Scenario Design

Lecture 4

Memo

- Quiz 1
  - Thursday October 20th

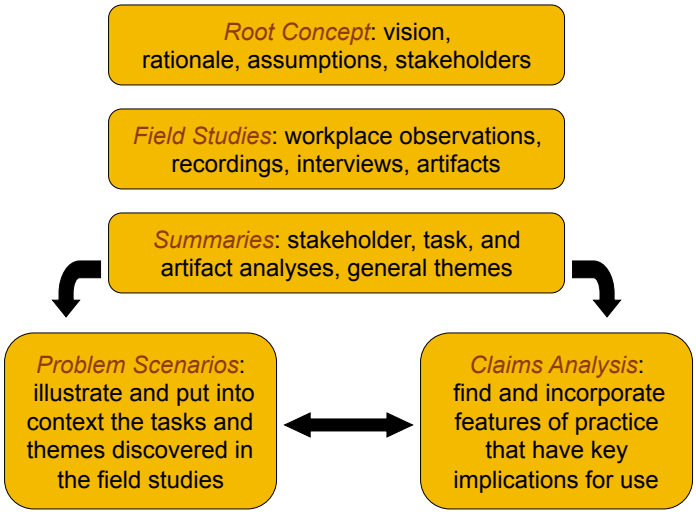
Outline

- Scenarios for Design
- Goal Directed Design
  - Scenario Development

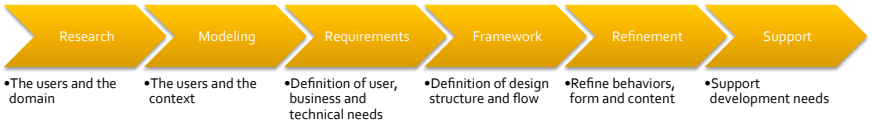
Scenarios for Design

- Narrative explanations
  - Describe motivations, behaviors, issues
  - Make issues and solutions concrete
  - Transform into visual descriptions
- Scenario based methods

Scenario Based Design (SBD)



Goal Directed Design Process



- Scenarios are key to the Modeling Stage

Scenarios for Requirements Definition

1. Creating Problem and Vision Statements
2. Brainstorming
3. Identifying Persona Expectations
4. Constructing Context Scenarios
5. Identifying Requirements

Problem and Vision Statements

- Problem Statement
  - Purpose of the design engagement
  - Describe the situation that needs changing
- Vision Statement
  - Inversion of the problem
  - Describe how things will change

Brainstorming

- Get a full range of ideas out
- Eliminate pre-conceptions
- Begin the switch from "analysis" to "solution"

Identifying Persona Expectations

- Attitudes, experiences, cognitive factors
- Expectations about the experience
- Behaviors expected from the product
- How the persona thinks about basic elements, data

Constructing Context Scenarios

- Describe broad context of behavior patterns, environmental and organizational
- Need several, broad, shallow
- Textual
- Pretend the interaction is "magic"
  - Can create scenarios that

Identifying Requirements

- Data Requirements
  - Information that must be represented
    - people, documents, messages, songs, image, status
- Functional Requirements
  - Operations or actions on the objects
  - Often represented as 'controls' in the interface
- Other Requirements
  - Business
  - Technical

Digital Living Ease of Use

Example

Digital Home Devices

DLEOU – Vision Statement

DIGITAL HOME EASE OF USE
FORMATIVE FIELDWORK

The home is becoming a complex and hard-to-manage collection of computers. The number of digital devices, connections and settings results in a huge number of configurations; some of which work but many that do not. The work to setup and maintain the array of digital living devices in the home is similar to the work of IT professionals in the enterprise. But at home, there are rarely professionals with the benefit of help desks, problem tickets, and problem tracking systems. The growing complexity of interconnected digital devices results in more and more time spent solving problems with those devices and their configurations.

We call the time spent on addressing issues of digital device interoperability in the home "problem-time". The Digital Home EOU project aims to build a body of knowledge in the digital home that can support the design and implementation of a system to reduce problem-time. Fieldwork will provide a basis of understanding for this work. We base our research on a set of assumptions that suggest questions and implications for design to drive the fieldwork. The intention is that the assumptions do not presuppose a solution but that they frame the problem (and thus the fieldwork) in a tractable manner.

DLEOU – Vision Statement

DIGITAL HOME EASE OF USE
FORMATIVE FIELDWORK

The home is becoming a complex and hard-to-manage collection of computers. The number of digital devices, connections and settings results in a huge number of configurations; some of which work but many that do not. The work to setup and maintain the array of digital living devices in the home is similar to the work of IT professionals in the enterprise. But at home, there are rarely professionals with the benefit of help desks, problem tickets, and problem tracking systems. The growing complexity of interconnected digital devices results in more and more time spent solving problems with those devices and their configurations.

We call the time spent on addressing issues of digital device interoperability in the home "problem-time". The Digital Home EOU project aims to build a body of knowledge in the digital home that can support the design and implementation of a system to reduce problem-time. Fieldwork will provide a basis of understanding for this work. We base our research on a set of assumptions that suggest questions and implications for design to drive the fieldwork. The intention is that the assumptions do not presuppose a solution but that they frame the problem (and thus the fieldwork) in a tractable manner.

ASSUMPTIONS:

1. Problems of interoperability with digital devices in the home require noticeable time and attention (i.e. problem-time).
   a. Fieldwork Questions
      - Does problem-time exist in the interoperability of multiple digital devices in the home?
      - Do home users consider problem-time a significant issue?
      - How do home users talk about problem-time?
   b. Expected Implications for Design
      - There is an opportunity for solutions to help reduce problem-time.
2. Activity and, when known, configuration are user descriptors of interoperability problems.
   a. Fieldwork Questions
      - How do home users describe interoperability problems?

