MEETINGS: CURSE OF THE BUSINESS CLASS

Dear Juan:

I feel left out when you exclude me from executive meetings. But when I do get to go, they're boring and last too long. You hardly ever call on me, and when I do get a chance to speak I'm ignored -- even when someone says the exact same thing a few moments later and his idea gets recognized.

Yours in despair,
Alice

This issue of Release 1.0 attempts to define and explore the subject of meetings, along with some implications for software and systems that can assist in making them more effective -- and enjoyable.

We expect the meeting-tool market to grow and prosper for the next couple of years, but it will change shape as meetings become more "distributed" -- as either mediated online conferences or task-specific group-enabled applications. As with groupware, we believe the meeting-tool functions are not a market but more a set of capabilities that will be expected of all "group-enabled" software (which, according to vendors, comprises almost everything). As meeting tools get integrated with the rest of the software infrastructure, there will be an added benefit: The information generated in meetings will become part of the corporate memory, whether in active project plans, workflow systems, on-line documentation and performance support, or continuing on-line discussions of progress and policies.

Thus, this issue explores the nature and structure of meetings first, with a brief look at specific products. Since meetings are the essence of management, understanding how they work (and can be made to work better) is fundamental to designing good management tools. Long run, there will be a few dedicated meeting software tools, but many meeting-support functions will slip into the (network) operating system (realtime application- and data-sharing) or the application framework (ranking alternatives, organizing information and other functions of information-sharing groupware in general). Foreshadowing this trend is Lotus Notes R3, the very model of a modern information-sharing application framework.

THANKS, LISA BREIT!
Separately, other canny meeting-tool (and groupware) vendors who can't compete on a broad, foundation scale will devolve their wares into content-filled, task-specific templates for applications such as launching a product, editing and assembling a newsletter or managing a sales seminar.

For now, the promise of meeting management tools is twofold: That they can make meetings more efficient, and that they can reduce the need for meetings altogether by taking over some of their functions. Could we someday run effective town meetings electronically, or even Congress?

The current range of tools is still immature, and few of them interoperate. It includes dedicated meeting support tools from Ventana Software and Collaborative Technologies Corporation, designed for face-to-face meetings and now broadening to distributed meetings; forthcoming communications tools from WorkSpace Technologies, Intel and Artisoft, initially for managing meetings (not just data communications) by phone and eventually by video conference. We describe them briefly starting on page 15.

Tools for information-sharing without meeting support (not covered here) will include Notable Technologies' Shared Whiteboard (see Release 1.0, 12-92), and already include Group Technologies' Aspects (for realtime data sharing) and Corporate Memory Systems' CM/1 (for information mapping). Notable precursors include Doug Engelbart's work at Tymshare and SRI and now the Bootstrap Institute, and PARC's CoLab and LiveBoard.

Meetings: a medium for management

Meetings create, reflect and enforce a group's culture, and can indoctrinate -- or exclude -- newcomers. They can be used to transmit information (policies, rules or "simple" facts), to collect information, or to make decisions. They may simply affirm someone's power to call a meeting; they may recognize the efforts of certain people; they may provide an opportunity for people to voice their opinions with no visible impact on anything. (Of course, some meetings do nothing at all.)

But meetings they do not just reflect corporate culture; they are where it is most intensely exercised and refined. After all, a corporate culture is about the interactions of people; a company is most itself when its people collect. In some companies, people may be left out of meetings and left out altogether: They work for a single manager or department rather than for a shared company vision; they do their jobs without knowing why (other than a paycheck). If they do go to meetings, they go only to listen (or at least sit quietly, please!).

Why meetings matter

Meetings (face-to-face or distributed in space and time) will become more and more important, as organizations devolve and downsize and become "virtual," and as more joint work is done by consultants, project-oriented teams of collaborating competitors, alliance partners and even supplier-customer teams (a.k.a. "consultative selling"). We wonder if the task forces formed in the new Gang of Six UNIX alliance will use facilitators and meeting software... Will Lou Gerstner use anonymous meetings to flush out what really ails IBM?
MEETINGS: PROCESS AND CONTENT

Meetings range from free-form to structured events, a unique combination of form (or process) and content. Traditionally, they occur in real-time, so there’s little ability to manage them after the fact, with speech recognition or other slow-working tools. (That will change as they become more distributed.)

So how susceptible are meetings to facilitation, let alone to enhancement or management through software tools and intrusive keyboards?

With a set of rules (such as Robert’s Rules of Order), you can automatically manage the process of a meeting -- who speaks, how long, now let’s vote, now let’s list alternatives -- much as workflow manages the process of work. But you need real-time judgment at various steps, especially since meeting content, unlike at least some of the work in a workflow, generally isn’t interpretable by software. Much of it is speech, and even typed-in input is usually text (except for structured voting and ranking sessions). Call it real-time workflow.

In the end, the content (both content and context) of the meeting generally governs the process -- including real-time modification of the agenda, which frequently occurs in most productive, non-routine meetings. And you typically need people, not software, to keep things on the topic. Someone has to make the explicit calls: What subject is this on? You’re talking about people, not issues. Calm down! Experienced group members can monitor each other; you don’t necessarily need a moderator to do this.

The "content" of a meeting is a unique combination of the substantive information conveyed or the issues and decisions discussed, and the more hidden social "context": hierarchies, power struggles, roles, personalities and capabilities, emotions, leadership, fear, expertise, legitimacy, etc. Software tools are better at dealing with substantive information than with the social aspects -- mostly because the social context is rarely represented explicitly and openly in speech, let alone in computer-readable form. Thus software tools that handle content are more often used to represent and explore the rational content, although one could imagine a chart that showed personal relationships within a company or, more concretely, the frequency of e-mail contact between various pairs of people.

Our vision of meeting support isn’t simply a matter of allowing people to meet face to face virtually, although that too can be a useful function. In our terms, such conferencing systems manage neither process nor content, but simply transmit it from place to place. Thus we do not address here the many distance-removing video-conferencing or data-sharing systems now entering the market; they have nothing explicit to do with the conduct of the meeting and could just as well be used by security guards. However, their presence can affect the social context and potentially the content quite dramatically, which is another story...
Ritual is its own reward

Bill Daniels of American Consulting & Training makes the distinction between task-force meetings called to solve a problem or work on a project, and "regular" meetings, the periodic staff meetings that most people dread. Yet, he points out, the regular meeting has a unique, necessary role. "Regular meetings are where the organization's formal authority figures gather to determine what will be done with the organization's resources. Regular meetings regulate the life of the organization; they do its politics. They go beyond problem-solving to do what the expert staff cannot -- turn brilliant ideas into organizational action. They are the secular ceremony by which inspiration is made incarnate in the procedures, products and services of the organization, where the service of staff is transferred to the active authority of line. When people dread regular meetings, it is usually because the participants have forgotten their purpose in meeting, or because the wrong, powerless people are attending."

Understanding the difference in purpose -- and thus the very nature -- of meetings is vital to making them effective. The task-force meeting is about the substantive content; the regular meeting is a ratification of the social context. Overall, since more content is shaped and more unexpected things happen at task-force meetings, they are more susceptible to enhancement with software tools, whereas regular meetings' purpose is their existence, with perhaps some software tools to display the agenda and record (but not modify) the ceremonial content (which may be the outcome of a task-force meeting). But even for regular meetings, an explicit memory/record can move the meeting along and help hold people accountable. All too often each meeting leads to new promises, with old ones forgotten.

Software can manage process and can help display substantive content. It also contains implicit assumptions about the social context (and may prompt people to address it).

Meetings are good enough to share

The implicit purpose of many meetings is to get involvement from the participants -- both to stimulate them to think, and to give them the experience of working together. The real issue is not so much decision making as decision implementation. Meetings -- good ones, anyway -- give people a sense that they participated in making the decision, and that they should work together to carry it out. Although all of the participants may not agree in the end, at least they will understand each other’s points of view and the arguments for or against the various positions. They will carry the same mental model of the issue, even though they may weigh the various arguments differently for intellectual or personal reasons.

