

Coursework 2- Phase 3: Coursework Preparation

Aims

The aim of this practical session is to help you with the conceptual design of Phase 3- coursework 2. What you are required to do is to consider and try to provide answers to the following question.

Questions

Questions that you should consider here include:

- 1) What is your project about? Write a few sentences describing the purpose of the system.
- 2) What aspects of the environment you would like to sense? For example, users' actions (e.g. movements, position, trajectories, velocity, acceleration, orientation etc.) and/or the elements (e.g. sounds, light, wind, humidity, temperature). You might want to have a look in the following site to see what sensors are available, for instance see Active-robots sensors. There are other similar sites available.
- 3) Make a list of all the inputs of your system.
- 4) Make a list of the outputs (i.e. sound, images, videos, touch, and force feedback).
- 5) Think about the system as a whole, how do the inputs affect the outputs (e.g. the loudness of environmental noise captured by a microphone will affect the volume of the warning audio that the system will produce through the loudspeakers as well as the image displayed on the wall using a projector), where will the sensors be placed (e.g. on the walls, floor, the ceiling, other objects in the environment etc.).
- 6) It might be useful to draw a flowchart to show all the components of the system and how they are linked. You can create flowcharts using Microsoft Word, or other free apps for example Ed Graph Editor. You can also create a sketch or use image processing tools (e.g. Photoshop) to demonstrate the physical installation of the system in the environment, for some examples see figure 3- 7 in last week's practical handout, i.e. practical 9.