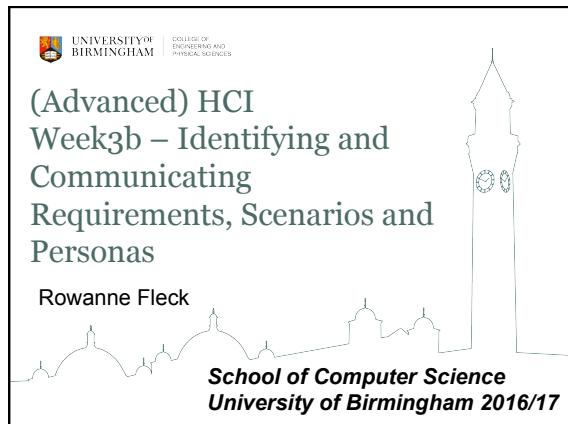


UNIVERSITY OF BIRMINGHAM | COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES

(Advanced) HCI

Week3b – Identifying and Communicating Requirements, Scenarios and Personas

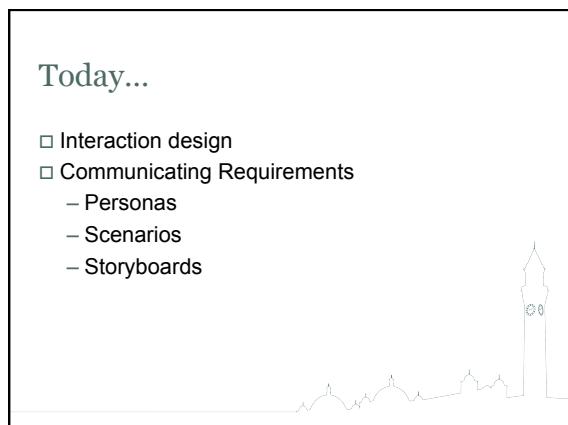
Rowanne Fleck

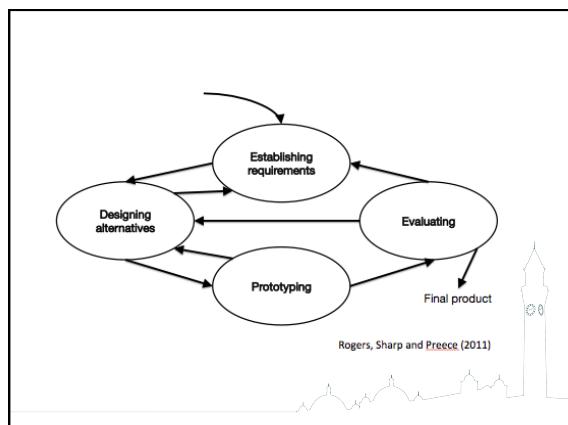


**School of Computer Science
University of Birmingham 2016/17**

Today...

- Interaction design
- Communicating Requirements
 - Personas
 - Scenarios
 - Storyboards





Working in interdisciplinary teams

- Many people from different backgrounds involved
 - Different perspectives and ways of seeing and talking about things
 - Benefits
 - more ideas and designs generated
 - Disadvantages
 - difficult to communicate and progress the designs being created



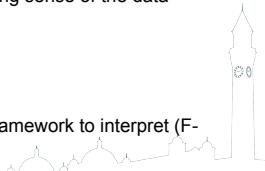
Communicating user research

- Different project stakeholders
 - E.g., clients, different user groups, developers, business analysts



Last time...

- Talked more about techniques for understanding users and their current behaviours
 - Fieldwork
 - Ethnography
 - Cultural and Informational Probes
 - Talked about ways of making sense of the data collected
 - Qualitative analysis
 - Thematic analysis
 - Affinity diagrams
 - Using a theoretical framework to interpret (formations)



And the time before...

- Interviews, focus groups, questionnaires, observations.



What were we hoping to achieve?

