



Reprinted from *Future of Work Agenda*
May 2006

Digital Group Memory

By Brad Jackson

Brad Jackson is a co-founder and CEO of cOrdin8.com, software to manage ideas, portfolios and project teams. Brad has had a long-time interest in the intersection of distributed computing systems and distributed human systems. He has spent over twenty years researching and consulting both small and large businesses in the use of technology to support teams. Brad can be reached at brad.jackson@cordin8.com.

For over twenty years, I've worked in a space that has had many, many names. In the 80's, it was *group decision support systems*, *computer mediated communication systems*, *computer-supported cooperative work*, and then *groupware*. In the early 90s, it became *collaborative technology* and *knowledge management*.

That was the technology backdrop. In the foreground were business improvement initiatives that included the rah-rah world of Total Quality Management that ushered in the use of business teams. That was quickly followed by the less than rah-rah business process redesign and overhead reduction initiatives. In the middle of all of this, virtual teams got a bit of press. Most of those articles glamorized geographically dispersed groups of people working together through email.

However, email has several shortcomings that make it a poor choice for being the primary platform for team communication. From a team memory perspective, email is like a sieve from which valuable information leaks out.

The following are key problems in using email to support teams:

Not group memory. By definition, an email inbox is an *individual's* memory and is only accessible by that individual. At best, one team member can forward a series of emails to a new team member as a way to share pieces of information to help bring the new member up-to-speed.

Fragmented threaded conversations. People send messages to the whole team. Several members then usually use "reply-to-all," which creates different versions of that email thread intermingled with other messages. Further, these threads make it difficult to see or track the status of certain types of communication, such as an issue under discussion.

Assumes communication needs are same for all members. Different team members have different communication needs, both in content and in time. An email sent to the team may be beneficial for a few members right away. However, other members may benefit from that communication only at some future time. Others may not recognize it as useful at all, or it could turn out to be critical in a few months. By that time it's usually difficult for team members to remember where it is in their inbox!

Exclusion. Whether intentionally or not, team members can send messages to just a few members of the team. The other team members may or may not have something to contribute to that particular conversation, but often there is value in just being aware of the conversation.

Poor contextualization. While many individuals categorize email into sub-folders, the “reply” culture of email creates strings of "RE: [subject header]." This labeling can be useful in putting together the fragmented threads, but when reviewing the subject lines to determine if the message is one that is relevant, the subject line is of no help. That means that the individual must often open many messages to track down the information he or she is looking for. Moreover, there are no associations between email messages, documents, and objectives.

Poor support for creative processes. This problem includes lack of support for idea generation, ranking and rating ideas, viewing results, and building upon them. The true benefits of working together as a team are found by building on each member's strengths. While initial ideas can be surfaced in email, they usually run quickly into the fragmented threaded conversation problem. Further, members cannot easily rank the ideas and view them in an ordered list in order to work with them further.

Do these difficulties mean that there is no role for mail in team-based work? No; infrequent communication is actually best done with email because the individuals involved are usually not part of the core team's digital group memory. Email, along with instant messaging, is extremely powerful as an alerting mechanism when communication is urgent. Ironically, because of email's success, it has become a less powerful medium because the volume of non-urgent information that is distributed gets in the way of the more important content.

Today, I hear of companies working on strategies to support virtual teams. I believe that many of these efforts are misguided and that organizations risk missing the big picture entirely. I propose that what organizations must do instead is to think about a team-based organizational information system, or **digital group memory** for short. It should be designed by thinking through the organization's processes of how ideas are captured, prioritized, funded into projects, managed as projects, and then how the products of these projects are supported in the long term.

From this perspective, what does management need in terms of information and communication, and what do teams need in order to process their work and report progress?

Technology can and should integrate those needs. Today, however, I don't see a cohesive system. I see *islands of automation*. Each team organizes (or not) independently of the larger organization. Each one has its own structure hierarchical folder structure on a file server where team members dump files. Team leaders communicate progress to their managers by emailing file attachments that contain their particular reports. Often, the manager receives differently formatted reports from the team leaders.

The result of this process is that each layer of management is forced into becoming “technology clerks” who waste an inordinate amount of time culling through emails,

detaching files, and trying to combine them into yet another file to forward up another layer. Technology is working against efficiency.

