



Interacting with ambient displays

How ambient displays affect behaviour

Yvonne Rogers:

The idea behind the clouds project is an investigation into ambient information displays and how we can use these to change peoples behaviours and in particular we are interested in changing peoples behaviour at the point of decision making.

Clouds is an Open university research project funded by the EPSRC.

William Hazlewood:

And you can see that a large typical display has been set up that is giving different feeds of information depending on what they want choose to put on it but also in the space right up in this area will be our large ambient display. Our large ambient display is going to also be pumping a constant piece of information but the piece of information will be much smaller. Our ambient display is going to simply be telling you, are people using the stairs or the elevator? The more that people use the elevators the higher the orange cloud of spheres rises and the more people that are using the stairs the higher the grey cloud of spheres is rising . So walking in the building someone can quickly glance and have this single piece of information given to them or not whether they wanted it or not .

William Hazlewood:

As people enter in to the Jennie lee building the first thing that they are going to notice is right up in this air space there is going to be this large collection of spheres hanging.

This is the first point of decision that they make whether they are going to wither go in to the central atrium or either head to the upper floors or in to other offices.

As they veer in this direction the floor sensors will detect that they are going this way and that's when the LED's will begin to light up along the carpet.

The pattern of motion will be acting as a sort of subtle lure suggesting if you are going to go the upper floor perhaps you should take the stairs. As they walk in this direction towards the stairwell they will get a sort of reward in the sense that the LED's will begin to spark up faster and faster, but if they step off the path in this direction towards the elevator the entire series of LED's will change in to a red glowing field. As that pulse of red suggests that the carpet is bit upset that you didn't take its suggestion to take the stairs and it's a bit disappointed that you are taking the elevator.

William Hazlewood:

So there is a series of strategically placed pressure pads throughout the building. We have these pressure pads at the beginning of every stairwell and at the entrance to every elevator, and this is simply taking a counting of the number of steps across this threshold, so if someone goes up the stairs we add one and if some goes up the elevator we add one.

This is a visualisation showing what we have been getting from our pressure pads throughout the building, What we are using this for is to compare the different peoples of usage of the stairs vs the lifts and also as a way to try and get an early idea of what our structure is going to look like

Susanna Hertrich:

Hello I'm Susanna Hertrich I am an Interaction Designer and I was asked to come up with the concept for the project.

The project was about how information could play a role or how technology could play a role in side architecture to make people to do certain things.

Of course starting with the brief and talking to the people involved in the project like sharing ideas. So the second step was identifying these two spots in which the installation could take place and also thinking what is feasible like in the entrance. The lights on the floor was inspired by these carpet tiles that were already there - so why not use these tiles and for the atrium which is so high and there is all the space from the ceiling that is not used.

And the most important bit was of course that these are functioning pieces and that are communicating what they should be communicating. So one part of this matrix of spheres was supposed to represent the lift and was supposed to represent the stairs. The easiest way to do that was choosing two colours, to different clouds. Keeping it on this very functional level but trying to add a little more of let us say an aesthetic, poetic level to not just make it informative but also very pleasing to engage with.

William Hazlewood:

So one of the things we did is we did some very low fidelity prototyping specifically with this to try and explain what it would look like to have a cloud made of particles that would rise above the other and then throughout the day change shape so that one came either close or either above or below to give different pieces of information.

This is the second model I think most of the other model was eaten on the day it was made.

There is a sweet spot that we are looking for there is information that that is too aggressive you can't help but see and there is information that is too subtle you never notice it is there.

So we are really look for the best way to design information that is useful but non distracting and non intrusive. The question is how do we do it? Or how does the large atrium outside tell you a piece of information that is useful to you without just slapping it on another screen and hanging it in the environment.

So there are two things that we need to find from this project. One is whether or not people are capable of receiving the information in the way we are delivering it?

Second thing we need to find out is; How they are using that information? So if we tell a bunch of people that their colleagues are all using the elevators will they start using the stairs? If we see this change in behaviour happen we know they are receiving the information and we know in some way the display is effective.