

FirstClass vs. Blackboard

An opinion paper: How Blackboard compares to FirstClass in delivering online courses

March 2000

This is the full manuscript of a paper created by two professors at a Canadian post-secondary educational institution with approximately 5,000 full-time students. The purpose was to provide a comparative analysis between FirstClass and Blackboard. Kathryn Cook and Trevor Davies are pioneers in teaching online courses at their college, and over the last five years have taught a variety of online communications and general education courses to literally thousands of students. Kathryn is currently completing a Ph.D., specializing in computer-mediated communications in education.

Purpose

The purpose of this document is to outline the points we would like to make regarding the communication capabilities we need for our online courses. After each point, we describe the proficiency of Blackboard and FirstClass to meet our communication need.

Assumptions and Beliefs

Before you begin reading this document, we'd like to share some of our assumptions and beliefs:

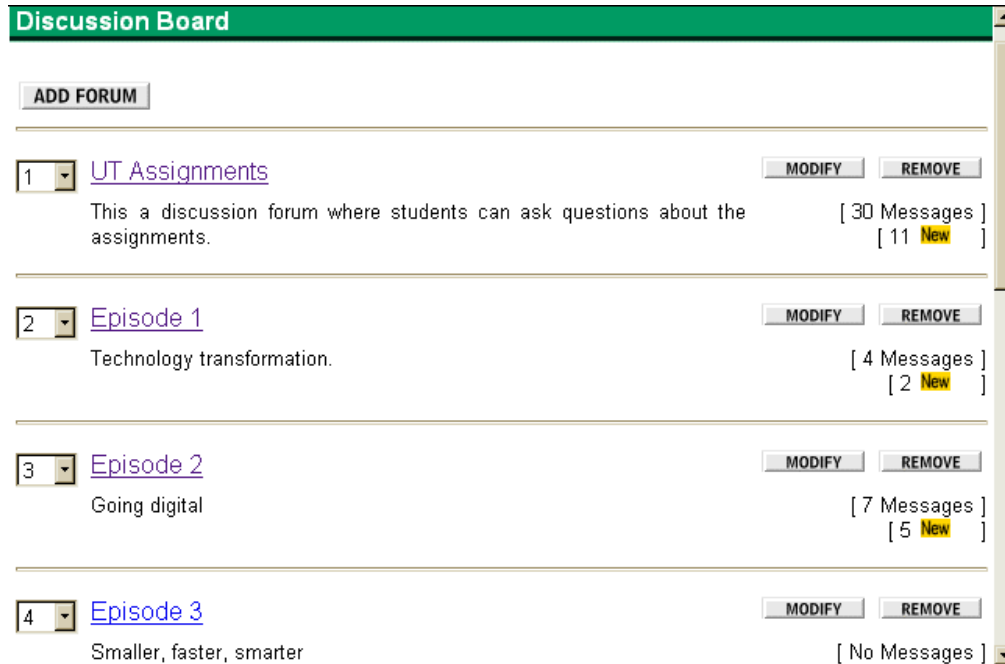
- We believe in an interactive model of online education, where online discussion is at the heart of the class -- without interaction there is no education. We do not believe in an industrial model of distance learning, where students proceed in isolation with well-designed pre-packaged materials.
- Any discussion of specific software features is based upon current released versions of Blackboard and FirstClass. Since both vendors are in the business of selling software, we think assurances are easily made with no guarantees. And both vendors release new versions often, so improvements to both products are inevitable.
- Electronic communications are an extension of our learning environments -- computers are not just tools like pens and pencils, but an integral part of teaching and learning online. Changing communication systems should rest on sound academic principles.

Online class discussions

1) *sub-forums*

- a) Creating sub-conferences or sub-forums is an instructional strategy for facilitating online class discussions, and managing an online course. Sub-conferences are a way for the moderator to keep the size of the message base manageable and reduce information overload. Also, creating topic specific sub-conferences helps the moderator focus the online discussions. Finally, for some course activities, such as class discussion about assignments, having more participants is better than fewer. Having a larger number of participants for question and answer forums gives students access to more information, and increases contact for peer support. We need flexibility in arranging communication areas to accommodate groups of different sizes and purposes.

