CSE 403 Software Engineering

Richard Anderson
Autumn 2002

Introductions

- Richard Anderson
  - Professor, Computer Science and Engineering
  - Joined UW in 1986
  - Research interests
    - Educational Technology
    - Algorithms
  - Industrial Experience
    - Microsoft, 2001-2002 (Sabbatical)
    - Design Intelligence, 1998-1999 (Summers)
    - Control-C Software, 1981

Teaching Assistant

- Mark Yamagishi
- 1st year EE grad student, Robotics and controls
- BS in EECS at UC Berkeley, 1999
- Raytheon Systems 1999-2000
- i2 Technologies 2000-2002

Course goal

- To gain an understanding that *developing a software product is not merely a matter of programming*

If it's not merely programming

- What is it?

Project

- It's difficult to appreciate software engineering issues without working on a large project
- Issues only become real on larger projects

However

- 10 weeks is too short
- There will be a natural tendency to over emphasize development
- Teams will be homogenous
- But that won't stop us

ConferenceXP Presenter

- Developed last year at Microsoft Research
- Instructor oriented system
  - Synchronous display of slides on multiple machines
  - Integration of ink and slides
- www.conferencexp.net

Management charge

- Develop a companion student product to go with ConferenceXP presenter
- Target in class (laptop) and out of class use
- Management doesn't know what they really want
  - But student note taking associated with slides is the natural starting point
- But management wants it by Christmas
  - Release to Manufacturing (RTM) December 13

Details

- Work in teams of size about 6
  - Management will specify teams
- Development environment
  - C# using Visual Studio .NET
  - Possible integration with existing code base
- Other tools will be specified
- Deliverables expected in addition to (working) code

Team selection

- Fill out background survey
- Survey will be used only for assignment of teams
  - It will *not* be used for assignment of roles in team
- Team assignments will be announced Tuesday
- Teams should appoint a Program Manager, but will otherwise be self organizing

Evaluation

- Project grade will have a large impact on course grade
- Project grade will (attempt to) recognize individual contributions
- All artifacts will be considered in the evaluation
- Quality matters

Teams

- Independent and non-competing
- Think of other teams as working for other organizations
- Code and document sharing between teams is not permitted

Milestones

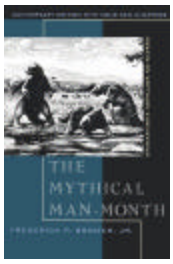
- October 14, Project proposal, management pitch
- October 28, Project specification
- November 14, Dev milestone
- November 27, Code complete
- December 6, Code freeze
- December 13, RTM

Reading

- Assigned texts
  - Mythical Man Month, Frederick Brooks
  - Code Complete, Steve McConnell
- Supplementary papers

The Mythical Man-Month

- Expresses many key ideas of large scale software development
- Written in 1975, based on IBM OS 360 Project (1965)
- Read past ancient technology
  - Microfiche
  - Renting memory for $12 per Kilobyte-Month



Code Complete

- Overview of Software Construction
- Practical developer oriented advice

Reading assignments

- Monday, October 7
  - M M-M Chapters 1-8
- Monday, October 14
  - M M-M Chapters 9-15
- A short writing assignment will be based on this reading

Administration

- It's on the web . . .
- Course mailing list – cse403@cs
- To subscribe to the mailing list, send mail to cse403-request@cs
  - subscribe
- Instructor/TA mailing addresses
  - anderson@cs.washington.edu
  - gishi@u.washington.edu