Field Studies
The Ultimate Tool in Your Usability Toolbox

UIE Virtual Seminar
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the process

- understanding the problem
- identifying users
- identifying the work
- preparing for the visits
- conducting observations and interviews
- analyzing the data
the philosophy

- be flexible in your methods
- a little can go a long way
- quantify what’s quantifiable
- respect the experiential

selecting the right project

- you have some ownership
- customers want it
- management wants it
- it has visibility
- it’s manageable
- there is little organizational resistance
- it’s easy to identify, contact, and travel to users
- it’s new or ready for changes
convincing management

- the competition is using these techniques
- customers are demanding usable products
- there are more discretionary users
- this approach saves time and money
  - support calls
  - training
  - costly re-design
  - lost sales
  - errors

knowing your team

people you might want on your team:
- domain expert
- software engineer
- interface designer
- product manager
- technical writer
- product marketer
determining the user groups

- are there different roles?
- how might demographics correlate with behavior?
- rule of thumb:
  5 – 8 participants per distinct user group
- develop a matrix of criteria and get buy-in from stakeholders.

Sample Matrix

We will visit four sites of various sizes. Some will handle a relatively low work volume and some will handle higher volume. The sites will be located throughout the continental United States. We will work from the following list of sites to find participants for this study:

<table>
<thead>
<tr>
<th>Site</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td></td>
<td>X------X</td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td>X------X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>X------X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At each site, we will interview managers. We will observe workers in differing roles and ask interview questions as they perform their work. We will meet with individuals in a variety of roles.
developing a screener

- disqualifiers at the beginning
- demographics from matrix
- criteria:
  - job role
  - age
  - work experience
  - education
  - training
  - computer experience

finding people to study

- marketing leads
- customer registration databases
- sales force leads
- alpha and beta test sites
- people who bought competitors’ products
- market research firms
cataloging tasks

- ask domain experts
- use the product specification
- conduct surveys or interviews
- conduct “day-in-the-life” studies
- group resulting tasks into categories
  - ask users to rank the tasks by frequency
  - ask managers to rank the tasks by importance
  - later, you’ll create a “top-ten” list

developing forms and surveys

- screener
- demographic questionnaire
- voluntary participation, video/photo release, NDA (if needed)
- interview scripts
- task-ranking forms
- note-taking form for observation
- logging forms for long-term studies
determining participant incentives

- give people something you know they want
- make sure management approves of the incentive
- give a gift to people who helped arrange the visits
- new versions of the product are often attractive
- money may be appropriate
- free service might be motivating

setting up the visits

- get managerial approval
- schedule when work is happening
- prepare people for your arrival
  - save typical tasks
  - collect artifacts
  - don’t clean your desk
  - confidentiality
- send a letter
- call to confirm
the power of observation . . .

observing tasks

- process steps
- verbalized frustrations, problems, and thoughts
- physical movement
- use of tools
- communications with other people
- papers, forms, or online references
- decision points
capture it all

- work with a team member
  - take turns watching and recording
  - or, take different roles
- collect forms and other workplace artifacts
- videotape or audiotape
- take photographs
- take notes and sketch
conducting interviews

- ask open-ended questions
- get answers to pre-determined questions:
  - goals
    - front-line people
    - managers
  - likes and dislikes
    - where attitudes conflict with business goals
    - where the process breaks down
  - problem spots
tips for the visit

- watch the time
- consider a pilot
- warm up the users
- observe, don’t design
- try tag-team interviewing
- expect the unexpected

analysis activities

- organize your data
- illustrate the current state
- identify opportunities for improvement
- prioritize problems & opportunities
- make recommendations
- illustrate improvements
communicating “what is”

- illustrated stories
- day-in-the-life scenarios
- profiles, audience summaries & personas
- storyboards
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Tasks by Frequency

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Key Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>1. Check for new orders</td>
</tr>
<tr>
<td>Medium</td>
<td>3. Resolve customer issues</td>
</tr>
<tr>
<td>Low</td>
<td>5. Monitor sales performance</td>
</tr>
</tbody>
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Information Sources, Flow and Decision Making

Here are the key elements of the flow of information and decision-making in the company's sales process:

1. **Order Receipt**: The sales representative receives an order from a customer.
2. **Order Processing**: The order is processed by the order fulfillment team.
3. **Inventory Check**: The order is checked against inventory levels.
4. **Approval**: The order is approved by a manager.
5. **Shipping**: The order is shipped to the customer.
6. **Payment**: Payment is received from the customer.

