

# About New Media

The tools and work methods of art and design are changing, and digital technology is an agent of change in this development. But more than that, the content/subject/target of design is changing as well. Design is moving into a new realm: a virtual digital reality where the task is to design more or less intelligent logical objects and their interaction with the real world and each other. The new media, as we see it, is this new digital world that will function as the most powerful means of communication between people, but also with the technological environment and all kinds of systems and organizations in the society.

The computer is a metatool that can manipulate anything that can be expressed as digital information and it is becoming an integral part of every other tool or device, as the provider of intelligence or programmability, the brains of the machine. But because processing information is easier and cheaper than operating machinery and transferring information through wires is more economical than physical traffic, manufacturers have been very motivated to find ways to get rid of as many physical parts as possible. So we have typewriters, video recorders, televisions, and telephones that can all live inside a standard computer, without any new physical parts.

The actual progress and the many implications of this development are among the things that the MA in New Media course wants to study and speculate with. One of the interesting implications for product design is that to develop totally novel products with unseen functionality you do not necessarily have to build new machines any more. The implementation can be done in software ♦ design ideas are organized into software systems that consist of digital information.

Virtual reality is a term that has different meanings to different people, just like multimedia, new media or interactive television. I want to think of it as a general term that describes an alternate environment that does not appear in the same physical reality as the one we occupy but lets us deal with it and objects in it according to some set of rules and behaviour that are familiar to us. Sometimes the interface technology lets you visualize it on screen or with a headset, sometimes you can manipulate objects with a mouse and sometimes with a dataglove.

New media is all about virtual reality; most of the time we try to emulate physical world things in the digital domain, partly because we need the functions, partly to make the new digital implementations of old products comprehensible. For example, a word processor is based on virtual reality: the virtual text you write on a physical keyboard appears on a sheet of virtual paper on a physical screen. Because of this emulation of the physical world it is easier for you to understand and manipulate the text so that it fits the page when you actually print it (the printer transforms the virtual page into a physical one). But even when we abandon emulation and build something totally new and original, the set of rules that govern any digital world make it a virtual reality. Virtual reality is another dimension and it is just as real as the physical reality. Sometimes the objects inhabiting it are being bought and sold just like physical objects, for example. We are already familiar with interacting with virtual things in dreams, play, games, and stories, for example, and that is why the same principle works so well in communication with the computer.

A virtual reality inside a machine may be a very hostile place for a human being for many reasons. The products are complex, hard to use, and ugly and they do not communicate using human language. Not to mention that in general they are not intelligent, they do not forgive your mistakes, and they do not learn. Virtual worlds need to be designed like all artifacts and how good the design is depends on the same factors as in any other design discipline. Current design has happened mostly as a side effect of technological development - the things that exist have to appear as something. The virtual world poses a big challenge for designers, because to master its design they have to learn a whole new universe with its new laws of nature and new kinds of objects, languages and interaction. Of course a whole new universe also gives you fantastic new possibilities, if you are open to them. It is important that artists and designers start to participate more in the shaping of the new media that is becoming so dominant in our lives.

The digital world is about software; the hardware is just an enabler, which acts as the interface, storage and communications channel and it is becoming more and more transparent. It is obvious that we can not train and hire a servant programmer for everyone. Instead the industry is looking for new paradigms for programming that enable everyone to tell the machine what to do. Software is developing towards independent objects that can be used as intelligent Lego pieces. Today, multimedia authoring, CAD and page layout are new forms of programming that designers do use; maybe we will get intelligent agents in the future. But nevertheless, I believe that many artists and designers who work in the digital domain will do programming in some sense, because good design requires that understanding and once you have that, actual programming is just like putting the pieces together.

