



LIMBO

limb in motion by others

Ermal Dreshaj

Sang-won Leigh



Inspiration

Neuromancer (Dude Shes Like In A Coma)

A special service at a brothel Molly used to work at, where prostitutes are in comas and mechanically controlled like puppets by a computer. Riviera does a performance piece based on how her tenure as a meat puppet went horribly wrong. The service is first described in "Burning Chrome."



Inspiration

Avatar Movie

and countless other sci-fi films with
avatar/mechanical puppet control



Inspiration

Daito Manabe

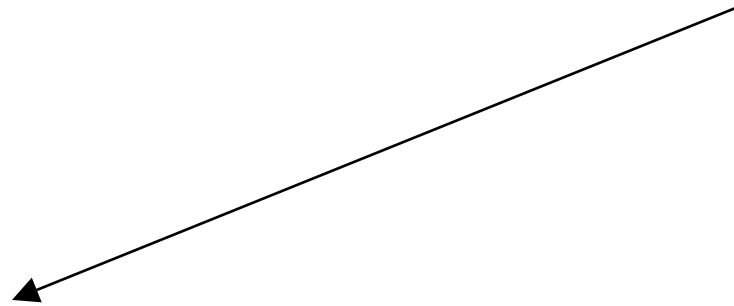
Electric stimulus to face using
audio -> electrical signals



Concept

Human-to-human remote control

Guide Hand



Dupe Hand



Theory



Guide

- Hand is detected using CV techniques and depth sensing camera
- Grasp intensity is detected and sent digitally to a micro-controller



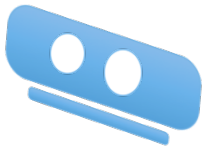
Dupe

- Electrodes attached along grasping muscles
- Grasping is actuated via **FES** connected to output of microcontroller

