

User-Centered Design & Usability Testing



Washington State
Department of Revenue
Jenny Smith

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User-Centered Design & Usability Testing
June 10, 2008



What is User-Centered Design (UCD)

UCD is:

- A dedicated focus on the end user
- Rational
- Empirical
- Iterative
- Collaborative
- Scalable
- Cyclical

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Why is UCD important?

If not applied, users will:

- Make mistakes
- Get frustrated
- Abandon the web site or application
- Call or visit a local office

Why apply UCD?

UCD:

- Saves the *agency* time, effort, and money
- Increases use
- Saves the *team* time, effort, and money

\$1/10/100 Rule

Private sector has long embraced UCD

- Apple
- BBC
- Google
- Microsoft
- Nokia

To name a few!

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Case study: Dept of Revenue web site

DEPARTMENT OF REVENUE
WASHINGTON STATE

Test Version | Printer-Friendly | Help | Site Map

Home Online Services Doing Business Taxes Forms Contact Us

Statistics & Reports
Laws & Rules

Home

What's New
Newsroom
Careers
About Us
Questions & Answers

TAKE OUR ONE MINUTE SURVEY
CLICK HERE

External Links

Access Washington

Welcome to Washington State Department of Revenue

Tax Incentive Report/Survey now offered online!

The Department now offers the ability to submit your tax delinquent/waiver or credit program survey online! If you have an Online Services login ID and password simply [log on](#), then click on the Tax Incentive Report/Survey link on the left-side menu.

If you don't have a login ID or password, you'll need to [register](#). Follow the steps to register and add your account. To do this, you'll need a recent tax return with your tax registration number and pre-assigned access code (PAC). Once registered, click on the Tax Incentive Report/Survey link on the left-side menu.

For more information about the survey, [click here](#).

Quick Clicks

- Cigarette Tax Form
- Consumer Use Tax Return
- Delinquent Taxpayer List
- Excise Tax Returns and Information
- Frequently Asked Questions
- Fraud (Reporting)
- Special Notices: Information on specific tax issues
- Workshops
- Indian Issues: Doing business with Indians in "Indian Country"

Tax Topics

- [Federal Sales Tax Deduction](#)—The state rate is 8.5%. Check here for your [local tax rate](#).
- [Did you receive a delinquent notice?](#)

Don't forget your property taxes

Court decision invalidates Washington's Estate Tax

Are you doing business on the Internet?

Take a look at the 2005 Tax Reference Manual

Online Services
E-file & More
[Learn More](#)

Login ID:
Password:

Register Now!

Unclaimed Property

Business Records Database

GIS
Tax Rate Lookup Tool

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User profile

What we did:

- Analyzed server log data
- Looked at Taxpayer Satisfaction Survey data
- Conducted online surveys
- Talked to subject matter experts
- Looked at user profiles of similar agencies

User profile

What we learned:

- Our web site has two main user groups:
 - 65% are business users
 - 20% are general public users
- Of the business users:
 - 90% are business owners
 - 10% are tax professionals

User profile

What we learned:

- Users are task-oriented and look for information topically
- Users expect to find expansive personalized information in “My Account”
- Users are drawn to clear, simple content
- Users scan, they don’t read
- Users want to get in, and get out

User profile

What we learned:

- E-file
- Look up a local tax rate
- Find a registered business

User profile

Why build a profile:

- To keep you focused on your customer
- To recruit

Card sort study

What we did:

- Recruited
- Identified key topics
- Asked participants to group topics and label their groupings
- Solicited feedback during general discussion
- Asked participants to rank the topics – what they were most likely to use

Card sort study

What we learned:

- Participants tended to group topics based on subject matter (including online applications)
- Participants were drawn to certain labels (My Account, Filing and Paying Taxes, Workshops and Education, etc.)

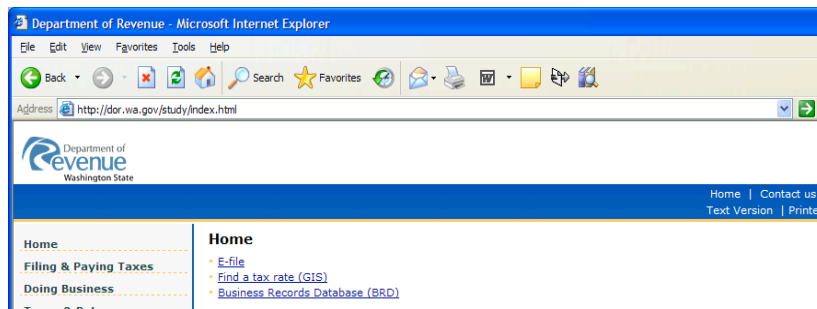
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Phone study

What we did:

- Created a simple prototype
- Developed 37 scenarios that included key tasks
- Recruited 12 participants to test over the phone



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Phone study

What we learned:

- The new architecture worked for majority of participants
- Participants were drawn to certain labels; confused by others
- Participants expected to find expansive personalized information in “My Account.”

