

COMPUTERS IN ARCHITECTURAL DESIGN

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As an architect who takes a very personal approach to design, for years I watched the functional requirements of my clients becoming more complex; the various systems within the building becoming more and more sophisticated as the demand increases for completely controlled environments.

With increased technology, elevating architecture into the realm of art was even more of a challenge. At the same time as requirements were increasing, the cost of producing these designs was becoming prohibitive; draftsmen, technologists, engineers and architects were demanding higher salaries and more amenities. Production costs increased, productivity decreased. It was at this stage I turned my thinking to the possible advantages of using computers.

I wanted to gain and keep control of my art, to force discipline in the creation of our drawings, to improve documented communication with the construction industry, to eliminate the spread between management and labour by having a staff composed of thinkers, and to eventually store sufficient data to eliminate the "re-invention of the wheel" with each project. I knew I wanted a "friendly" computer. A machine that talked my language of architecture and engineering. It had to be easy to use as we were not computer oriented people. The training time had to be short as we could not afford an unproductive lag. It had to be flexible enough to grow with us, be added to, be upgraded to meet our increasing demands. And, of course, it had to be affordable.

A computer was found. For many years I had used pencils and drawing boards as my craft, and sitting behind the terminal I realized that these were instruments of the past. I also realized that the introduction of a

graphics computer in my organization would be met with resistance as management had never operated a keyboard. People in my profession take pride in the craft of drawing and the change would be too dramatic for some. The heavy investment of a computer dictated that its introduction into my firm be efficient and productive in a matter of weeks. I decided not to phase in the computer because from my experience, I realized there would be many reasons why people would not want to use it, and all their creative effort would be tied up in finding ways of showing me how useless a machine is.

I trained myself first so that I could effectively produce drawings. At the point that I felt I understood the programs and the machine sufficiently, I totally computerized the office, forcing my staff to concentrate on innovative ways of using the machine rather than finding reasons to return to the drafting board. From that day, we have not used conventional drafting in our office.

The computer enables me to produce a better quality of design and still survive in a competitive market. It allows me to do architecture, to do sculpture at the same cost and same fee as my competitors. It enables me, as principal, complete control of the design and costing of each product so that I can do my projects on budget. For my clients, I can now provide uniquely designed projects within their budgets. I have the flexibility of last minute changes and modifications. It has allowed me for the first time to gain control of my life, my direction and the direction of my profession, and has placed back in my hands the authority that must go along with the responsibility I take on behalf of my clients.