IMPROVE PRODUCTIVITY WITH
Contextual Collaboration

BY DEREK RUTHS

As the project deadline approaches, you set aside one afternoon to call together

everyone whose input might be valuable. With a conference call and a hosted

videoconference, the widely scattered group will be able to look over and

discuss the same resources. Even those away from networked desktops

can use instant messaging on their cellphones to get glimpses

of the presentation. But there's something

missing.

TO BE ABLE TO MEET IN A collaborative SESSION WHEN FINANCIAL INFORMATION IS SUBMITTED FOR REVIEW ENCOURAGES IMPROVED ANALYSIS AND FASTER PROBLEM SOLVING.

The whole dynamic encourages passive commentary rather than active collaboration. Now if you could open the databases and spreadsheets used to produce the PowerPoint slides to all the participants, the collaboration could add another dimension. Static economic profiles and strategies nailed down as bulleted copy on screen could be changed with "what-if" questions from anyone in the group—the changes shifting the resulting charts and images in real time. Matthew Cain, vice president of the industry research firm META Group, believes that collaborative tools will achieve their true potential when they are embedded directly into software applications instead of residing in a separate program or infrastructure. He calls this concept contextual collaboration.

EX-CONTEXTUAL COLLABORATION

Current approaches to collaboration are usually separate from the software applications you use every day. They require users to move out of their software program, say Excel or SAP, and into a separate collaboration workspace or system, such as Domino, WebEx, eRoom, or Groove, in order to interact with colleagues. Analysts call this ex-contextual collaboration. The reason ex-contextual collaboration products have enjoyed some early success is that they can be introduced into the workplace without upgrading or replacing existing (noncollaborative) tools. But these products add steps to the work process, which actually compromises the productivity gains they intend to create. For example, while collaborative workspaces provide document management, version control, virtual teaming rooms, and resource management, they force users to learn a new interface and to move out of familiar applications. The underlying problem with ex-contextual collaboration is that it forces people to complicate the way they work. To deliver its promised productivity gains, collaboration should be integrated seamlessly into business processes and practices.

CONTEXTUAL COLLABORATION

Contextual collaboration integrates collaborative functions into familiar software applications, creating a comfort level for users. Contextual collaboration embeds functions like presence awareness, instant messaging, real-time conferencing, file exchange, and virtual workspaces into the business applications finance and accounting professionals use daily. For example, adding contextual collaboration to Microsoft® Excel® lets you start a collaboration session from within the Excel program itself, inviting colleagues to review and modify the same spreadsheet.

Mark Levitt, research director of collaborative computing at the research firm IDC, says that most collaborative applications are deployed for the same end-users as are other business applications, but they are almost always separated by a different interface or information repositories. What needs to happen for collaboration to rise to the next level and reach a much broader audience is for the collaborative tools to be integrated into the

Figure 1: **A contextual collaboration in Excel**

APPLICATION ADAPTER

Data centric collaboration requires no modification of the base application

LOCAL APPLICATION

Participant 1

Collaborative representation of the type of data the application uses

COLLABORATIVE DATA REPRESENTATION

Bidirectional adapter translates events in the applicaton into modifications to the data and vice versa

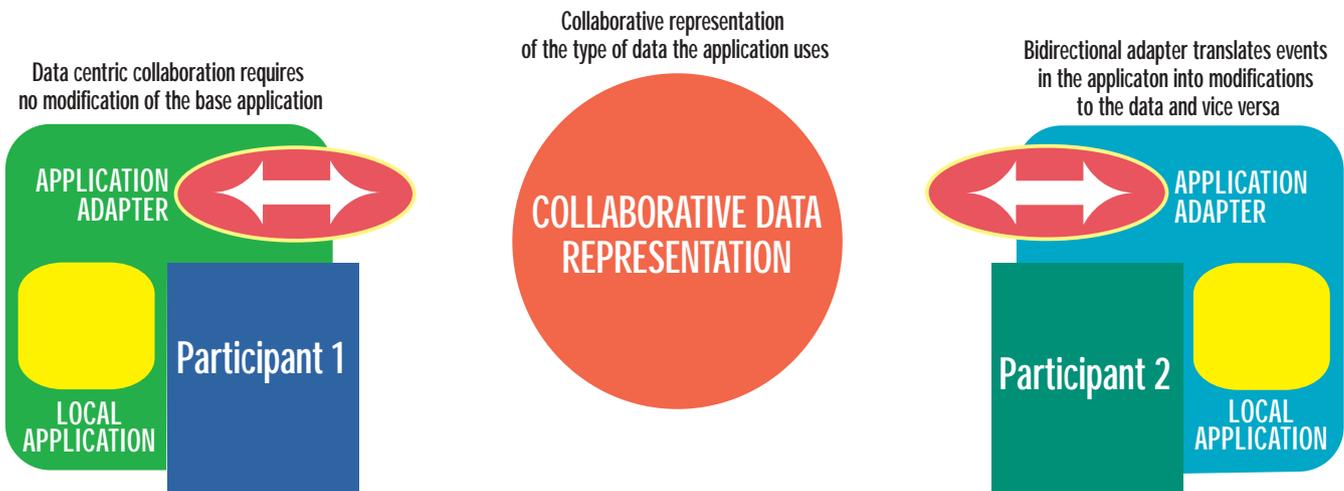APPLICATION ADAPTER

Participant 2

LOCAL APPLICATION

Figure 2: **Presence-AR™ enables contextual collaboration by making the data collaborative and by providing application-specific adapters to interact with the collaborative data**

business applications.

