



Class 2 CS545

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The second week! This week we will start the journey on your HCI project. Each week we will spend a bit of time on the project.



Roadmap

- Task Analysis
- Personas
- The Project
- Readings this week: Stone, et.al., chapters 2-7 and Tidwell chapter 1
- Readings next week: Tidwell Chapter 2.

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So we will discuss task analysis a bit today, introduce personas and begin discussing the project.



Logbook: iPad



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The iPad. I received my iPad, the cheapest version, on the first day. I did it the hard (but enjoyable) way by standing in line. When I brought it home and used it for a bit the first word that I used to many of my friends was intimate. It was clear that apple had created a new niche. Since then I added other devices to my backpack. On each of these devices there are unique user experiences and each is suited for a particular set of tasks. 1) Laptop – general computing and any sort of data entry, 2) iPad, browsing, reading and correspondence, save for heavy typing and 3) smart phone, basically mobility, when the others are inconvenient. Recently I also purchased a refurbished kindle fire and I was very impressed. Although not as flexible as the iPad (I now do most of my note taking on the iPad) it is very well done with a great UI. Why did I get it when I had the iPad? Basically it was the form factor, I could slip it into my pocket when I travel to New York City and not need to carry a bag. Apple listened and there is a smaller ipad. I still use the kindle though - the smaller ipad is too pricey but is selling very well. Anyone out there use the kindle fire or any other non Apple tablet? I still have not tried the surface tablet. I had a first generation Nook (Barnes and Noble) and gave up on it. I have an apple watch, wear it all the time, but the only real use I put it too is as a health monitor and to check the temperature.



Microsoft's View of Future HCI

<http://www.youtube.com/watch?v=a6cNdhOKwi0>

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I would now like you to contrast Apple's view of future computing with Microsoft's. Microsoft has a more recent vision and it is markedly different from Apple. We will have an opportunity to discuss this further in the forum for this week. Note the notion of pervasive computing – apple focused on a room, the new vision focuses on the environment. Note you can view the video on canvas.

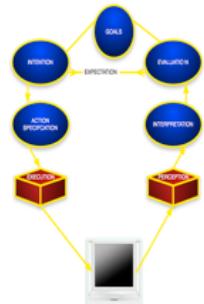


PAR

- Is your experience up to PAR?
- Perception
- Attention
- Retention

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Again I just want to maximize the repetition of this concept. Taking account the psychological issues in your user experience is important as is recognizing it in other interfaces, so the you can use the concept in your next interface.



Using 7 Stages for Design

How easily can one:

determine the function of a device?

tell what actions are possible?

tell if system is in a desired state?

determine mapping from intention to physical movement?

determine mapping from system state to interpretation

do the action?

tell what state the system is in?

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A set of questions, from Norman, that you should be asking about your design in addition to the PAR criteria. These questions are specifically addressed to avoid the gulfs of execution and evaluation. Mapping is an important concept in the user experience literature and can be loosely interpreted as “corresponds to,” but implies an even stronger relationship between the items that are mapped.



Task Analysis

- Analyze task within context of use:
 - The users
 - The tasks
 - The equipment (hardware, software, materials)
 - The social environment
 - The physical environment

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Task analysis is a fairly old yet still very relevant form of user experience analysis and in some ways is related to functional decomposition. In order to analyze the task you must consider these elements which we shall review in detail in the next few slides.



In Other Words

- Population
- Tasks
- Methods
- Techniques
- Evaluation
- Heuristics

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So the first element is understanding the population. What are the demographics of your user base? What is their skill level? Research on the web is usually a good way to begin.



The Users: Groupings -1

- Pre school
- Grade school
- Middle/High School
- College to Post Grad
- Adult - business use
- Adult - home use
- Elderly
- Special needs

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So one grouping is to conflate education and age into one age group along with special needs. These groupings span most of the population but it may not be the appropriate attributes one would want to use. These groupings would be best for example if we were designing a general information service which we would want to adjust to the abilities, education level and interests.



Groupings-2

- Computer professionals
- Technical professionals and industrial workers
- Business professionals and clerical folks
- Professionals (doctors, lawyers, architects,...)
- Public administrators, police
- Instructor, teachers
- Research scientists
- (loosely adapted from Endres and Rombach, 2003)

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These groupings would be perfect if we were considering some sort of abstract service, a digest of recent articles for a given field, based on interests.



