

Course C32

Avoiding "We can't change THAT!": An Introduction to Usability and Software Architecture

1 unit

Instructors: Bonnie E. John, Len Bass & Elspeth Golden (Carnegie Mellon University).

Companion Course: Avoiding “We can’t change THAT either”

Benefits:

The usability analyses or user test data are in; the development team is poised to respond. The software had been carefully modularized so that modifications to the UI can be fast and easy. When the usability problems are presented, someone around the table exclaims, "Oh, no, we can't change THAT!"

This course will introduce software architecture and the interactions between architecture design decisions and usability requirements that cause "We can't change that!" at detailed design meetings. We introduce a method for solving this problem at architecture design time. (An advanced course, We can't change THAT, either!: Usability-Supporting Architectural Patterns, gives details of an approach to solve this problem).

Participants in this course will

- Understand basic principles of software architecture for interactive systems and their relationship to the usability of those systems,
- Be able to evaluate whether common usability scenarios will arise in the systems they are developing so that the impact arising from these concerns can be considered at architecture design time.

Origins:

A combination of previous tutorials at CHI'02, '03, '04 and ICSE'04.

Features:

- An introduction to software architecture, its concepts, and purposes.
- The role of software architecture in the software lifecycle and how that interacts with typical usability roles.
- Quality attributes in general and usability as a quality attribute.
- A brief introduction to usability-supporting architectural patterns.

Intended Audience:

Usability professionals desiring more involvement with early software decisions. Software developers who want to understand the usability implications of architectural decisions. No prior knowledge of software architecture is needed.

Presentation style: Lecture, Q&A.

Instructors' Backgrounds:

Bonnie John, a psychologist & engineer, has 20 years experience teaching HCI. Len Bass is the author of three books on software architecture & developing user interfaces. Elspeth Golden is a graduate student in the Human Computer Interaction Institute at Carnegie Mellon studying the intersection of HCI and software engineering.

For more information see <http://www.cs.cmu.edu/~bej/usa/>