What We've Learned About Web Application Design

UPA 2002 Panel

Susan Fowler, FAST Consulting, susan@fast-consulting.com
Whitney Quesenbery, Cognetics Corporation, whitneyq@acm.org
Jeff Johnson, UI Wizards, Inc., jjohnson@uiwizards.com
Steve Krug, Advanced Common Sense, skrug@mindspring.com

What is a web application?

- Can it be defined?
  - Any application that runs in a browser
  - An application that connects over the web
- Does the definition matter?
- Or is the real question:
  How do we make design decisions?

What drives design decisions?

- A series of questions that can be used to discuss different aspects of the application
  - Relationship between user and application
  - Style and tone of the conversation
  - Presentation style
  - Interaction style
  - Expectations for interface standards
  - Frequency of use
  - Perceived distance
  - Expectations for response time

Relationship Between User and Application

Web Page — Web App

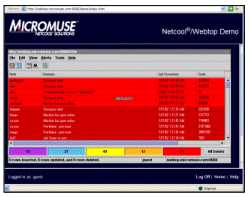
No ongoing relationship. No log in.
Calculator

Prior history. Remembers me.
E-commerce

Mission critical work
Online banking

- Is this app required for users?
- Do users have to identify themselves?
- Does the app remember prior work?
- Is there an need for reliability?

Interaction Style



Web Page → Web App

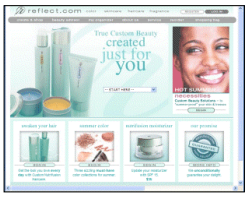
Text Information and Links
Online auction

Simple Data Collection
Consumer mortgage application

Data Presentation and Complex Controls
Network monitoring and management

- How do users interact with the application?
- What is the basic paradigm of the interaction?

Style of Conversation



Web Page → Web App

Informal or Casual
Self promotion

Polite but Friendly
Build-your-own shopping app

Formal
Security screener

- What is the relationship between the application owner and users?
- What kind of language and terminology is used?

Presentation Style

Web Page — Web App

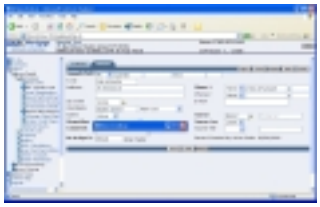
Fun, Cool, Graphic

Informational but Attractive

Subdued, Serious

- What is the graphic style of the user interface?
- How closely related is the presentation style to the application content?

Expectation for Interface Standards



Web Page — Web App

Consistency within the site/app

Game

Strong PC or Mac platform standards

Online Banking

- Does this application replace or supplement a desktop application?
- Is it used with other apps that set expectations?
- Is it used exclusively in a business setting?

Frequency of Use

Web Page — Web App

Occasional, Erratic
Foreign exchange tool

Episodic, Periodic
Self-registration for medical appts

Constant, Daily
Customer service desktop

- How often is this app used?
- For how long is it used at one time?
- What triggers its use?

Perceived Distance

Web Page — Web App

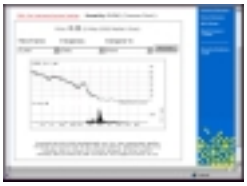
Far Away Server
Panama Canal-cam

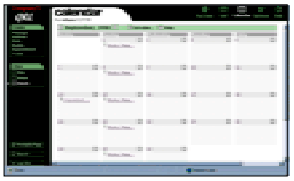
Can't Tell or Don't Care
Quicken updates

Nearby, On-site or Local Machine
Internal application

- Where do users think this application 'lives'?
- Who do they think controls the data?

Expectations for Response Time





Web Page ⟷ Web App

Slow
Enron calculator

Immediate
Corporate calendar

- Is response time critical?
- Why or how?

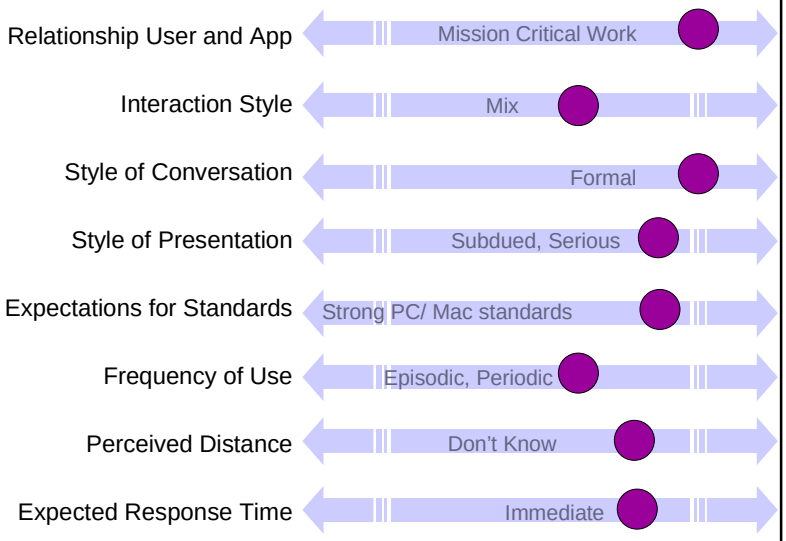
Example: Mortgage Broker App

Used to process applications for mortgages

Relationship User and App	Mission Critical Work
Interaction Style	Complex Controls
Style of Conversation	Formal
Style of Presentation	Subdued, Serious
Expectations for Standards	Strong PC/ Mac standards
Frequency of Use	Constant, Daily
Perceived Distance	Nearby, Local Server
Expected Response Time	Immediate