Ideally, meetings foster a positive group culture. The leaders get a chance to lead, and the team gets a chance to forge its identity. Frequently, the biggest limitation (as Alice notes above) is that you can't be part of a group if it's too small for you to join. Ask any team leader about productive meetings, and you'll probably hear that the most effective size for getting work done is four to seven. "Any more than three or four," says Philippe Kahn, "and I start to dominate a meeting. I can have a discussion with one or two people, but more than that and I take over."
MEETING METRICS

Unlike Tolstoy's families, meetings come in great variety whether they're effective or ineffective. Some dimensions include:

- What is the size of the group? Is this a meeting, or is it a presentation or a conference? Are the people an audience, or participants?
- Is the meeting really a meeting, or is it a set of one-on-ones with the leader that the others are forced to watch?
- Is the meeting a task force to decide something? Or is it a "regular meeting," where the leader collects information, explains decisions, and exercises authority?
- What is the composition of the group: Do people bring different points of view (or are some of them redundant)? In a solidarity meeting, similarity of viewpoint would be helpful; in a brainstorming session, diversity would help.
- How is the group structured (hierarchical or democratic)?
- What is the purpose of the meeting: to define a problem? to find a solution? or agree on a solution? to recognize achievement? or blame slackers? Or is the meeting a tea ceremony with a predetermined outcome?
- Is the purpose clear? Or is there also a hidden agenda? Are the goals of the meeting realistic?
- Does the group work together normally? Are there (new) members with different backgrounds and new ideas or perspectives?
- Do all the people in the group have the same background information? Is that information sufficient? Or is the purpose of the meeting to develop and share that information?
- Is the meeting one-shot or part of a series?
- Is there freedom of expression? A spirit of collaboration? Rewards for interesting ideas, or disincentives for "out-of-line" comments? Do members enjoy working with each other?
- Is there a capable moderator? Does the moderator have power over the group members outside the meeting? Is the moderator neutral, or a group member?
- Are crazy ideas, criticism and controversy welcome? acceptable? repressed?

Then there's the whole issue of whether the meeting is in one room or distributed in time and space. Moreover, a "meeting" can occur in several parts or sessions, with preparation distributed before a gathering at one time and place, and follow-up again distributed.

In this newsletter we deal primarily with issues-oriented, decision-making meetings, rather than conferences or presentations for the dissemination of information or other more formal events or "regular" meetings. Our concern is "working meetings," for negotiations, discussions, project management, conflict resolution, decision-making, etc. The assumption is generally that the group works together. They may be members of a task group, or of a more permanent management group running a company or part of a company. Or they may be part of a multi-company team working on a common project or product. We'll see more and more of these with the rise of the virtual corporation.
But the ideal for inclusion is really everyone -- so that they get a chance to participate in decision-making and feel a stake in the outcome. Many people left out in the face-to-face medium -- because they are shy, female, of the "wrong" race or lower-rank, have trouble with the language, or are simply not invited -- can contribute good ideas and a valuable different perspective in a more welcoming medium -- especially an anonymous one (see page 11).\(^1\) And they also benefit from feeling part of the team.

Although we were skeptical at first -- we're a great fan of small meetings -- we have seen that some meeting tools can indeed stretch the capability of a realtime, face-to-face meeting to encompass more people. And they can certainly increase the bandwidth of information-sharing, with the ability to create records for dissemination to a broad group of virtual-meeting-goers.

**Benefits of face-to-face vs. distributed**

Aside from transmitting information and serving the ritual functions of regular meetings noted by Daniels above, face-to-face meetings bring people together to focus on problems in a way they couldn't or wouldn't one by one, distributed in time. They almost force people to pay attention and concentrate their energies on the issues at hand, and they generate a synergistic energy that can't really be matched in the person-alone-with-cpu situation. The value of conferencing is that people can do it at their own pace, on their own time, and can pay only half-attention. They can deliberate about their responses, check their facts before replying (if they're that punctilious) and correct their spelling. (This may force organizers to make online meetings interesting, just as zappers have forced advertisers to make their commercials more appealing -- but not necessarily more informative).

**Distributed meetings**

Unstructured e-mail conferencing is not a meeting in the sense we discuss here, although it can replace some of what a meeting does. Distributed meetings are a way of organizing electronic mail, just as same-place meeting management (human or electronic) is a way of organizing face-to-face communications. (Over time, much of our task-oriented e-mail will happen through group applications, rather than vanilla e-mail.) Indeed, we expect to see a rise in time spent on e-mail and synchronous and asynchronous distributed meetings, leading to a more-than-equivalent reduction in time spent in face-to-face meetings. Both the time spent in meetings, and the cycle time -- how long it takes to go from start to finish -- should be substantially reduced...by as much as 50 percent, according to many Ventana and Collaborative Technologies customers.

How will that extra time be spent? Perhaps at leisure, or perhaps in more meetings that will result in a faster-moving company. As with other forms

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\(^1\) The impact of the change of "medium" does not apply only to face-to-face vs. online, although online minimizes most traditional impediments to being heard (but not for the illiterate, for example). If you speak another language -- but not too well -- try participating in a meeting held in that other language; you'll see how painful it is to be a second-class participant.
of increased productivity, the results may not be visible because they will be competed away: Your competitors will be doing the same thing (Release 1.0, 31 March 1993). Products will come out faster, but with shorter life cycles. If each generation is an improvement, that means faster improvement, but if each generation is a style change, it will result only in faster turnover.

All the world's a collaborative meeting

The essence of meetings is collaboration, which occurs almost everywhere (or should). You can use meetings as a filter to watch the behavior of a source with a reporter trying to collaborate on a story; a salesperson and a customer collaborating on a proposal; a group of maniacs trying to collaborate on a new government; marriage partners collaborating on everything from housework and spending money to raising children and balancing careers and family time; a teacher collaborating with her students and students collaborating or competing with one another. (We also see the process/content/context division in education: the process of classes, papers and grades; the intellectual content in textbooks; and the social context of morals, citizenship and interacting with peers.)

You can also look at yourself-today collaborating with yourself-tomorrow through the medium of a personal calendar and to-do list, or a draft proposal that you write one day and edit the next. For example, consider a personal information manager as groupware for one; it lets you coordinate your own activities and information with yourself. (Haven't you ever sent yourself deferred e-mail as a reminder?)

How meetings misfire

Some of the main limitations of meetings are that they can:

- take too long to set up and get started;
- go too slow, so people lose interest, walk out, daydream, waste time;
- last too long (compared to amount of work handled);
- reflect biases of senior (or powerful) people;
- leave confusing records or none at all;
- address issues not clearly stated (either confusing information or social items left unaddressed);
- worsen divisions, fail to address issues, make wrong decisions, leave people out.
- and so on....

Meeting tools to the rescue

The purpose of meeting tools, of course, is to overcome or offset these limitations and failings, and to make meetings as productive as possible. The tools can also leverage the meetings by integrating them more closely into the other activities of the organization.

But how? It's a truism that you can't increase the productivity of an orchestra...but that's actually misleading. Even if the point of the performance -- or of the meeting -- is an experience that can't be compressed in time, you can make that experience available to more people. Moreover, a performance must be experienced over time, but many parts of a meeting could be compressed with great benefit to all parties. Part is forcing people to
edit themselves, by keeping time or cutting them off, and part is making them type: They'll keep their comments shorter, and people can type but not talk simultaneously, while others can read several contributors faster than one speaker can talk. Finally, there's the Artisoft approach, which allows intelligible speeding-up of recorded voices.

In general, the tools are not rigid: They allow users to design a meeting and help to implement that design. For example, how is the order of speaking determined (by leader or by request)? Do certain people get priority? This could reflect either hierarchy, or a more practical approach such as topic-experts first. How long may each person speak? Can people engage in side conversations? (One Japanese potential customer asked a vendor for a feature allowing a manager to ask a subordinate a question discreetly, so as not to lose face in front of the group.) Must each person be identified (usually unavoidable with voice tools, but not completely)? And so forth. Different approaches can be combined, and all can be beneficial in certain situations at certain times, but none is a single or foolproof answer. The value of the tools is not in enforcing any single protocol, but in offering the users a choice.

