Design Research

Sebastian Wendlandt
Design Research Consultant, User Interface Design GmbH (München)
Outline

On Design Research

• What is Design Research?
• Innovation as ethnographic Exploration
• Identifying Design Opportunities

Applied Design Research

• Introducing the Project
• Applying Design Research

Q&A Session
Outline

On Design Research

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Q&A Session
What is Design Research?

What is Design Research?

Why Design Research?
What is Design Research?

DESIGN vs. design
What is Design Research?

The DESIGN of the design of the DESIGN.
What is Design Research?

Why Research?
What is Design Research?

1. Design Research = Research for Design
2. Design Research = Research about Design
3. Design Research = Research through Design
What is Design Research?

1. Research for Design
Hello! Are you late getting together your summer internship applications? We are too! Maybe this is serendipity...

Yahoo! User Experience Research is hiring a summer intern from a Master's Degree Program focused on qualitative, collaborative, front-end research.

You would be working alongside Hillary Carey <http://www.linkedin.com/in/hillarycarey> to develop a research plan for understanding internet behaviors across mobile, tablet and computer-- with the goal of inspiring the product and design teams with great user insights.


And contact me with any questions.

- Hillary

Hillary Carey
Participatory Innovation, UER, Yahoo! Inc.
Sunnyvale, California
hcarey@yahoo-inc.com

Design Research - Intern

Location:
Sunnyvale, US - Sunnyvale
Reg. Number: 37768
Yahoo! Design Research – Intern

Primary responsibilities include:
– Assisting with, or conducting independently, an exploratory user experience research project that helps to inform and inspire a rich understanding of key product experiences.

– Synthesizing insights from qualitative research.
– Developing presentations and or workshops to share findings with stakeholders
– Working collaboratively with designers, product, marketing and other researchers
– Conducting research as part of a collaborative team, seeking feedback and information from other researchers and stakeholders.
What is Design Research?

2. Research about Design
What is Design Research?

3. Research **through** Design

Develop hypotheses about the DESIGN through design.

Design as a way to ask meaningful questions about design.

Identifying design opportunities through designing.
The Elements of User Experience

A basic duality: The Web was originally conceived as a hypertextual information space; but the development of increasingly sophisticated front- and back-end technologies has fostered its use as a remote software interface. This dual nature has led to much confusion, as user experience practitioners have attempted to adapt their terminology to cases beyond the scope of its original application. The goal of this document is to define some of these terms within their appropriate contexts, and to clarify the underlying relationships among these various elements.

<table>
<thead>
<tr>
<th>Web as software interface</th>
<th>Concrete</th>
<th>Completion</th>
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</thead>
<tbody>
<tr>
<td>Visual Design: graphic treatment of interface elements (the &quot;look&quot; in &quot;look-and-feel&quot;)</td>
<td></td>
<td></td>
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<tr>
<td>Interface Design: as in traditional HCI: design of interface elements to facilitate user interaction with functionality</td>
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<tr>
<td>Information Design: in the Tuftean sense: designing the presentation of information to facilitate understanding</td>
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<td>Interaction Design: development of application flows to facilitate user tasks, defining how the user interacts with site functionality</td>
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<tr>
<td>Functional Specifications: &quot;feature set&quot;: detailed descriptions of functionality the site must include in order to meet user needs</td>
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<td>User Needs: externally derived goals for the site; identified through user research, ethnotechno/psychographics, etc.</td>
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<tr>
<td>Site Objectives: business, creative, or other internally derived goals for the site</td>
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<tr>
<td>task-oriented</td>
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</table>

<table>
<thead>
<tr>
<th>Web as hypertext system</th>
<th>Abstract</th>
<th>Conception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Design: visual treatment of text, graphic page elements and navigational components</td>
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<tr>
<td>Navigation Design: design of interface elements to facilitate the user's movement through the information architecture</td>
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This picture is incomplete. The model outlined here does not account for secondary considerations (such as those arising during technical or content development) that may influence decisions during user experience development. Also, this model does not describe a development process, nor does it define roles within a user experience development team. Rather, it seeks to define the key considerations that go into the development of user experience on the Web today.
The Elements of User Experience

