The subtle power of virtual collaboration

By Reinhard Ziegler and Craig Mindrum

By using a whole battery of new technologies, companies have found ways for their people to work together on essential tasks while essentially staying put. Sure, the savings can be dramatic. But before you abandon direct interpersonal interaction altogether, you need to ask yourself some fundamental questions.

Given recession-ravaged travel budgets and heightened concerns over security, few people are racking up frequent-flyer miles these days. That may not be much fun, but you have to admit that the consequences of reduced travel, from a purely operational perspective, haven't been all bad.

Fact is, the business world didn't come to a standstill when travel did. By using a whole battery of new technologies, companies have found ways to get essential tasks done while their people essentially have stayed put. The favorable impact on the bottom line, in many instances, has been dramatic: One high-tech company started seeing savings of $5 million *per month*. That pays for a whole lot of videoconferencing and "webinars."

There is no shortage of technologies out there today promising to help us collaborate virtually. One organization that follows the industry is currently tracking more than 1,000 tools and services that claim to have collaboration functionality. They range from videoconferences and webcasts to virtual classrooms and online design review tools. (A particularly cool tool projects a 3-D holographic image of a speaker into a meeting room. The image is so realistic it actually appears to be addressing specific participants in the room.)

Discomfort level

Yet it seems the more you use electronic tools as substitutes for direct interpersonal interaction, the more uncomfortable you are with the whole idea. We've all felt it—that palpable sense of dissatisfaction after attending a teleconference or trying to follow a presentation on a virtual whiteboard that leaves us thinking, "That little exercise would have taken us half the time if we had been together in the same room, face-to-face."

So before you embrace these captivating technologies (and the savings they can bring), you need to ask yourself some fundamental questions. First, what is the nature of the *work itself*—the different kinds of work done by your organization's various players and units? Second, what are the unique needs of your *workers* that can be enhanced (or possibly diminished) by virtual collaboration technologies?

Finding good answers to these questions can help an organization develop and implement a virtual collaboration strategy that applies the right blend of technologies and that actually amplifies the power of human interaction within and across the organization.

Signal loss

How an organization's people respond to virtual collaboration technologies very much depends on what preceded these new electronic tools. If dispersed work teams were accustomed to frequent travel for face-to-face meetings, virtual interaction will probably make them feel like something has been taken away. If, however, people who previously weren't able to collaborate at all are now connected, they are bound to regard this as a big improvement.

Either way, though, virtual collaboration raises the problem of what we call "signal loss." If you've ever had a bad mobile phone connection, you know what we mean: You're not getting the full strength or power of the signal. With a mobile phone this is annoying, to be sure. But when the signal loss in a virtual collaboration setting goes from being a minor distortion of the message to the equivalent of a "Hello, *hello*—are you there?"

type of problem, that spells trouble, not just for the team but for everyone depending on the team's work.

Virtual collaboration is all about power. The word *virtual* actually derives from a Latin word that can mean strength or vigor. Being effective while working virtually means retaining as much of the power of a physical interaction as possible—or, in other words, having the least signal loss. When and why does most signal loss occur in virtual collaboration? Ignoring the specific attributes of either the *work* or the *worker* leads to a weaker signal—and therefore a loss of power.

Here are a couple of examples of what we mean. Several months back a global group within Accenture devised a collaboration strategy to bring together its professionals from North America, Europe, Asia and Australia for a series of two-hour meetings via a global video and two-way audio link. Participants got the opportunity to see and hear leaders discuss strategic direction, to learn new content from guest speakers and to ask questions.

The virtual gathering was a big success, but it could have been a big waste of money. What if the organizers had defined the "work" aspect of the session in terms of broadcasting key messages to hundreds of passive television watchers? The signal loss would have been huge.

How did planners avoid that problem? In part, by addressing the basic human need for variety, interactivity and reciprocity. The virtual meeting proceeded at a brisk pace with numerous speakers and activities, and participants had a chance to ask questions via an audio link to the "studio" and to one another.

