Communication is the very essence of teaching and learning, but the vagaries of distance education make effective communication difficult to achieve. Various media from humble print to sophisticated two-way audio-video have been employed in attempts to ameliorate the devastation that distance imposes, with varying degrees of success. One of the most recent contenders in the contest is computer conferencing, which provides an asynchronous means of discussion that is difficult to achieve any other way. Essentially, computer conferencing can be viewed as a souped up form of electronic mail that provides functionality and permits activities that regular e-mail does not.

FirstClass 2.6 by SoftArc Inc. of Markham, Ontario is a combination package of bulletin board/electronic mail/computer conferencing software that is increasingly being adopted by distance education institutions around the world as a primary delivery and communication medium. However, FirstClass is very useful aside from its application in distance education it can be used equally well as an adjunct for on-campus instruction, as well as a surrogate for face-to-face meetings among work groups (students and teachers alike). Our work group has found, for example, that a good deal of the business and discussion that takes place in face-to-face meetings can be done in a FirstClass conference, with consequent decreased frequency of meetings. When meetings do take place, they can be conducted more efficiently, since background information will have been distributed beforehand on FirstClass. Furthermore, discussions that take place on FirstClass tend to be of better quality, since the asynchronicity provides an opportunity for more reflective discussion. FirstClass features a graphical user interface (GUI) which is quite intuitive (with a few exceptions) and is common to both Macintosh and Windows users, making it easy to teach new users about the environment regardless of the hardware they use. A non-GUI command-line interface is also optionally available for situations that involve dumb terminals or other non-Mac or non-Windows platforms. Client software, while copyrighted, can be freely distributed to any and all users; only the server software is licensed.
The server software can run on virtually any Macintosh or Windows NT machine, but smaller capacity machines may limit the number of simultaneous users possible. For example, the server software will run on a Mac Plus and would probably be adequate in that configuration for a work group of several dozen users, provided they did not need to all be on-line simultaneously. Larger groups, of course, would require more computing horsepower. Server software is offered on a fee schedule that depends upon the number of users, in increments of 5, 10, 25, 50, 100, 250, 500, or 1,000 users (in addition to the five users allocated to the basic server license). The whole licensing fee schedule is modular: remote (telecom) users can be licensed separately from regular, local-area network users (and cost substantially less per user than the latter). Macintosh server software can have an optional Windows user module and Windows NT server software can have an optional Macintosh user module; both can have optional command line user interface modules. AppleTalk, IPX, and TCP/IP modules are available, as are Internet gateway software, allowing you to customize FirstClass for your environment without paying for capabilities you don’t want or need. Discounts for educational institutions provide substantial savings over corporate licenses. The way in which FirstClass deals with users’ names is so rational and human-like it may confuse users who are accustomed to less sophisticated e-mail systems. Although each user must have a unique UserID, only the individual user and the system administrator need be concerned with what that UserID is. Other users simply address each other using their normal (human) names. Indeed FirstClass is so smart that it will recognize individual users given only portions of their (real) names (although it won’t necessarily recognize portions of their UserIDs). For example, Jonathan Barson’s UserID may be something as arcane as JB123 or something as reasonable as Jonathan Barson, but for the sake of this example, let’s pretend it is the former. Only Jonathan need remember what his UserID is, because he needs it to log on; other users will address him as Jonathan Barson. But they don’t need to know exactly what Jonathan’s name is they need only type in, say, Bar and hit Return, and FirstClass will pattern-match all users with that string in their (real) names, perhaps yielding a menu of users (from which Jonathan’s name may be selected) that includes Barbara Simons, Jonathan Barson, and Sara Baron. Alternatively, they could type in jon (capitalization is unimportant) and hit Return, with similar results (i.e., a menu of names of all users who have those three letters in their names). FirstClass also provides for users’ resumes, which can shed light on individuals who may share similar names. Resumes can even include a picture. Also available are a directory, which lists the (human) names of all users registered on the system (unless they are specifically excluded by the administrator), and a listing of whomever is on-line at the time.Offers virtually all the standard e-mail features one might expect, plus a number one might not. Creating, sending, and receiving an e-mail document is straightforward, employing all the normal menus and commands one might
expect in a Macintosh or Windows environment. Messages can include mixtures of different fonts, sizes, styles, and colours of text, and can be assigned various levels of priority (normal, urgent, bulk) and sensitivity (normal, personal, private, company). Messages can also be receipted. That is, when you send a message with receipting turned on, you will receive a reply message indicating when one of the following activities take your choice occurs: routing, delivery, or reading. (No more excuses of I didn’t receive your e-mail or I got it, but haven’t read it yet!). You can choose to suppress notices of non-delivery of outbound messages. Sent messages can be “unsent” so that you can make that addition you always think of after you’ve sent a message, or retract those angry words you wish later you hadn’t sent. A History feature allows you to view all transactions related to a given message: when it was sent, when it was read by each individual to whom it was sent, when it was replied to. A powerful search capability permits locating messages by specifying text which appears in some combination of the subject or file name, the sub-conference or folder name, the contents of documents, the names of attached documents, the “From” field, or the “To” and “CC” fields. The seat function makes it easier to find those messages that have been mis-filed or otherwise lost. An auto-reply feature permits you to automatically reply to an incoming message with “canned” text. For example, if you are away for a period of time, you might set up an auto-reply message that tells people who send you messages that you received their message but are away and will not be able to respond until a specified date. Messages may also be forwarded automatically when they are received. The ability to create forms of various kinds allows you to customize what a message will look like. FirstClass comes with several forms (e.g., a telephone message form that looks much like printed telephone message pads, several varieties of e-mail message forms, a requisition form, a request for information form, and several others) as well as the standalone software necessary to create custom forms (e.g., questionnaires for electronic polling). The same software also permits you to create custom settings files and splash screens, to further customize your environment.