Preaching only to the converted?

This is all very well, but do people want their meetings enhanced (whether by moderators or software)? It is precisely the unenlightened companies, who most need help, who are least likely to welcome it. We hear stories of companies democratized and flattened by e-mail...but was e-mail the cause, or just the means?

For all the tales below of enthusiastic users, there are also countertales. A few days ago, for example, we met a couple of systems analysts for one of the customers of one of the tools. The company used it for a while, they told us, but management lost its enthusiasm rapidly because it didn't like the anonymous comments it was reading on the system. "Of course," said one of the underlings, "you could make it non-anonymous. Then management would like it, but we wouldn't see much point in using it anymore."

Peanut story

Some time ago we were on a shortish flight which was encountering a delay in leaving. A flight attendant made an announcement: "Folks, we don't have the peanuts yet. If you want the peanuts, we can wait here for the caterers to bring them. It may take 10 or 15 minutes, but I can't really be sure. Or we can leave without the peanuts, if that's what you prefer. I'd like you just to raise your hands..." Of course, we voted to leave without the peanuts.

No one complained about the unaccompanied drinks. After all, we had made the decision.

Release 1.0

31 March 1993
THE ROLE OF THE MODERATOR (A.K.A. FACILITATOR)

Moderating a meeting is like editing, but in realtime. It requires both skills and some understanding of the content. The skills are a sense of organization and sequence, an understanding of what matters and what to leave out, and the ability to tease out the underlying meaning in a jumble of statements, opinions and contradictions. Many moderators reject tools that presume to do their jobs (just as editors may reject fancy text tools). But the tools can help them do their jobs, and should be so positioned.

Implicitly or explicitly, the process of a meeting does need to be managed. In a two-person meeting, control is usually implicit and shared, although some people always interrupt (and may unknowingly alienate their partners). In small groups, likewise, there may be no formal control, or there may be someone to whom the others defer informally. All members may make comments, shift focus, etc. (But individuals' ability to influence a conversation varies; certain people -- or types of people -- get listened to more.)

Large or contentious meetings usually have designated moderators, whether it's simply the leader of the group, the senior person present, or some outside, ostensibly impartial person who can manage the process while understanding but (in theory) not influencing the content. A moderator may also be a participant, with knowledge of the content involved, and perhaps a stated or unstated interest in the outcome.

The moderator's job is not just to keep order and be fair, but to lead the group to achieving its purpose, whatever that may be. There's always a trade-off between impartiality and knowledge of the content, between discovering the will of the group and influencing it. A moderator new to the group is open-minded and impartial, but unaware of the underlying currents or even of the explicit content. The more the moderator knows, the better she gets at knowing who makes sense, who talks too much without saying anything, who needs to be drawn out, why Juan always ignores Alice's ideas. But the truly knowledgeable moderator can't help but form her own opinions, and perhaps even take sides. Shouldn't the moderator then join the group, because she may by now be wiser than most of those in it?

A good moderator doesn't just keep a list of waiting speakers, but knows who has been heard and who needs to be heard. Even a good moderator can't know what each person will say, and may have difficulty maintaining the thread of an argument: "Okay, Juan, that's off the topic; we'll come back to it later on." This is where simultaneous idea-entering makes a lot of sense; after all the ideas are collected and organized, the meeting moves to the sorting-out stage. Then only a human can make sure a tough topic is wrestled to the ground rather than slid over; only a human can say, "Enough is enough; let's vote!" Only the boss can say, "Enough is enough; we'll do it my way."

A good moderator also needs technical skills to use the kinds of tools we describe here. The companies we profile by and large have not yet reached their goal to make meetings self-managing -- with tools simple enough to allow all the participants to use them, and with protocols that allow for simultaneous data-entry at almost all times. Items needing decisions -- such as agendas, shifting from one mode to another, closing a vote or moving from topic to topic in a synchronous meeting -- could then be handled by a group itself without the need for a moderator.
MEETING TOOLS -- PROCESS

Meeting tools can help manage the process -- if the moderator (an outsider or a designated participant) wants them to. They can pass the "speaking token," collect and organize individuals' comments entered into a shared meeting document, randomly scramble ideas to force creative approaches, manage voting (with all kinds of algorithms for counting votes and preferences), monitor the passage of time and progress through the agenda. The people decide how formal the process needs to be (which depends on the factors listed on page 5). Many of these processes can be managed remotely, spread across space and time, but there are distinct logical locations for each of them -- and usually a time period during which voting or other sessions are open before the results are gathered.

A frequent organizing structure is the agenda itself -- a combination of content to be discussed and methods/process to address it -- reporting progress in specific areas, brainstorming, organizing and ranking ideas, voting, assigning responsibilities and deadlines, etc. (We'd like to see a tool that allows would-be speakers as opposed to typists to identify their topics so that threads of the conversation don't get tangled up. You could even just hold up blue, red or green cards.)

In the traditional model, an anonymous discussion/brainstorming preliminary session generally provides the input for a more focused, identified discussion. (In follow-up meetings, you may have both anonymous ideas and identified progress reports as the first stage.) In other words, the various tools fit the various stages of a meeting. With appropriate software and connectivity, some of these stages can overlap and be distributed over time and space, obviating the need for face-to-face meetings except during the most intense discussion periods.

It is the task of the moderator or of group members, not of the software, to know when to shift from one mode to another, and which tools to use at any point and for each particular issue. As GroupSystems user Sam Eichenfield of GFC Financial says, "I don't expect all my managers to know how to operate the software, but I do expect them to know which tools to use when [possibly with the help of a technician], just as I expect them to know how to use a spreadsheet even though they may not write the macros." In the future, voting, ranking and the like will be standard corporate exercises.

It's an iterative process: The agenda can be modified in response to the content -- points raised, voting results, etc. New topics can be created; new items can be voted on; areas in which there's substantial agreement can be passed without discussion. (Anonymity helps make sure there is substantial agreement, rather than reluctance to disagree in public.)

As well as process, the agenda's structure ideally forms the foundation of the minutes, or the content that the meeting generates. Strip an agenda of its meeting-time and process information, and you have the basis of a project plan, an assignments list, performance support, a rationale for action or a progress report to management. Thus it's important for the agenda and other content tools to have a structure that's movable to other applications -- a feature that will be much easier to achieve in the future environment of compound document architectures and SGML. (See Release 1.0, 4-92.)

Release 1.0

31 March 1993
Anonymity -- a powerful byproduct

One interesting early finding of the University of Arizona/Ventana team led by Jay Nunamaker (which eventually developed GroupSystems V, page 15) was the value of anonymity. Anonymity is fairly controversial. One of our favorite moderators, Lisa Breit of Technical Development Corporation and a consultant to the Electronic Frontier Foundation, puts it succinctly: "Groups that need anonymity in their meetings may not be dealing with the underlying dysfunctionality." She adds, "Anonymity may help you air the issues, but you still need an atmosphere where they'll own up to their opinions. You won't solve the problem unless people are then willing to talk openly." Maybe so, but dysfunctional companies could be a large market.

A good moderator can draw people out (and perhaps offset the power of a group leader) and may recognize problems the group doesn't see; in such cases anonymity may be unnecessary. But even with relatively healthy groups and without exceptional moderators, anonymity can lead to greater frankness and creativity -- and can speed up the recognition or acknowledgment of well-known but hidden truths.

For instance, notes Ben Martz, coo of Ventana, a user may type something critical. Then he may comment "openly" on his own words: "Perhaps the person who said 'The chairman is a scumbag!' is upset about our bonus policy." Anonymous comments may help newcomers who don't understand a well-known but not-discussed situation, or they may reveal a problem that everyone sensed but kept to himself. Troubled projects may be recognized sooner; ostensibly crazy ideas may surface to general acclaim.

