


THE Port 2016 – Pier58

**Music and Gaming for
Physiotherapy:
Introducing
SoPhy (& HaPhy)**





Our problem

It is a challenge to stick to your physiotherapy program...

- Boredom
- Lack of feedback
- Social Isolation

... but physiotherapy is the one of the most powerful tools for physical health.



Our solution

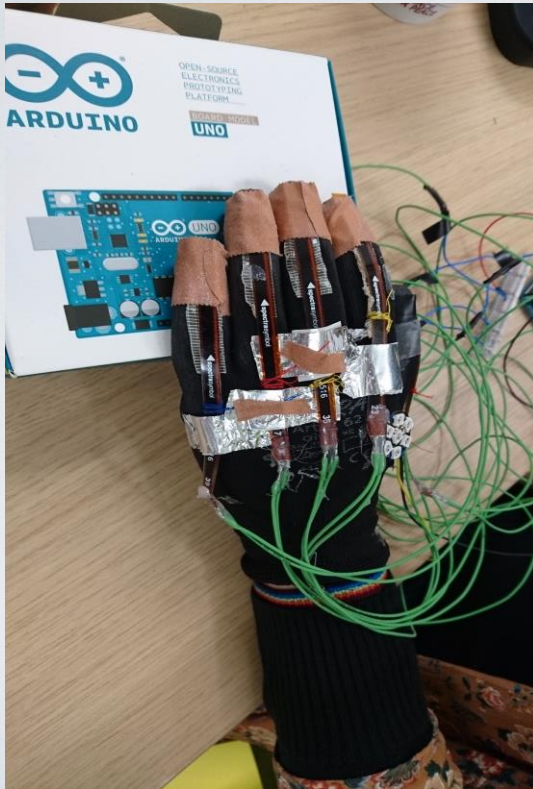
Develop:

- **SoPhy:** A glove that converts your movements into music
- **HaPhy:** A smart ball that provides haptic feedback, and sound

Why?