Imagine, instead, that there's a single organizational system. When a new project is launched, the team gets a standard set of pre-loaded online reports, forms, templates, and so forth that they use to guide and organize their work. The system provides structures for team members to use in producing required deliverables as well as capturing relevant communication regarding the project. At a minimum, teams no longer waste time re-inventing the structure each time they start on a new project.

Because they have a standard technology in this scenario, managers can run real-time reports to view a summary of all the projects or zoom-in to a particular project. And, since the information and communication are organized in a standard manner, when new people come onto the team or a next-phase team needs to look back to see how a previous team arrived at a decision or produced the previous phase work products, they can easily find and access them. Just try to bring a new person up-to-speed with your inbox and a file server/team site.

By way of example, a Houston-based natural gas company is doing this very thing. Following a major discovery and a more than doubling of their stock price, they found themselves in need of a new slate of automated systems to manage their business. The CIO is leading an initiative to select and implement twenty-plus software packages over the next two years.

The Project Management Office (PMO) set up a project notebook using **cOrdin8**, the platform my company has developed, for each project team. Each project notebook contains the company's processes and online forms for project charter, issues, project status reports, and so forth. A dashboard was set up for the executive committee to view – at their convenience – real-time status reports or click on a link to access a particular project notebook.

Each week, the team leader updates information in the project notebook regarding milestones, issues, plan and actual costs, and so forth. The online project status report form automatically pulls all of the required information (e.g., milestones, issues, costs) into the report and the team leader adds additional highlights of the week plus plans for the next. He then clicks a route button to send the report to the dashboard for the executive committee.

In terms of efficiency, they have eliminated the time that would have been spent handling twenty-plus emails a week (with file attachments) for status reporting to the PMO. Now the team leaders just enter the information directly into the system, which is then immediately available to the appropriate stakeholders.

The teams use the project notebooks to organize and manage the package selection process. They identify and weight the requirements (criteria) for the software package. They set up a scorecard for each person who will be evaluating the package. Following each vendor's demonstration, each evaluator completes the online scorecard by providing ratings and comments. Once all of the ratings have been completed, the team leader runs reports to view the scoring results that are used to support their selection decision.

The email alternative would have required the team leader to send out an email with a spreadsheet attached that each person would complete and email back. The team leader then would then have to detach each file and combine the scores from each spreadsheet into a single file in order to analyze the results.

Because all of the information and communication regarding the team's projects are organized by the company's project management methodology, anyone can easily find and access information within any project today or in the future.

So, instead of working on how to support virtual teams with collaborative technologies, think through your organization's information and communication needs. Can your executive management easily pull information regarding status of work from all its teams? Can a new team member easily orient himself/herself with the overall picture of the project, such as its charter, risks, current issues and their status, changes in scope? Can a resource who needs to work with multiple project teams easily access and contribute to the project information flow? It's a matter of organized, or structured, group memory versus scattered, unstructured memory (individual email inboxes and file and document management servers).

It's really a matter of designing technology to enhance the communication and information flow for the team-based organization irrespective of whether team members are geographically dispersed or co-located. The design must consider how all teams in the organization work and contribute as a whole, rather than focusing just on how technology can support only the virtual teams in the organization.

Please direct your comments and questions to comments@thefutureofwork.net. We'd love to publish your reactions and suggestions.

About the Work Design Collaborative and *Future of Work Agenda*

Future of Work is a global network of resources – practitioners, thought leaders, researchers, and senior consultants – who are committed to building and implementing physical, social, and technology-based work environments that are cost-effective, socially and environmentally responsible, and personally satisfying.

We are focused on defining the future of work and helping our members and clients achieve new levels of workforce and workplace productivity. *Future of Work* produces and distributes management tools, surveys, benchmark databases, white papers and technical reports, conferences and workshops, newsletters, books and articles, and public presentations on the changing nature of work. The Work Design Collaborative, LLC, provides leadership and infrastructure services for the *Future of Work* community.

Future of Work Agenda is a free monthly electronic newsletter produced by the *Work Design Collaborative*.

Direct inquiries to either Charles Grantham at +1 928.771.9138, or charlie@thefutureofwork.net, or James Ware at +1 510.558.1434, or jim@thefutureofwork.net