The other great benefit of anonymity is its ability to minimize gender bias -- or many other kinds of bias, for that matter. The point is to focus on the content, not the person who made the remarks. In Nunamaker's studies (used to design Ventana's GroupSystems, not to justify it after the fact), low-ranking users generally reported the greatest satisfaction with anonymous meetings, whereas higher-level people were lukewarm. "They [the underlings] contribute more, and they feel they can surface potentially unpopular ideas without personal risk," says Nunamaker. Of course, satisfaction doesn't imply effectiveness in getting a job done, but it's got to be beneficial to some extent.

Anonymity isn't always possible if group members know each other well. In face-to-face meetings, both Ventana and Collaborative Technologies use the enter-text-then-upload-it approach; an individual's words don't appear on other screens at the same time as she's typing. But certain individuals may have well-known spelling problems, opinions or other identifiers. And Artisof's Kiva even has an option for like disguising people's voices, but you know, it can't like disguise their choice of words or like verbal tics, if you get my drift, eh?

2 Note the distinction between the roles of the moderator, who leads the meeting, and the group leader, who leads the group outside the meeting. They may be the same person, but that can lead to problems...
Anonymous complaints

Anonymity can go too far...as it does especially over some networks where people don't work together, and as it might in a truly dysfunctional atmosphere. When anonymity goes bad, the focus is on figuring out who made the comments -- either because they were so offensive or because the atmosphere is excessively punitive. In the end, anonymity doesn't create a bad situation, but it may expose it. The general level of criticism, wildness, and sanctimoniousness will always reflect the local culture.

As with other capabilities, anonymity has its pros and cons; the trick is to know when it's appropriate -- and for the software to give you the flexibility to turn it on or off. "Somehow groups know when to drop the anonymity," says Nunamaker. "We see a difference between the flaming that goes on with an e-mail system, and the kind of comments that go on with our meetings." He can't explain the difference, but we suspect it has something to do with the tightness of a working group and the relatively controlled, categorized nature of an electronic meeting, even an asynchronous one.

"Online flaming responds to anonymity as if it were gasoline."
-- Stewart Brand, EFF board, Whole Earth Review, The WELL

MEETING TOOLS: CONTENT

The content of a meeting was traditionally represented first as a bare structure, in the agenda, and then in the minutes. Minutes were a dry recitation of the formal actions taken at a meeting, perhaps with the secretary's selection of important discussion points raised (as colored by a bias toward reporting the chairman's remarks in full). But minutes need not be just a bland, formal report; they could be a list of action items linked to the person responsible (and to a corporate calendar), or a budget, or a project plan. Collaboration on the minutes -- creating documentation or specs for the content -- can in fact be an explicit task.

Indeed, in the hands of a good moderator, almost any piece of software can be a meeting tool for recording, manipulating, presenting and refining the minutes, or content -- a spreadsheet with graphs, for example, clarifies assumptions about numbers (with Chronicle to manage the assumptions); an outliner can manage topics; a presentation tool or simulation tool likewise is a means of communication as well as modeling.... In fact, the ability of these tools to carry their information beyond the confines of the meeting (or to the next meeting) is one of their values. (See below.)

Corporate Memory Systems' CM/1 is perhaps the most powerful tool of this kind that we've seen. It does not attempt to visualize the content per se, but allows users to create discussion or content maps, laying out an issue in a set of comment nodes (and links to other information) and showing their relationships. For example, you can show that A supports B, this fact is an example of that concept, this document refutes that hypothesis. (See Release 1.0, 8-92.) Although CM/1 was originally conceived without meetings in mind, CMS is finding that more and more customers use it in synchronous, face-to-face meetings. (Users can place their own items into the CM/1)
Tools such as CM/1 help make the content visible -- both for understanding it and for seeing the "shape" of the discussion: Which issues are surrounded with comments and arguments, and which issues are unresolved or undisputed? We would love to see CM/1 integrated with a tool suite such as Ventana's or CTC's -- or Notes.

Other graphical tools -- both on-paper or on-screen cartoons and illustrations, and more rigorous electronic diagramming and hypertext tools -- are generally used by a skillful moderator to model and elucidate the content under discussion. Several moderators make a skill of this, most notably David Sibbet of Graphic Guides. (We will cover his work and visual thinking in general in a future issue of Release 1.0.)

Many task-force meetings are a group effort at building a model, refining its constituent parts and details, and then assigning responsibility for discrete parts: Who does what?

Documentation -- a powerful byproduct

Generally, it's useful to have people collaborate on the minutes rather than leaving it all to the moderator. By helping to create the minutes, the participants are forced to think what they really want to say: "So what shall I write here to summarize your point [which was delivered in a five-minute diatribe]?

"Does this item really belong inside the circle, or over here on the outside?" By changing the minutes, the participants feel a sense of ownership; sometimes, says moderator Bernie DeKoven, he throws in an obvious red herring just to get the group to jump in and take part in defining and correcting the record.

Donald Norman, an Apple Fellow and the author of The Design of Everyday Things, comments: "I have long had the rule in meetings that it doesn't really matter what gets said, what matters is what's in the minutes. I have been at many meetings, including some facilitated by masters, and watched while they mis-summarized meeting events (not necessarily their fault, since the events may happen too fast). Sometimes what is summarized is easier to capture than what is actually said. This is especially true with meeting moderators who capture ideas in a few pithy words or diagrams. Sometimes the clever phrase or diagram wins over perhaps a more accurate but less interesting summary. During the meeting, participants accept the brief oversimplified summary because they automatically expand upon it in their heads.

"But when the meeting is long over and all that remains are the brief summaries, the person charged with taking action is free to assign almost any interpretation. As a result, good ideas or even carefully worked-out suggestions are sometimes lost... Indeed, this can turn into a new kind of political game if the meeting participants pay attention not to what gets said but to what is being written down."

Thus, one value of electronic meetings is that all the participants enter their own thoughts -- and they are kept as part of the record. The question then is, Will anyone ever look at them again? Yes, if they are kept easily accessible, and if categorization and other tools are properly used to organize them intelligently.
Connected meetings

Meetings occur in the context of the corporation's continuing life.

As noted, the minutes of a meeting can be more than just a record; they can be part of an organization's active electronic information infrastructure. A meeting is part of a continuum: Minutes kept on line can continue to be annotated; items sent in beforehand can be used to generate an agenda for the meeting or as background materials. The purpose of the meeting is to focus and decide or form consensus, but the subject matter of the meeting is the stuff of the corporation's daily life.

Conversely, Ventana and others have found value in letting users go directly into corporate data during a meeting (via their own normal corporate hook-ups, which have to be in place). Rather than form a task group to study an issue, you can just call up the information during the meeting. The real benefit isn't saving five minutes in a meeting, but saving the days that would elapse until the next meeting. (Of course, realtime access to the corporate network also allows users to sit in the (logical) back and answer their e-mail or do other work during a synchronous meeting.)

That's why we consider Collaborative Technologies' integration with Notes an important first step.

New technologies

Meeting tools are more dependent on hardware and infrastructure developments than most software, since meetings are traditionally physical events -- whether remote or face-to-face. People are either looking at each other, or they need complex communications systems allowing them to communicate with each other, often in realtime. Right now, the issue is how to configure the meeting room: pcs on the desk, or discreetly recessed into the furniture. A whiteboard up front, each person with his own screen, or both? Additionally, there's the more fundamental challenge of persuading computer-illiterate people to type, and illiterate people in general to use written communications.

In the long run, the arrival of pens, laptops, and widespread wireless will change the awkwardness of the physical infrastructure and the role of the meeting room. It will no longer be a special facility, since people can gather with their own computers (and data) and establish connections easily. Synchronous online distributed meetings cause little commotion, and asynchronous meetings allow most people to join in at their own convenience. However, the face-to-face meeting will remain a special event -- and an important ritual.

Way, way out, speech recognition and easy-to-use facilities for soundtrack editing will also come into play.

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Issues keep coming up when they're not resolved.

