Intelligent Toy Interfaces

Agenda

I. Project Overview

II. Work summary

III. System Design

IV. Ethical considerations

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Project Objectives

Create intelligent interfaces

For smart toy-robot interaction

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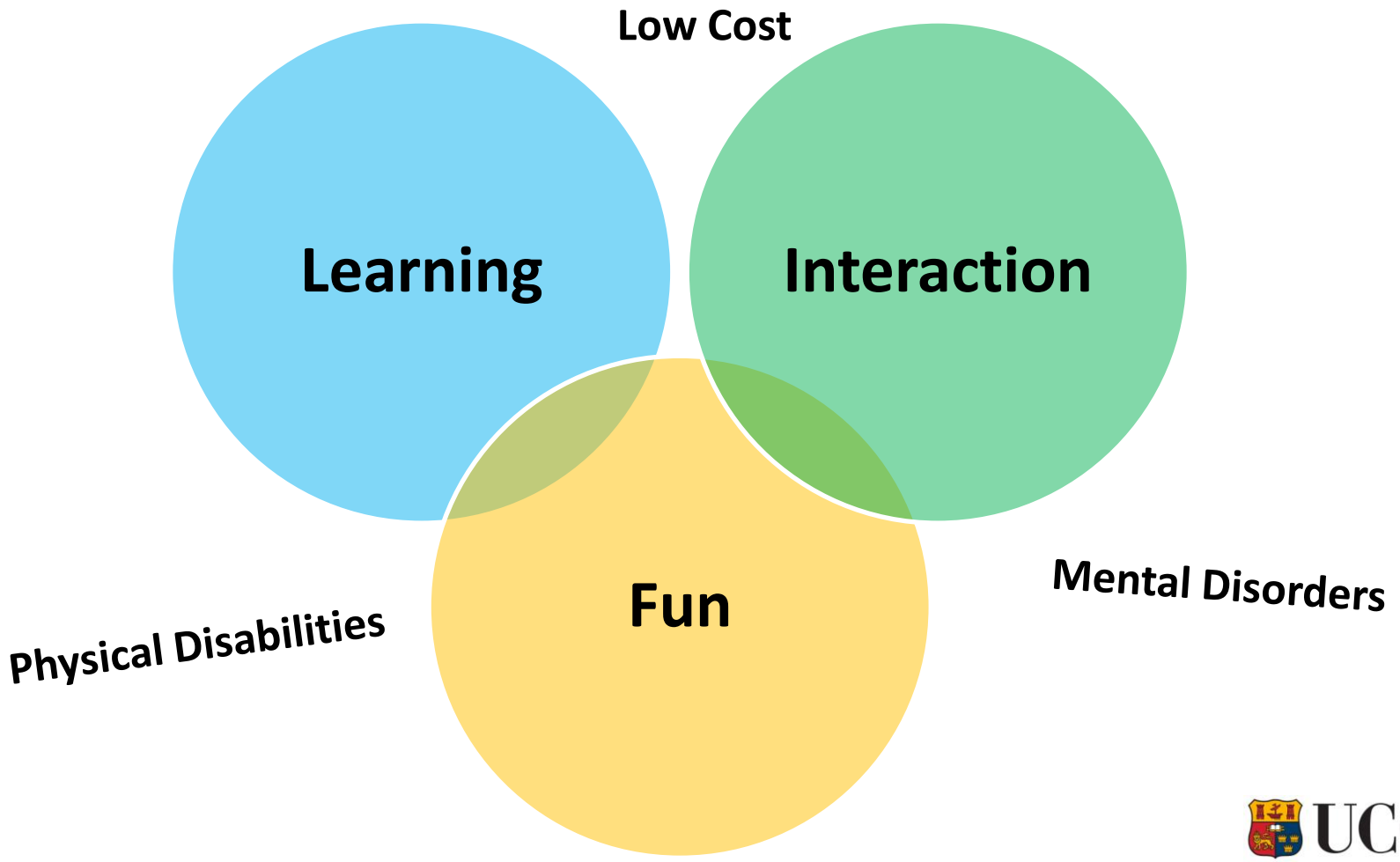
What do we mean?