- Hacking physiotherapy to promote quality of live through the lifespan

SoPhy



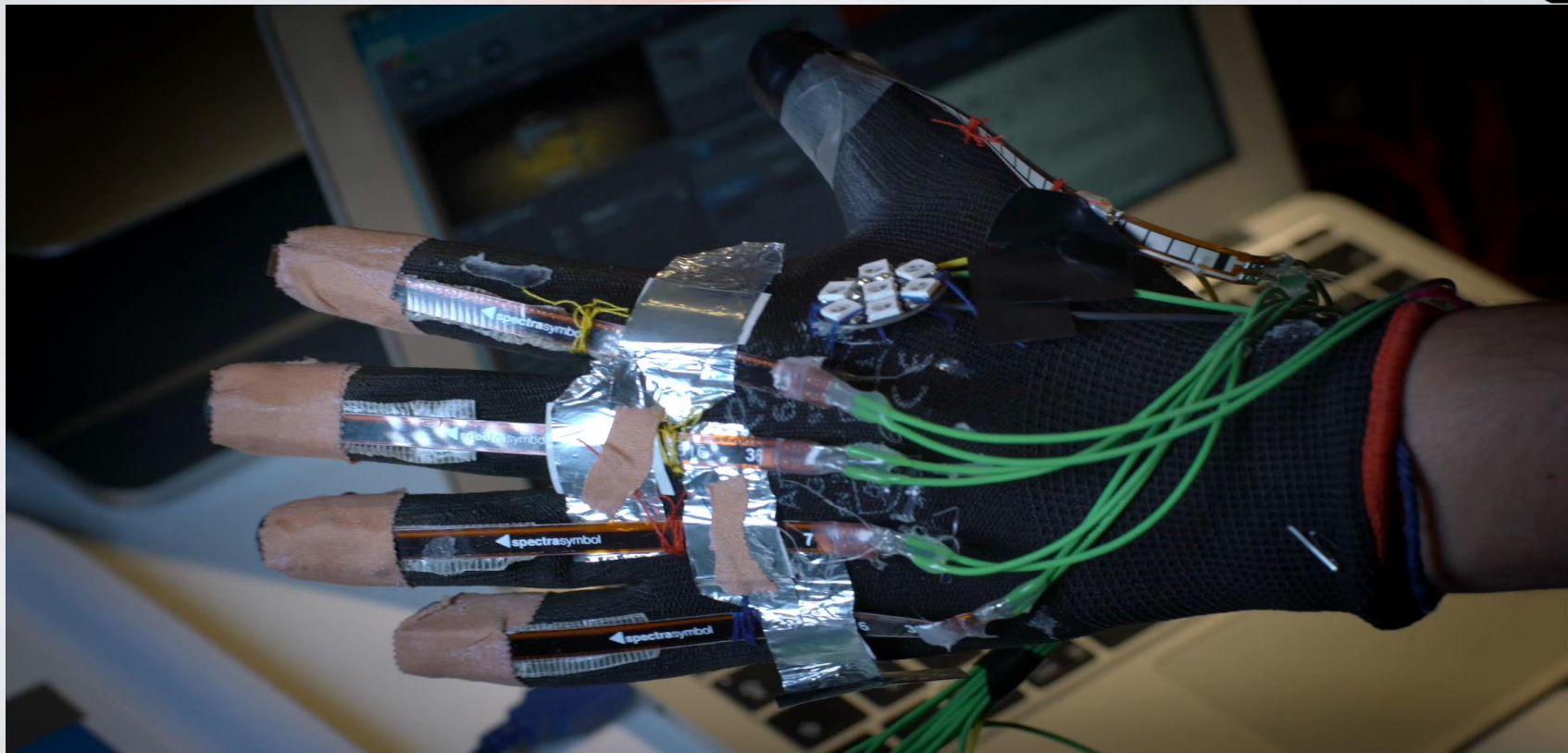
Demo of SoPhy

Turns finger movement into music

- Enhancing the engagement with the exercise through art
- Real-time feedback and track performance over time
- Can inform physiotherapist of patients progress

Demo of SoPhy

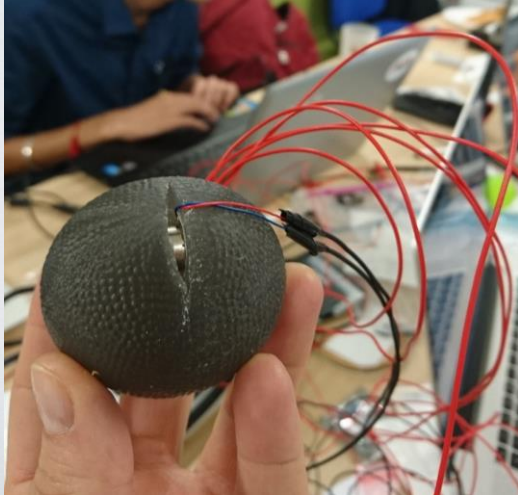
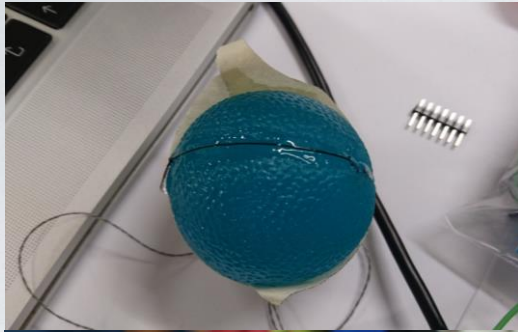
SoPhy