FirstClass makes it particularly easy to send documents to other users. To attach a document to a FirstClass message, a single command evokes a standard Mac or Windows “open file” window which permits locating the desired file by clicking through the volume and folder structure normally used on that platform. Once the desired file is thus identified, FirstClass automatically compacts and binhexes (for Mac) or zips (for Windows) the file and sends it on its way. The recipient is notified of an attachment by a small document icon in the message header and needs merely to double-click that icon to cause FirstClass to unpack the document and place it on the desktop or wherever the recipient designates. If the sender attaches, say, a Macintosh Microsoft Excel tile and sends it to a Windows user, the document will automatically appear on the recipient’s desktop as a Windows Microsoft Excel file, complete with appropriate icon: All types of files (word processing, page layout, spreadsheet, graphics, multimedia, etc.) can be attached,
the only requirement is that the recipient have software that can properly interpret the file once received.

FirstClass is much more than an e-mail system, however. Its strength lies in the ability to create and manage conferences containing individual messages and threads (collections of messages all pertaining to a single topic or sub-topic). It is not really overstatement to say that FirstClass permits an almost dizzying array of controls over who can communicate with whom, and how, which greatly simplifies setting up groups and sub-groups who are engaged in a particular discussion or conference. Central to this administration is the notion of privilege groups, groups of users who are granted certain powers. There are 17 different levels of permissions that can be assigned to privilege groups: edit permissions, moderate, delete any item, create folders and files, edit sent messages, edit documents and stationery, move and resize windows, approve items, delete items, view summary, search, send, open, create sub-conferences, download, view permissions, and view history. Nine standard combinations of those permissions allow easy designation of groups of those permissions, resulting in privileges ranging from Disallowed (the user is not able to open the conference at all), through Summary, Browser, Reader, Contributor, Approver, Moderator, and Creator to Controller (whose powers are secondary only to the system administrator’s). Privilege groups are easy to create and modify, and users may be assigned to more than one privilege group. By careful specification of privileges to groups, the system administrator and those granted Controller status can empower or limit users to varying degrees a boon in a teaching situation where a teacher might want to create and dissolve sub-groups of students over time and grant them differing degrees of access to certain resources or conferences. Typically, for example, one would want to limit the ability to read and send messages in a conference to only those members who should be part of the conference. FirstClass makes it easy to do this, although it makes it equally easy for the administrator or conference Controller to grant universal access as well. It is even possible to conceal the very existence of a conference from users who are not members of that conference.

Automatic threading of messages in a conference is also a valuable feature. To understand how threading works, assume a conference involves one user initiating a discussion about Topic A. Over the course of a few days, perhaps, other users will reply to Topic A with their thoughts. At the same time, a second user may initiate a discussion about Topic B, and yet another user may start Topic C. Since users respond to these topics asynchronously, the incoming messages within that conference will consist of a hodge-podge of messages relating to all three topics. By starting to read the first message in Topic A (readily identifiable by the header to the message), and using the threading feature, a user can skip from one message about Topic A to the next message about Topic A, then to the third, etc., without having to invest time and energy in seeking out the correct path through the hodge-podge of messages makes it easy to do this, although it makes it equally easy for the administrator or conference Controller to grant universal access as well. It is even possible to conceal the very existence of a conference from users who are not members of that conference.