Users and Disabilities

- 1998 amendment to Rehabilitation Act requires Federal Agencies to assure access to Information Technology, including computers and web sites by employees and the public
 - Keyboard modifications
 - Supporting vision and hearing impaired
 - Color coding issues
 - Font size settings
 - Empathy Tools, e.g., clouded glasses, weighted tools, Vonnegut's short story, "Harrison Bergeron,"
http://www.nexuslearning.net/books/holt_elementsofлит3/Collection%204/Collection%202/Harrison%20Bergeron%20p1.htm
 - Conversion to Braille and text to speech including description of figures
- Plan early .. Computer curb cuts, e.g., in design move on/off switch to front
- Packages for learning disabled, e.g., game-like interfaces
- W3C, world wide web consortium has done a fantastic job of addressing these needs: <http://www.w3.org/WAI/>

Extreme Users!

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I feel strongly about designing for users with disabilities. We so often forget about them. When I was in charge of development for a speech recognition and text to speech project I was struck by the needs of the deaf and blind communities. They were dismayed that so little consideration was given to their needs. Besides the obvious accessibility issues, considering their needs is great economically. As this generation ages, they will have difficulty hearing and seeing yet they have grown up as information technology users. This growing segment constitutes a valuable and lucrative segment of our population. So if you are not enamored by my humanitarian pleas, understand that it should also appeal to your economic interests! The short story Harrison Bergeron by Vonnegut depicts a society in which every one with special skills is handicapped so that they are consistent with the government's prescribed norm. Worth the read. They are also extreme users, often designing for them will result in benefits to the rest of the population, e.g., relying more on speech recognition and text to speech results in hands free operations that work well in the car.



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After the population is understood, which tasks are most relevant, in practice Population and tasks often are done concurrently.



Classes of Systems

- Life critical systems - lengthy training periods for **error free performance, even under stress**
 - Practice sessions for emergencies
 - Subjective satisfaction less of an issue
- Industrial and commercial uses - issues of reliability may be eased due to cost concerns
- Office and Home Entertainment - subjective satisfaction
- Exploratory, creative and cooperative systems
- Sociotechnical systems: voting, identity verification, crime reporting, ...

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This is fairly self explanatory. Sociotechnical systems are a new class and have some interesting aspects that others do not. For instance any voting system has to be private, yet transparent, e.g., insuring that the votes counted were real votes and that they were recorded correctly



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So how do we go about doing this?



User Centered Design

- 4 main principles:
 - Active involvement of users
 - Appropriate allocation of function between user and system
 - Iteration of design solutions
 - Multidisciplinary design teams

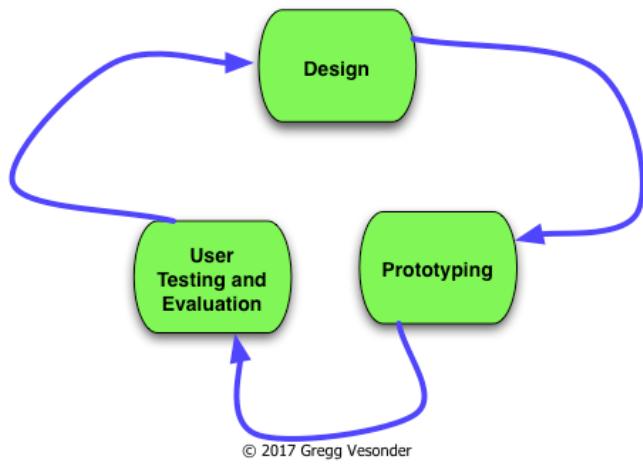
- 4 main activities:
 - Understand context of use
 - Specify users organizational requirements
 - Produce design solutions (prototype)
 - Evaluate designs with users against requirements

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Well it is all about User centered design and that revolves around, you guessed it, the User! Note that part of the task is to allocate tasks between the users and the systems and hopefully we take advantage of what each does best! Note that User Centered Design is an iterative process that involves the users at each step.

UI Design and Development Process



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This is a virtuous cycle of design, realizing the design in a prototype and then testing and evaluating the design as objectively as possible. Objectivity really requires that your analyses be data, not opinion based.