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VENDOR VIGNETTES

Meeting tools range from process tools such as DeKoven's Meeting Meter (to mark the passage of time and its estimated cost) at one extreme, to content tools such as Ventana's new TeamGraphics or Corporate Memory Systems' CM/1 at the other. In the middle are the two meeting-software leaders, Ventana and Collaborative Technologies, which provide both process management and some content manipulation. EDS's showcase CaptureLab provides similar but friendlier Mac-based tools at three sites with a fourth to come, mostly in the context of research and of internal meetings, but with some meetings held with or for customers. (The Detroit center, used by EDS and GM, was fully booked last year, says EDS senior research engineer Lisa Neal.) Intel and WorkSpace both address process-management of remote phone meetings with shared data, but with minimal attention to content. Artisoft's Kiva will be a process-manager for voice meetings and manage sound records as content, a unique (so far) idea. Voting and ranking tools include DecisionPad from Apian Software and SmartChoice from SmartChoice Technologies.

On a different axis are tools such as Shared Whiteboard from Notable and Aspects from Group Technologies, which serve as a medium for meetings without doing much for either content or process; they are data teleconference tools (and are not covered here). They simply facilitate the communication without mediating it.

These tools, like any tools, are powerful. In the hands of a good moderator, they can enhance a meeting and make its value available to more participants, speed things up, etc. But the tools alone can't compensate for a dysfunctional group of people or poor leadership. In any case, they merely extend the leader's capabilities or reflect the designer's goals. In the end, it takes people to manage the unique interaction of process and content that comprises a meeting.

VENTANA CORPORATION: GROUPSYSTEMS V

Ventana was co-founded in 1989 by CEO Jay Nunamaker, most recently head of the department of management information systems at the University of Arizona, and also the co-founder (in 1969) of Combinatorics, which he sold to Mathematica in 1972. Co-founder and COO Ben Martz was one of his students, and had previously run several small businesses. Ventana is the outgrowth of a number of studies of meetings at the U of A, and the software, GroupSystems, is the commercialization of a prototype developed there by Nunamaker and his colleagues.

The idea behind GroupSystems was to speed up corporate activity by speeding up the meeting cycle, not just the meetings themselves. As noted, in a normal meeting, people speak more slowly than other people listen, and so the listeners' minds tend to wander. But if you can get them to sit around typing stuff in, you accomplish several goals: You get more ideas in the first place (more stuff to choose from); you get more people involved (broadening the privilege throughout the company); and you get more participation from the people in the meeting.

Even people who aren't generating ideas can get more involved, since there is more content to capture their attention. Of course, there's no guarantee
of the quality of the extra input, but it's easier to scan through and dis-
miss fluff than it is to listen to it. And with a tool such as Oracle's
ConText Engine (Release 1.0, 2-92), you could even reduce the text further.

In use

The initial and still typical venue for GroupSystems is a specially con-
figured meeting room: Each person sits at a networked computer, and they
all face each other around a table. The moderator may or may not have a
large screen, and everyone sees the same thing on his screen unless side
communications or activities are specifically enabled by the moderator.

The software they use, GroupSystems V, is a suite of DOS-based meeting tools
(a Windows version is on the way by Groupware 93 this August). There is
also a distributed version, which allows any participant to be a session
leader (by choice of peers or a management decision external to the system).
The distributed version also gives more support for side communications and
access to corporate information. A high-end software system of either vari-
ety with all 21 functions costs about $35,000; a starter set costs about
$25,000 for 20 group members. The functions include:

- Electronic Brainstorming. Typing online simultaneously. When a user is
  satisfied, he uploads the data to group space, where it appears in-
stantly.
- Topic Commenter. The same as brainstorming, but users enter their com-
  ments into specific topics areas (and thereby constrain their thinking
  to relevant ideas, in theory).
- Group Outliner. Collaborative generation of an outline of topics and
  subtopics down to nine levels.
- Categorizer. Methods for generating, synthesizing and categorizing
  ideas, using keywords and text-matching.
- Group Dictionary. For sharing definitions for concepts, categories or
  other items (such as "how we define the PDA market").
- Voting. Seven different voting tools for ranking, weighting, selecting
  alternatives, allocating resources, etc.
- Alternative Evaluation. Evaluation of alternatives against a specific
  set of weighted criteria, allowing for what-ifs with the criteria and
  weightings.
- Group Matrix. Analysis of interrelationships among information sets,
  for example matching tasks and skills, with related text or evaluations
  displayed in boxes.
- Stakeholder Identification. Analysis of voting results by groups (e.g.
  workers vs. management, engineers vs. manufacturers).
- Questionnaire. Semi-structured responses to a questionnaire.
- Group Writer. Collaborative preparation of documents.
- Policy Formation. A version of Group Writer for structured documents.
- Agenda Tool. Time-sensitive structure.
- Survey Tool. Standalone version of Questionnaire for distributed use.

The system's data files are formatted so that appropriate data can be moved
from one tool to another, and all text can be searched as full-text or by
some keywords. The files can also be saved as ASCII and exported into other
formats, but data interchange with the corporate infrastructure still isn't
as rich as it should be.
The company had sales of $2.2 million last year, including sales through IBM, which calls its package TeamFocus. Overall, the product is used at about 200 commercial sites, 90 of them at IBM and 60 through IBM. Customers include Hewlett-Packard (known for its effective management approach), the Federal Aviation Administration, the World Bank, Bell South, American Airlines, Texaco, American Express, Chevron and NASA.

Ventana currently has 30 employees, and is working hard to reduce the sales cycle. It finds that people who get as far as trying the system out with a real meeting of their own usually buy, but that process can take a year or more. The company is now looking for additional equity financing and exploring the use of third-party distribution channels, such as those who currently sell Notes or NCR's Cooperation (see Release 1.0, 9-92), or management consultants who understand the meeting process.

User testimonial: He liked it so much...

Perhaps the most enthusiastic customer is GFC Financial ceo Sam Eichenfield, who first heard of the software three years ago when it was still a project at the University of Arizona. Eichenfield had recently arrived at GFC from Heller International, charged with reviving the troubled leasing company.

He decided to use the system with his ten inherited direct reports, in order to find out what was really happening at the company. He had already met with all of them one on one, he says, "but I wanted to get it out in front of everyone in atmosphere of anonymity... What had gone wrong? What were the problems and the opportunities?" That first part of the meeting -- basically just entering ideas, opinions, comments and suggestions anonymously -- lasted for two days. Then the group took the computer-generated lists, sat around the table and talked about the issues and problems that had surfaced. They turned back to the computers to craft a mission statement, using GroupSystems' editing tool (not yet a product at the time).

Although Eichenfield doesn't credit GroupSystems with saving GFC, it was a major contributor, he says: "It absolutely revealed and focused us on the key issues. I want to make certain I'm getting what people really feel, not just what they think I want them to say."

After a few more such meetings, he decided to bring the system in-house. There he brought in a broader group, about 30 people, to define and develop an activist corporate culture. The first such session rated the ten direct reports as a group against a set of 16 success characteristics. Eichenfield was relieved to see that the ten were harder on themselves (as a group) than the broader group was.

Next, he continued with the anonymous ratings, but had the group rate each of the ten managers individually. Those ratings were shown to each manager individually but never to anyone else -- not even to Eichenfield, who also saw only his own scores. "It got across a message about the characteristics I considered important, and it gave each individual a status report, a road-map for improvement, which they took," he says. Only one of that original group has left (he realized he wasn't going to keep pace), and the rest are all better managers, he says.

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The company now uses GroupSystems frequently both for strategic planning and for handling mundane tasks such as workflow design, budgeting and developing new financial offerings. It has a permanently set-up meeting room in its headquarters, and some weeks it is fully booked, while it may be used only a few times a week in slow periods. (The company has 160 people altogether.)

Aside from better meetings, Eichenfield now has 16 direct reports, mostly as a result of using GroupSystems, he believes. He and his group can simply handle more information when it comes electronically, and better coordina-
tion and collaboration allow a flatter organization.

GFC is now an investor in Ventana, with $1 million in equity for 15 percent of the company, and a $1 million line of credit. Sure, that makes Eichen-
field biased. But he wasn't biased when he first tried it out, and bought it. Then he liked it so much he decided to invest. (Founders, employees and the University of Arizona (10 percent) own the rest.)