The event also treated participants as individuals, not just as a faceless crowd. Engagement, feedback, humor and sharing of insights were amplified through the use of a virtual chat room and instant messaging service, which ran parallel to the video feed. Participants could communicate with one another and with meeting organizers, who monitored the chat and interrupted the meeting from time to time to give the speakers and participants a richer sense of how the meeting topics were being received.

The result: a virtual experience that was, according to participants, better than many "real" conference experiences, where people often sit passively in a dark room and listen to a single speaker with little, if any, opportunity for interaction. By tailoring the technology to support both work and worker, not only was there minimal signal loss, there was actually an amplification of some aspects of the total signal.

Just as signal loss can occur if the worker isn't supported, it can also occur if the specific work isn't well suited to virtual support. We recently were part of a dispersed project team that included people from Phoenix, Dallas, Chicago, London and Johannesburg. It was a great group of very competent people. But the work was particularly challenging because it had no fixed or precise objectives; our goal, more open-ended in nature, was to come up with new thinking and new approaches to running the project.

We found that the virtual technologies we used most of the time—teleconferences and some videoconferences—were simply inadequate for our needs. They did support our need to connect, to interact, to build relationships;

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in fact, the team established a high level of trust. But the technologies we selected didn't support the unique characteristics of the work.

After struggling for some weeks, we finally determined that at least a few people on the project should work in the same office for a few months. Only after adopting this "blended solution" of face-to-face work mixed with some virtual interaction did the project proceed to a successful conclusion.

Moving up the curve

These examples should make it clear that "to collaborate" (literally, "to labor together") isn't a simple or unitary idea. Even in a physical office environment, teams that are laboring together aren't necessarily, well, always *together*.

A typical week might start out with a meeting at which team members give various status reports. Then everyone would go back to their desks to work as individuals. They check and send e-mails, make and receive phone calls; they ask colleagues for advice, seek out expertise on new or thorny problems. Someone may call a quick ad hoc meeting, where everyone gathers around a whiteboard to brainstorm. A colleague might drop by unexpectedly to ask a quick question or offer some insight.

Clearly, various forms of work come into play in this kind of setting: from few participants to many; from routine work to specialized work; from formal to informal and planned to spontaneous; from synchronous work (in real time, together) to asynchronous work (like playing chess by mail); from interaction that is primarily communications-oriented to work that truly involves laboring together on job tasks. Companies looking to introduce virtual collaboration to some or all aspects of this complex array of work should begin by virtualizing simpler forms of work, and then move to more complex types over time (see figure, page 70). Movement up this virtual collaboration curve occurs only under certain conditions: if the technology platforms become sophisticated enough to support the more complex *work* involved, and if, simultaneously, the needs of *workers* are taken into account so that they are able to labor together effectively in that more complex, more richly nuanced virtual environment. Typically this occurs in three stages.

Stage 1: Emphasis on virtual communication

In this first stage, the nature of the work is more routine and may focus primarily on communications, whether among individuals, teams or larger parts of an extended organization. Thus, it involves technologies as well as interaction styles that are fairly familiar, like conference calls, e-mail or instant messaging. Groups will come together easily for meetings, but actually working together on job tasks will be mostly asynchronous at this stage.

Businesses can use virtual technologies here for a variety of needs, such as rapidly communicating time-sensitive information. But even though Stage 1 activities are relatively routine, a number of human challenges still must be addressed if the work and the workers are to be supported.

For example, as the number of people working together increases, the opportunity for meaningful interaction and for a sense of engagement in the work and in the team diminishes. This feeling needs to be counteracted through thoughtful, creative layering of multiple types of commu-

nications. For example, we recently co-hosted a webinar that could have been a fairly brittle discussion of new technologies and market offerings. But by presenting it in a "talk radio" format, a high degree of engagement and interactivity (and fun) was achieved.

Another interesting Stage 1 solution was devised by Eli Lilly and Company. To reduce cycle time for new drug development and increase the hit ratio for successful drugs, Lilly formed a wholly owned subsidiary called InnoCentive. Participating drug companies post on the InnoCentive website which medical issues they are targeting, along with relevant background information. Individual scientists can then go to a virtual project room set up on the site that contains more specific information, including product specifications. These scientists then take on the task of trying to come up with solutions for the drug companies, motivated by a reward that can be as high as $100,000.