Experimentation

- Understand the task, understand potential solutions
- Try to approximate the task(s) under controlled circumstances
- If you are investigating new techniques, use a control and experimental group(s)
- Measure everything that may be relevant: error rate, time for various stages, keystrokes, ...
 - these measures should be matched to the E you want to improve
- Observe, perhaps video tape or think aloud with permission - very time intensive

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Experimentation is the most controlled manner of testing. In this methodology, we rigorously and systematically manipulate some variables: size of text, color of display, noise in the environment, number of concurrent tasks and objectively measure the effects of manipulating the variables through keystrokes, error rate, timing and other objective measures that reflect their performance. We may also record video of the user's performance, **with their permission**. However, be very careful since such recording is very time consuming to analyze.



Situated Action and Distributed Cognition

- A simple experiment may not always be diagnostic because of these four views of situated action:
 1. Complex interactions between people, electronic devices and paper resources
 2. Physical and social resources are intertwined with use of computer and information technologies
 3. Design cannot be separated from patterns of use
 4. Users change plans in response to circumstances
- **Distributed cognition - knowledge not only in the minds but also distributed in the environment**
- Therefore users have to be participants in the design process not just experimental subjects (rigid definition): ethnography, longitudinal studies

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KNOWLEDGE IN THE HEAD -- KNOWLEDGE IN THE WORLD

"Usability First" gives the definition of situated action as "the notion that people's behavior is contextualized, i.e. the situation is a very important factor in determining what people will do. In the extreme view, this is the idea that you can't generalize and predict people's behavior from one situation to the next. Thus, this suggests an approach to usability which says to understand each user's or, more commonly, each organization's specific and detailed needs in designing software for them we must carefully examine how they work and how situational and organizational factors fit into that process."

The four views of situated action above differ slightly in their explanations, but all drive the point that people's actions are influenced by the context of their specific situation. The last view goes a bit further by drawing on how a user's perceptions of the situation and specific actions are continually working together to determine the next step. Lucy Suchman described it best herself by stating that every course of action is highly dependent upon its material and social circumstances focusing on moment-by-moment interactions between actors, and between actors and the environments of their action (Suchman, 1987). Basically often each situation is unique, with many variables!



More on Task Analysis

- Agents, work and situation
- User interface details:
 - What can the user do with the system? System capabilities
 - What parts should the system do and what parts should the user do?
 - What is dialog and presentation interface
- On dialog
 - Command language, interaction according to a grammar, user has to understand what's possible - persuades system to do it - linux
 - Menu, complete form, respond to interface - eases memory load, user may not feel in control - MS Windows
 - Direct manipulation in a space - 3D environments - MATRIX
- On representation
 - Perceptible aspects, includes artist and designer, story boards are helpful

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This slide lists some essentials that are necessary regardless of the method. These questions are supported by techniques (some of which are mentioned in this slide) that we will discuss in the next section. The last bullet item emphasizes the fact that this is truly a multi disciplinary effort, using artists, anthropologists and other expertise where appropriate.



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So these methods are supported by a vast array of techniques and disciplines.



Interaction Styles

Style	Advantages	Disadvantages
Direct Manipulation	Visually presents task concepts, easy learning, easy retention, avoids errors, encourages exploration, high subjective satisfaction	Hard to develop, requires graphics display & pointing device
Menu Selection	Shortens learning, reduces keystrokes, structures decision making, can use dialog management tools, easy support of error handling	Danger of many menus, slows frequent users, consumes screen space, requires rapid display rate
Form Completion	Simple data entry, modest training, convenient assistance, use of form management tools	Consumes screen space
Command Language	Flexible, power users, user initiative, creation of macros (customizing)	Poor error handling, long training, memorization
Natural Language	Relieves burden of learning syntax	Clarification dialog, more keystrokes, contest is hard, unpredictable

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If your system is predominantly a software system, you will deal primarily with these five interaction styles. We will delve into these interaction styles in more detail in later lectures.