How we will do it?

NAO Robot

Hex-Bugs

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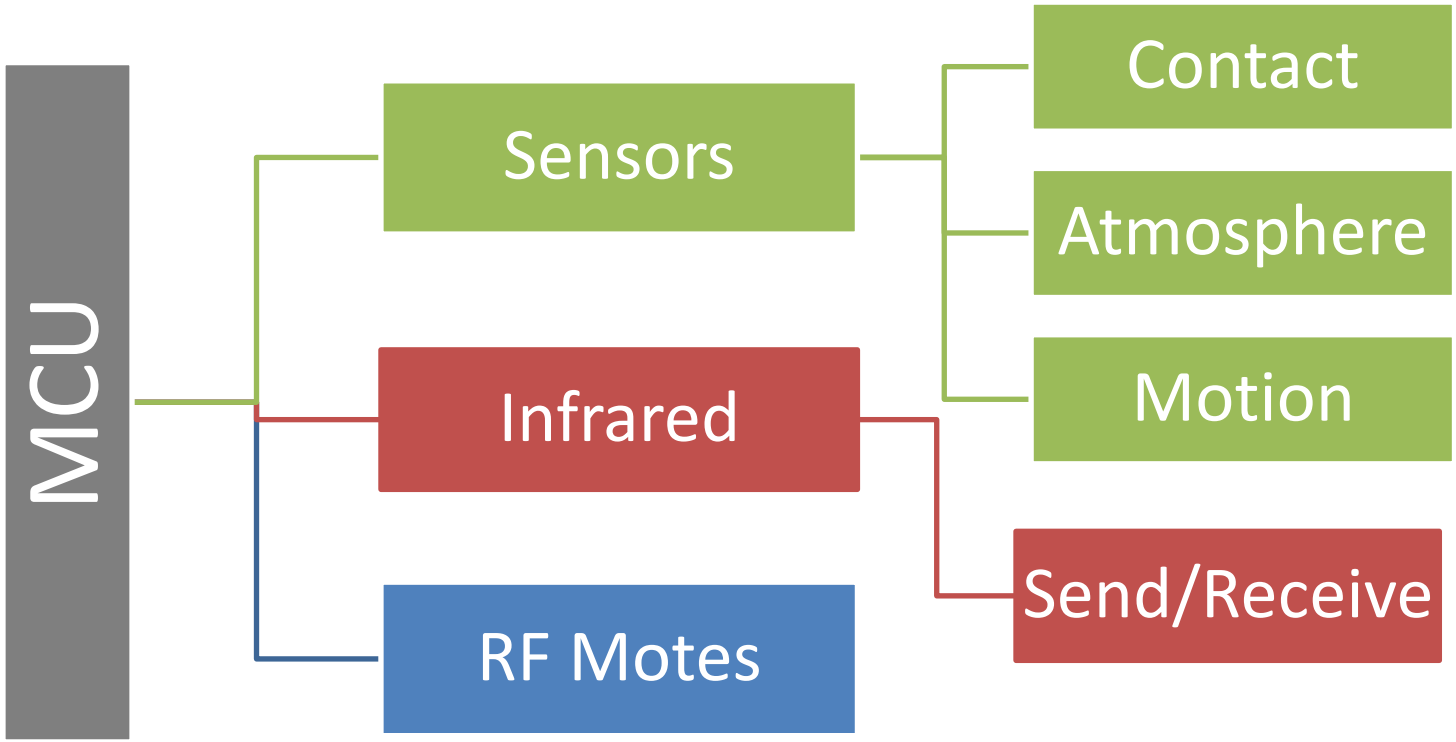
How we will do it?