Usage data

- Throughout this process we analyzed web usage data to validate what we had done and where we were headed

Branding and identity

Through graphics, shapes, and colors, our goal was to create a task-oriented, user-friendly web site.



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In-person study

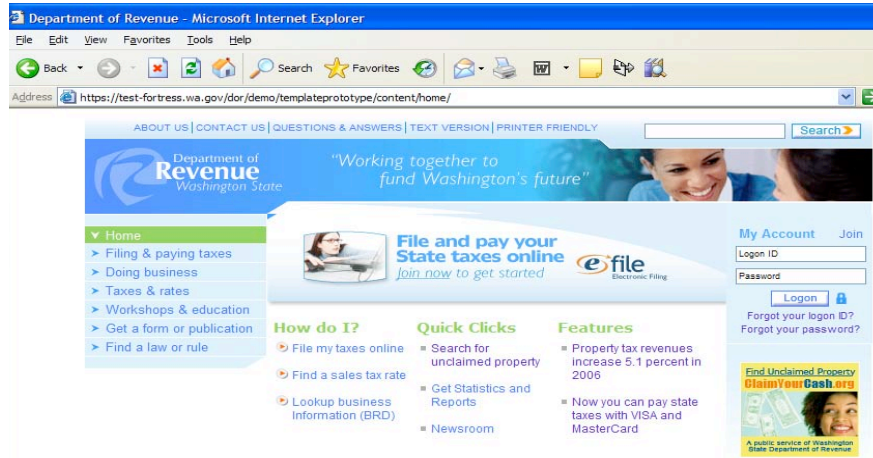
What we did:

- Created a working prototype
- Recruited 8 participants
- Developed 34 scenarios
- Using a test lab, we conducted a 2-hour session with each participant
- Invited observers

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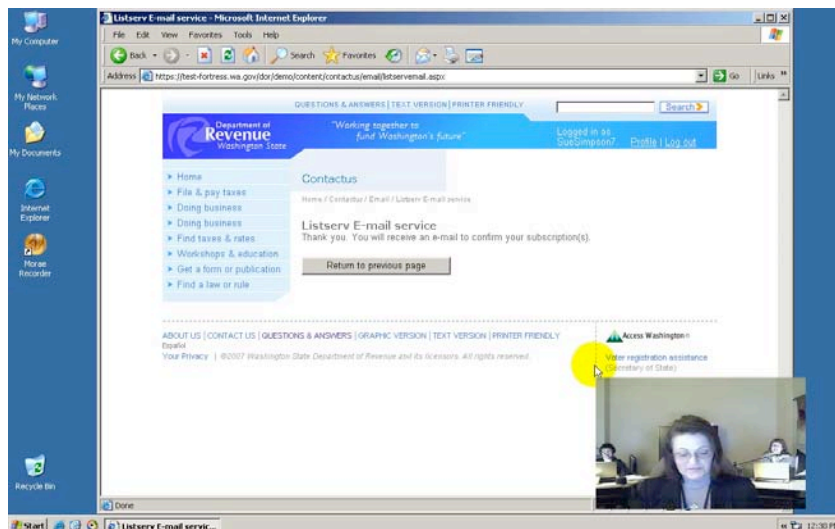
In-person study



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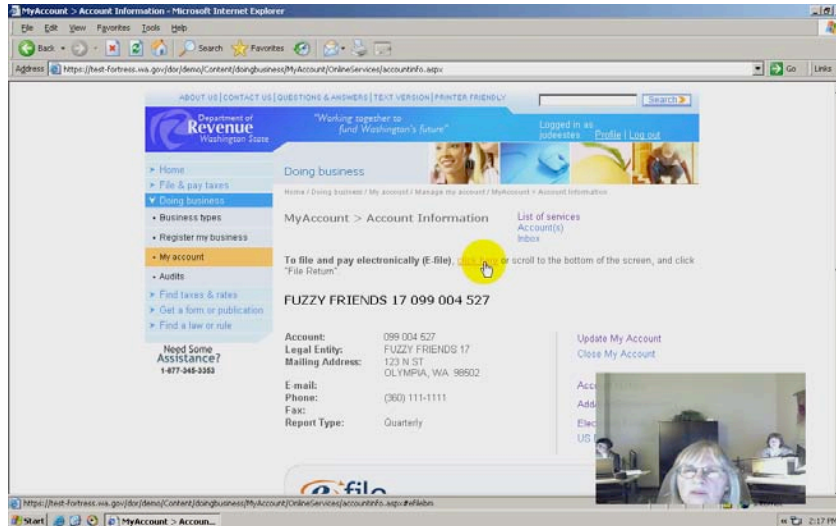
Video clip