Physical Abilities and Surroundings

- **Anthropometry** - basic data about human dimensions (range of dimensions)
 - Not only static (size of hand) but also dynamic, reach distance while seated, speed of finger presses, strength of lifting, ...
- Human Factors engineering of computer work stations
 - Work surface and display support height
 - Clearance under work surface for legs
 - Work surface width and depth
 - Adjustability of heights and angles for chairs and work surfaces
 - Posture adjustments, arm rests, foot rests, chair coasters
 - Luminance levels, glare, flicker, noise, air temperature, movement and humidity

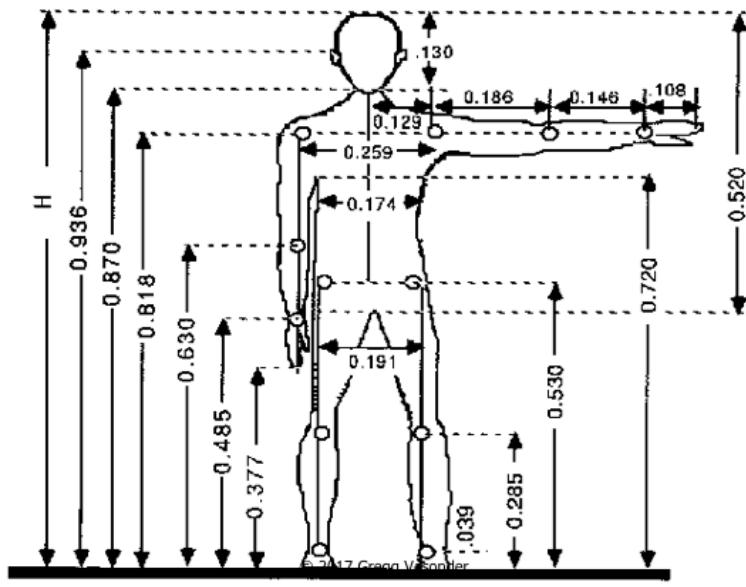
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These next three slides mention the issue of designing the physical environment to accommodate physical work. The three slides presented here are to make you aware that this knowledge and the related metrics exist. Such knowledge would be very useful if you were designing work centers, tanks, vehicles and military aircraft. However I think that commercial aircraft designers ignore this wisdom concerning the space necessary to work and rest comfortably!



Relative Dimensions of Average Human Body



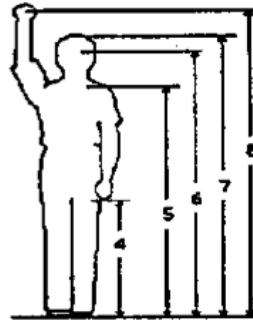
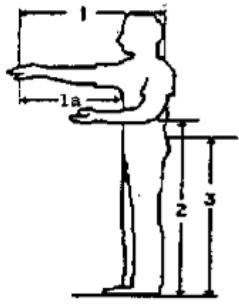
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There is a whole body of information that discusses the relative dimensions of the human. For example our arm with hand attached is about 44% of our height $[(0.186+0.146+0.108)\times 100\%]$.

Standing Posture Data



Measurement (Inches)	Males			Females		
	95th	50th	5th	95th	50th	5th
1- Forward Grip Reach	33.3	30.9	28.5	30.1	28.0	25.8
1a- Bust to Grip Reach	21.9	20.9	19.8	18.3	18	17.5
2- Elbow Height	46.9	43.6	40.2	43.1	40.2	37.2
3- Hip Height	39.2	36.0	32.9	35.8	32.9	29.9
4- Fingertip Height	26.5	26.0	23.4	27.4	24.8	22.2
5- Shoulder Height	61.0	56.7	52.4	56.1	52.2	48.2
6- Eye Height	71.9	67.3	62.8	64.2	60.0	55.9
7- Stature	73.6	69.1	64.6	68.1	64.0	59.8
8- Vertical Grip Reach	87.0	81.9	76.8	80.5	75.8	71.1



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The last page provided relative sizes of static measurements, e.g., size of arm, length of legs, This chart provides you with some dynamic measurements, such as grip reach along with additional static measurements. There are many charts available like this that you can study and use.



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So given that we actually understood whom we should target, what are their tasks and how we should support these tasks, how do we evaluate whether it is sufficient? Evaluation will be heavily stressed in the term project.