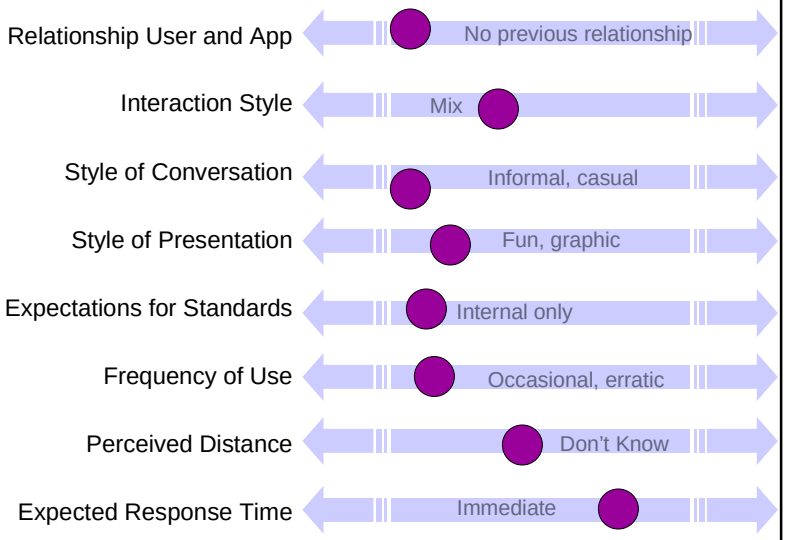
Example: Online Personal Banking

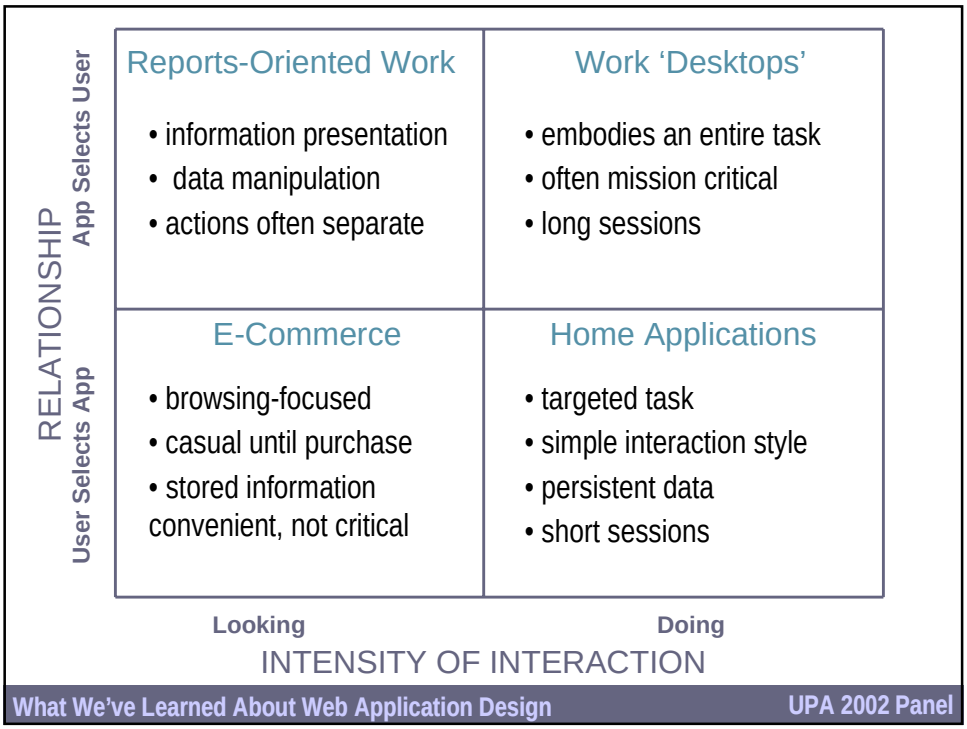
Used to monitor checking account, pay bills, transfer funds



