Digital Information Sharing for Precasters

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The goal: reduce the time frame of a project between the award date and production start date to one week. That is how Hans Klohn of Strescon Limited, Saint John, New Brunswick, Canada, opened a recent meeting on digital information sharing.

In my Chairman's Message in the January-February issue of the PCI JOURNAL, I emphasized product quality as one step in raising the level of the way we do business. As we are all aware, the quality of our product is directly related to the quality of our shop and erection drawings. Now, if we were able to automate the drawing/engineering/production process, we would be able to eliminate the multiple data re-entry process and considerably reduce errors and the cycle time. Indeed, our current drafting and engineering procedures may actually limit or cause delays to our product capability.

As an industry, we are presently working with disconnected Information Technology (IT). The results of our data from the available structural design packages are not automatically downloaded to our drafting package. Estimates are manually entered into spreadsheets or data-based estimating programs but are not downloaded to create project budgets. Bills of materials are generated manually from our CAD drawings. In fact, in most firms, the normal business process requires entering data as many as 10 times from the estimate to final delivery. This process is obviously time consuming and prone to errors at each step.

How do you get from where we are today to fulfilling Hans Klohn's challenge? The process was eloquently presented on March 14-15, 2001 in a PC-21 workshop. Twenty-two PCI and CPCI producer members, along with Associate and Professional members, participated in a workshop that was, in my opinion, the first step in a dramatic change in the way we do business.

If we are to fulfill Hans Klohn's dream, we obviously must do it with automated downloading. Furthermore, we must be in the loop of the architect's drawings. Our challenge is to create "interoperability" with owners, contractors, suppliers and the design community, while at the same time write production application software that is interoperable with our internal systems.

Externally, we need to ensure that our precast components are included in all current packages such as Auto CAD and Bentley, as well as structural analysis packages, in order to download and receive data directly.

A majority of the March workshop participants and others have agreed to meet again on April 23-24, in Denver, Colorado, to form a consortium whose objective is the establishment of interoperability both internally and externally in our industry.

The initial objective of the group will be to define a structure, time-table and costs for creating a software entity to represent its members. Acting on a proposal presented by Chuck Eastman of the Georgia Tech School of Architecture, a global research and identification of potential software writers will be initiated and then followed by a Request For Proposal (RFP).

Ownership of the software will enable us to incorporate precast details in the architectural and structural contract drawings. We can utilize our company-specific details, with the advantage of a higher consideration level, if use and detailing of our product is simplified. Design/build will now become an even more viable delivery method due to the potentially rapid generation of design documents.

For this initiative to get off the ground, the producers' consortium must be willing to fund the initial RFP process and possibly the customized software development. The more producers who participate, the lower the cost. Yet, more than money is needed for the success of this venture.

Participation at both the managerial and technical levels is vital in order to properly identify and monitor the process. The result will be ownership of a software system that is specific to our industry with the ultimate goal of standardizing information flow.

In closing, I strongly recommend that all of our producers consider joining this initiative. It has the potential to support our marketing objective of increased consideration of precast/prestressed concrete by the design community; reduces the time needed to prepare drawings; gives us the opportunity to respond much faster to project requirements; increases our market share; and elevates the level of the way we do business by delivering a superior total product.