SoPhy: Development of gamification



HaPhy

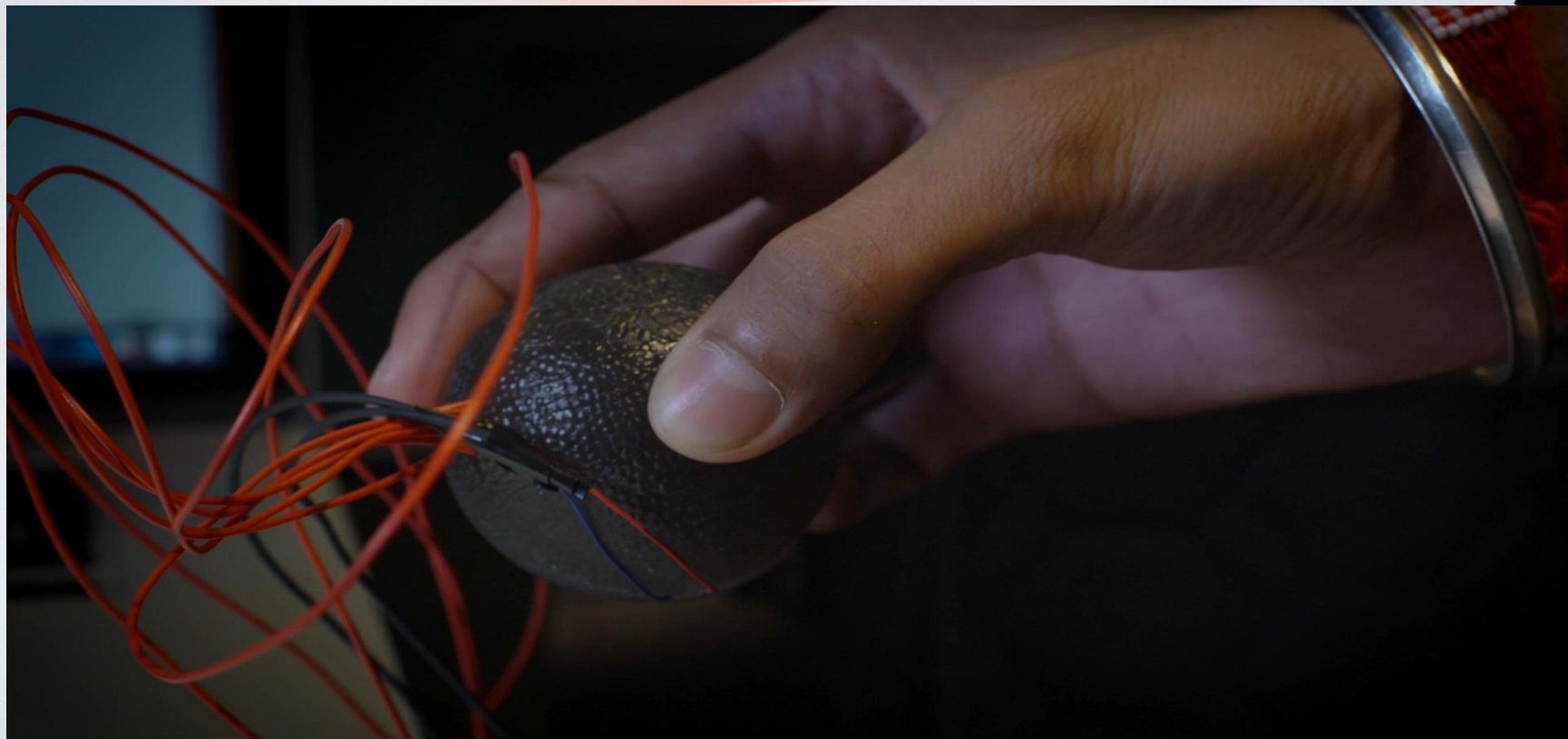


2 haptic “smart balls”