Example: Custom Beauty Program

Used to create a custom mix of beauty products




RELATIONSHIP
App Selects User
User Selects App
Reports-Oriented Work
• information presentation
• data manipulation
• actions often separate
Work 'Desktops'
• embodies an entire task
• often mission critical
• long sessions
E-Commerce
• browsing-focused
• casual until purchase
• stored information convenient, not critical
Home Applications
• targeted task
• simple interaction style
• persistent data
• short sessions
Looking
Doing
INTENSITY OF INTERACTION
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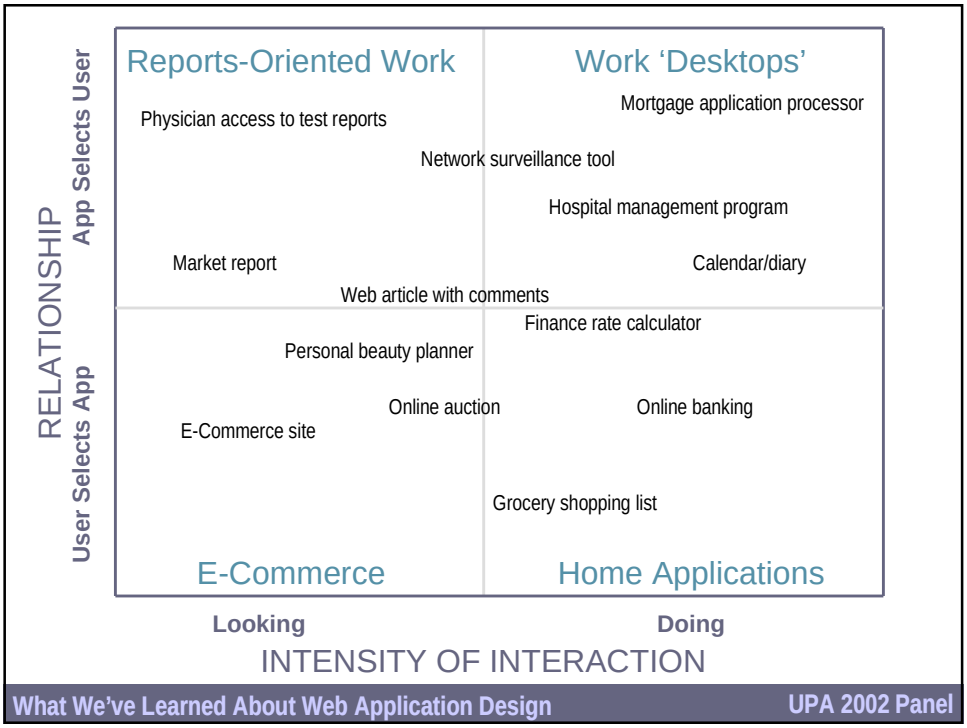
RELATIONSHIP
App Selects User
User Selects App
Reports-Oriented Work
Physician access to test reports
Network surveillance tool
Market report
Web article with comments
Work 'Desktops'
Mortgage application processor
Hospital management program
Calendar/diary
Finance rate calculator
Personal beauty planner
Online auction
E-Commerce site
Online banking
Grocery shopping list
E-Commerce
Home Applications
Looking
Doing
INTENSITY OF INTERACTION
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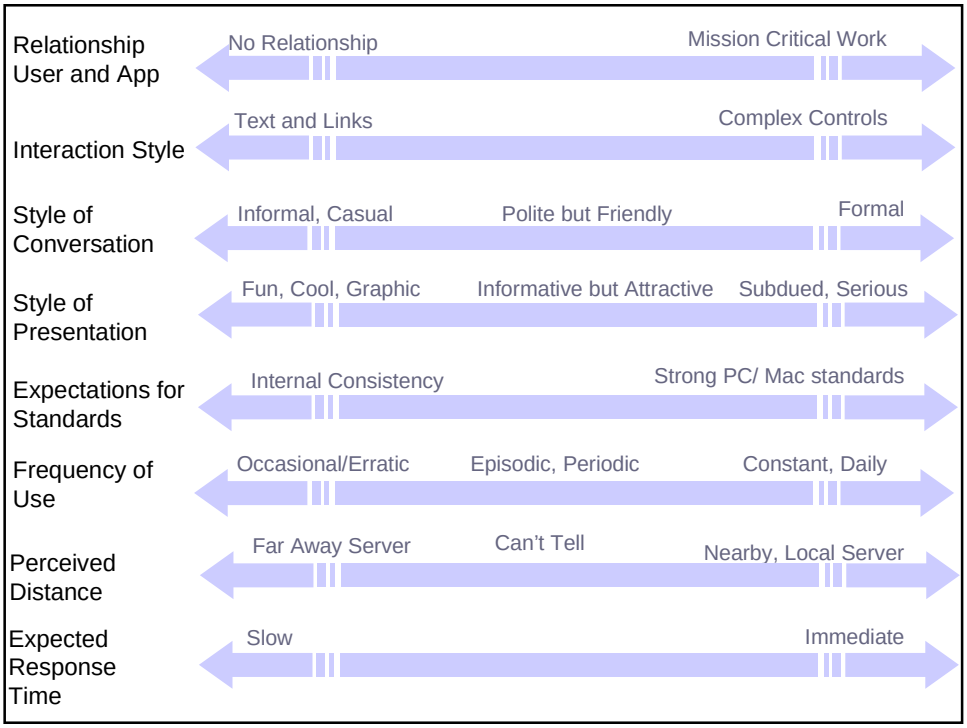
Exceptions

- Games
  - May be “obsessions”
  - Often turn usability guidelines on their heads
- Some visualizations
  - Too soon to tell whether they are “tools” or “toys”
- Sites with overlapping purposes
  - Marketing sites with small applications