ABSTRACT

The representation of spatial reality that exists within the human mind is a mixture of learned, contextual, and culturally encoded collective long term memories, as well as the personal interpretations associated with the visual images captured in the present, immediate memory. The imitation, or capture of spatial essence, allows for the representation of place as opposed to simple spatial representation. A critical evaluation of the above idea is dependant upon how closely the idea can be represented and understood compared to its intended form. It is a quest for the essential qualities, through the application of philosophical questioning and a response to the human perception of reality. The role of realism and representation in architecture is examined in proposing the notion of simulated spatial environments in architectural design. The proposition that representation through abstraction and simulation of real world designs could extend into the virtual realm to gain an understanding of the complexities of the physical world. A greater level of realism in representation could be obtained by exploring the design of information space within the virtual world in conjunction with real architectural space. As one of the roles of architecture is to embody meaning extracted from the world around us in a spatial environment, then the complementary role of virtual architecture is to create a simulated spatial environment embodying meaning extracted from the information space around it. Realism in computer simulation should then be based on essential properties of the physical world, manifested through computer representation, to extend the limits of human understanding of design perception. Hence it is the intention of this dissertation to initiate a possible framework for super-imposing simulation on the real world. It attempts to inject virtual presence into the present real world by developing the potential of an idea through the medium with which it is represented (Figure 1a and 1b).
Figure 1a. The computer is used as a presentation technique to represent architectural reality, some being relatively simple, others more complex

Figure 1b. An image from the MacArchitrion walk-through