CSE 91: TAC Assignment

January 7, 2009

Feel free to interact with TAC in groups of up to 4. Each individual is responsible for their own write-up.

Go to the 4th floor of the CSE building (EBU 3b) and find the automatic cameraman (TAC) installation across from the elevators. Read the webpage displayed about TAC and its usage instructions. Call the camera to look at you (you may have to speak up a bit). The camera should look in your direction. The face detector will be active and it will try to find your face (denoted by a square on the video in the upper right screen). The camera should center on your face.

To activate a video recording, place your hand over the small red square displayed on the video in the upper right display. Follow the on-screen directions taking your hand out and then back into the square. Stop the video by placing your hand over the small square again. Shortly thereafter you should see your video on the webpage displayed in the lower left screen.

The url of the website is:

`http://seed.ucsd.edu/~cameraman/video_recordings/`

Write a brief response to each of the following questions (no more than a few sentences per question).

1. How good is the face detector? If you cover your face with your hands will it still find your face? How about if you pull your shirt up over your mouth? Experiment a bit and explain how good you think the face detector is.

2. Claps are pretty easy for TAC to locate. Whistles are pretty difficult. Make sure TAC is in its "resting" state (not recording a video, and not finding anybody's face), then make a clapping sound. Are there parts of the room where TAC doesn't point well at the sound you are making?

3. On the upper-left screen is a "bubble" popping game. Move your hands so they go over each green square, the squares should disappear as you move your hands in them causing new squares to appear! What kinds of games/applications do you think could be created based on this type of bubble-popping functionality?

4. Imagine that we have solved all of computer vision and audio processing and can know exactly what you are saying, what kind of movements you are doing, what kind of expression is on your face, what clothes you are wearing, etc. Given this, what kind of applications do you think would be fun on an interactive display like TAC? How do these application ideas change when TAC is used in an office setting versus in a home setting? (Feel free to answer in more than a few sentences if needed).

5. What's the name of the video you recorded and what were you wearing?