

Ethical Product Design Through *Unethical* Product Creation

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Engineering ethics is complex as there are no clear answers. Yet, its importance to society grows as fast as technology is advancing.

*This work is sponsored in part by NSF Ethics Education in Science and Engineering Award #1033014

Educational Objectives

Understand technology ethics issues in products

Privacy is a primary example of a topic that product designers need to be aware of. Recent technologies in GPS, online banking, consumer tracking, prevalence of small cameras etc have great potential for abuse.

Recent studies [Levy2007] suggest that within 40 years people will be having sex with **robots** and even marry robots. How should designers think about these products? When do people stop thinking about products as products and instead as living entities? [Arkin2008]

Learning Activities

Experiential Learning

Teaching ethics approaches are often didactic or role playing as it is difficult to put students in truly unethical situations. True first hand experiential learning is possible with unethical products however.

State of the art technology

Short labs teach the students about potential ethically charged technology such as: GPS, wireless listening devices, key fob security and techniques to jam and prank radio and video signals.

Unethical user experience Reflection and discussion

Engineering students team with architecture students to design unethical products. They experience observe and discuss the results.



Class Execution



In one example, motivated by the invasion of privacy issues in the airport TSA body scanners (topical at the time) and other privacy violations, students developed as the final project a gallery experience where attendees were introduced to products and exhibits that surreptitiously and unethically invaded their privacy.

An attendee badge secretly identified each participant uniquely. Data such as: weight, age, marital status, home address and value, blood alcohol content, facebook pictures, etc. collected during the show was tied to that badge. At some locations, private data was displayed for anyone to see. Sounds and video from the bathroom were modified and displayed. An example product is "Face Torrent." It shows information about people in a bar setting. Users point the device at others and it shows the age, name, marital status etc. to the user. Unbeknownst to the user, the device also scans him and shows his info to the other tables at the bar. It makes improper assumptions about the user's tendencies in terms of social interests and possibly sexual orientation.

Conclusions

Unethical product creation was vibrant and exciting. Reflection and discussions, post show were not as effective.