VOICE OF THE USER

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Unit Objective

• Understand what user experience (UX) means and how it matters
• Understand how to approach UX and usability

• Thanks go to Joel Angiolillo, Demetrios Karis, and Bob Virzi – three UX pros – for their insights and help developing this section
User Experience and Usability

User Experience puts the end user at the center of the universe and defines the system from that perspective

More than just Human-Computer Interaction aka User Interfaces (UI) or slick Madison Avenue designs

- Functionality
- System Organization and Structure
- Interactions and Look and Feel
- Access

Usability is finding the best match between a user’s needs and a product’s use

Challenge: there is no one User. If there was, we would all be driving the same car, wearing the same shoes, and using the same computer.
Good User Experience Means You Have To Be Good Across The Entire Lifecycle

The experience should be satisfying and the user should feel good about it.

Current buzzphrase: Delight the user
The End User

**Few truths hold universal**
- Anyone or everyone may be a user
- They want
  - Good value
    - Cheap but not necessarily free
  - Reliable, trouble free products
  - Products that perform as advertised

Beyond these there are few truths.

Or at least my truth might not be my neighbor's.

**Users come at a product or service differently, sometimes uniquely**
- Level of experience
- Physical or mental capabilities and limitations
- Cultural expectations
- Language differences
- Senses of style
- Have different needs or values
  - E.g., *I want fast acceleration, but you want good fuel economy*
Can You Please Everyone?

**No**

- **Multiple Sizes**
  You can have different products for different types of users.

- **One size fits most/enough**
  You can have a product for an average user

You can aim for average within a subset of the market

Either way, you can not optimize the experience for EVERY SINGLE user. You can't succeed. Period.
UX Matters

MP3 Players


Diamond bought by S3 Graphics for $100M+ in Late 90’s. S3 Graphics reformed as SONICBlue, went chapter 11 in 2003.

Apple created an experience around creating and playing “mixes” – what went on the tapes

Apple (2001)

APPL traded at ~$1.4/share in 2001. Since, it has split 14:1 and is presently traded at ~$112/share.

User Experience

• Roxio emphasized an experience similar to the then familiar, *Sony Walkman*, and emphasized a digital experience like listening to tapes
  – The user experience was around “pushing play”
  – The design emphasized the Walkman design

• Apple created an experience around creating and playing “mixes” – what went on the tapes
  – the user activities emphasized making playlists, acquiring tunes, and playing music
  – The design emphasized one thumb simple
<table>
<thead>
<tr>
<th>Engineering’s view of Users</th>
<th>Users’ view of Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>It works. You are just not using it right.</td>
<td>Why does my computer have a cup holder?</td>
</tr>
<tr>
<td>If you build a fool-proof system, only fools will use it.</td>
<td>The machine asks me to say hello. So I say hello, but nothing happens. I’m doing what the machine asks…</td>
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The system designers’ job is to create the system that serves the users (and satisfies the client)

- √ Does what the users need and want
- √ Natural to use
- √ Helps them avoid trouble
Poor Usability Costs Real Dollars

- Generates calls to tech support

Product Returns
- E.g. an ISP had 30% of routers returned as non-working
  - *but they tested fine*

- Poor word of mouth
  - Negative impact on **Net Promoter Score (NPS)**
    - Gauges the loyalty of a firm's customer relationships.
    - Claims to be correlated with revenue growth.

Study Of What A Call To Tech Support Costs

Natural mapping, by which I mean taking advantage of physical analogies and cultural standards, leads to immediate understanding. For example, a designer can use spatial analogy: to move an object up, move the control up. To control an array of lights, arrange the controls in the same pattern as the lights. Some natural mappings are cultural or biological, as in the universal standard that a rising level represents more, a diminishing level, less. Similarly, a louder sound can mean a greater amount.

Easy to say, harder to do
The Challenge: Aligning the Two Views

How the user thinks about the problem

How the designer models the problem

Uses it

Does something

Exports an experience

Creates work-arounds

Rendered into being

Understand/Align
Designing A System that “Delights the User”

• Talking to users and potential users
  – Semi-structured interviews
    • lots of tips for creating an interview guide and how to conduct the interview online.
  • It’s amazing how much you can learn by interviewing people.

Create Paper And Low Fidelity Prototypes

- Research (Karis, Virzi) shows you find the same problems with low fidelity and high fidelity systems.

Credit to: Ariel Waldman, on Interaction Design/Rachel Ilan

F. Cifaldi, Gamsutra, *Sometimes, paper is your best prototyping tool - even if you’re Nintendo*, 2012

On the development of the Wii U tablet
Cautions

Usability And Interviewing Are Robust

- Even if you make a lot of mistakes in the process, you'll still learn a lot

Online Surveys Are NOT Robust

- There are many, many ways to make mistakes, and the mistakes will often destroy the validity of the results

- While it's trivial to write and distribute an online survey, but if you don't know what you're doing, there's a significant probability that you'll end up with garbage
Key Questions

1. Who are the users: novices or experts?
2. What are users trying to accomplish?
3. How often will the user be using the system?
   - Should the design emphasize ease of use and learning or efficiency?
4. What information do they need to accomplish their task?
5. How easily can they identify the information they need and the steps needed to accomplish their tasks?
6. Is the information and task structures (aka the system) accessible to everyone?
Key Activities

- **User Research**
  - understanding user behaviors, needs, and motivations through observation techniques, task analysis, and other feedback methodologies. Also includes usability.

- **Usability Evaluation**
  - how well users can learn and use a product to achieve their goals. It also refers to how satisfied users are with that process.

- **User Interface Design**
  - anticipating what users might need to do and ensuring that the interface has elements that are easy to access, understand, and use to facilitate those actions.

- **Interaction Design (IxD)**
  - creating engaging interactive systems with well thought out behaviors.

- **Visual Design**
  - ensuring an aesthetically pleasing interface that is in line with brand goals.

- **Accessibility**
  - how a disabled individual accesses or benefits from a site, system or application. ADA Section 508 is the governing principal for accessibility.

User Interface is About a Dialogue

The challenge is putting the dialogue in the right terms and in the right order.

- How to organize all the things a user could want to do
- Users may not be good at forming their questions, expressing the needs.

Everything in the product design contributes to this dialog - from the button labels/placements to noises to screen prompts.

To construct a good dialogue, one has to spend a lot of time watching a lot of different people "talking" with it.
Old Adage: Your interface should be so simple a drunk person could use it.

Someone took this seriously

Where To Look for More Information

- The usability body of knowledge project is getting more content and is now useful: http://www.usabilitybok.org/
- UPA (now UXPA)  
  - http://www.upassoc.org/
- SIGCHI  
  - http://www.sigchi.org/resources
- Usability.gov  
  - http://usability.gov/
- Usability Net  
  - http://www.usabilitynet.org/home.htm
- Society for Technical Communication Usability & User Experience Community  
- Human Factors and Ergonomics Society  
- Measuring the User Experience: A companion website to the book by Tom Tullis and Bill Albert  
  - http://measuringuserexperience.com/
- Jeff Sauro’s site, Measuring Usability  
  - Includes calculators for A/B comparisons, sample size, and more
- Templates, Forms, and Examples  
  - Examples of Test report templates, questions to ask at a kick-off meeting, a usability test plan  
  - http://www.usability.gov/templates/index.html#Usability  
  - www.wiley.com/go/usabilitytesting  
- And, of course, Wikipedia, which has some excellent very thorough articles...and some not so excellent and not very thorough articles.