Relativity of Design

- Each user and each task should have precise objectives:
 - Average time to learn
 - Speed of performance
 - Error rate by users
 - Retention over time (frequency of use is a factor)
 - Subjective satisfaction - surveys satisfaction scale
- **Tradeoffs:**
 - lengthy learning -> better performance
 - Rate of errors vs. speed of performance

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Well the evaluation has to occur within a context, so we have to determine what we want to improve and this must be measurable. There is also the knowledge that focusing on one aspect may actually influence other performance aspects. Most HCI performance measures are not independent. For example, if you increase the speed of your typing then you are likely to have more errors – you cannot improve speed and decrease errors because they are dependent. Therefore we have to determine relatively early on which are more important.



Why spend effort on the UI? (redux)

- Increased efficiency
- Improved productivity
- Reduced errors
- Reduced training - strive for game like training
- Improved acceptance
- So evaluation determines how well we did

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You've seen this slide before, but now these are influenced by the evaluation process and your goals for the system.



Usability Characteristics Evaluation

ISO 9241	Schneiderman	Nielsen
Efficiency	Speed of performance	Efficiency
Effectiveness	Time to learn	Learnability
Satisfaction	Retention over time	Memorability
	Rate of errors by users	Errors/Safety
	Subjective satisfaction	Satisfaction

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9241 is a long & expensive report but it essentially examines what you need to measure and therefore is critical to the evaluation of products that must be ISO compliant. I mention this in case you join a company that requires ISO compliance for their products.



Evaluation Keys

- Plan the evaluation and plan to evaluate frequently
- Evaluation early in the life cycle, mockups serve as feedback to requirements and design process
- Evaluation later - how well does it meet the users needs (sometimes defer)

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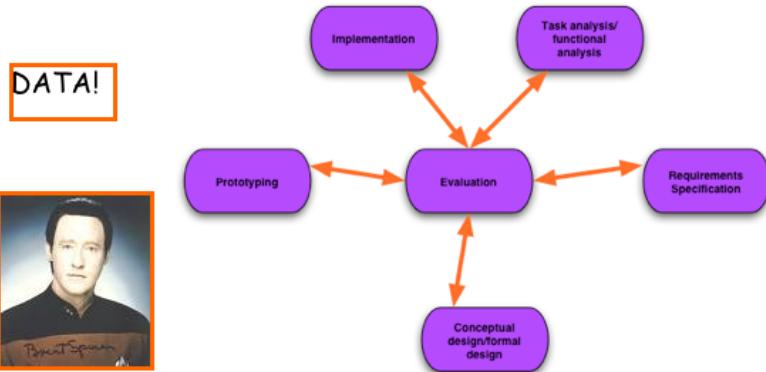
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The keys to a successful evaluation are to plan the evaluation in the early stages, evaluate frequently and begin evaluating early on, continuing until you reach your goal. Why the emphasis on evaluation? Because the only way you know you are improving is by collecting data that will indicate progress towards your goals. In the later stages of evaluation, we try to measure how effective the total User experience is.

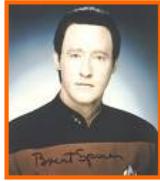


Star Life Cycle

THE STAR LIFE CYCLE



DATA!



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And the key to this extensive evaluation is collecting, whenever possible objective **data** from the users on the key performance measures. The next slide lists the 5E's, the performance measures we will use.



Evaluate User Experience, 5 E's

DIMENSION	KEY NEEDS	Design Tactics
Effective	Accuracy	Focus on places in the interface for potential error and protect against them. Look for opportunities to provide feedback and confirmations
Efficient	Operational Speed	Present only most important information. Work on smooth, direct navigation. Interaction style should minimize actions required
Engaging	Attract users	Consider what aspects of the product are most attractive and incorporate into design
Easy to learn	Just-in-time instruction	Step by step interfaces that help users navigate through complex tasks. Provide training in small chunks if possible
Error tolerant	Validation	Look for places where selection and calculators can replace data entry. Error messages provide opportunities to correct problems

Quesenberry(2003) in Stone, p.109

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You saw this chart in the first lecture in the context of your semester project. Your task is to select one of these E's to improve in your project. Of course you cannot select the appropriate E's until you know what your project is! You also must select the measure that will determine whether your design was effective. Then you have to select how you will measure improvement. For example, to measure efficiency you can measure time to do a task.