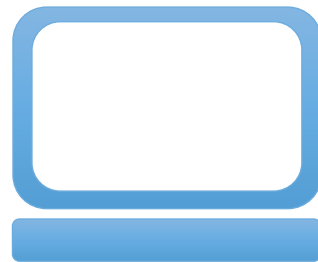
Implementation



Guide



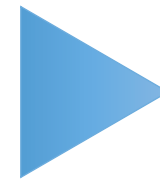
Depth Camera



Processing



Microcontroller



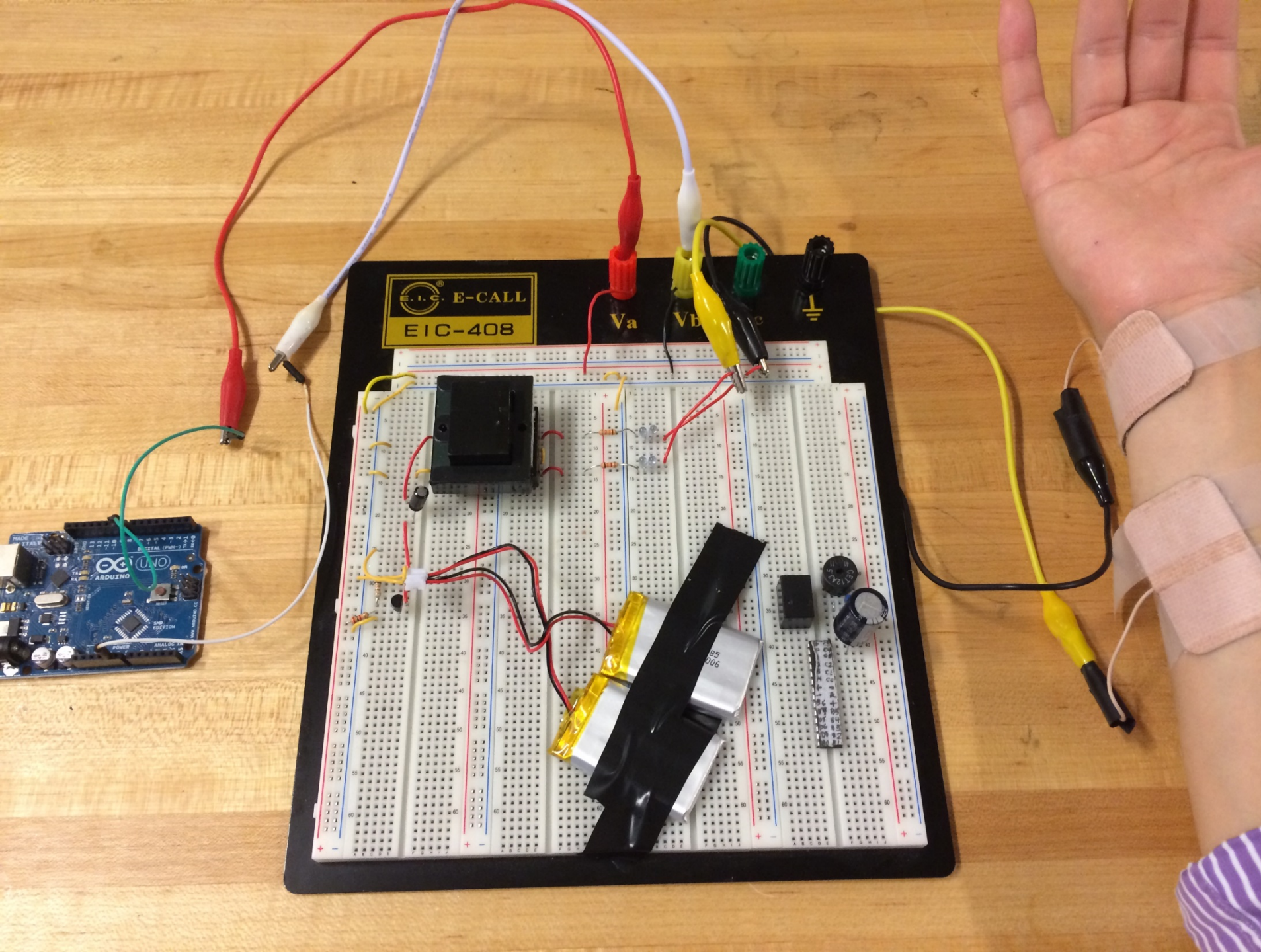
AMP



Transformer



Dupe



Final
Circuit

Demo

Future



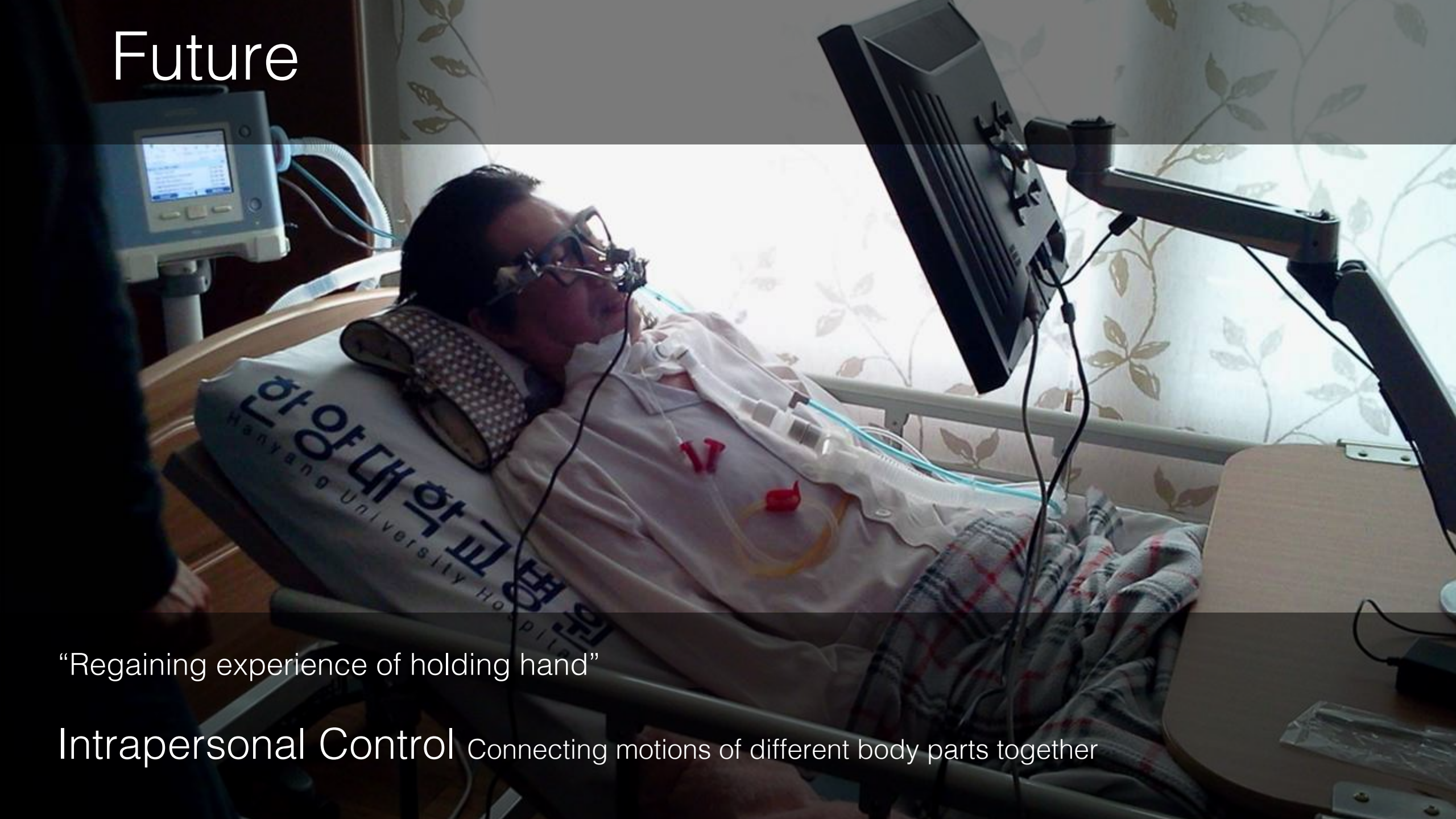
“How can I drive without thinking about leg control”

Intrapersonal Control Connecting motions of different body parts together

Future

“Regaining experience of holding hand”

Intrapersonal Control Connecting motions of different body parts together



Future



“How can I assist a disabled relative from my work?”

Syncing two people's body motion together **Interpersonal Control**

Future



“?”

Syncing two people's body motion together Interpersonal Control



THANKS
limb in motion by others

