CSC 406 Lecture Series (6)

Visual Representation

How can you design computer displays that are as meaningful as possible to human viewers? Answering this question requires understanding of visual representation – the principles by which markings on a surface are made and interpreted.

Typography and text
Most screen-based information is interpreted according to textual and typographic conventions, in which graphical elements are arranged within a visual grid, occasionally divided or contained with ruled and coloured borders.

Maps and graphs
Basic diagrammatic conventions rely on quantitative correspondence between a direction on the surface and a continuous quantity such as time or distance. These should follow established conventions of maps and graphs.

Schematic drawings
Engineering drawing conventions allow schematic views of connected components to be shown in relative scale, and with text annotations labelling the parts.

Pictures
Pictorial representations, including line drawings, paintings, perspective renderings and photographs rely on shared interpretive conventions for their meaning.

Node-and-link diagrams
Node and link diagrams are still widely perceived as being too technical for broad acceptance. Nevertheless, they can present information about ordering and relationships clearly, especially if consideration is given to the value of allowing human users to specify positions.

Icons and symbols
The design of simple and memorable visual symbols is a sophisticated graphic design skill. Following established conventions is the easiest option, but new symbols must be designed with an awareness of what sort of correspondence is intended - pictorial, symbolic