Why Look at Computers Now?

Wall and Ceiling Contractors Aren’t the Only Ones Who’re Feeling the Effects of Computers on Business

Why in the world should a wall and ceiling contractor go out and spend perfectly good money to buy a computer for his business? The answer most often heard is: because he’ll be needing it soon just to convince people in the construction industry that he’s serious about staying in the business.

What’s happening is that everyone else in the construction industry is computerizing swiftly and subcontractors will need to swim with the flood tide . . . or drown. It’s getting to the point that computers are talking to each other more and more with the result that a contractor will need some electronic assistance in the future just to converse with his customers.

If wall and ceiling contractors wonder if there will be any significant impact on their way of doing business, think what the shattering blow will be to architects and other design professionals. According to the Sweet Division of McGraw-Hill, by the year 2000 as many as four-fifths of the nation’s architects could be “dislocated.” That’s a nice way of saying they’ll be out of business.

Why? Computers!

Computers are rapidly automating the production of architectural drawings, product specifications, cost estimates and schedules. The accelerated use of computers for construction design will push the architectural professional toward greater diversification.

“Computers in construction will improve the productivity of existing efforts, but will not generate new jobs, as is the case in other industries,” commented Harry Mileaf, chairman of the 4,000-member Coordinating Council for Computers in Construction. “At the same time, it will have enormous impact on contracting firms who will need to address their own computer interface if they hope to keep up.

“Labor design and installation is highly labor intensive.”

Half of all architectural costs are accounted in producing drawings for a new building project, and painting contractors historically apply more labor costs than materials to their bids. Within 15 years with computer-aided design, systems will have automated the drawing process to a substantial degree. The manpower change for wall and ceiling contractors won’t change all that much—but they’ll be facing computer printouts much of the time.

Just as in the architectural professions where clients will begin to realize that design firms using computers consistently deliver a higher quality prod-
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uct at lower cost, many customers will start seeking out the contractor whose company can spew and interpret vast amounts of data quickly and accurately.

Compatibility will be the keyword. If a designer’s computer can spit out estimates in shorter time, the people who hire contractors will shorten the time allowed for bidding and submissions. It’s done every day now that computers talk to each other on change orders—with orders transferred to the field.

According to Mileaf, a smaller percentage of construction engineers are involved in jobs that are easily automated, so the impact of computers on that profession will be less pronounced. But building product manufacturing firms also are becoming more computer-intensive. This development will draw manufacturers deeper into the design — and contracting-function, as they develop software programs to promote the selection and specification of their products.

Smaller manufacturers and contractors, which include most of the firms in the industry, will be hurt most because it will be harder for them to keep pace with their larger competitors in the technology arena.

“Overall the trend will be toward smaller numbers of larger firms, reduced labor requirements, and a growing dominance of the building owners as the major influence in the construction design market,” Mileaf said. “We can expect to see a great deal of confusion in the early 1990’s as the industry scrambles to adjust to the new realities.”

The Office of Technology Assessment (OTA), a research arm of the United States Congress, solicited the information as part of its investigation into the impact of technology on the construction industry. The construction portion of the OTA research is one segment of a larger OTA study entitled, “Technology and the American Economic Transition.”