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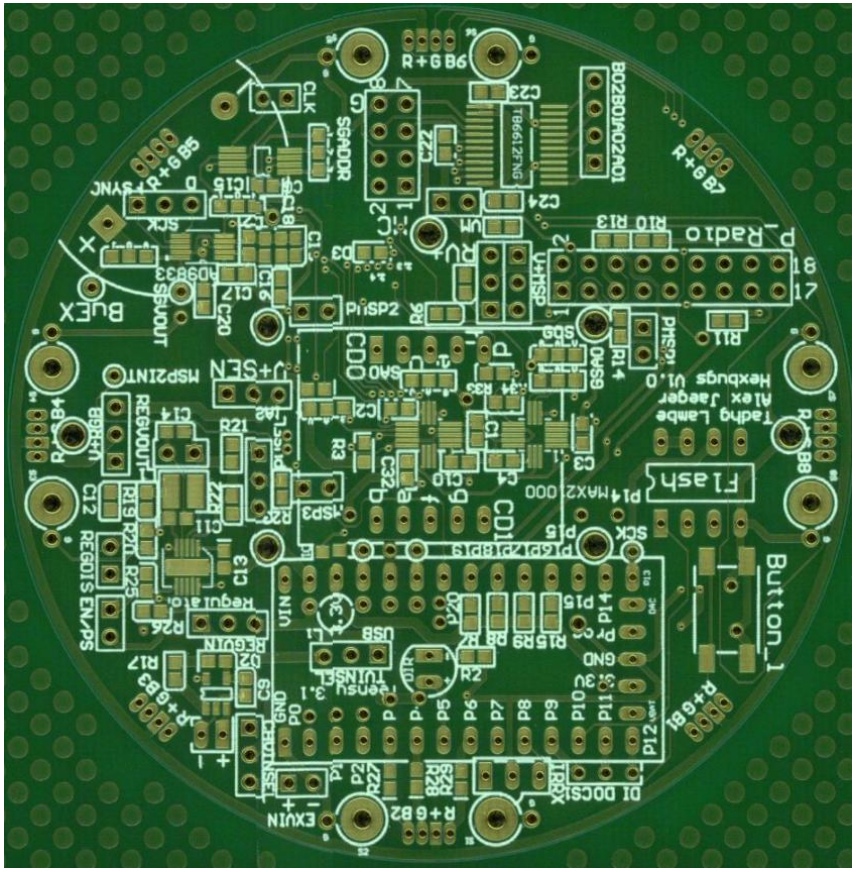
Work Completed



- Power and MCU schematics designed.
- PCB layed out + fabricated.
- Hardware drivers written for sensors (I^2C).

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Work Completed

python

- Learned about NAO,
- Used Python to access the NAO API
- NAO with joystick
- Infrared communications

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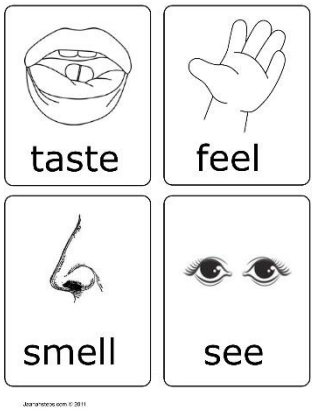
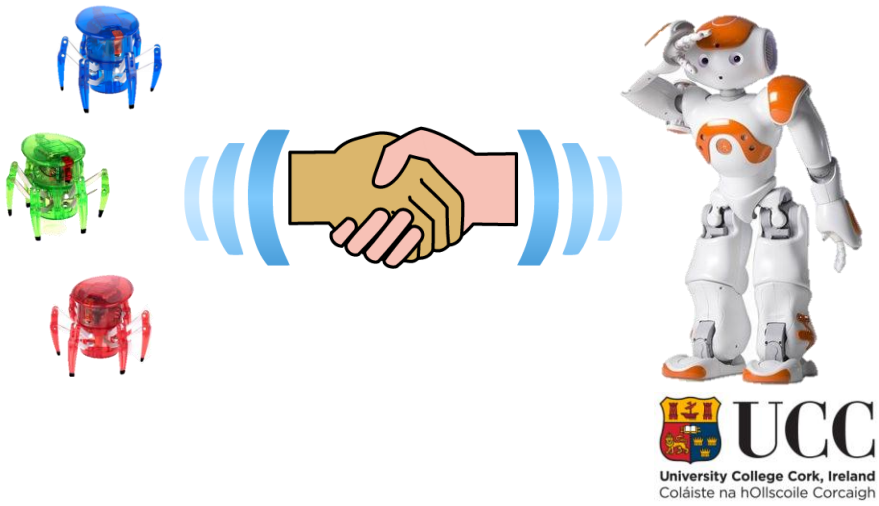
System Design

