Overview
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User-Centered Design and

Usability for

XML and e-Government

Duane Degler, IPGems

**XML Working Group, March 17, 2004**

What is Usability ?

Usability means making sure that

> the people who will use your web site

> can use it to do their work productively,
> to answer their questions, to reach their goals

> within their own physical and social environments

> easily (effectively and efficiently – defined by the users)

Usability means providing *value* that users can see themselves.

You are not the user!
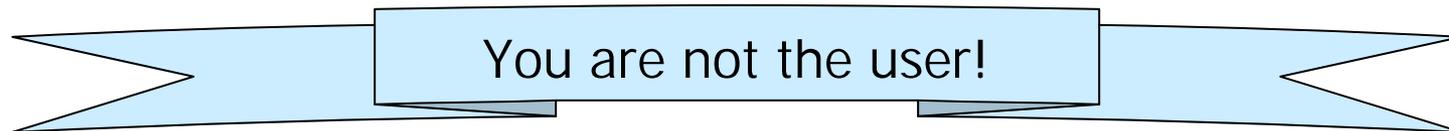
Ginny Redish, Oct 2003, <u>Introducing Usability and User-Centered Design</u>, UA Collaboration Expedition Workshop

Clearing Up Some Misconceptions

Usability ¹ "making it pretty"

➢ Focus on user and organizational goals, successful outcomes

Satisfaction ¹ Success

➢ Users may be polite – or unaware of possible outcomes – and say they "liked" an unsuccessful experience

➢ Satisfaction may not translate into business and user performance

Usability ¹ Testing

➢ Full lifecycle participation reduces rework – *user-centered design (UCD)*

Usability ¹ just Accessibility

➢ Partnership between UCD & 508 to meet the individual needs of all users

➢ XML has an important role to play in adaptability

It's not just for information web pages

➢ Complex interactive applications, eForms… and hardware… and…

What is the Role of Usability and User-Centered Design ?

Project Management

> ➤ Manage risk – design for user acceptance and goal achievement
>
> ➤ Support teams – techniques for requirements elicitation/documents
>
> ➤ Reduce error and rework – test early and often
>
> ➤ Measure quality of performance and user experience

Developing Interactive Applications and Information Sites

> ➤ Understand and articulate user and stakeholder requirements
>
> ➤ Reach out to the citizen to support "life events"
>
> ➤ Gather feedback from users – early and often
>
> ➤ Increase design quality and consistency

What is the Role of Usability and User-Centered Design ?

Organization-Wide

➢ Understand profiles and needs of citizens, other organizations, and staff

➢ Inform the choice of projects and services – based on value

➢ Align organizational goals with user goals

➢ Establish standards for design, presentation, and accessibility

➢ Create consistent procurement language/guidelines (CIF-R)

Components and Emerging Technology

➢ Aggregate individual component usability to task/application level

➢ Promote consistent user experience

➢ Establish methods for testing and reporting based on context (CIF)

➢ Share context to understand assessments and support socialization

What is the Role of Usability and User-Centered Design ?

Summary

➢ **Manage risk** – know the effect before you're done

➢ **Promote understanding** – speak the user's language

➢ **Establish requirements for design** – know what you're building

➢ **Support procurement** – know what you're getting

➢ **Establish user-driven standards** – usable and valuable for all

How ? The Process of User-Centered Design

Planning
- Lessons learned from previous projects
- Persona and scenario libraries – Who are our users? What do they need?
- Vision and organizational goals / performance requirements

Analysis & Articulation
- Contextual inquiry and observation
- Personas and scenarios
- Task analysis and modeling
- Users' goals, needs and expectations capture

Design
- Establishing design principles & requirements
- Iterative prototypes – conceptual, paper, low fidelity, high fidelity
- Information design
- Design patterns and reusable design elements

Development & Testing
- Functional requirements
- Usability testing (lab, remote)
- Conflict resolution

Implementation & Use
- Surveys and follow-up
- Lessons learned from this project
- Performance assessment

" What does this have to do with XML? "

Why Discuss Usability at the XML Working Group ?

Important influence over innovation, emerging technology

- ➢ ET registration, assessment, and socialization

- ➢ What are the goals and scenarios of use?

- ➢ What is the context where a product is useful or not?
  Does that match *my* context, if I'm thinking about procurement?

Important role with both data and content applications/sites

- ➢ Users don't recognize artificial boundaries between data/content

Registry usability and accessibility

- ➢ Do people know where to find the "common language" of government?
  Can they discover what it "means"?

- ➢ Can they find it and use it easily, to support their projects?

- ➢ Do they know the context(s) in which it was created? Used?

For Further Information . . .

➢ One day workshop on The Role of User-Centered Design in e-Gov and the Federal Enterprise Architecture (12 presentations): http://www.ipgems.com/present/ua-workshop.htm
(part of the Universal Access Collaboration Workshop Series: http://ua-exp.gov/)

➢ Government web usability: http://www.usability.gov

➢ Accessibility and 508 compliance guidance: http://www.section508.gov

➢ IUSR (NIST) – Industry Usability Reporting (ANSI/INCITS-354 Common Industry Format – CIF): http://www.nist.gov/iusr

➢ Usability Professionals Association: http://www.upassoc.org/usability_resources/

➢ Society for Technical Communication, Usability SIG: http://www.stcsig.org/usability/resources/

➢ UsabilityNet resources pages (European site): http://www.usabilitynet.org/tools.htm

➢ Universal Usability information site: http://universalusability.org/index.html

➢ IBM Ease of Use: http://www-306.ibm.com/ibm/easy/eou_ext.nsf/publish/558

Discussion

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For more information: www.ipgems.com