

Web Engineering Process

Week 2

Agenda (Lecture)

- Web Engineering Process

Agenda (Lab)

- Web 2.0 architecture patterns
- Project proposal
- Weekly progress report

Weekly Progress Report

- From now on, each team is required to submit a weekly project progress report to the instructor by the end of the Wednesday lab session. The report should be typed up and should include
 - The team name and a list of team members' names
 - A list of activities that have done in the previous week and the names of the corresponding contributors
 - A list of activities that will be conducted next week

Team Homework Assignment #3

- Study the “communication” (or requirement/specification) phase of the Web Engineering Process (Ch. 4 or related materials) and prepare for presentation slides.
- Due date is 7:00 pm, February 7th

(Team) Homework Assignment #4

- Study the (Web 1.0 and) Web 2.0 examples (see the next slides for assignment) and prepare for presentation slides.
- Presentation slides should include, description, case study, and visual representation (figure) of each example.
- Due date is 7:00 pm, February 7th

Team Homework Assignment 4 (cont'd)

Team 1	(Double Click, Google AdSense), (Akamai, BitTorrent)
Team 2	(MP3.com, Napster), (Britannica Online, Wikipedia)
Team 3	(Personal Websites, Blogging), (Page views, Cost per click)
Team 4	(Screen scraping, Web services), (Content management systems, wikis)
Team 5	(Directories(taxonomy), Tagging(Folksonomy)), (Stickiness, Syndication)



Innovative technologies proliferate around Web 2.0
Constructed by Markus Angermeier, November 2005

Team Lab Assignment #1

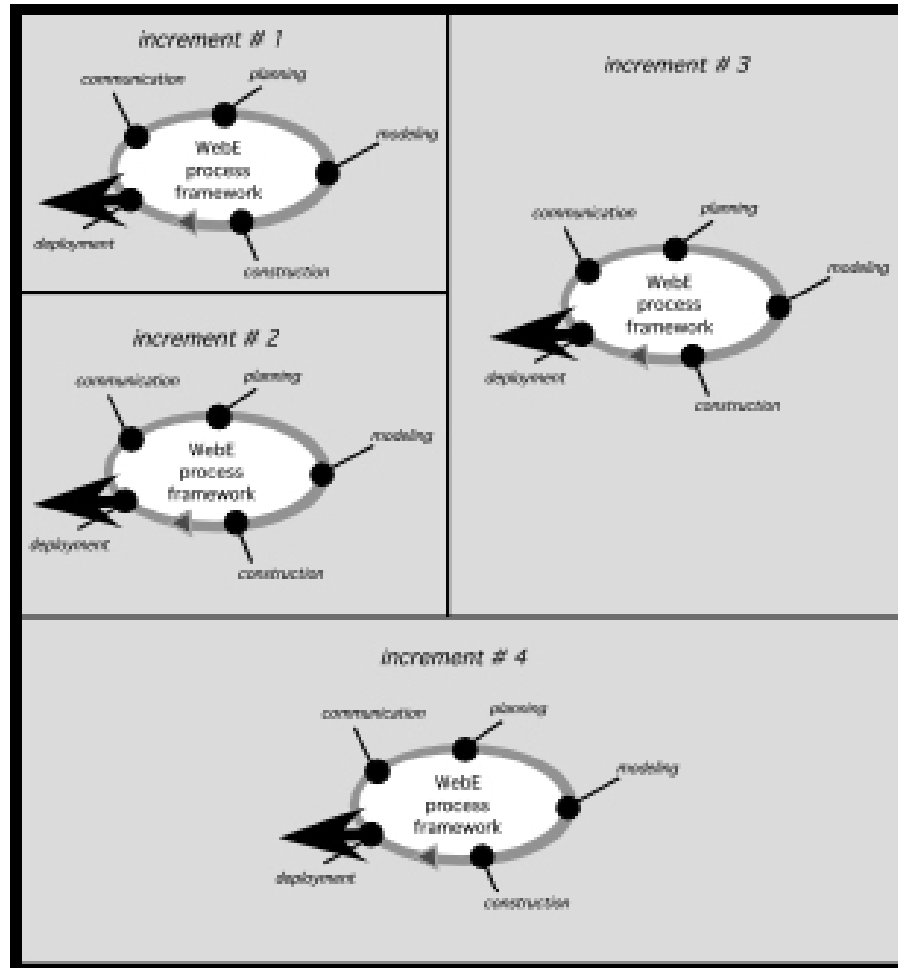
- Finalize the topic of your group project
 - Submit an one-page description of the project topic.
 - Make slides for presentation
- Due date
 - The beginning of the 2/7 lab session

Web Engineering Process

- The process must be agile and adaptable, but it must also be *incremental*
- Why incremental?
 - Requirements evolve over time
 - Changes will occur frequently (and always at inconvenient times)
 - Time lines are short
- Incremental delivery allows you to manage this change!