DLEOU – Data Collection

- Stakeholders
  - Debate about the "average Joe" vs the expert, early adopter
- Tasks
  - Unusual vision of search, trial and error, use of friends
- Artifacts
  - Selected devices, media
- Home Interviews

Example

Interviewer asks about music - where & how much ICT2 has …

ICT2: Mine mostly habitates on external devices like iPods. I do have some on my computer. I just don't – I'm – the thing about taking up so much memory on my computer doesn't appeal to me. Some people do it because they don't need that memory. I use it for Word documents, and PowerPoints, and stuff like that.

Intv: Um-hum. Okay. So you've got some music on your laptop. What about on your desktop?

ICT2: Desktop? I don't have quite as much. That's got a lot of movies on it. So mainly the music, I just take around with me. If I have something that I want on it, I'll put it on a library, and then put it to an external device and delete it afterwards.

… (19:45)

ICT2: No. The idea is not to take up space on a single computer that will slow down speed and take away its memory. The idea is just to kind of spread it around, keep what you want personally on it, and –

Example

Intv: Yeah. Is your iPod full right now?

ICT2: My iPod – this one is not. My – I have an iPod Mini, also. That's more full, because I've had that for about a year and a half now. So –

Intv : Yeah. Do you ever take stuff off and put new stuff on?

ICT2: The one regret I have about iPods, it's a one-way system. You can only put it on the iPod, the music personally. You cannot take it from the iPod. You can only make play lists from it and keep that within the iPod itself.

Intv : You mean once you've filled it up you're done?

ICT2: Once you've filled it up, the only thing you can do is delete the music.

Intv : Oh, you can delete it.

Example

ICT2: You can delete the music to free up space. But you cannot copy music from the iPod.

Intv: Got it.

ICT2: That is probably what I consider to be the largest copywriting thing out there, is making it sure that that large area of iPods, you can't use it to cheat the system. So that to me is kind of one of my biggest headaches, because I have to get all the music from my Mini from somewhere else now. So it's get –

… (21:21)

ICT2: But yeah, it's definitely something I'm worried about. Because now what I'm gonna have to do is get together with other people and get the music I want back onto my Nano now. Because I don't have all of that on my library.

Intv: Oh, 'cause it's on that iPod Mini.

ICT2: Yes. And I can't get it from the Mini straight to the Nano. I have to get it from another source.

Intv: Right, right, right. What about on your Mini, have you ever deleted music so you can have room to put new music on?

Example

ICT2: Once or twice. I bought a _____ you can buy, which allows me to have about, oh, over 1,000 songs on it. So I haven't had a great need to do it, because I'm very conservative about what I put on there. It's got to be music I like. And if it's usually music I like, it tends to stick with me for a while. But there are some songs, I'm just, like, I'm sick of it. So I delete it. But on the Nano, I haven't had it long enough. I've only had it for a couple of weeks. It's only got about a couple of hundred songs.

Intv: Okay, good. So what about, do you share music with anybody in your family?

ICT2: Occasionally. We all listen to different things. So, I mean, my brother and I, we like to listen to the same type of music, so we'll share it.

Intv: How do you share it? How do you and your brother share it?

ICT2: Oh, he will usually either have a CD or something I like, because he's not heavy into the networking thing like I am. So I'll take that and burn that from him, or we'll go the external route and use jump drives or CDs to trade back and forth music onto our computer.

Intv: Yeah. So you don't trade it back and forth over the network?

ICT2: No. There is – we haven't picked up the software for that. One of the friends I was telling you about who does the LAN party has the software for that. That's one of the reasons we do it at his house, because it's easier for us to trade music.

Questions

- What are some misconceptions?
- What are the Mental Models?

DLEOU – Problem Scenarios

1. Upon returning from a trip to Italy, Jennifer plans a party featuring a photo slide show of Tuscan hill towns. She would like to show her slides on the TV in her living room so that everyone can see them.
2. Jennifer has heard of "media adapters" that wirelessly stream pictures and audio to a TV and stereo. The images of her trip to Tuscany are stored on her Entertainment PC in the bedroom and a "media adapter" sounds like just the right solution, but which media adapter should she choose?
3. Jennifer identifies and buys a media adapter that can both stream pictures and music. Jennifer adds the device to her network and attaches it to her TV and stereo. Soon she has photos streaming to the TV, but unfortunately she has trouble getting music to play with the photos. Is the problem the wireless router, her PC, some settings, audio formats, or the wrong software?

Questions

- What are the goals, aspirations?
- What are the activities?
- What problems?

DLEOU – Context Scenario

Interior Design/Home Design Concept

Jennifer has heard of "media adapters" that wirelessly stream pictures and audio to a TV and stereo. The images of her trip to Tuscany are stored on her Entertainment PC in the bedroom and a "media adapter" sounds like just the right solution, but which media adapter should she choose?

Jennifer launches a browser and navigates to the "Digital Home Design Studio" where she enters her current PC, OS, the brand and model of her current TV and wireless Access Point. Jennifer provides some information about the most prevalent format for her music (WAV) and photos (JPG), and if she is using any specific software to organize her music and pictures. Jennifer also enters some personal characteristics like how comfortable she is with some specified technical tasks and how much she is willing to spend.

The "Digital Home Design Studio" generates a list of devices ranked in order of those most compatible with the equipment that Jennifer already owns. For each device the system provides a cost and an explanation of how difficult it is to get working.

Questions

- What problems are solved?
- What are the new problems?
- What role for 'magic' in the scenario?