The advantages contextual collaboration has over ex-contextual collaboration are ease-of-use and efficiency. With contextual collaboration, users won't notice any changes to their software when it's made collaborative. The application will look and operate the same way it did before. The only addition will be two new buttons or menu options that say Begin Collaboration and End Collabora-tion (see Figure 1). The user can perform the same func-tions in the program, but now he or she has the ability to collaborate with colleagues.

COLLABORATION AMONG DIFFERENT APPLICATIONS

Integration of collaboration into the work process also encourages a view that reaches beyond a single software application or document. For example, in a collaborative session organized within PowerPoint to prepare a presen-tation, if a question about a chart arises, the Excel work-book used to create the chart could be brought into the session instantly, and participants could review and mod-ify it as necessary. The multiple applications are simulta-neously collaborative, yet they retain their familiar look.

Other benefits are efficiency and focus. To be able to meet in a collaborative session when financial informa-tion is submitted for review encourages improved analy-sis and faster problem solving. For example, while developing a presentation for senior management, if the

general manager of a business unit requires clarification on the revenue projections for the quarter, he can, while still in the presentation program, invite the sales manager, using an instant message alert or VOIP (voice over IP), to review the projections. The sales manager would view the same file the general manager is working on, and both could work together to resolve the questions in real-time. If necessary, the sales manager could include in the col-laboration session additional supporting data from any source such as Excel or a Customer Relationship Manage-ment (CRM) application. The alternative is for the busi-ness unit manager to note the concern and raise it in an e-mail, by phone, or in a meeting.

REMOVING BARRIERS TO MOBILE COLLABORATION

Contextual collaboration is more than just information sharing in a software application—it also extends to a variety of other access devices. This is especially helpful for mobile users who don't have access to large display screens common on the desktop. In the example above, inviting the sales manager who is in the field to join a PowerPoint or Excel collaboration and then attempting to cram the entire slide or spreadsheet onto a three-inch PDA screen would be pointless and frustrating. Instead, contextual collaboration adjusts the data to fit the access device. In this case, the sales manager might see the entire PowerPoint slide, but only the range of cells currently

NEW TECHNOLOGY HAS EMERGED THAT'S CAPABLE OF INJECTING contextual collaboration INTO ANY APPLICATION, LINKING SEVERAL APPLICATIONS TOGETHER IN A COLLABORATIVE ENVIRONMENT.

being discussed if a spreadsheet needs to be reviewed. On a slow dial-up or wireless connection, which is the most common way mobile users currently access data, the graphics would be eliminated or reduced.

The business benefits of maintaining contact with mobile users is enormous. Decisions wouldn't need to be put on hold until a key player returns to the office, and experts from remote geographic areas who otherwise couldn't participate could now contribute. And errors and duplication caused by time delays between information gathering and document review can be eliminated.

LINKING MULTISTEP PROCESSES

Contextual collaboration can take many different forms depending on the application into which it is integrated. The level of integration can range from simple, in the case of basic document collaboration on a spreadsheet, to sophisticated, in cases where the collaboration spans many single-purpose software applications that are inter-related. For example, quarterly reporting may involve gathering, integrating, and reviewing data from a myriad of software applications—accounting systems, spread-sheets, CRM, ERP, and so on. Contextual collaboration enables different software applications and data sources to be linked so that changes made in one application are immediately propagated in the related software applica-tions. Using contextual collaboration to tie various soft-ware tools and their users more closely together can dramatically reduce or eliminate time spent waiting for responses or reviews in the quarterly reporting process. It can also speed up management analysis of critical busi-ness issues, both during and after the reporting cycle.

CONTEXTUAL COLLABORATION SOLUTIONS

New technology has emerged that's capable of injecting contextual collaboration into any application, linking sev-eral applications together in a collaborative environment. An example is Advanced Reality's Presence-AR™. Using an approach that makes the data itself collaborative, it eliminates the need to modify or re-architect existing software applications. An application-specific adapter

allows the software program to interact with the data the Presence-AR system has made collaborative. As a result, several different types of software applications, each equipped with an adapter, can collaborate on the same data.

Users can collaborate within the same application or among applications that utilize the same underlying data because data is presented in the traditional format of each software application (see Figure 2). For example, when users collaborate from within Excel and interact with data originating from a different software applica-tion, such as an Oracle financials module, the informa-tion appears in Excel's familiar rows and columns format. Yet the user who is more familiar with Oracle may choose to participate in the collaboration using the Oracle pro-gram. This technology has the immediate benefit of elim-inating the time and expense associated with introducing new software applications or business processes.

THE NEXT STEP

The first wave of ex-contextual collaboration products that operate in a separate environment from standard business software applications has established a market for collaboration technologies. The next step will come with the adoption of contextual collaborative tools that add collaboration to existing classic software applications. This evolution to contextual collaboration will eliminate the infrastructure and procedural and educational barri-ers that have limited the deployment and return on investment of ex-contextual collaborative technologies. The ability of contextual collaboration technology to integrate seamlessly with existing software applications can unleash tremendous productivity advances by linking finance and accounting processes with on-demand collaboration. ■

Derek Ruths is co-founder and chief technical officer of Advanced Reality. He has lectured to business and technical audiences at the National Science Foundation, the InterDoc Symposium, and the Collaborate Conference & Expo. Derek can be reached at druths@advancedreality.com.