

Week 4 Demo 1

MKI59: Robotlab practical
November 21, 2018

In this demo you need to come together as a group and put together the stuff you have been working on the past 2 weeks, making it into one beautiful, flowing symphony of Nao behaviour! **You don't NEED to implement it in the interface, but if you can, then implement it such that the procedure starts with the click of a button.**

The demo requires:

- 1 Nao robot with a functioning camera and microphone
- 1 laptop that runs the code
- 1 target human actor
- 1 large sticker to put on the target human's forehead
- 2 distractor human actors
- 1 A4 paper
- tape
- watch the linked scenes from the movie

Basically you will re-enact the Terminator 1 movie [arrival](#) and [clothing](#) scenes.

start The Nao is placed, turned on and sitting, in in the corner of an open space where on one end there are the actors, sitting about 1m apart from each other. The corner of the open space is indicated with white A4 taped on the floor. See Figure 1 for how the setup must be. Target human actor says **READY!**, such that the Nao can hear it, and the Nao stands up. Target human actor says **ACTION!**

arrival

1. The Nao eye LEDs turn off.
2. The Nao goes into a compact, kneeling position. The position has to be recognizable, but not precise.
3. The thunder sound plays on its speaker.
4. The Nao slowly goes from the kneeling position to a standing position.
5. The Nao slowly rotates its head upwards.
6. When the Nao's head reaches the leveled position, the eye LEDs turn on white color.
7. On the laptop, the terminator vision turns on.

8. The Nao looks around to locate a group of 3 faces. Faces should be indicated on the terminator vision by a bounding box.
9. Once located, the Nao points to the middle of the group and says **start process acquiring apparel**.

clothing

1. The Nao walks towards the group of 3 faces and stops about 1 meter in front of the group.
2. The Nao turns to each of the human distractors and approaches until only their face is on the terminator vision.
3. It looks at them, moving its head up and down slowly.
4. On the terminator vision it should show a text with **NOT A MATCH**.
5. The Nao makes a disapproving mechanical noise.
6. Finally the Nao looks at the target actor, looks the target actor up and down.
7. On the terminator it should show a text with **MATCH**.
8. The Nao's eyes turn RED and it says **I need your clothes, your boots and your motorcycle**.
9. The target actor laughs loudly and touches the Nao's foot bumper and head, one at a time.
10. When each place is touched, the Nao says **OOF** and **OUCH**, respectively.
11. On the terminator screen we see some kind of distortion filter, see Figure 2, whenever a bumper is touched.
12. The target actor says **CUT!**.
13. The Nao says **that went well!**, LEDs turn white, terminator vision turns off and the Nao walks back to the middle of the empty space and sits down.

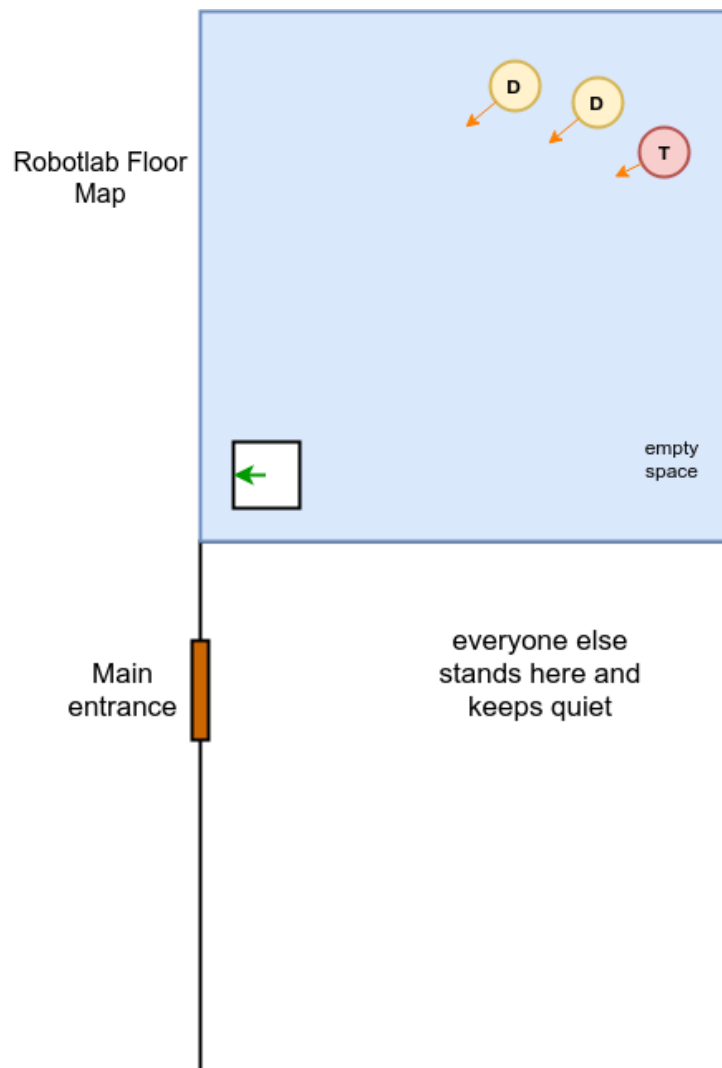


Figure 1: Positions setup.

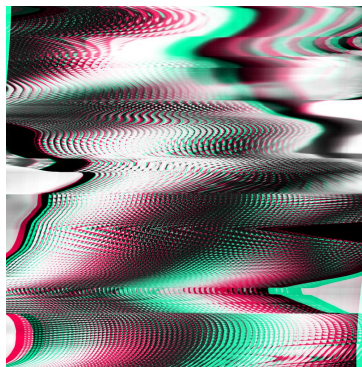


Figure 2: Example distortion.