Certainly there are some competitive issues here, and this example shows how, in some cases, companies are giving up some control and secrecy in exchange for better speed to market. The InnoCentive site works, in part, because the virtual solution is faithful to the manner in which scientists collaborate in real life. Laboratory work is a mix of synchronous

Virtual collaboration technologies: The work and the workers

In considering various virtual collaboration technologies, you must consider not only a number of spectrums relating to the primary work to be accomplished but also the unique needs of workers that may be compromised in a virtual environment. If you consider only the work or only the worker, "signal loss" in the collaboration will most likely occur.

Unique elements of the work

- Complexity or clarity of purpose (from routine work or work focused on a single, clear task or decision to more open-ended brainstorming)
- Formality (from a spontaneous and informal meeting to one planned far in advance with clear leadership perspectives)
- Level of interaction (from one to many, to a small team, to many to many)
- Duration (from a one-off meeting to support for a project team working over many months)
- Number of people involved (from one to many hundreds)
- Synchronicity (from asynchronous to real time)
- Frequency of interaction (occasional to frequent)
- Continuity (from staged to continuous)
- Familiarity (from new to repetitive)
- Type of interaction (from primarily communications to real-time collaboration on tasks)

Unique needs of the workers

- Purpose
- Trust
- Variety
- Control
- Reciprocity
- Engagement
- Respect
- Belonging
- Serendipity
- Visual/auditory cues (that connote humor, subtlety, and sustain "dead air" or quiet time)

Supporting technologies

- Audioconferencing
- Data collaboration
- Videoconferencing
- Web conferencing
- Web casting

SOURCE: ACCENTURE ANALYSIS

teamwork with asynchronous and solitary endeavor. The most important "collaboration" may come in the idea or problem stage, rather than in the solution stage. That's where this virtual solution maintains its power.

Stage 2: Learning to "labor together"

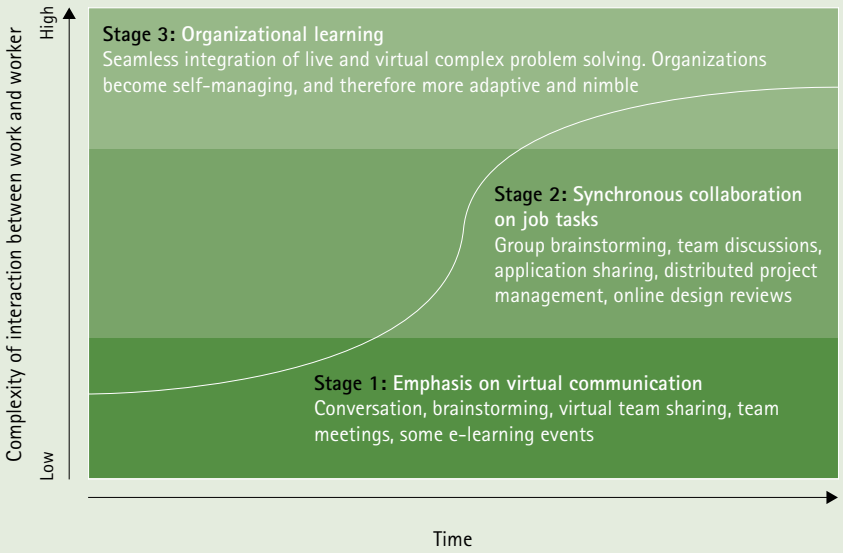
As we progress up the curve, we move beyond a primarily communications-oriented form of collaboration and into the mainstream of daily work: the synchronous accomplishment of job tasks. Examples of this kind of work include group brainstorming, team discussions, application sharing, distributed project management and online design reviews.

Many companies are now moving their people up the curve by finding ways to embrace technologies such as web-based collaboration tool sets and portals (see page 73). For example, Agilent Technologies, a developer and manufacturer of test, measurement and monitoring devices, semiconductor products and chemical analysis tools, is using these technologies to facilitate real-time cross team collaboration, live demos and hands-on remote training. As a consequence, the company has truly changed the way it manages projects and the manner in which its teams gain access to experts in different areas.