- i) There is **no** mechanism for creating sub-forums in Blackboard. So this will have a significant impact on the nature of online discussions, especially when a teacher is assigned more than one section. For example, in Understanding technology (UT), Kathryn often has three sections of students enrolled (~135). UT students watch ten separate technology videos; each video episode raises a number of technology issues that are fuel for online discussions. Using Blackboard, Kathryn would create a discussion board forum for each episode, and then students would create threads within each discussion board forum -- one thread would represent one technology issue. If all 135 UT students participate in one discussion board forum based on one video episode, there could easily be over 300 messages in each forum (students are required to post two messages for each episode, minimum, plus the teacher's contributions).

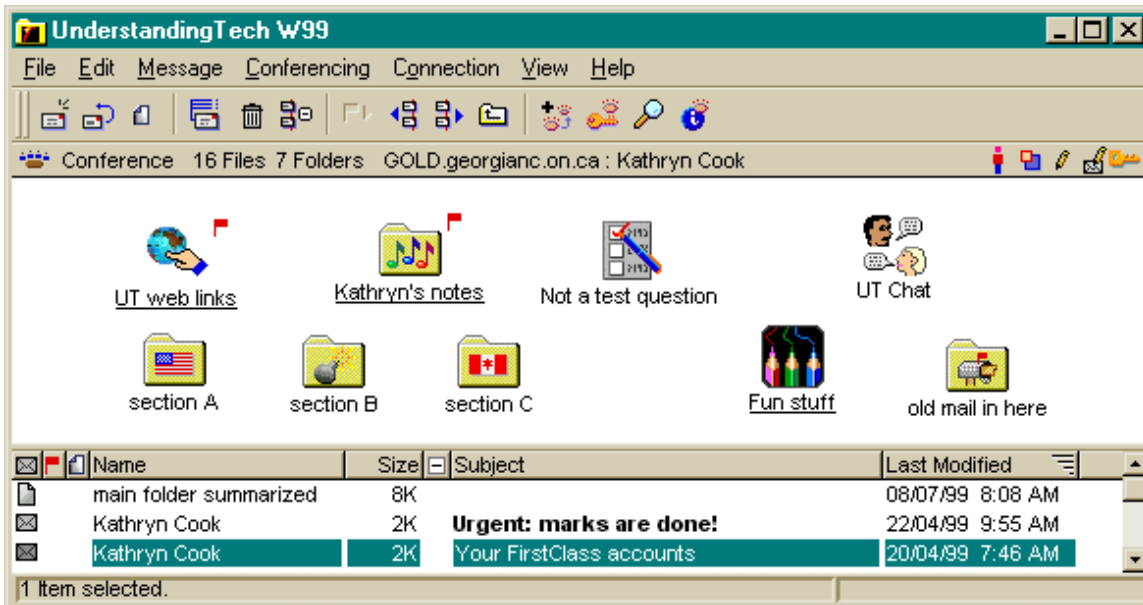


UT Forums using Blackboard

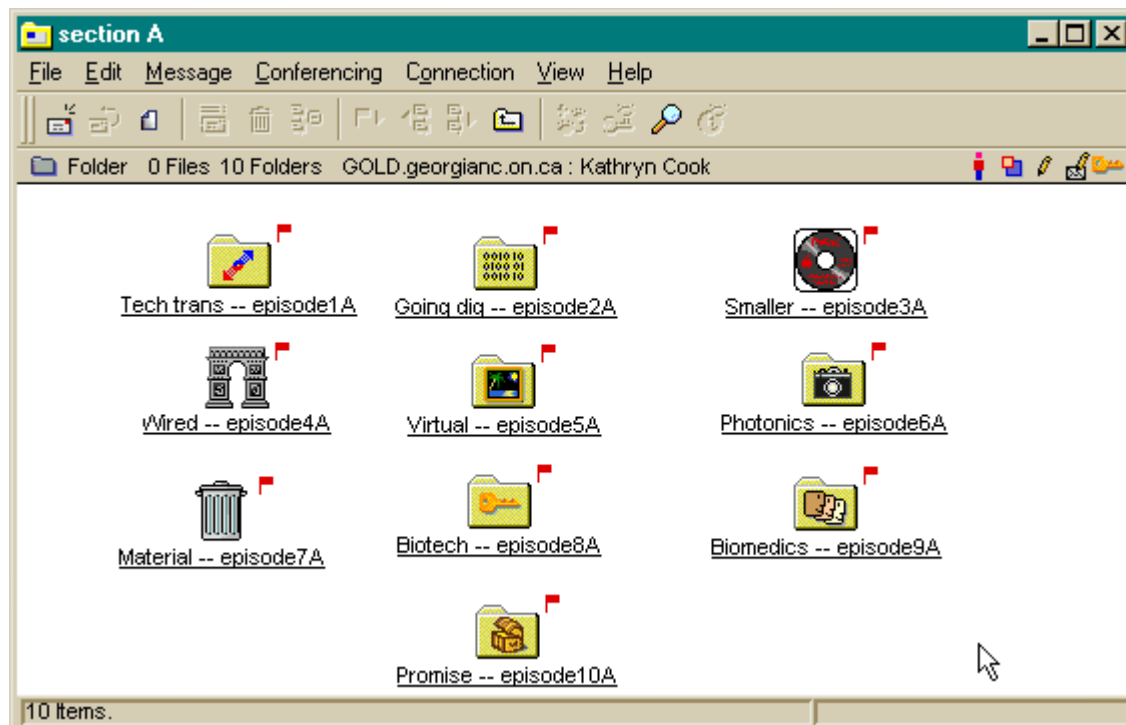
- ii) One suggested solution is for the Blackboard system administrator to create copies of the course and divide students into separate sections of UT. Here's our response to this idea:
- (1) Making copies of a course still does not solve the problem of needing sub-levels of discussion areas; having topic specific sub-conferences is a key strategy for facilitating online discussions because it focuses the online discussion. Even if Kathryn had just one section of 45 students, the threads in Blackboard will become unwieldy with active class participation. We estimate discussion groups in Blackboard would have to be limited to about 15 students – each thread would then contain ~30 messages. Using the example of 135 UT students, Kathryn would need nine copies of the UT course in Blackboard.
 - (2) Copying the course and dividing students into many class sections means more work for the teacher, since messages meant for the whole class will have to be repeated many times over. Secondly, students will not have a holistic view -- a mental model of the whole class, nor will they appreciate