To gain understanding of

- The user
- Their activities
- The context of that activity



To influence the design of our system

Produce set of requirements as basis for designing

What is a requirement?

Statement specifying what a product should do or how it should perform

Should be specific, unambiguous and clear

- i.e. time to download any page should be less than 5 secs



- i.e. Visitor should find the tabletop engaging
 - More vague than first and need to research what would be need to achieve this.

Types of Requirements

- Functional
- Data
- Environmental
- User characteristics
- Usability goals
- UX goals



Functional & Data Requirements

Functional Requirements

- Should do x
- Game should be challenging to all users



Environmental Requirements

Physical

- lighting, noise, movement, safety
- E.g. Bank Machine



Environmental Requirements

Organisational

- user support likely? How easily obtained?
facilities for training?

Technological

- What tech will product run on/be compatible with, relevant tech limitations.



User Characteristics

Key attributes of user group

- E.g. abilities, skill level, technical knowledge, nationality, personal circumstances, disabilities



Generation of a user profile

Usability and UX goals

Usability Engineering

- Measures & goals agreed early and progress measured across iterations



UX goals

- Harder to measure progress
- Needs stated as requirement

Representing the user

- Who is the target user?
 - What are their defining characteristics?
 - How to represent this and communicate it?
 - You are not the user!



Personas

- ❑ A fictitious character representing a member of a target user group
 - ❑ Efforts made to bring the persona to life
 - ❑ Not real people! But characteristics should be grounded in data from data gathering stage (user interviews, observations)
 - ❑ Different personas can represent a different kind of audience for the system. Need more than one persona!





Paula Grey
Professional Staff Member, Senate Agriculture Committee

- 42-years-old
- Divorced, 1 child
- Law degree
- Very comfortable using a computer, intermediate Internet user, with high-speed connection at work and DSL at home for daughter
- Uses email extensively; accesses web about 2 hours a day for work

"Is this information right?"

Paula gathers information that will help her prepare economic analysis for the Senate Agriculture Committee and its staff. She is interested in the economic impacts and cost estimates of legislation.

She obtains a great deal of her information from the Internet, now that increasingly most of the data, articles, and reports she regularly uses are available online. Some of the sites at which she goes to AgWeb.com for timely news, NASS for raw data, and ERS for ERS reports. She also obtains information from FAPRI, THOMAS, the Congressional Research Service, Mann Library, and the Farm Service Agency.

For her, accuracy and credibility of the information she uses is key, but keeping abreast of the latest issues on a timely basis is also very important.

Key Attributes

- Concerned about providing valued information for policy and legislation decisionmaking process
- Focus on fact and detail-oriented
- Broad knowledge of agricultural legislation and issues

Tasks

- Researches information pertinent to current legislation
- Prepares economic analysis for committee members and staff
- Attends and performs briefings
- Keeps abreast of current issues that may impact or have been impacted by policy and legislation

Informational Goals

Personas

- Purpose
 - Capture understanding of target audience to drive design
 - Use to prioritise different system features
- Audience
 - Design team (primary audience), stakeholders, engineers (for context)
- Context
 - Typically occur early in project before detailed design



Benefit of using personas in design

- Focusing attention on the main user groups



A communication tool

- Represent complex data in a compact format
- Effectively encourage a user-centred approach
- Provide a clear vision of the user across the organisation



Personas hierarchy

- Primary/Focal persona
- Secondary persona
- (Unimportant)
- (Affected)
- Anti-persona/Exclusionary persona



Helps avoid

- The dangerously elastic user
- Self-referential design
- Too strong a focus on edge cases



Constructing a persona

- identify behavioural variables
- map interview subjects to behavioural variables
- identify significant behaviour patterns
- synthesise characteristics and significant goals
- check for redundancy and completeness