- Give affordable toys senses
- Reaction to senses
- Enable collaboration
- Interact with NAO





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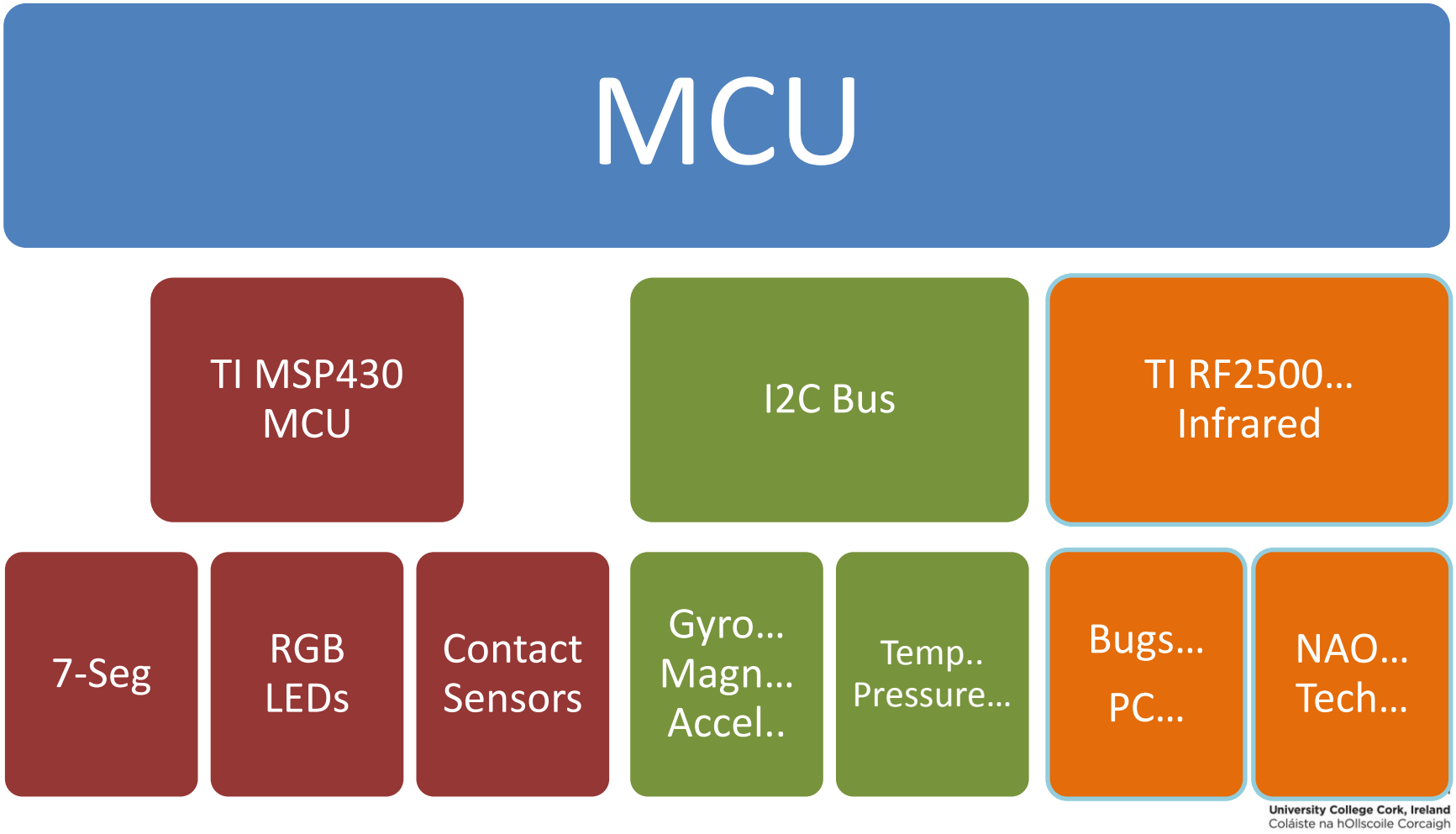
HexBug Design