the teacher's entire responsibilities for the course. Students will not see the relationship between their section and the whole UT class. Thirdly, groups are not formed until several weeks into the course, and students are given the option of choosing their learning partners. The freedom students have to choose learning partners is decreased if students are separated into many sections of UT. Finally, students can't communicate with UT peers assigned to a separate copy of the UT course – class discussion will be limited to their UT section. Thus, an advantage of the online learning environment using FirstClass – combining sections and sub-dividing groups – cannot be exploited using Blackboard.

iii) Using FirstClass, we can create many levels of sub-conferences, and each sub-conference can have multiple, numbered threads that are created automatically based on the subject line. This means students can create a new thread by simply writing a new subject line; the subject line then becomes an advance organizer for readers, and its importance in online communications is reinforced for students. Because of the flexibility in creating sub-conferences and sub-folders, Kathryn can divide the 135 UT students into six different sub-sections; each sub-section can have its own set of sub-conferences representing each of the ten video episodes. Also, students in one sub-conference or sub-section can still read the replies in another sub-section; we're often delighted at how many students voluntarily read the messages in non-assigned discussion sections. There are many keen students who contribute more than the minimum number of messages, and their genuine interest in the discussion topics is enhanced by access to a larger group. Furthermore, having views of all discussion sections adds an element of friendly academic competition, as well as providing peer role models for students. For example, students can view other sections when planning their turn at moderating a discussion week. FirstClass allows us to create and manage sub-conferences that accommodate groups of different sizes and functions.