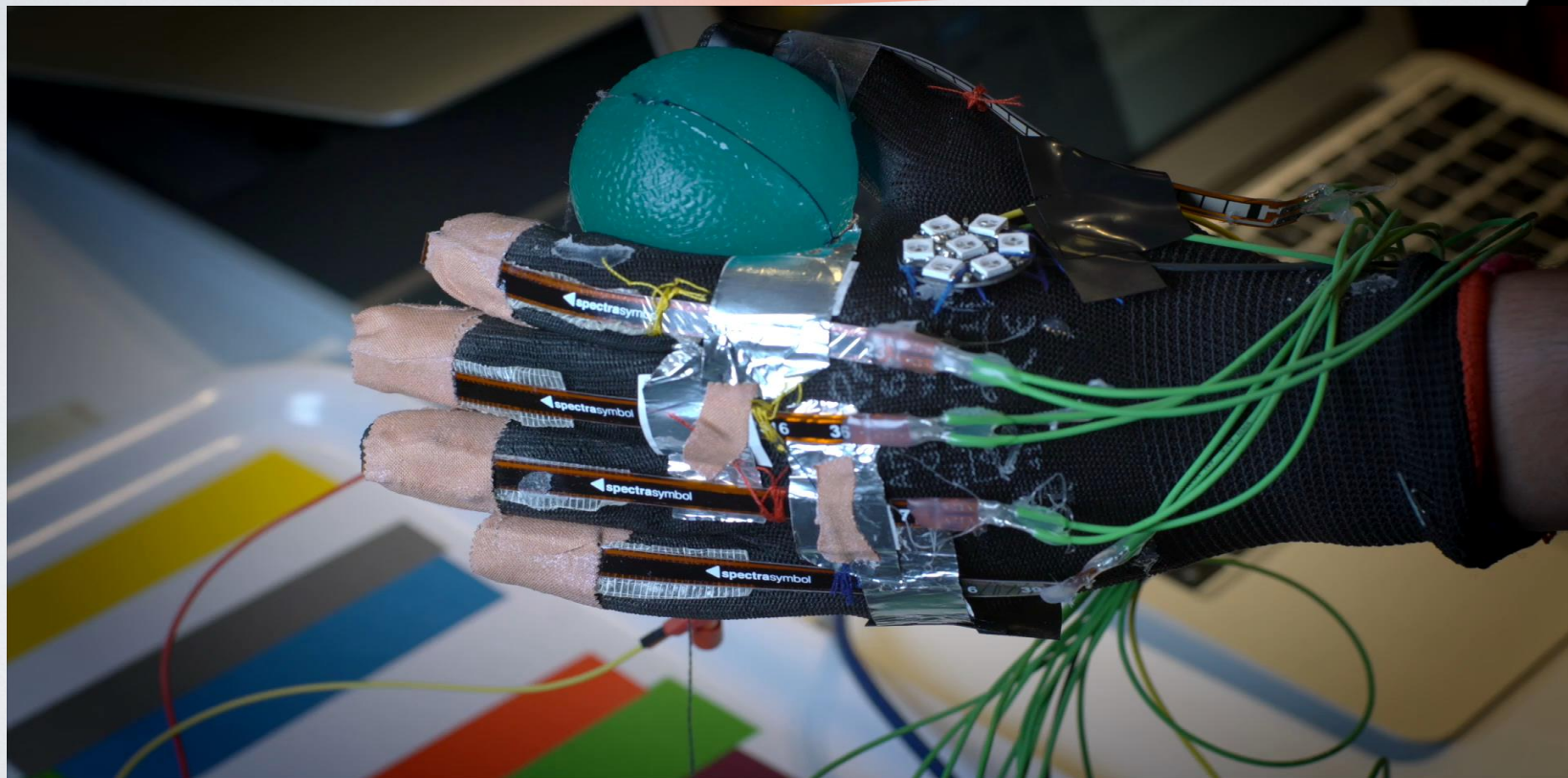
- Measure ball squeezing
- Measure ball orientation
- Provide vibration
- Control volume and tempo of SoPhy

Demo of HaPhy

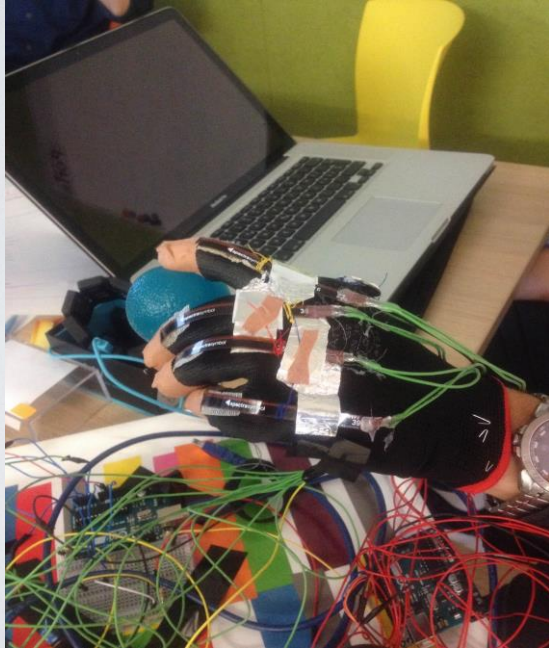
HaPhy



SoPhy & HaPhy: The final prototype



Sonification and Gamification for Physiotherapy



- Technology and art to revolutionise physiotherapy
- Creating music from movements and gamifying experiences
- Providing smart physiotherapy at home and in remote places around the world

The Future...



- Upgrade to a cheap, mobile self contained system
- Networking and machine learning to provide physiotherapy to isolated communities around the world

Our Journey, and thank you!



A stylized graphic of a flashlight beam pointing from the right side of the frame towards the left. The beam is a gradient of orange, starting with a darker orange at the flashlight and fading to a lighter, almost white, orange at the left edge. The word "END" is written in a bold, dark grey, sans-serif font in the center of the beam. The flashlight itself is a solid black silhouette on the right edge, with a small orange rectangle representing the lens.

END

ADJUSTMENTS & NEW IDEAS

SoPhy and HaPhy



UPGRADE





FINAL GOAL

Working prototype

Develop:

- SoPhy: Convert Movements in Music
- HaPhy: Haptic feedback from a smart bal

Why?

- Revolutionize physiotherapy

AND...

...LOOKING FORWARD TO MORE FUN!