Evaluation

- Not only in course of design process but as part of the system - throughout process, continually evaluate
- BEFORE: scenario based, manual based, story board based - evaluation as prototyping, experimentation
- AFTER: (have a prepared baseline of all tasks in previous environment) study and MEASURE how users are doing - in the beginning and at regular intervals
 - Casual interfaces - kiosks should go quickly: seconds to minutes
 - Week on task interfaces - telemarketing: minutes to hours
 - Month on task interfaces - help desk: days
- Observe the entire environment before and after for days
 - Include what is on their desk, tacked to wall and interactions
- **SATISFACTION AND JOY** - what follows are some heuristics to get there

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SATISFACTION AND JOY ARE KEY AND REALLY IGNORED THESE DAYS. I would like you to stress that as part of your evaluation.



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This next set of slides lists heuristics that may be helpful. Since HCI and User Experience are at their early stages, there is still a preponderance of lists of advice. The most encyclopedic of these efforts is Shneiderman, et.al. [Designing the User Interface: Strategies for Effective Human-Computer Interaction \(5th Edition\)](#). I will comment on only a few of the items since the admonitions are relatively self explanatory. However if you want more discussion on some, please start a discussion in the main discussion group.



Heuristics on the User Interface

- If there's a substantial UI component have full time UI person involved from beginning *plus artist/designer*
 - **UI person is not converted developer**
- Avoid Natural Language interfaces
- Understand the environment and the users and the types of users
 - Auditory interface in high noise or long dialog text is not recommended
- Test it and observe - prototypes, user manuals, storyboards
- Do not stray too far from current interfaces, unless ...**revolution!**
- Do not be tempted by direct manipulation/"Matrix mode" unless ample time and software/hardware - but be inventive

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I am not a fan of Natural Language interfaces. They have only been successful in a few menu oriented word spotting applications. Apple's Siri has changed this a bit but it is far from perfect. Amazon's Echo is getting better – I have one set up in my kitchen and enjoy it. I will return to Natural Language interfaces several times during the semester. Similarly, direct manipulation interfaces are difficult, however the advent of special devices such as the Nintendo Wii, Xbox Kinect and the Playstation 3 Move changed that, making "motion in the large" as an interface mechanism easier to develop and deploy. However, the next generation of game consoles (Playstation 4 and Xbox one) do not feature it. Perhaps Oculus Rift will take over!



More on UI

- **Do automate!**

- Do not ignore the users needs
- Do talk to the users
- Do understand your user population
- Do be predictable
- Do use common examples in documentation - Unix Man pages
- Do use designers/artists
- **Do use paper, stickers, job aids, ...**
- Do consider Ergonomics
- Do consider special needs
- Joy is an important aspect

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If you can completely automate a task, that is great. The best interface may sometimes be no interface. Adding information to the environment such as stickers and short reference cards may not be high tech but they often work and make it a more efficient, productive and enjoyable environment for the users.



Information Visualization

- Shneiderman and Plaisant
 - Overview
 - Zoom
 - Filter
 - Details on demand
 - Relate - among items
 - History
 - Extract

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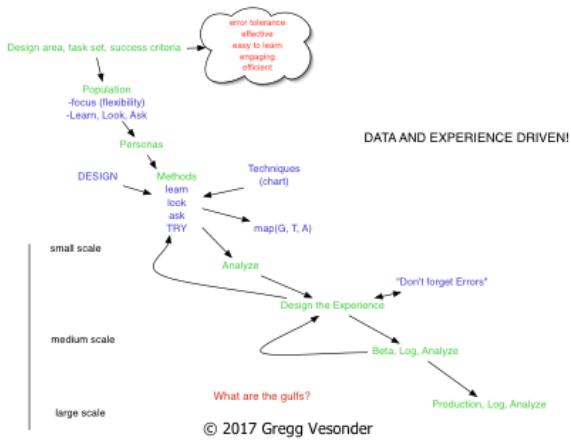
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This slide suggests capabilities for Information Visualization interfaces, especially for data mining tasks. Another list derived from Shneiderman.



Our Context

- User Experience Design is neither linear nor rigid!



You've seen this before – next time I will dispense with my hand drawing. This is a segue from the discussion on the structural aspects of HCI (Population, Tasks, Methods, ...) to a discussion regarding personas. Note that the success criteria mentioned in the diagram refer to the 1 or 2 Es (slide 31) you are trying to improve.