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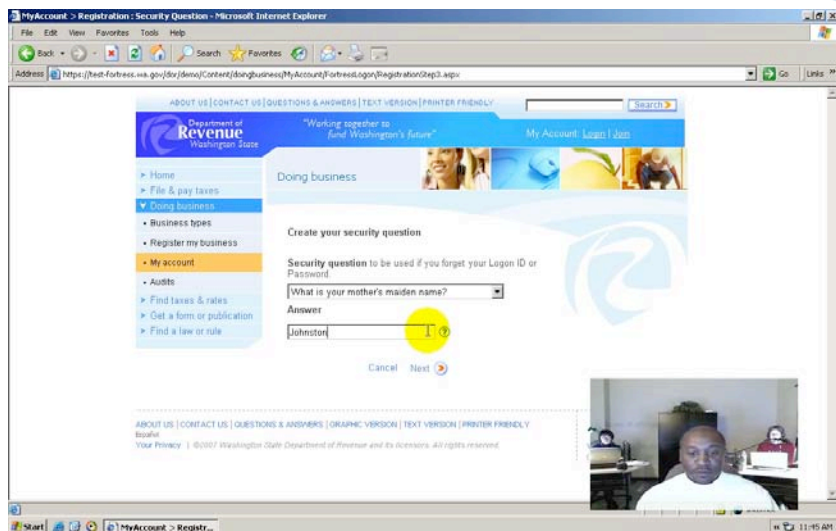
Video clip



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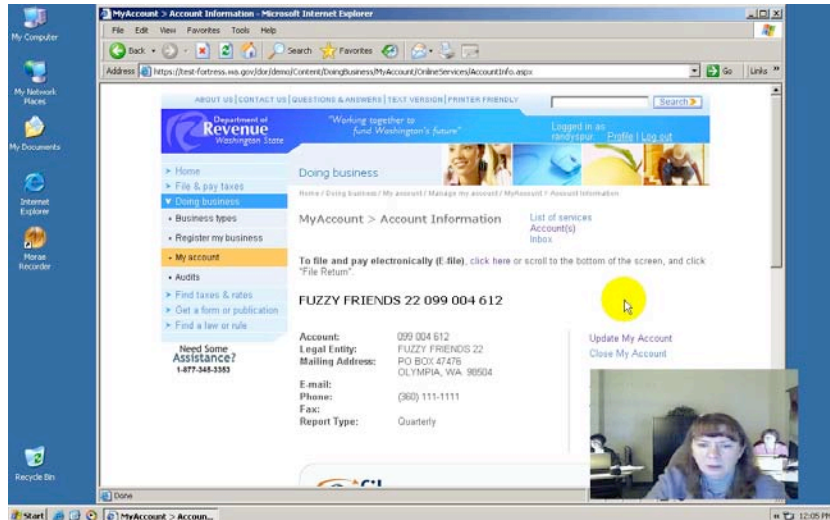
Video clip



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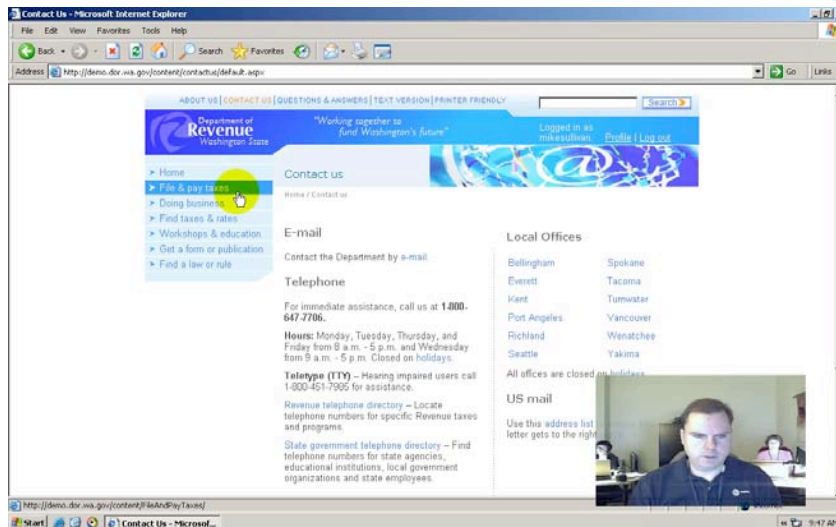
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Video clip



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The results are in

Since its launch in April 2007:

- We have received rave reviews from customers
- During our peak filing season, visits to the web site increased by almost 1 million unique visitors.



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Application development

Solidifying the process:

- Conceptualize
- Design
- Develop
- Test
- Implement

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Questions?

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