Three basic steps to constructing a persona

- Collect data about users
- Segment the users
- Create personas



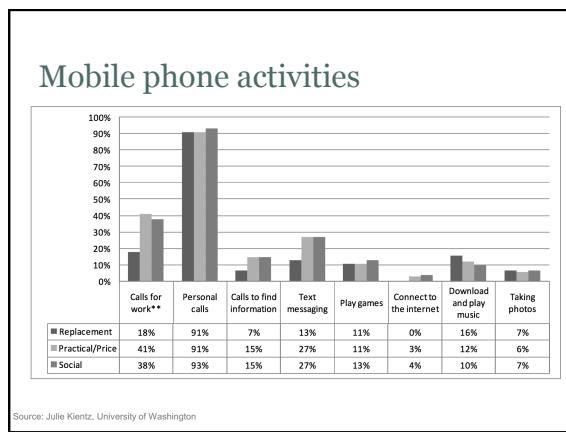
Step 1: Data

- Personas need to be created with **data from real users**
- Triangulate common patterns
- Combination of methods
 - Interviews
 - Focus groups
 - Questionnaires
 - Ethnography
 - Competitor analysis
 - Cultural probes
- Interpret the data



Step 2: Segment the Users





This example (3 slides) is for illustration -

I won't examine you on it

Step 2: Segment the Users

- 460 respondents owned used and owned mobile
 - Phones
 - "What was your motivation to acquire your phone?"
 - Three logical groupings
 - (1) Replacement for home phone motivations;
 - (2) Practical motivations
 - Desire to make outgoing calls and pricing motivations
 - (3) Social motivations
 - Desire to receive incoming calls and a need for a mobile phone because friends had them



Segmentation Groups

- Replacement group
 - 45% (13) individuals in the replacement motivation group
 - 84% of this group claimed not to have a phone at home
 - Practical group
 - 194 (55%) individuals in the practical motivation group
 - 99% gave a need to make calls when away from home or work as the motivation
 - Social group
 - 113 (32%) of individuals in the social motivation group
 - 85% wanted people to be able to reach them at all times



Step 3: Create the Persona

- Anatomy of a persona (Brown, 2011)
- 3 layers



Layer 1

- establishing requirements
 - Name
 - Key distinguishing feature
 - Descriptive dimensions
 - Objectives and motivations
 - Source



Layer 2

- Elaborating relationships
 - Concerns
 - Scenarios and circumstances
 - Quotes



Layer 3

- Making them human
 - Personal background
 - Photograph
 - System features
 - Demographic information
 - Technology comfort level



Shen – “The follower”



"I never get 'the' phone, I'm always one or two steps behind"

She uses his phone primarily to keep in contact with his family and enjoys using it to take photos of his children. Although he would like to own a smart phone so he can use it for emails and the internet, they are currently too expensive for his budget.

In order to keep his phone until he's eligible for a discounted upgrade, although, if given the option, he would upgrade more often for the novelty of having a new phone.

Constantly surprised at how quickly technology is changing, he is always interested to see new phones on the market.



<http://asinthecity.com/2011/05/13/explaining-personas-used-in-ux-design-%E2%80%93-part-2/>

Toby – “Fashion Phone Upgrader”



"One year in phones is a long time"

Toby loves technology and has to be seen with the newest and coolest digital gadgets. His phone is not just about making calls; he loves using its wealth of features for everything he can: surfing the web, writing emails, social networking and using it as a personal organizer.

Because he gets bored quickly with his phone, Toby is always looking for the latest toy and plays attention to new releases. He frequently upgrades part way through his contract and is unwilling to renew it unless he gets



<http://asinthechair.com/2011/05/13/explaining-personas>

1. Persona Exercise

Think back to the tourist information office

- Pick one 'primary' persona
 - Try to give them some 'layer 1' attributes
 - Name
 - Key distinguishing feature
 - Descriptive dimensions
 - Objectives and motivations
 - Source



Scenarios

Informal narrative description (Carroll, 2000)

"A scenario is a concise description of a persona using a product to achieve a goal" (Cooper).