User Centered is Difficult

- Not natural - rather we pick users like ourselves
- Users are complicated and varied
- Those that do the market research are usually not the designers and developers
 - Attempts at understanding users are collecting data
 - Raw data and reports don't help - synthesis is necessary
 - Even the word user isn't helpful
- Not user interface rather [user experience](#) (user centered|interaction design)
- All data gathering leading to persona development

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But why personas – basically because being user centered is difficult. There is a tendency to assume that users are like ourselves, but in reality the space is much more complicated and varied. Even if we collect data it is hard to bridge the gap between tables of numbers and user needs. However data is essential as we have stressed in preceding slides, so many user design and experience folks are turning towards personas as an embodiment of the available data.



Personas

- Make up pretend users representative of groups and design for them (Cooper's book, The inmates are running the asylum)
 - Carefully specified through discovery in the requirements gathering process
- They are defined by their goals
- Successive refinement during the low fidelity prototype stage
- Designing for one person, err persona, is actually effective. **The broader the target you aim for the more likely you will miss the bullseye**
- The more specific the persona, the more effective it is
 - Names and faces help this
 - In "great and specific detail"
- A DESIGN TARGET



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Okay so a persona is a pretend user with specific attributes that represents the groups you are targeting yet is fairly specific. In a real sense the persona is designed to be an embodiment of the data that is known about the targeted groups and their needs. However representative does not mean broadly defined, in fact Cooper presses the opposite, that effectiveness is related to the specificity of the persona. Personas are given names, faces and cover stories (examples are coming). Note, and I cannot emphasize this enough, that personas represent data. Therefore your first step in building a persona is to accumulate and analyze data relative to your project that provides insight into your user demographic. This data comes from public sources, National Bureau of Census, **competitors** and data gathering you may initiate among users such as questionnaires and the like.

As an example of generality/specification, Cooper's design firm was hired to design travel luggage. Rather than targeting the entire travel population, they targeted flight attendants and found that they wanted very mobile, compact luggage that would be easy to carry and could expand when necessary. So Cooper's design firm focused on this population what evolved was rolling luggage that is so ubiquitous in airports. Designing for a specific population made it easier to focus on their needs and these needs turned out to be applicable to a much larger population.



Personas -2

- Personas:
 - Make assumptions about knowledge and users explicit
 - Focus on design for a small set of users
 - Fosters interest and empathy towards users
- **Data** is still foremost but personas humanize data
- Gets away from the focus that every feature we decide not to build could be the reason the product fails

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So personas result in a characterization of the assumptions while still representing the data.



History

- Market segments, demographic segment, life style segment (yuppies too vague), usage based segment, benefit segment, geographic segment -> impersonal and abstract, summaries not synthesis
- Target customer characterizations:
 - Profile and job description
 - Technical resources
 - “day in the life”
 - Problem that motivates
 - “day in the life” with solution

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An where do you get the data? Search the web for like minded products, explore demographics of folks using these products. What are the issues with the use of cell phones by senior citizens – google press reports and perhaps search the aarp web site. Mine as many resources as possible to uncover data. You also may want to construct a preliminary questionnaire to address questions you cannot find elsewhere. Note: simply developing a questionnaire is not enough, using public data is essential and you must do so in your project and list the data and where you acquired it.



Scenarios/Use Cases

- Stories having a setting, actors or agents, goals/objectives and a plot/sequence of actions
- Necessary but not user focused - actors are abstract

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One thing you can develop to help is to construct a few use cases on how you think folks experience your errr user experience!



Cooper and Personas

- Asylum author
- Distinct user goals
- “what they do and why they do, not simply who they are!”
- More than a collection of facts they come to life yet are well built, data driven and thoroughly communicated

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Now back to personas. Note that we want to make our persona as real as possible by understanding their motives.



Using Personas

- Users are carefully (lots of effort) described through narrative and story telling
- lifecycle perspective integrated with process
- extensible

Some examples

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So we actually construct a cover story – a fictional life for the persona. What follows are examples from my previous classes

Shopping
assistant

Personas: Primary

"Busy" Betty

- Works part time as an office admin
- Has two children
- Food shops more than once a week
- Takes a lot of time searching for products and keeping track of her children
- Doesn't have time to cut coupons
- Betty is always heard saying:

"I wish I had more time in the day!"

