User Centered Design Process
May 6 - June 28

History of user centered design in HCI
July 2 - July 5

Academic HCI
July 8 - July 12

Special topics in HCI
July 15 - July 17

Course Review
July 22

Presentation 2
July 24 - July 26

Last class
July 29
Accessibility in HCI

Accessibility = "ability to access"

“Design of products, devices, services, or environments for people who experience disabilities”

Accessibility in HCI

Accessibility = "ability to access"

Disabilities:

- Cognitive
- Visual
- Hearing
- Motor
Accessibility in HCI

Basics:

- "Alt" tags
- Settings for text size and fonts
- Settings for screens
- Transcriptions / different modalities
- Basic formats
- Keyboard access
Slip-On Typing/Keyboard Aid

Adapted keyboard

BIGTrack
Slide to unlock: Making touch-screen devices accessible to all
Accessibility in HCI

Accessibility = "ability to access"

Disabilities:
- Cognitive
- Visual
- Hearing
- Motor
Accessibility in HCI

Accessibility = "ability to access"

Strategies:

- Automatic adaptation
- User made configuration
- Production customization
- Universal design
Supple system, K.Z. Gajos et al.
Accessibility in HCI

Accessibility = "ability to access"

Strategy:

- Automatic adaptation
- User made configuration
- Production customization
- Universal design
Accessibility in HCI

Accessibility = "ability to access"

Strategies:

- Automatic adaptation
- User made configuration
- Production customization
- Universal design
Accessibility in HCI

Duration spectrum
(short-term to long-term)

Source spectrum
(inside itself to outside itself)

Disabilities:

Cognitive
Visual
Hearing
Motor
## Seven Principles of Ability-Based Design

<table>
<thead>
<tr>
<th>Stance</th>
<th>Description</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ability.</strong></td>
<td>Designers will focus on ability not dis-ability, striving to leverage all that users can do.</td>
<td>Required</td>
</tr>
<tr>
<td><strong>Accountability.</strong></td>
<td>Designers will respond to poor performance by changing systems, not users, leaving users as they are.</td>
<td>Required</td>
</tr>
<tr>
<td><strong>Adaptation.</strong></td>
<td>Interfaces may be self-adaptive or user-adaptable to provide the best possible match to users’ abilities.</td>
<td>Recommended</td>
</tr>
<tr>
<td><strong>Transparency.</strong></td>
<td>Interfaces may give users awareness of adaptations and the means to inspect, override, discard, revert, store, retrieve, preview, and test those adaptations.</td>
<td>Recommended</td>
</tr>
<tr>
<td><strong>Performance.</strong></td>
<td>Systems may regard users’ performance, and may monitor, measure, model, or predict that performance.</td>
<td>Recommended</td>
</tr>
<tr>
<td><strong>Context.</strong></td>
<td>Systems may proactively sense context and anticipate its effects on users’ abilities.</td>
<td>Recommended</td>
</tr>
<tr>
<td><strong>Commodity.</strong></td>
<td>Systems may comprise low-cost, inexpensive, readily available commodity hardware and software.</td>
<td>Encouraged</td>
</tr>
</tbody>
</table>