours: Mon. 2-3 PM & Wed. 10-11 AM in 390 Gates
• Email: landay@stanford.edu

JAMES LANDAY

• PhD in Communication 2014
• Collective intelligence in journalism & democratic processes: crowdsourcing & co-creation
• Award-winning journalist
• Office hours: By appt tanjaa@stanford.edu

TANJA AITAMURTO

• BS in SymSys, MS in CS (HCI)
• Needfinding, rapid ideation and prototyping, user testing, ed-tech
• I went to school in 3 different countries!
• Office hours – TBD in TBD

MAKIKO FUJIMOTO
CS 377E: Design for Solving Global Grand Challenges  
Instructors: Landay and Aitamurto  
Stanford University  
Spring 2015  

3/31/2015

377E:
Design
for
Solving
Global
Grand
Challenges

Instructors:
Landay
and
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Stanford
University

Spring
2015

Engelbart's
Unfinished
Legacy

Design
Technology

Engelbart's
Unfinished
Legacy

Design
Thinking

Engelbart's
Unfinished
Legacy

Design
Doing

Timeline

Week 1
Present
Results
Brainstorming &
Needfinding
in
Project Domain

Week 2

Week 3

Week 4
Present
Results
Needfinding
@
The Demo

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Present
Results
Parallel
Prototypes &
User Testing

Present
Results

Medium-fi
Prototype

Low-fi
Prototyping

Video Prototype

Project Fair

Low-fi
Prototyping

Video Prototype

Project Fair

Tools For Thought Ch 9 (Engelbart Demo)

GRADING

• A combination of
– individual assignments & presentation (10%)
– class/studio participation (30%)
– group project (60%)

• demos/presentations/poster (group component)

• project write-ups, exercises, videos & other deliverables

• No Exams

– must present at project fair at end of quarter

TIDBITS

• Late Policy
– no
lates
on group assignments
– individual assignments lose one letter grade/day

• Web site online tomorrow

NEXT
TIME

• Fill out this survey by tonight (letting us know
whether you want in the class still)
– http://goo.gl/forms/CrOrry41vr

• Lecture
– Doug Engelbart and the Mother of All Demos

• Read
– Tools For Thought Ch 9 (Engelbart Demo)

• Tools For Thought Ch 9 (Engelbart Demo)