**Functions vs. ease of use**

Overall, Ventana has more discrete functions (21) but is somewhat more com-
plex to use than Collaborative Technologies’ VisionQuest, users say. But
the design center is different. We see Ventana as focused on the meeting cycle, with its focus on meeting rooms and research on the dynamics of meet-
ings. Long run, we believe, Ventana will either have to become a meeting-
oriented consulting firm or go where Collaborative Technologies is heading -- towards content-specific tools that use its meeting functions as a foun-
dation.

Ventana is pushing to let people in the group take over manage-
ment functions. "We're trying to move towards the group facil-
itating itself, but someone has to have the Magic Marker, the chalk or the command line at any one time," says Nunamaker.

**COLLABORATIVE TECHNOLOGIES: VISIONQUEST**

CTC started out as a commercial company, with an executive information sys-

tem heritage, to do fundamentally the same thing as Ventana -- manage real-
time meetings in meeting rooms. It was founded in 1987 by Jerry Wagner, who
had previously founded Execucom, an early EIS company, and sold it to Com-
share in 1984 (with a three-year non-compete). After three years of brain-
storming, the company built a nice suite of DOS-based tools in 1990, but it
never managed to make much money or build much of an installed base (about
45 sites). A new management team took over in February, with new funding
from Columbine Ventures and Batterson, Johnson & Wang. That new management is now considering how to remake CTC, even as it helps its customers to re-
make themselves.

The first change will probably be in pricing, which is currently about
$20,000 for a 25-user system (roughly equivalent to the starter Ventana sys-

tem, although the companies can’t agree on how to compare their functions). CTC is still having meetings about this issue, but new CEO Frank Wilde ex-
pects the price to drop by about half. (Shades of Notes, and its continual-
ly dropping prices and broadening distribution.)
Currently, the VisionQuest product line consists of the usual set of tools (like GroupSystems, it will shortly appear in a Windows version):

- Brainwriting. Brainstorming.
- Compactor. Lets a designated user/moderator organize the ideas into categories. It can also use imported files, such as company documents.
- CommentCards. A structured way to share opinions and data on dialogue topics, which also serves for group outlining and authoring.
- Ranking (by order), Rating (by points), Point allocation (allocating a fixed number of points, as one might do with a budget or other finite resources) and Scoring (rating by multiple criteria with specified weights).
- Subgroup selection. Basically "rating" with a value of 0 (discard) or 1 (keep).
- Voting. Yes, no or abstain.
- Agenda tool.

The resulting information can then be exported to other applications such as Excel or a word-processor, although it needs to be reformatted. The link with Notes is tighter. Technically, while GroupSystems works with a set of DOS (or Windows) files, VisionQuest is based on a B-trieve database. Thus it can move data from one tool to another, but the process can be slow and cumbersome. (We expect VisionQuest will someday use generic SQL databases, which would make it easier to integrate into other environments.)

With new management, CTC has a chance to redesign itself ahead of a moving market. Its latest big step is the newly available Notes interface, requested by several customers including the National Academy of Science, Dell and Baxter Healthcare. It allows for easy export of information to and from Notes, and allows people to manipulate the information jointly in realtime (whereas Notes generally works on a deferred basis). This allows for some of the structured document capabilities Ventana offers within GroupSystems -- and on a more easily interoperable basis.

Of course, someday Lotus will probably incorporate that realtime sharing capability into Notes itself (or license it from CTC), but by then CTC will have moved on anyway. The meeting-specific functions -- voting, ranking and organizing the content -- will likewise lose their unique value.

Thus, as noted, "distributed meeting management" turns into generic information-sharing groupware. CTC's value-added -- a few add-ons to Notes -- is a small business. Thus CTC's own business will probably turn into content-specific templates for tasks such as product design, product launch, Total Quality Management, and business-process re-engineering, performance reviews (now usually a meeting of two, but perhaps it would benefit from formal input from others), pricing strategy, and other things people meet about.

CTC is already working on templates for problem solving, continuous improvement and TQM. Although the first two sound like unstructured activities, maybe they are structurable and would benefit from a little more rigor. CTC customers have built templates for cross-functional problem-solving teams in areas such as human resource planning, manufacturing, product development and market planning. Perhaps one day CTC will become a marketing channel for them.
User testimonial: He like it so much he left...

Marriott is perhaps the most enthusiastic user, even though its primary VisionQuest champion, Carl DiPietro, left to start his own business running meetings with VisionQuest. Marriott uses it actively for internal management meetings at 15 sites. It also rents out its VisionQuest room at the Tysons Corner Marriott to customers (with a royalty to CTC) and is opening several more. DiPietro is a frequent user of the Tysons Corner facility.

Another believer in VisionQuest is Mark Tebbe of Lante Corporation, a well-known systems house that runs the Notes system for PC Forum, among other things. Tebbe's first reaction to VisionQuest was that it seemed too complicated for nontechnical customers, but that he would try it in-house. Now the company is using it enthusiastically internally. "It saves us a lot of time by keeping us in touch better, so we don't need as many face-to-face meetings," says Tebbe. "And when we do have meetings, we have a focused agenda and we get much more done."

Lante also started using it for design and contract sessions with customers, some of whom were delighted with it and are now using it themselves (with initial support from Lante). Customers referred by Lante include Baxter Healthcare, Hewitt Associates, Illinois Federation of Teachers, Hill & Knowlton (for strategy sessions with clients) and Mutare. Mutare is a telecommunications systems integrator that offers a system/service called MeetingWare based on some VisionQuest tools.

WORKSPACE TECHNOLOGIES

WorkSpace Technologies was founded last year by Jeremy Thomas, chairman of UniSoft and also chairman of the executive committee of UNIX International. His goal is to form a "cross-industry consortium" of companies who will complement his meeting-infrastructure tool -- something like UNIX, we assume, but more practical and more effective! "If we get it right, this [meeting] market will be the next wave of growth in the computer industry," he says.

His product/service, WorkSpace, scheduled for delivery late this year, will handle the communications underpinnings and some of the process for remote meetings over regular phone lines in real-time. The Windows-based system will start with limited data interchange plus voice at first release, with eventual support for full video-conferencing. The goal is to make it "a low-priced, mass-market product aimed at the middle tiers of distributed organizations" -- which we assume means a few hundred dollars per user.

Technically, WorkSpace brings more to the party than just software; it includes a tiny beige "black-box" that allows data and voice to travel over the same lines. Thus the software manages and controls access to the participants' voice lines seamlessly, while other approaches require modem servers and extra steps to link voice connections to the appropriate pcs. Each user needs only one phone line (which must be connected over a standard phone-conference bridge for more-than-two-person meetings). The WorkSpace technology is patent-pending, and we can't describe it here, but it should provide an edge. In the long run, if WorkSpace is successful, it could easily implement its technology as a small add-in card or PCMCIA device -- or even get hardware OEMs to include it as part of the basic system. (The system can also run over LANs or two phone lines for higher data rates.)

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WorkSpace, due out by year-end, will focus on managing the process, with tools that allow a meeting leader to set up and manage a meeting automatically, passing a token from speaker to speaker. In addition, users can indicate their attitudes to the progress of the meeting, with screen stick faces showing smile, neutral or frown, and another icon showing a check or a question mark. For example: "I understand and I'm happy about it. I don't understand but I don't really care." And so forth. Users can even leave temporarily, greying out their names on the list of participants. They can request to speak, and be put on a list, but only the team leader can interrupt the flow of speakers. Optionally, the system can cut people off after a set time limit, and pass the floor to the next person.

Each user sees who's talking (and for how much longer), who is next in line, and who's there. There are also facilities for posting the agenda and attachments, keeping and displaying the minutes, voting, two-way private notes (or public messages), sharing of data objects such as spreadsheets, whiteboards, documents or outlines, calendars and graphics (although the details of application-sharing will depend on the implementation and precise user environment). At the end of the meeting, each user's computer will contain records of all the meeting content -- the whiteboard, minutes, agenda, and files from any shared applications. Users can scan the minutes with a WorkSpace tool to find their own tasks, and annotate them and send them back to the group to report progress. In the current version, users can also tote up statistics such as how long and how often each participant had the floor -- but this is a controversial feature that may not survive.

