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January 31, 2001

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March 15, 2001*

B2B: Business to
Business and Back
to Basics

March 28, 2001

Eastern Region
Outlook

April 26, 2001

4th Annual
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*Technology Breakfast
Seminar Series

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Technology Catapults Project's Success

As project managers have long realized, access to current and accurate information is key to completing a building project on time and on budget. The ability to communicate and monitor objectives and expectations with all project team members clearly helps minimize potential issues and problems.

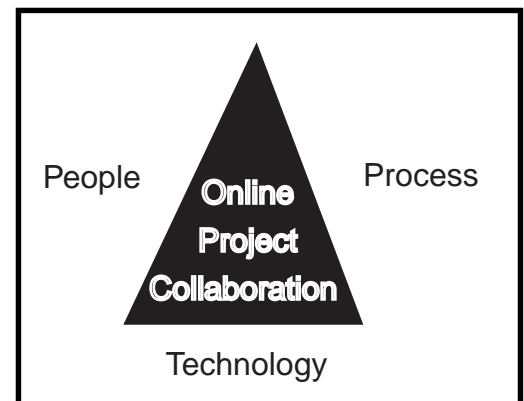
On an average project, team members, including the lead designer, general contractor, consultants, and subs, will generate and exchange hundreds or thousands of documents and messages impacting any number of decisions or actions. When using traditional business tools, such as fax, mail, and next-day or same-day couriers, managing and controlling the flow and accuracy of this information is problematic, at best.

With the introduction of electronic mail, the Internet and the World Wide Web, collaborating on a project takes on a new meaning as information can be "published" to a web site for all team members to view. By leveraging the Web's ability to create a level technology playing field, project teams can sidestep hardware and software issues, costly paper handling, and slow turnaround by centralizing information to this common repository. Rather than requiring each user to have specific business software installed locally, users rely on web browsers, such as Netscape Navigator or Microsoft's Internet Explorer, to serve as the software gateway for accessing and exploring common project data.

When two or more firms—some combination of client, architect, consultants, and contractors, for example—share browser access to data and information on a common web site, they have created what is

called an extranet. Because these sites can be hosted on Web servers inside or outside a firm, design-and-construction extranets are more aptly called project-specific web sites, project webs, or Project Collaboration Networks (PCNs).

The simplest PCN functions as a secured repository for documents, such as drawings, memos, and meeting minutes. Project participants can access this information by entering an assigned ID and Password. Everyone can view, copy (download), or save



(upload) documents using nothing more than a web browser.

Clients, for example, can view CAD drawings online, without having CAD software on their computer. Some PCNs add the ability to pan and zoom across CAD files or to annotate and redline these draw-

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The Construction Institute's Technology Committee can be reached at citech@construction.org. The final two programs of the four-part breakfast seminar series are scheduled for January 18 and March 15. Visit www.construction.org for more information.

Welcome New Members

Associated Construction Company
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Softer Side (continued from page 4)

component of the system fits, from the PC and its operating system to obtaining files from the project web site, is critical to achieving the goals and efficiencies expected.

Support

Adequate technical support, whether it is provided by a software vendor, a network integrator or an internal IS staff, is necessary to prevent user frustration when things go wrong. Without sufficient support, people will begin to either find their own methods or fall back on old practices, impacting your investment.

Management Support

Every project, including implementing electronic project collaboration, needs a champion to drive it forward. Management needs to show that they are fully committed to it. Without obvious support and direction from the top down, users will be less inclined to accept and use new technology. This commitment will go a long way in convincing staff that project collaboration is here to stay. ▲

Getting Started With a Technology Upgrade

Getting started with project collaboration technology can come with varying price tags depending on what you want to do and how much control and responsibility you want to have over the data. At a minimum, there are three elements required: a computer, web browser software and access to the Internet, allowing you to review and comment on any information pertaining to the project stored on a project collaboration network (PCN).

Department, electronics, and Internet-based stores can provide you with the computer equipment you need. The PCN host is the best source for configuration advice, providing the memory, disk space and processor speed needed to work with the information stored on their server(s).

Web browser software, such as Microsoft Internet Explorer or Netscape Communicator, typically comes with a new PC.

The Internet access element is the tricky part. A 56K modem connected to a standard telephone line will provide access to an Internet Service Provider (ISP), but for project collaboration purposes, it's not the best approach. The amount of data that will be accessed, viewed and exchanged will result in users waiting for excessively long periods of time as data is downloaded.

The more bandwidth you have, the faster information can travel from the web to a computer. Several options are available, including cable, Frame-Relay and Digital Subscriber Lines (DSL). DSL, which runs over standard telephone lines, is a clean, reliable and affordable high-speed alternative for small and medium sized businesses and allows for affordable upgrading. Companies like SNET, DSL.net, Broadband.com and ReCol.net are some local service firms that offer DSL service to businesses.