Web Usage

In his office, there is a log with details on how the computer is used. The computer is used for various tasks, including:

- Email: 20 hours/week
- Word processing: 10 hours/week
- Web browsing: 5 hours/week
- Social media: 1 hour/week

The log shows that the computer is primarily used for email and word processing. The user spends a significant amount of time on email, indicating that communication is a key aspect of his job.

Brokering Shopping

Here is an example of the brokering process:

1. **Customer Inquiry**: A customer calls the brokering team with a specific request for a policy.
2. **Policy Comparison**: The team compares different policies from various companies to find the best match for the customer.
3. **Proposal**: The team presents the best policy to the customer, explaining the benefits and features.
4. **Verification**: The customer verifies the policy details before signing.

The process is transparent and customer-focused, ensuring that the customer is well-informed and satisfied with the final decision.
Next, Ed expands the Search for box on the company record and fills in nearly every field.

He clicks the Contacts tab. Before entering information, he goes to F2 to search for Pat Ford, Big Enterprises’ financial advisor. He finds Pat in the database, so he adds Pat as a contact.

Still on the Contacts tab, Ed adds himself as a sales contact.

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**Computer Hangs at Shut Down**

This storyboard illustrates how a Gomoli Research and Design Intermediate Technician typically handles the frequent task.

1. Ed is in the marketing department at an architecture firm. He’s frustrated because his computer hangs at shut down. This problem has occurred for 3 days, and Ed’s fed-up. He quickly picks up the phone and calls the technical support help desk.

2. Cindy, who works at the technical support help desk, answers the call. Ed explains the problem to Cindy.

3. Cindy enters the data, user name, and problem description into a technical support logging system. She provides Ed with a ticket number and tells him that a technician will be contacting him.

4a. Ted, an expert technician picks up the incident. He visits Ed at his desk. Ted shuts down the computer to re-create the problem. Once enough the computer hangs and displays a blue screen with errors. Ted writes down the error information and returns to his desk to troubleshoot the problem.

4b. After, an intermediate technician picks up the incident. She calls Ed and asks him to record the error message he received. She writes down the error code and clicks the search button.

5a. Mary accesses the knowledge base from her desk in the office. She enters the error code and clicks the search button.
illustrating improvement ideas

- scenarios .................... future user experiences
- storyboards ................. future task flows
- affinity diagrams ............ types of improvements
- flowcharts ..................... process improvements
- UI sketches .................. design concepts
- timelines ..................... improved speed / efficiency
before + after timelines

Dorothy

A Product and Interface to Satisfy Dorothy

- Easy to order and assemble.
- Mouse required.
- No technical language.
- Easy to follow instructions online.
- No cluttered screens or small windows.
- No complex motor or design required.

Dorothy

before + after timelines
consolidating your materials

create a series of one-pagers, such as:

- a collage of photographs
- a summary of user goals
- the list of top-ten tasks
- a summary of user demographics
- a big-picture storyboard
- a combination:
  - “what is” storyboard
  - today’s flowchart
  - “what could be” storyboard
  - future flowchart
gaining visibility

- include key stakeholders in the field visits
- make presentations
- show videos
  - user frustration
  - user enthusiasm
- show prototypes as soon as you can

a final word

your goal is to meet real users, immerse yourself in their world, and gather as much detail as you can about their tasks

you are bound to enjoy the process, because you will have formed a personal connection with your audience, and you will be able to design from a position of knowledge