VIRTUAL INTERFACE TECHNOLOGY

William Bricken and Tom Furness
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A three day short course in virtual reality technology, designed for application engineers.

SECTIONS

Morning, Day 1

Intro to Virtual Interfaces — Furness
Definition of virtual interfaces, baseline concepts, how they work, principal components.

Historical Perspectives — Furness
Review of the evolution of virtual interfaces, including research findings.

Afternoon, Day 1

Human Interface Considerations — Bricken
Review of the principals of good human interface design, including the matching of sensory, perceptual and cognitive capabilities of the human to the display, processing, and programming of the computing engine.

Human Factors Issues — Furness
Detailed review of human factors issues associated with the design of virtual interface hardware and software.

Morning, Day 2

Virtual Interface Hardware Considerations — Furness
Discussion of the design, operations, and limitations of the devices and components of virtual interfaces, including visual, auditory, and tactile displays and head, eye, and hand input transducers.

Afternoon, Day 2

Virtual Interface Software Considerations — Bricken
Design issues regarding the programming of virtual interfaces and the creation of virtual worlds.

Morning, Day 3

Applications considerations Bricken/Furness

Application concepts for virtual worlds, including use in education/training, medicine, scientific visualization, design, entertainment, and prostheses for the physically disadvantaged.

Afternoon, Day 3

Social & Ethical Considerations Bricken

The implications of virtual interface technology and virtual reality for society and for civilization as a whole.

Future Developments Bricken

Where is the technology going? Pervasive problems to be solved. How the world industry is forming.`

Wrap-up & Conclusions Furness