For some firms, hosting their own project web servers is an attractive option. However, the technical requirements of providing such service to a project team can strain the resources of firms with a limited technology infrastructure and information technology staff. Clients and contractors on Web-based projects expect reliable access 24 hours a day, seven days a week, which requires that the host have, at a minimum, the following:

- High-speed Internet connectivity (generally T-1 or better)
- Robust, high-capacity servers capable of managing complex user requirements
- Experienced technology support staff on call, around the clock.

For firms unable or unwilling to make that kind of investment, nearly three dozen businesses have sprouted in the last 18 to 24 months to provide PCN services on a rental basis. Typical service fees start at a few hundred dollars per project per month. But this delivers plain-vanilla services offering little more than the Web equivalent of a filing cabinet and a memo pad. Fees may run as high as \$1,500 per project per month for unlimited users on a full-featured service, which includes elaborate annotation and messaging options, built-in structured workflow, and other features.

On-line project collaboration holds many benefits and challenges for construction companies of all sizes and specialties. By setting realistic expectations on what you can afford and can accomplish will help your firm achieve the cost savings and efficiencies possible with the new project management tool. ▲

Rex Roberts is Director of Business Technology Services with Blum Shapiro Consulting, LLC, West Hartford, CT. He can be reached at 860.561.4000 or RMR@bshapiro.com.

Technology Catapults

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ing without leaving the web site. Recent developments also make drawings electronically portable by downloading them to personal digital assistants (PDAs).

PCNs may also include a message center, a place for posting and archiving memos and notices about items for action or review. Messages can be broadcast to the entire team, a project subgroup, or specific individual. Most PCNs track who has read which messages and present the latest unread messages first, like an email system. These message centers replace the confusing and easily misfiled array of faxes, E-mails, phone messages, and paper memos most often found in project files and binders.

Finally, PCNs can provide a hub for project workflow, such as tracking requests for information, submittals, and shop drawings. Most project contracts impose legal obligations to handle such transactions in a formal and timely manner. As a result, tracking documents up and down the chain of command consumes an inordinate amount of the project manager's time and attention. A PCN makes this workflow instantaneous, self-documenting, and transparent—anyone with browser access can verify whose response is required next. This also frees up the project manager to focus on a more critical issues - customer service. ▲

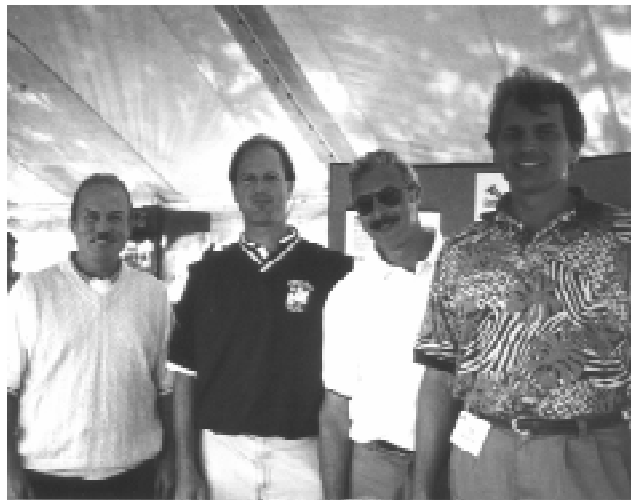
F O C U S

Annual Golf Tournament Grows



This year both the Gary Player and Trent Jones courses at Lyman Orchards Golf Club were filled to capacity with 200 players at the Sixth Annual Golf Classic. A special thanks to Golf Committee Chairman Peter Shmigelsky of the Department of Engineering, Town of New Haven and the committee members for another successful event.

Front Row: Lawrence Whipple of Cornerstone Consultants, LLC, Donata Ceretto Giannone of Bristol Hospital, Peter Shmigelsky of the City of New Haven, Jeffrey Krason of Payne Environmental. **Back Row:** Tommy Thompson of Advanced Software Concepts, Patricia Quinn of Petra Construction Company, Diane Kozel of Fletcher Thompson, Edward Callo of RECON International



First Place Low Gross Winning Team from Dimeo Construction Company were Geoff Beddoe, Lee Blackwell, Andy Schiff & Rai Muhlbauer of BL Companies.



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4 ▲ Construction Institute Update

The Softer Side of Technology Improvements

Before you begin any technology-related project, it is important that you consider the impact these new systems will have on the people and processes responsible for driving your business. Aside from the hardware and software requirements, here are four additional elements that will influence the success of implementing your project collaboration technology.

Process Change

By increasing the role of automated systems, many paper-based, manually intensive activities will be eliminated, changing the responsibilities of some staff. Rather than perform these traditional activities, staff will perform more analytical tasks, evaluating and scrutinizing information more thoroughly rather than moving it

from one place to another. This is where the true cost and benefit of automation will be found.

Training

Training is the biggest factor to the successful use of any technology. If users don't know how to use the hardware or software, integrating on-line project collaboration into your firm is pointless. Throwing technology at a problem only leads to more problems and wasted investment. Whether you are a big firm or small, understanding how each

(please see Softer Side on page 2)

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