Adam, Dale, David, Hanley, Mark, Matt, Tom

The secret lives of computer systems

A disparate network of everyday computer systems (phones, desktops, tablets, a diy arduino robot) enjoy casual interactions with each other such as conversation (via text-to-speech google translate api) and computer gaming. As a viewer approaches, the computers hide their intelligence; interactions stop, and the system glares at the viewer through its many representations of sight: a robot hand; a swivelling mobile screen & laptop; a webcam-as-eyeball, placing the viewer on the screen. The longer a viewer stays, the *more agitated the computers become.* Once all viewers move a distance away or turn their backs, the interaction between the computers resumes — it is clear that humans are not welcome in this space.

Research

- **Conceptual Research**
  - past projects, academic papers (e.g. cognitive effects of different implementations)
- **Technical Research**
  - implementation of past projects, current technologies
  - reliability, flexibility of different potential systems
  - what are the environmental requirements, if any (e.g. no sunlight preferred if kinect is used)
  - logistics (e.g. what different hardware/software options are possible, what parts are needed, what is their torque/volume/range/etc., what will they cost)
  - implement / propose-the-creation-of different objects solely with this research (e.g. under audio; a standalone arduino with a speaker and microphone that mimics everything you say, logistic requirements …), i.e. unreliant on the resulting research of other categories.

Specialties

- Tactility.
  - Matt
- Audio.
  - Hanley
- Graphics
  - Adam
- Human Detection.
  - Dale
- Robotic Communication.
  - Mark, Hanley

General group notes/questions/requests on each category.

- **Tactility / motors.**
  - explore methods of conveying robotic communication and moods through tactility and motors.
  - logistics for a robotic hand flipping someone off?
  - how to control air guns.
  - how to move a lazy susan with different amount of weights on top, what torque will be required and how much would the resulting type of motor cost?

    - is it viable to get a door to slam automatically? (haunted house)
    - paper bots are pretty cool - light, cheap.
    - how about rotating cameras? are there any cheap ones out there we can hack to rotate or change focus?
- **Audio**.
    - methods of conveying robotic communication and moods through audio.
    - can explore live robotic text-to-speech generation and how this can work on a standalone arduino board. Also, maybe how to get an A.I. system working with this (e.g.cleverbot).
    - the feasibility of actually doing sound design (think wall-e sound design, starwars creature-sounds) that simulates communication and/or mood (i particularly like chirp's sound design https://vimeo.com/45838932)
    - what about the feasibility of childish robotic replies? (e.g. you speak, and it responds back with "ne ne nene ne")
    - http://www.youtube.com/watch?v=WuKEZOPWitM&feature=fvw
- **Graphics**.
    - methods of personifying robotic communication through graphics.
    - what about projections onto 3d space, with obstacles? how could we achieve this?
    - can we logistically build a 3d led matrix - what form will this take?
    - how about mapping live projections onto people?
    - could we use raspberry pi for some of this stuff in the place of a pc?
    - Interesting representations of audio ; *phonaesthesia ; http://www.flong.com/texts/lectures/lecture_ted_09/* - skip to 4:30
- **Human Detection.**
    - potential hardware: directional mics, kinect, pressure sensors, proximity sensors, string, pulleys, flexi-sensors, motion detectors, (different tools for different scenarios). how do we mount or set up different hardware?
    - networks of cameras?
    - can we detect someones face to shoot darts at it or capture their expression?
- **Robotic Communication.**
    - Creation of technical server/client network so the robots/computers can communicate with each other.
    - how to achieve different representations of robotic moods?
    - what xbees are needed - where can they be bought - how long is shipping, which communication protocols should we establish?
    - what guidelines should all nodes within the network follow, from the most basic to most advanced system? (what have other projects implemented)
    - technically; are we implementing a hive mind, a central server, or a set of independent nodes with like behaviors.
    - are we simulating a hive mind or a central intelligence?
    - how do we facilitate access to user-mobile-phone?
    - Sending morse code across a harbour via arduino-controlled maritime lamps. Users can send their own msgs via twitter http://www.creativeapplications.net/webapp/cphsignals-connecting-copenhagen-neighbourhoods-using-morse-code/
- **General / Miscellaneous Stuff.**

- things that are still very up in the air like aesthetics, or similar projects that don't fit anywhere.
- viability of the project as far as providing a positive/entertaining user experience?
- (on describing the idea: "Why are they misanthropic?" - Emila)
- H: I also have a little-receipt printer working that can print out text.