School of Electrical Engineering and Computing
SENG2260/SENG6260 – Human-Computer Interaction

Lab 1: Conceptual Models/Product Analysis

Week 2

Conceptual Models:

Consider the appropriateness of different kinds of conceptual models that have been designed for similar physical and digital information artifacts:

Compare the following:

- A personal paper-based calendar versus a digital calendar (i.e. diary)
- A shared paper-based wall planner versus a shared web-based calendar

What are the main concepts and metaphors that have been used for each (think about the way time is conceptualized for each of them)? How do they differ? What aspects of the paper-based artifact have informed the digital calendar? What is the new functionality? Are any aspects of the conceptual model confusing? Do you use a paper-based or web-based calendar? What are the pros and cons of the one you use?

Product Analysis:

Go to www.abledata.com and investigate the user interfaces for some of the products available there. Check the various input devices available for people with disabilities (http://www.abledata.com/products-by-category) and conduct a product analysis of the interface (it is easiest to begin by listing the positives and negatives of the product before moving on to what may be missing and what is unnecessarily redundant or confusing.

Design problem:

The following is the design problem that each group will undertake:

There is ongoing interest in virtual and augmented reality display technologies and the immersive interactive environments that they enable. Although head-mounted display technology is not new, 2019-2020 will see the release of new and second generation VR/AR systems for mainstream use, e.g. Facebook's Oculus Rift S/Quest, Microsoft's HoloLens 2, HTC/Valve's Vive Pro, and Sony's Playstation VR. In addition to the challenges of engaging with a general user base, it is unclear what the VR/AR "killer app" will be. Previous research has explored military, medical and educational use of similar technology. However, as these advanced user interfaces enter mainstream usage there are exciting opportunities to explore new applications of this technology and consider how this may impact human-computer interaction (HCI)/user experience (UX) approaches to designing, prototyping and evaluating user interfaces.

The **group project** this year will consider the use of the Microsoft HoloLens 2[1] in the UON Gallery[2] (Callaghan students) or The Millery Café/Cafeteria (Central Coast students). Your group must design the **user interface** for a **HoloLens 2-based interactive system**.

For your project:

1. Consider the conceptual model for your project interface. Is there a similar physical artefact to imitate, extend or improve? How will this help your users? What is the conceptual model for your interface?
2. Sketch out the questions and answers that form a possible product analysis of your project user interface.

[1] See https://www.microsoft.com/en-us/hololens

[2] See https://www.newcastle.edu.au/community-and-alumni/arts-and-culture/the-university-gallery