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This persona targeted a shopping assistant, note that the persona has characteristics that are representative of the data, with a bit more elaboration to make them real. Cooper also recommends that one uses pictures of real folks rather than stock photos or caricatures. Note that this is a primary persona. For larger projects, there may be a need to characterize a secondary persona. Your project should have one or at most two personas. It should have a picture of a real person, not an actor or celebrity but your persona should not be a real person, rather it should be a representation of the data and demographics.



Personas: Secondary

Terrance the store manager

- Worked in the grocery store business all his life starting as a bag boy
- Looking to become a district manager
- Always looks out for corporate (\$\$) while keeping the customer happy
- Does not want to inconvenience his customers
- Workers always hear him asking:
"How much did we make today?"



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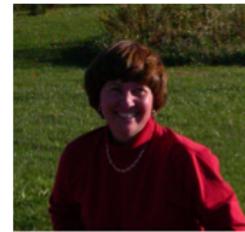
In this case the shopping assistant not only affects the life of the shopper but also of the store manager to determine whether he or she, he in this instance, will be receptive to the technology.



Lynda Daniels

Personas

- Age: 45
- Family: Married with 2 Children (ages 14 and 16)
- Occupation: CFO at a Fortune 10 Company
- Lynda resides with her family in the suburbs of Philadelphia. Given her busy life, Lynda is interested in the convenience and security provided by the Intelligent House.



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Another persona for a home security application. The fact that there is no coined phrase actually diminishes value – it is important to make the persona as real as possible so that the person(a) is part of any discussion.



Frank Jameson Personas

- Age: 32
- Family: Single
- Occupation: Electrical Engineer
- Frank's an electronics hobbyist who enjoys integrating the latest electronic devices into his home. Adding the centralized control provided by the Intelligent House is of great interest to him.



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Note that these two personas for a home security application cut through different areas of the demographic data and represent different motivations.

Persona - John Doe, 63

Retd. School Administrator - Philadelphia



Profile

- Widower who currently lives alone in South Jersey
- On a fixed retirement pension but has relatively low expenses
- Has 2 married daughters, 4 grandchildren staying in Philly suburbs
- Daughters concerned about his health after mild heart attack last year
- John forgets medicine often, kids feel John's getting more absentminded

Primary goals from his next purchase

- Views cellphone use more as a utility, not interested in fancy features like camera,mp3,etc
- Device has to be simple to operate as he makes error often while operating current phone
- Phone has to have clear signal with a good volume as he has hearing issues
- John does not want to spend a fortune on his next phone!

Elder phone

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The next two focus on an elder phone – again the more personal details the better. I also would like to enforce that you have only one persona, although you can propose several and decide which is the best. The more detailed the cover story, the better the persona, since the persona becomes real. Of course the persona must relate to the data.

Persona - Ellen K., 67

Retired School Teacher – Plymouth, PA



Profile

- A widow who lives by herself, and has lived in the same home for over 40 years
- Has lived by herself for six years, when her husband, a retired police officer died
- She has two children, both of which live in the same town as Ellen
- Still very energetic, waking up at 5am and going to sleep at 9pm every day of the week
- Very fixed income level, with her social security and teacher pension to live
- Perfectly happy with the rotary dial phone style she has at home since every one she stays in contact with are local to her

May get a cell phone if

- Can perform the same functions as a rotary phone.
- Help her remember frequently called phone numbers
- Does want any of the fancy bells and whistles of today's cell phones on the market
- Cost is a major factor as well. The price needs to be right

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Another elder phone example. Designing for both these individuals would be a chore since it broadens rather than narrows. We will stop here today and discuss a bit more about personas next time.



The Project

- What group or population are you targeting? Can you get data from that group for your potential project
- Even if you can get data from the target population you should investigate the literature for other info. For example if it is an elder phone you should do research to see how many folks in different age groups own phones and investigate how they use them. This will help in building both your persona and your project
- Note that it is important that you have a pool of users available since you will be required to collect data from them.
- Again understand that a questionnaire is not enough – mine the web for relevant data.

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Hopefully this slide will get you moving on the project. I will have a worksheet to help in this process.



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These references will span several lectures, so you will see them again