3D visualisation and interactive design week 8

Aims of this chapter are to: Explain what is meant by the problem space.

Explain how to conceptualize interaction.

Describe what a conceptual model is and how to begin to formulate one.

Discuss the use of interface metaphors as part of a conceptual model.

Outline the core interaction types for informing the development of a conceptual model.

Introduce paradigms, visions, theories, models, and frameworks informing interaction design.

interaction designers begin by doing user research and then sketching their ideas. (wireframes)

having a clear understanding of why and how you are going to design something.

learning to identify, understand, and examine the issues.

Don’t start on the nuts and bolts of the design i.e. multitouch, speech, gui.

certainly necessary at some point to choose which technology to employ and decide how to design the physical aspects, it is better to make these kinds of decisions after articulating the nature of the problem space

design team thinking through how their ideas will support or extend the way people communicate and interact in their everyday activities.

identifying usability and user experience goals is a prerequisite to understanding the problem space.

core questions to aid design teams in this process: Are there problems with an existing product or user experience? If so, what are they? Why do you think there are problems? How do you think your proposed design ideas might overcome these? If you have not identified any problems and instead are designing for a new user experience, how do you think your proposed design ideas support, change, or extend current ways of doing things?

Common ground within the design team help establish terms in which confusion and misunderstanding can be reduced.

Open-mindedness allows for all aspects to be focused upon and not tunnelling to specifics.

Using a conceptual model which users are familiar with such as online shopping and a shopping mall, with such things as section which would be aisles and shopping baskets/carts.

Interaction types:

Instructing: user issues a set of instructions to the system. i.e. typing in a command, selecting from a drop down, pressing a button or using a combination of keys to perform a function.

Conversing: where users have dialog with a system i.e. typing in questions and getting a reply from the systems.

Manipulating: where users interact with a digital or physical entity. i.e. opening and closing or relocating.

Exploring: where users move through a physical or digital space. i.e. VR, sensor based physical environments such as smart rooms.

it is possible to describe the specific domain and context-based activities users engage in, such as learning, working, socializing, playing, browsing, writing, problem-solving, decision making, and information searching.

The benefits of direct manipulation include: helping beginners learn basic functionality rapidly; enabling experienced users to work rapidly on a wide range of tasks; allowing infrequent users to remember how to carry out operations over time; preventing the need for error messages, except very rarely; showing users immediately how their actions are furthering their goals; reducing users’ experiences of anxiety; helping users gain confidence and mastery and feel in control.