Chapter 1: Web-Based Systems

- In the early days of the Web, we built systems using informality, urgency, intuition, and art
  - Informality leads to an easy work environment—in which you can do your own thing.
  - Urgency leads to action and rapid decision making.
  - Intuition is an intangible quality that enables you to "feel" your way through complex situations.
  - Art leads to aesthetic form and function—to something that pleases those who encounter it.
- Problem is—this approach can and often does lead to problems

But Why?

- As WebApps become larger and more complex,
  - Informality remains, but some degree of requirements gathering and planning are necessary
  - Urgency remains, but it must be tempered by a recognition that decisions may have broad consequences
  - Intuition remains, but it must be augmented by proven management and technical patterns
  - Art remains, but it must be complemented with solid design
- Bottom line—we must adapt the old-school approach to the realities of a Web 2.0 world

And What’s the Response?

- Web Engineering

The Web

- An indispensable technology
  - In virtually every aspect of modern living
- A transformative technology
  - Changes the way we do things
  - Changes the way we acquire and disseminate information
- An evolving technology
  - Bottom line—high impact on everyone in the modern world

WebApps

- The term Web application (WebApp) encompasses:
  - everything from a simple Web page that might help a consumer compute an automobile lease payment to a comprehensive website that provides complete travel services for business people and vacationers.
  - Included within this category are complete websites, specialized functionality within websites, and information-processing applications that reside on the Internet or on an Intranet or Extranet.
### WebApp Attributes

- Network intensiveness
- Concurrency
- Unpredictable load
- Performance
- Availability
- Data driven
- Content sensitive
- Continuous evolution
- Immediacy
- Security
- Aesthetics

### WebApp Types

- Informational
- Download
- Customizable
- Interaction
- User input
- Transaction-oriented
- Service-oriented
- Portals
- Database access
- Data warehousing

(see [http://digitalenterprise.org/models/models.html](http://digitalenterprise.org/models/models.html) for examples)