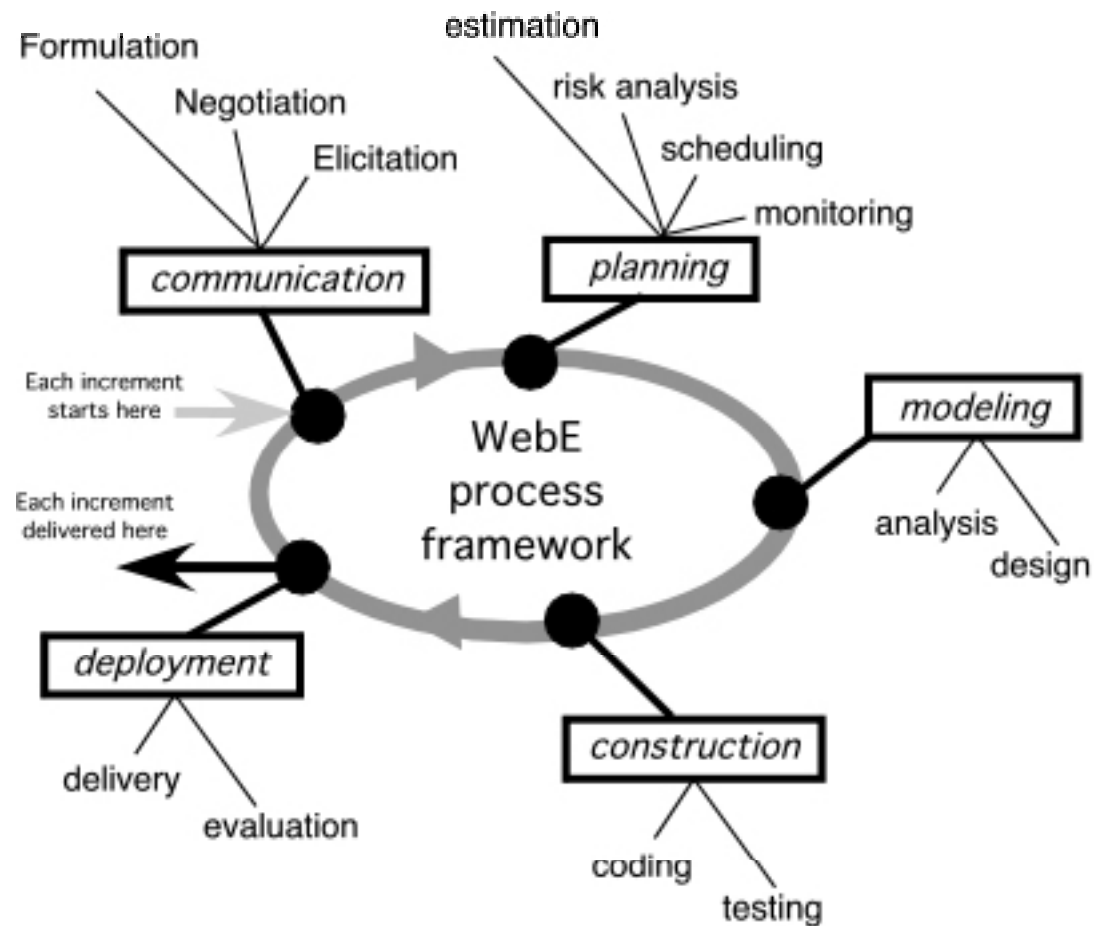
Incremental Delivery

Complete WebApp



Repeat the development cycle for each increment!

WebE Process Activities & Actions



Conducting Framework Activities-I

- The first iteration
 - define business context
 - establish overall requirements
 - create a set of usage scenarios
 - negotiate conflicting needs among stakeholders, and
 - from this information derive the set of WebApp increments that is to be delivered.
- Develop a broad outline of all components, recognizing that it will change

Conducting Framework Activities-II

- The second iteration
 - You've learned that the first increment is an informational WebApp and it must be delivered in one week!
 - You meet with stakeholders and later review your notes:
 - Logo and graphics—need aesthetic design.
 - One- or two-paragraph introduction.
 - CPI mission statement (file exists)
 - A word to visitors (someone will write this tomorrow)
 - Basic navigation bar will look like ...
 - About the company
 - Our offerings
 - Home security products (hierarchical at next level)
 - Monitoring services (a list)
 - Our Technology (the new sensor)
 - Contact us
 - Other issues:
 - Informational content will change over time.
 - This "home page" will be the navigation starting point for content and functions required for subsequent increments.

Conducting Framework Activities-III

- The second iteration
 - You spend a few minutes developing a plan
 - Day 1: Create a prototype layout (a model) of the WebApp.
 - Collect and review all existing CPI content and graphics.
 - Get stakeholder feedback on prototype, if possible.
 - Day 2: Using the prototype as a guide, begin construction of the increment.
 - Build navigation bar.
 - Lay out content areas.
 - Integrate graphics, links, etc.
 - Test all links for validity.
 - Review all content for completeness and correctness.
 - Day 3: FTP all files to (an existing) domain.
 - Perform navigation tests.
 - Deployment: Inform selected stakeholders that the increment is available.
 - Day 4: Poll stakeholders for feedback.
 - Make modifications based on stakeholder feedback.

Conducting Framework Activities-IV

- The next iteration
 - You've deployed the informational WebApp
- the communication activity during this second iteration will identify the requirements (including content and functionality)
 - assume that the second increment delivers the capability to select and download product specifications and related information
- the process flow is restarted at the beginning, performing the communication activity for this increment.
- The tasks you select to populate each framework activity for the increment may differ from the tasks performed for the preceding increment, but the overall process flow remains the same

Revisiting the Framework Activities

- WEPA pp. 32 - 42 presents a breakdown of the generic actions and tasks for each of the five framework activities
- Recognize that a WebE team must refine and adapt these generic tasks to the problem at hand
 - And continue to refine them throughout the project

Umbrella Activities

- Background activities which occur in parallel with the main development activities
- Equally important to the success of a project
 - And so should be considered explicitly.
- Many umbrella activities can be defined
 - But only four are crucial for a successful Web engineering project:

Umbrella Activities

- **Change management.** Manages the effects of change as each increment is engineered, integrating tools that assist in the management of all WebApp content
- **Quality assurance.** Defines and conducts those tasks that help ensure that each work product and the deployed increment exhibits quality
- **Risk management.** Considers project and technical risks as an increment is engineered
- **Project management.** Tracks and monitors progress as an increment is engineered