Thomas imagines a model meeting of no more than eight people, with agreed-on process structure -- although the technology will stretch to 24 people (based on feedback Thomas is getting from beta sites). The assumption is that the group probably has worked together in a single room; now they have dispersed to their separate tasks and want to meet remotely on a periodic basis to follow up and to handle issues as they come up, without the bother of a face-to-face meeting. Thus each participant can imagine the people behind the stick faces (or you can scan in real images).

All WorkSpace's process functions can be turned on or off at the users' will. It goes all the way from what Englishman Thomas calls "California-style," or everyone at once, to formal preset speaking times. "We let action-focused working groups select their style on a per-meeting basis -- sometimes formal, sometimes not -- depending on what they're trying to accomplish," notes Thomas.

INTEL: TO BE ANNOUNCED

Ever since Andy Grove saw Notes at PC Forum in 1990, Intel has been intrigued with the possibilities of communications, e-mail, groupware...and business conferencing (or meeting management). The person charged with developing meeting software was Chris Hughes, a general manager in the Personal Computer Enhancement Division software business area. Contrary to stereotype, Hughes is not just a hardware man: He has thought long and hard about the sociology and has used Bill Daniels of American Training and Consulting (page 4) to advise on the project.

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Hughes began by thinking about meeting process management on the one hand, and by watching how people use fax as a means to communicate data semi-interactively -- since doing real-time data exchange is a significant part of the problem he's trying to solve. He then extended this model of "real-time fax" to include meeting support, with tools for sharing a list of participants, sharing and annotating documents or other data. Users can annotate or point to a document, sign it, and "seal" it against further changes. Hughes also promises to have support for shared applications, so that users can manipulate real data using application facilities instead of simply annotating screens. "We won't ship the product until we can do that," he asserts bravely.

This future Intel product, slated for shipment in the fourth quarter, is basically communications software that will manage a data channel operating in concert with a separate voice line for each user. (The voice lines will go over a standard conference-call facility; the data lines will use a modem server or a LAN for more than two people.)

The system itself doesn't impose a particular meeting protocol but it allows a designated user to control the meeting with preset rules or dynamically, as the meeting progresses. People have roles and privileges as specified by the person in charge. The privileges (duties) include keeping the minutes (in a user-supplied application), access to the shared workspace (one at a time will make it easier to achieve the application support), the right to pass private notes over the system, and so forth. The fundamental idea is to provide a tool with which the chairperson or moderator can design the meeting, either in advance or dynamically, as the meeting progresses and the agenda adapts.

With this product, Windows-based, Intel will provide some of the meeting-support/business-conferencing infrastructure on top of which other vendors may provide specific fixed-protocol management or content/procedure-rich information tools. This is the kind of broad, ambitious offering that properly comes from a company with a broad market presence. Its goal should be mostly to disappear into the plumbing, while providing a few APIs for people who build the more niche-y product on top -- much as Lotus is doing with Notes. As applications are group-enabled, they should be able to query the Intel product to find out the identities of the users on-line so that, for example, different people's assumptions in a spreadsheet can be properly identified (unless anonymity is specified).

Intel will probably market the product as a tool for meetings for two persons and up; that is, you can start with enhancing simple phone calls to another person, and move up to data-enhanced conference calls when you're ready. The initial product will be limited to eight users, but that's an arbitrary limit. It will require no extra hardware (except the modem everyone has, right?), and will be distributed standalone as software and perhaps bundled with certain other Intel Personal Computer Enhancements products.

ARTISOFT: KIVA

What's next after file- and printer-sharing? Meeting management, of course. Artisoft is best known for LANtastic, its peer-to-peer network. It has an installed base of approximately 225,000 systems with about 1.2 million
users. President Jack Schoof has long chafed at the need for meetings, and at the difficulty of managing them effectively. Hence Kiva, a forthcoming voice-conference management tool that the company has previewed but won't ship until 1994. Artisoft's goal is to sell Kiva for $295 per seat; the networking infrastructure costs extra (and is Artisoft's basic business).

Like Intel's and WorkSpace's products, Kiva will manage voice meetings, but more actively than either of them, with the ability to turn voice access on and off according to user-specified rules. Unlike them, the system can distribute data (a la handouts) but will not support shared access; it assumes that a single user maintains the "minutes" of the meeting and has set the speaking rules. Ultimately, it will have an API for complementary applications, which will be able to determine who's speaking and who's on the list. Also, its initial implementation is for LANs rather than telephone conferences (although you can hook remote sites up via LAN-to-LAN bridges if you don't mind a little delay, or a user can call in from home if he has two phone lines).

What will set Kiva apart is its ability to manipulate the audible part of the conference, speeding up speech intelligibly so that latecomers (or people listening retrospectively) can "skim" through a meeting and catch up. Since access to the voice lines is controlled, the system has a record of who spoke when, so that the sequence of speakers can be listed out and matched to the recorded sound and the records of the meeting moderator (keeper of the minutes). Then a single person can summarize what each person said in text, so that the records can be searched for the actual speech. (Long run, also there will be a capability to convert the speech to text, using Artisoft's ArtiScribe transcription tool, an aid for typists.)

People like to speak more than they like to listen. You know the scenario: A moderator tells a line of people standing at the mike, "Sorry, only one more question." Most of those standing don't sit down to hear the last question and answer; they walk out.

BERNIE DEKOVEN -- INSTITUTE FOR BETTER MEETINGS

"Meetings are the organization made manifest," says Bernie DeKoven of the Institute for Better Meetings (see Release 1.0, 8-88). He is a master of "technography," his term for his technique of using computer content tools in meeting facilitation. Less a theoretician than a master practitioner, he manages meetings with a computer and projector, which he uses to create, record and display the agenda, minutes, and various visualizations of a conference's content. Sometimes he runs the meetings himself, with ample interaction about the content from the participants; sometimes he simply

3 The for-profit Institute also offers Meeting Meter (a joke that turned serious), an on-screen timer that totes up and displays the cost of a meeting as it proceeds, based on the salaries of the participants. But mostly he and his collaborators manage the process themselves.
records the content, while a partner manages the meeting itself, asking questions, leading discussions, and getting the participants to generate the content DeKoven records.

With technography and meeting facilitation in general, DeKoven came to realize, he was messing not just with a company’s meetings but with its essence -- power structure, beliefs, goals, fears. In the business since 1985, he has discovered more about it each year. "When I developed the process and each refinement," he says, "I wanted to pass them on to everyone." But he discovered that his ideals of democracy and empowerment don’t always operate: Some people are good technographers; some can be trained; and some will never get it. Technography itself is empowering but not necessarily democratic; it’s more like an efficient marketplace that lets good ideas float to the surface -- and then efficient marketing, that enables them to be sold to the group.

Over the years, for example, DeKoven has learned when to turn off the overhead, so that group members must face each other -- but also so that they can talk without a record being generated. The trick isn’t just doing it, but knowing when. (Meeting management is like horoscopes; all the ideas and tricks make sense, but the skill and brilliance is knowing, when, how and with whom to apply them.) Using the tools is a process of continuous invention, says DeKoven, by group members as well as by him. He introduces a new technology and they work together to apply it.

Before running a meeting, DeKoven interviews a few of the key participants -- to find out the purpose of the meeting, to prepare the leaders, and to start to derive an agenda. There are some occasions, he notes, when he has advised a prospective client not to hold the meeting at all, or at least refused to work on it -- mostly because the meeting had no point, which usually meant it had some underlying political purpose. (But such clients rarely talk to moderators in the first place.)

DeKoven sees meetings as a collaboration; people work together. In fact, he likes using two moderators working together, to provide a subliminal (usually) model to the other participants. (No, it’s not just to charge more; in many cases, one of the partners is from the client side.) "Incentives for teamwork are absent in most organizations," he says. "But at least I can put them into meetings. I do frequent 'copy breaks,' where I print things out. They see how working together makes tangible things happen."