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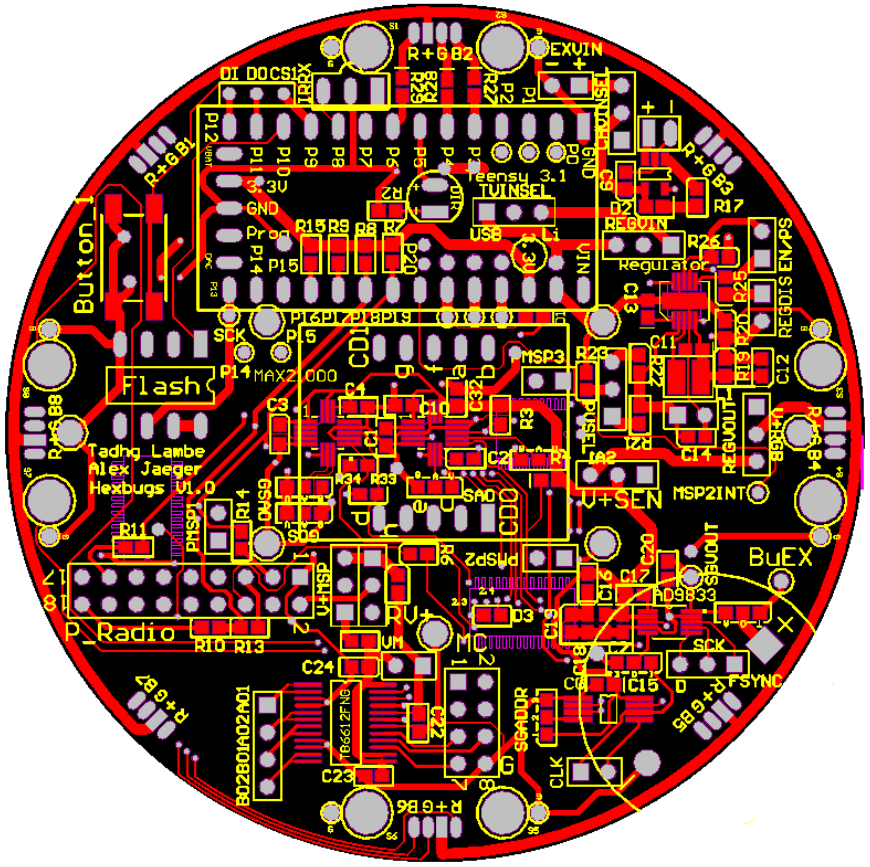
PCB Design


Button
Flash
Tadhg Lambe
Alex Jaeger
Hexbugs V1.0
P_Radio
Teensy 3.1
TWINSEL
REGVIN
Regulator
MAX2000
MSP2INT
BuEX
FSYNC
SCK