Welcome and Overview of School of EECS
EECS Quick Summary

- Top Research, Engineering, and Computer Science University in Oregon
- Research expenditure of $6-7 million/year ($6.3M in 2008)
- 40 Faculty (including 3 new hires), 8 Teaching Faculty, 8 Adjuncts/Visiting Professors
  - 8 IEEE Fellows
  - 3 ACM Fellows
  - 1 American Assoc. for Artificial Intelligence Fellow
  - 1 Institute of Combinatorics and its Applications Fellow
  - 14* NSF Young Investigator/CAREER Awardees
- Students
  - 130 Ph.D. students
  - 140 Master students
  - ~1000 Undergraduate students

* 2 to be funded
A Culture for Innovation
Incubator for Several Start-up Companies

Transdigita (Peer-to-peer)
mystrands®
redRover SOFTWARE
Smart Desktop®
Azuray TECHNOLOGIES
Columbia Power Technologies
Inpria
School of EECS: ECE Research Areas

- Energy Systems
- Mixed-Signal Integration
- Materials and Devices
- Signals, Communications, and Networking
School of EECS: CS Research Areas

- Computer Graphics & Vision
- Programming Languages
- End-User Software Engineering
- Intelligent Information Systems
- Learning and Adaptive Systems
- Open Source Development & Usability
NACSE

Northwest Alliance for Computational Science & Engineering

• Interdisciplinary research center joining 7 colleges
  – Engineering, Science, Forestry, Business, Ag Sciences, Health & Human Sciences, (new!) Education
  – New partnership with Valley Library & Institute for Natural Resources

• Develops new interface technology to make complex data/software fit the daily tasks of practicing scientists & engineers

• Continue to host international virtual organizations for natural disaster preparedness/mitigation
  – Tsunamis, hurricanes, storm tides, floods, dam breaks, levee breaches
Inspired Curricula

Graduating Work Ready Graduates

Platforms for Learning
- TekBots
- OSWALD
- Community of Code

Freshmen Mentors Leadership and Professional Development
Platforms for Learning™

- Community building
- Curriculum continuity & integration
- Hands-on minds-on contextual learning
- Personal ownership
The Life of a TekBot

Electrical Engineering Orientation I
Freshman Orientation

Digital Logic 1
Introduction to Digital Logic

Electrical Fundamentals 1
DC Circuits

Electrical Fundamentals 2
AC Circuits

Computer Organization and Assembly Language Programming

Electronics 1
Semiconductors and DC Circuits

Electronics 2
AC & Transient Analysis of Semiconductors

Signals and Systems 2

Electrical Engineering Orientation 2
Ultra-Mobile PC (UMPC) designed by students for students
• Limited CPU, memory & storage
• Mesh networking
• 3D graphic processor
• Touch-screen

Open source platform encourages students to experiment and explore
• Adaptable to a variety of courses and student interests
• Access to unique, cutting edge hardware
• Continuity, context, and a focal point for course content
• Access to all layers - hardware to application layer
• Lowers risk of exploration through low cost device
Deployment

http://beaversource.oregonstate.edu/projects/cspfl

- Rolled out Spring 2009 in CS162 (109 Freshmen using Java)
- Wider use in EECS 2009-2010 and onward
  - Computer architecture
  - Operating systems
  - Computer networking
  - Graphics and gaming
  - Usability engineering
  - Software engineering

OSWALD Team:
Donald Heer, Carlos Jensen, Kevin Kemper, Christopher Dent
Ben Goska, Corbin Simpson, Matt Shuman

Made possible with generous support from industry partners, through part donations, technological & infrastructure, and financial support
Public & Private Funding

PROSPERITY through INNOVATION

• OSU College of Engineering
  People People People

• Private Funds to Transform the School
  – Attract Top Students & Provide Engaging Education
  – Attract Entrepreneurial Faculty
  – Create World Class Infrastructure