

## About virtual spaces - Jean-Marc Gauthier - Fall 2004

I have found ways to express myself as a writer, moviemaker, photographer, and architect but still felt the need to communicate ideas that did not fit into any of these domains. New possibilities for expression emerge in the design of virtual spaces. Designing virtual spaces helps me convey ideas in ways that cannot be expressed the same way in writing, movies, photographs, architecture or other visual art. Surrealist artists from the 1920s (Man Ray, Marcel Duchamp, Louis Bunuel) felt that movies could tackle situations or emotions that could not be depicted in writing or in the traditional visual arts of their times. For similar reasons, topics covered in this book stretch beyond the strict domain of virtual spaces. They relate to larger concepts like the future of cinema, the place of virtual spaces in tangible public spaces, defining new experiences for the viewer of a virtual space, or developing new types of associations between several media that may involve both the virtual and real.

I hope that my projects will help people to look at virtual spaces as an immense territory for experimentation where you can build, explore, and play more easily and faster than in the physical world.

Sections of my new book, "Building Interactive Worlds in 3D: Virtual Sets for Games and Film", Focal Press publisher, cover the creation of real-time interactions between an audience and a virtual actor using sensors and artificial intelligence. I explain how a viewer can interact with virtual sets using simple inputs such as live-video, gestures, or sound, as well as up-to-date technologies like cellular phones. Virtual sets are redefining the way film directors, dancers, scientists, medical researchers, architects, TV producers, and web designers can develop simulations of real world situations.

Examples of immersive virtual sets described in the book range from the 3D pre-visualization of a movie scene prior to shooting on location, to a virtual visit at to agora of the antique city of Aphrodisias, Turkey. Applications of virtual sets I cover range from interactive TV games to information systems created for decision makers.

"The beauty of nature lies in detail; the message, in generality. Optimal appreciation demands both, and I know no better tactic than the illustration of exciting principals by well-chosen particulars." (From Stephen Jay Gould. *Wonderful Life: The Burgess Shale and the Nature of History*. New York: W. W. Norton & Company, 1989.)

Gould's ideas about how to describe the living environment of some of our planet's first animals can be a source of inspiration for someone who attempts to design virtual worlds. Like in Gould's first sentence, the designer's special attention to details conveys a sense of beauty to the viewer; but the vision of virtual spaces needs to be much broader. The place of the viewer is a key element of the design of a virtual space. The viewer is in motion inside a physical space

where the expected notion of facing a screen tends to disappear. Viewers are invited to walk around installations where 3D content is presented on screens extending in multiple directions of a space, challenging the reactivity of the virtual space around them.

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