Bernie’s barrel of tools

DeKoven’s primary tool is not Meeting Meter nor any kind of fancy meeting tool, but plain old Microsoft Word -- which he uses more for its outline capabilities rather than fancy fonts or anything. It can also be annotated, either in a meeting or after the fact. (Previously he used Symantec’s More, one of the earliest full-featured outliners. But the process is fairly independent of the specific package.) He has also started using Proxima’s LCD projector with its Cyclops remote mouse that lets him interact with the large screen instead of sitting behind the keyboard. Occasionally he uses other software, such as Excel and various presentation tools.

DeKoven has worked with a broad range of customers and collaborates with many other meeting moderators and researchers. Clients include Apple, Time-Warner, Sun (they let him use a Mac!), EDS, AT&T and American Express.

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And he learns from them. For example, EDS sometimes uses a one-way mirror to observe meetings at its CaptureLab. At first, says DeKoven, "I was frightened and incensed by the whole idea -- people watching and making comments out of my control. But I began to realize that if meetings are so important, I need continuous feedback in order to make them better -- and not just from the participants, but detached, professional feedback. As a moderator or a participant, you can get too immersed. The point is not so much to be objective as to be outside the process even if you have strong feelings about the content."

HOW WE GOT THIS STORY

Until recently we have been spared the agony of meetings so familiar to most of the world; our company had only four and a half (now five and a half) people, and we're all within shouting distance of each other. We first saw a trained moderator at work about ten years ago, with Dell's entire executive staff (we were an invited "expert"). Three years ago, we saw a moderator try to moderate a meeting of Americans and Russians, which flopped completely. Russians didn't understand the allocation of limited power to the moderator, and simply wouldn't respond to his instructions.

However, over the past couple of years we have joined a variety of boards and other groups -- the Santa Fe Institute, the Global Business Network, the board of advisors of Perot Systems, the board of advisers of the Poynter Institute for Media Studies and the Electronic Frontier Foundation, the Russian Software Market Association. (No wonder we've been so busy!) Some of these groups had facilitated meetings; others did it themselves. Some of the meetings were large, some small; some productive, some pointless. As we assessed the different experiences, we began to formulate some notions of what distinguishes a good meeting from an ineffective one -- and of how good moderators and software could help. We'd like to thank in particular Lisa Breit, who helped make not just the meetings but the organization itself more effective, and Bill Boggs of Synectics, who explained his craft to us after moderating a superb meeting at the Poynter Institute. (But will they follow through?)

We also talked to many users for this article. Most of them preferred not to comment for the record: They hadn't yet signed the contract; they were still in pilot mode; they considered it a competitive advantage (do they behave this way in meetings?). But in general, we get the sense that those who use meeting software are those predisposed to organizational change in the first place. They are enabled to operate more effectively because of the tool, but the benign social context and open attitude that led them to adopt a tool in the first place probably matters more than any particular tool.
RESOURCES & PHONE NUMBERS

Bill & Lila Daniels, American Consulting & Training, (415) 388-6651; (415) 388-6672
Bill Ray, Apian Software, (415) 851-8496;
Donald Norman, Apple Computer, (408) 996-1010; fax, (408) 974-8414 or 5505
Jack Schoof, Artisoft, (602) 293-4000; fax, (602) 293-8065 home fax: (602) 297-6148
David Sibbet, Tomi Nagai-Rothe, Graphic Guides, (415) 882-7760; fax, (415) 543-2021
Frank Wilde, Don Peterson, Collaborative Technologies, (512) 794-8858; fax, (512) 794-8861; CompuServe, 75740.271
Jeff Conklin, Michael Begeman, Corporate Memory Systems, (512) 795-9999; fax, (512) 794-5921
Lisa Neal, EDS CaptureLab, (617) 225-0095; fax, (617) 225-2985
Sam Eichenfield, GFC Financial, (602) 207-2004; fax, (602) 207-5543
Bernie DeKoven, Institute for Better Meetings, (415) 856-8363; fax, (415) 493-1417; e-mail, meetings@applelink.apple.com
Chris Hughes, Intel, (503) 696-4376; fax, (503) 696-4770, 696-8144, 696-8085
Mark Tebbe, Lante Corporation, (312) 236-5100; (312) 236-0664
Ron Brown, Dave Larson, Notable, (415) 312-0800
Arnold Urken, SmartChoice Technologies, (201) 379-2306; fax (201) 429-9568
Bill Bogs, Synectics, (617) 868-6530; fax, (617) 354-2923
Lisa Breit, Technical Development Corporation, (617) 728-9151; fax, (617) 728-9138; e-mail: lbreit@eff.org
Jay Nunamaker, Ventana Corporation, (602) 325-8228; fax (602) 621-3918
Jeremy Thomas, Workspace Technologies, 44 (734) 723-940; fax, 44 (734) 724-532; 1 (415) 856-2945; fax, 1 (415) 856-6591

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COMING SOON

- Performance support.
- Visual thinking.
- Electronic support for communities.
- Pen stuff.
- Directory services.
- Constraint-based reasoning.
- And much more... (If you know of any good examples of the categories listed above, please let us know.)

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**Release 1.0 Calendar**

April 13-16  *Seybold Boston* - Boston. Electronic publishing in all its glory. Also the launch of SGML Open. Sponsored by Seybold Seminars. Call Beth Sadler or Kevin Howard, (310) 457-5850; fax, (310) 457-4704.


April 24-29  **INTERCHI ’93: Human factors in computing systems** - Amsterdam. Interfaces and intelligibility. Sponsored by ACM. Call Carol Klyver, (415) 738-1200.


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Release 1.0 is published 12 times a year by EDventure Holdings, 375 Park Ave., New York, NY 10152; (212) 758-3434. It covers pcs, software, CASE, groupware, text management, connectivity, artificial intelligence, intellectual property law. A companion publication, Rel-EAST, covers emerging technology markets in Central Europe and the former Soviet units. Editor: Esther Dyson; publisher: Daphne Kis; contributing editor: Jerry Michalski; circulation & fulfillment manager: Robyn Sturm; executive secretary: Denise DuBois; editorial & marketing communications consultant: William M. Kutik. Copyright 1993, EDventure Holdings Inc. All rights reserved. No material in this publication may be reproduced without written permission; however, we gladly arrange for reprints or bulk purchases. Subscriptions cost $495 per year, $575 overseas.
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<td>May 4-6</td>
<td>Telecom Developers '93 - Dallas. Sponsored by Teleconnect. Call Nora Long, (212) 691-8215; fax, (212) 691-1191.</td>
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<td>May 18-20</td>
<td>Wireless Datacomm '93 - San Jose. Sponsored by Communications Events. Call Linda Hanson, (203) 847-5131.</td>
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<td>June 14-17</td>
<td>Object World - San Francisco. Sponsored by IDG World Expo. Call Bill Hoffman, (508) 879-6700; fax, (508) 872-8237.</td>
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<td>June 29-30</td>
<td>Lap &amp; Palmtop portable computing and communications conference and exposition</td>
<td>Anaheim</td>
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<td>June 29-July 1</td>
<td>PC EXPO - New York City. Sponsored by Bruno Blenheim. Call Annie Scully</td>
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<td>August 9-13</td>
<td>*Groupware '93 - San Jose. Sponsored by The Conference Group. See the tools described here in action -- or at least in demo. Contact: David Coleman, (415) 282-9151; fax, (415) 550-8556 or Jim Burks, (602) 661-1260; fax, (602) 661-0449. Followed by...</td>
<td>San Jose</td>
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<td>Aug 29-Sept 3</td>
<td>International joint conference on artificial intelligence - Chambery, France. Sponsor: French Association for Artificial Intelligence and a host of others. Contact: Catherine Vidonne, 33 (79) 356-622; fax, 33 (79) 613-792; e-mail, <a href="mailto:vidonne@imag.fr">vidonne@imag.fr</a>.</td>
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<td>September 21-23</td>
<td>*UNIX EXPO - New York City. Sponsored by Bruno Blenheim. Call Annie Scully</td>
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Please let us know about events we should include. -- Denise DuBois

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