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who are logged onto the system simultaneously. Although fairly easy to use, the chat can be confusing if more than two people are involved.

Aliasing is supported to good advantage. For example, if a user accidentally deletes a folder representing the conference he is in, the administrator can create an alias of that conference and effectively re-subscribe that user to the conference.

Given all the strong points of FirstClass listed above, one should not assume there isn’t room for improvement, however. There are several places where FirstClass needs work. FirstClass has generally poor administration tools for bulk creation of new users. While the current system works well, is easy and intuitive to use, and is even relatively quick at creating a single user, it performs poorly when many users have to be added (or deleted, for that matter) at once, as is usually the case in education, where classes or cohorts come and go. There is provision for bulk creation of users, but it is clunky and hard to manage. This aspect of FirstClass needs to be modernized. FirstClass seems to assume a relatively stable group of users, which is not typically the case in computer conferencing as an educational tool.

Maddeningly, there is no straightforward way to create an address book in FirstClass from existing address books used with other mail systems. One would think, that in this day and age, it should be possible to simply import, say, a tab-delimited text file to create the necessary address book entries. Unfortunately, FirstClass requires that you type in these addresses one at a time. Indeed, it is not even possible to paste in more than one name at a time, which is unforgivable.

The paste capability is erratic in its operation in other areas of the interface, as well sometimes it works as expected, and sometimes it doesn’t. This erratic behaviour of the clipboard seems to be exacerbated by moving between FirstClass and other applications. Furthermore, there seems to be an unreasonably small limit on the number of characters that can be pasted at one time. Attempting to copy a multi-page text document and paste it into a FirstClass message is almost guaranteed to lock up your computer, necessitating a re-start.

Another shortcoming of FirstClass is the lack of an automatic digesting capability. A digest is simply a compilation of many messages, usually relating to one another. For educational conferencing, it would be invaluable to be able to automatically prepare a single document containing all the messages relating to one topic (i.e., a document which is the product of working through the auto-thread capability). Such a digest should contain the usual header information (who sent it, and when, etc.) as well as the body of the message. Unfortunately, if one wants digests of threads in FirstClass, one must create them manually, a tedious project at best.

FirstClass allows the user to adjust the font, size, style, and colour of text in a message, but again maddeningly not to set a default preference for any of those characteristics. Worse yet, the creators of FirstClass have chosen to use 9-point Geneva (on the Mac) as the default display. Obviously, this size of text is far too small to be comfortably read by most users (even those without bifocals!), and
having to manually adjust message text for each item gives plenty of opportunity to speculate on the question “What in the world were they thinking about when they wrote this program?” For having done so many things right with FirstClass, the creators certainly blew it on this point. The next generation of client software will supposedly rectify this oversight, according to SoftArc.

The lack of integration of FirstClass with the World-Wide Web is another shortcoming that one hopes will be rectified sooner rather than later.

Finally, the documentation that accompanies FirstClass is not all that good. It certainly isn’t the worst I’ve seen, but it would be helped immensely by including a few examples of how certain features could be usefully applied, particularly in the area of creating and managing conferences. The current documentation is also too business-oriented to be of much use to educators; perhaps a companion volume of documentation could be developed for educational applications.

Overall, however, FirstClass is several steps ahead of competitors aimed at the educational conferencing market. Given the advantages listed above, as well as the modular licensing scheme and favourable educational discounts, FirstClass is well worth serious consideration if you anticipate becoming involved in computer conferencing for education.

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mPOWER is available from Mindscape Inc., Post Office Box 54984, Santa Clara, CA 95056-0984

Reviewed by L.F. (Len) Proctor

Recommended System Requirements:
Mac with 68040, 8MB RAM, System 7
At least 10 MB hard disk drive CD-ROM drive optional.
640 x 480 color monitor.
AV Macintosh or appropriate digitizing card.

Software Description

mPower is a slide show package that features user friendly peripheral device control, multimedia integration and interactivity similar that found in several current CBI authoring tools. Assuming you have an A/V Macintosh or a Mac with a suitable digitizing card, still pictures and audio or video clips can be created without the help of additional editors. Audio and video segments can also be called from com-