With professionals located in more than 40 countries, Agilent has already discovered a number of the business benefits that arise from the effective use of these technologies. For example, more Agilent people now participate in meetings because access can be obtained from both inside and outside the company's network. Meetings include a richer variety of pro-

Moving up the virtual collaboration curve

Organizations and industries will pass through three stages as they adopt virtual collaboration technologies. Moving up the curve depends on two things: sophistication of the technology platforms to support ever more complex *work*, and appropriately supporting the unique needs of *workers* in the context of virtual work.



SOURCE: ACCENTURE ANALYSIS

fessionals, and there is more dialogue among teams. Agilent has also found that issues are resolved more quickly through the real-time, online review of design specifications, where participation levels have also become much higher and richer.

Another example of the increased complexity of Stage 2 collaboration comes when you consider the challenge of managing a portfolio of diverse projects across a distributed environment. Here a number of new collaboration tool sets are already meeting this challenge.

Raytheon, for example, has made effective use of an online program management tool to share knowledge and best practices across what had been three separate companies, workforces and cultures. An integrated virtual tool set permits such practices as structured, real-time issue management, and it enables better decision making by including an executive "dashboard" that provides a snapshot of critical initiatives. More than 5,000 people working on more than 1,000 projects throughout the company now use the tool.

Both the Agilent and Raytheon examples highlight the immense challenge, however, of supporting workers with the same energy and purpose with which one supports the work. For example, if virtual program management is going to be successful in the long run, it has to amplify, not bury or mask, the individual contributions and ideas of the team members.

Because these kinds of virtual solutions include functions like automated project status reporting, people may feel that their work is now being driven by the collaborative application. Consequently, as companies begin to put these technologies in place, they also need to increase their focus on personal interaction. These solutions also create a great deal more transparency within the organization, and this must be matched by efforts to increase clarity of purpose as well as trust. People need to feel part of the program management—that they're collaborating, rather than "being managed."

Companies operating at the upper end of Stage 2 need to make sure that individual and small-team contributions don't get lost in the roll-up of information, and that virtual project management is balanced with plenty of collaborative brainstorming on how the virtual tools themselves can be applied to greater effect.

Stage 3: Organizational learning

Even as we reach the upper levels of Stage 2 virtual collaboration, we can look around and see that while we have been doing lots of things better, we haven't been doing totally new things. We've gone this route before—think about some of the first motion pictures, which were actually films that documented stage plays. The new medium was first defined in terms of its predecessor. The same construct applies to the technologies and behaviors of working virtually.

What will organizations look like when virtual collaboration actually means doing new things? What will it mean when an organization's people have learned to work in these new ways, and when these collaborative technologies have become more tightly integrated with how we work?

Stage 3 virtual collaboration describes an environment in which we seamlessly integrate live and virtual complex problem solving over sustained periods of time to meet challenges that are only vaguely defined. Already today, a number of visionary thinkers

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are talking about organizations as living or adaptive systems—more like ecosystems than well-oiled machines. Although this kind of thinking sounds like it could take years to develop, it also begins to seem like an inevitable next phase in the evolution of work and of organizations.

Consider, after all, what virtual collaboration—the connecting of people anytime, anyplace, over an "always on and always aware" active network—will mean. It will mean that problems and ideas are moving rapidly in all directions. It will mean that we can connect with the intelligence that is embedded in and distributed throughout the nodes of the entire supply chain. And it will mean that no one is necessarily "in control" of this all the time.

The organization becomes much more self-learning and self-managing. When this happens, we move well beyond a sense of "the old work done better." It will truly mean an unleashing of the real power of people and of organizations.

For now the needs of work and workers are more practical and more immediate. In spite of the challenges, virtual collaboration technologies present us with genuine, practical opportunities today. We have a chance to realize some new operational efficiencies with a huge potential impact on the bottom and top lines.

At the same time, though, we have a responsibility to ask some hard questions about how much physical, eyeball-to-eyeball interaction people really need in order to be at their best. About how much virtual collaboration a company can stand before its people start to feel disembodied and detached from the overarching purpose of the organization and from one another. And, finally, about how virtual collaboration technologies can best be harnessed to unleash the power of people and the work they do throughout the entire organization. ■

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