14 Information Technology in Interior Design

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Traditionally, interior designers have employed two-dimensional drawings and three-dimensional scale models to represent design proposals. These representations continually evolve, and they serve multiple purposes (Figure 14-1). At early stages in the design process they support the rapid exploration of design ideas; designers think with their pencils in their hands, or by manipulating rough models. As ideas develop, visual and tactile representations are increasingly used to focus discussion among designers, clients, consultants, contractors, and other members of the design and construction team. They also serve to formalize the division of responsibilities among members of the team, and to coordinate and integrate the work of different team members.

At later stages, representations become more precise and formal. They are used less as exploratory tools and more as careful records of decisions that have already been made. They become the basis for area calculations and material quantity measurements, for cost analyses, and for various analyses of technical performance—structural, lighting, thermal, acoustic, and so on, as necessary. At the construction stage they serve as contract documents, and as the basis for necessary approvals by government agencies. Finally, at the postconstruction stage, as-built representations may become the foundation for ongoing facility management operations.

Since the late 1960s a third form of representation—the digital model—has become increasingly popular in architectural and interior design. The interface to the digital model is provided by computer-aided design (CAD) software—just as the interface to a digital text file is provided by word-processing software, and the interface to a digital image file by image-processing and digital paint software. Contrary to much popular belief, CAD systems do not replace traditional drawings and scale models; the paperless design process turns out to be as mythical as the paperless office. Instead, the three forms of representation complement one another in a way that allows design and construction processes to become far more efficient, and that allows previously inaccessible design possibilities to be explored.