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Web as software interface

Visual Design: graphic treatment of interface elements (the "look" in "look-and-feel")

Interface Design: as in traditional HCI: design of interface elements to facilitate user interaction with functionality

Information Design: in the Tuftean sense: designing the presentation of information to facilitate understanding

Interaction Design: development of application flows to facilitate user tasks, defining how the user interacts with site functionality

Functional Specifications: "feature set": detailed descriptions of functionality the site must include in order to meet user needs

User Needs: externally derived goals for the site; identified through user research, ethnotechno/psychographics, etc.

Site Objectives: business, creative, or other internally derived goals for the site

Task-oriented

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http://www.jjg.net/ux/
The Elements of User Experience

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http://www.jjg.net/
What is Design Research?

Idea  Sketch  Concept  Low-fi Prototype  Hi-fi Prototype  (Product release to market)
What is Design Research?

*Verbalize Idea*
*Draw Sketch*
*Act Scenario*
*Explain Concept*
*Build Mock-up*
What is Design Research?

The **practice** of design research

- identifying the right method
- at the appropriate time in the design process
- in order to elicit answers about the design.

= design research as **asking meaningful questions**.
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Q&A Session
Innovation as ethnographic Exploration

Idea Sketch Concept Low-fi Prototype Hi-fi Prototype (Product release to market)
Innovation as ethnographic Exploration
Innovation as ethnographic Exploration

Explorative Research

Idea Sketch Concept

Radical Change

Formative Research

Low-fi Prototype

Hi-fi Prototype

Incremental Change

(Product release to market)
Innovation as ethnographic Exploration

What is a meaningful question?
Innovation as ethnographic Exploration

Questions structure the answer.

Methods structure the outcome.
Questions structure the answer.
Methods structure the outcome.
Design
Research
Basics
Innovation as ethnographic Exploration

Open questions –
Answer structured by research subject

Closed questions –
Answer structured by researcher
Innovation as ethnographic Exploration

Open Questions
Explorative Research

Closed Questions
Formative Research

Idea Sketch Concept
Low-fi Prototype Hi-fi Prototype

Radical Change
Incremental Change

(Product release to market)
Conclusion

• Design research methods vary depending on what you want to know. What you want to know depends on where you are in the design process.

• More open methods (less structuring) come early in the process

• More specific methods (more structuring) come later in the process.
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Q&A Session
Identifying Design Opportunities

Research through Design – Identifying Design Opportunities by Designing
Identifying Design Opportunities

Research through Design – Identifying Design Opportunities by Designing

Goal

→ 'identify design opportunities'
→ 'making conscious design choices'
Identifying Design Opportunities

- identifying design opportunities
- making conscious design choices
Identifying Design Opportunities

- identifying design opportunities
- making conscious design choices

Source: Pugh 1990 in Buxton 2007
Your Questions
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Q&A Session
Example Project

**Industrial Computers in Logistics**
Current obstacles and future business opportunities

**Briefing**
- 6 field visits, own recruitment
- 1 expert interview – moderation between client and industry partner
- client joins for field visits
- interviews
- observations
- workshops in the field/ event-style idea testing
- brainstorming and body storming
- report hand-in after 4 weeks
Project Management as 'Event-driven Design'

**From User Study**

...to Implementation
Summary

Design Research – Ethnographic Methods for designing interactive Systems

– The design researcher as project manager – mediating and moderating between design stakeholders
– Use of audio and visual media – as 'window to the other side' (designer/user)
– 'Event'-style
– Use of materials and tools that allow non-designers to participate in concept development
– Workshops with instructions and formats that 'force' stakeholders to take project-ownership
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