Describes activities in story like fashion

Doesn't necessarily discuss in detail the use of tech

Good to explore constraints, irritations, context, fun things in task etc



Scenarios

In development should emphasise

- Context
 - Usability and UX goals
 - Task the user is doing

Personalised accounts

Used to describe existing task or future interaction

Created from data gathered in interviews etc



Scenarios should.....

Be concise

- short but complete; breadth instead of depth

Include the product

- assume the product (software or physical device) exists, even if it doesn't

Describe the goal

- the reason why we perform a task



Scenarios- Existing Processes

"Say I want to find a movie by Martin Scorsese. I don't remember the title but I know it came out in the cinema around 2006 or 2007. I go to the club website and choose the director option. A huge list is displayed.....another long list of movies leads me to the film I was looking for- The Departed.....the I need to enter my username and password....I am given an choice of rental periods. Then I download my movie" (Rogers, Preece & Sharp, 2011, p.375)



Scenarios- Future Visions

"Bramat has just finished a 4 mile run. He likes listening to music while he exercises, and has been playing his favourite pieces. This new skinput technology is great as he can focus on the running while scrolling through the available tracks, skipping through them with a simple tap of his finger. He comes in exhausted.....with a flick of his finger he turns off the music player and opens the palm of his had to reveal the television remote control panel....." (Rogers, Preece & Sharp, 2011, p. 376)



Carrol (2000): five reasons

- Scenarios evoke reflection
 - Helps developers to coordinate design actions and reflection
 - design action competes with reflection
- Scenarios are at once concrete and flexible
 - Helps developers to manage fluidity of design
 - Requirements evolve over time
- Scenarios offer multiple views of an interaction
 - Helps designers to understand the many consequences of a particular design move
- Scenarios can be abstracted and categorised
 - Helps designers to recognise, capture and reuse generalisations
 - Technical knowledge lags technical design
- Scenarios promote work-oriented communication among stakeholders
 - Makes design more accessible to variety of expertise
 - External factors can constrain and distract design

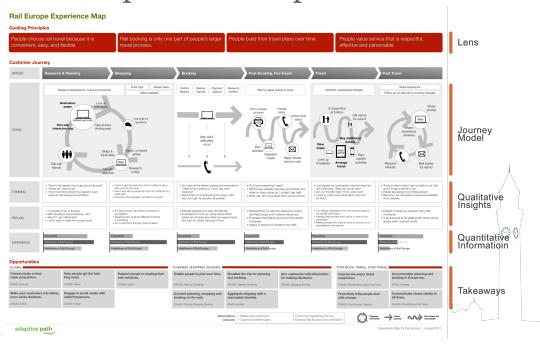
For information - I won't examine you on it

Communicating findings: Scenarios

- Scenarios are descriptions of your persona's actions or behaviours in particular situations
- They are useful for understanding the details and context of interaction
- Highlight some of the needs of your users, and the limitations/opportunities for design in the context of use.
- (later in the design process to think through steps of using a new technology, and communicating this to potential users)

See link on readings page if you are interested
in finding out more.

User Experience Maps



Storyboards

- Short graphical depiction of a narrative
 - Often depict scenario of how a new technology feature will work
 - Can help depict context

Working Mother : Speaking to send a text message

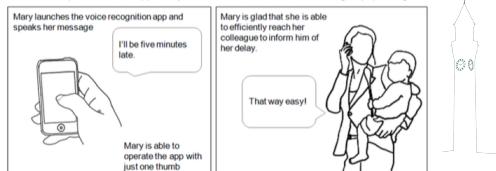
Scene 1: Mary gets a meeting request and realizes that she might be late

It is 7.45 a.m. Mary checks voice mail and reads:



Working Mother : Speaking to send a text message

Scene 2: Mary launches the app with just her thumb and sends the message by speaking



Summary

- Quick recap on interaction design
 - Requirements
 - Personas
 - Scenarios
 - User Experience Maps
 - Storyboards