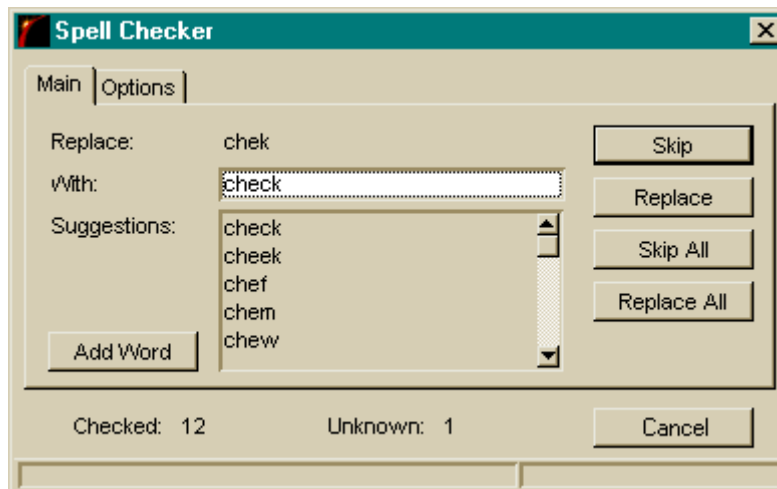
UT's main conference in FirstClass



One sub-section of UT in FirstClass

2) *spell check*

- a) Spell check is an important feature for students as well as teachers. Asking students to spell correctly for college written work is an **academic** decision that extends across the curriculum. Slow or two finger typists particularly benefit from a built-in spell check; a poor typist's eyes are on the keyboard rather than the computer screen, and two finger typists are not as able to check spelling as they write. Also, insisting on proper spelling raises the standard of written submissions to online discussions. Students in online discussions are judged, not by their physical appearance or verbal remarks, as they are in a face-to-face class, but on the quality of their written work. Messages with many misspelled words look sloppy, and make the authors look careless.
- i) Blackboard does not have a spell checker.
- ii) FirstClass has a spell checker; it can even be setup to automatically check messages on Send.



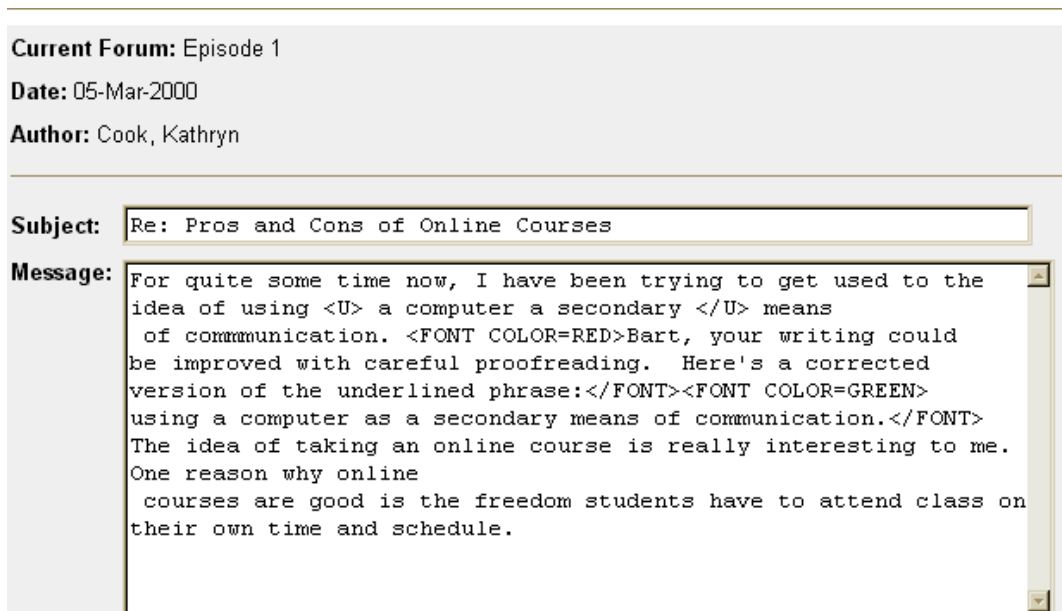
FirstClass spell checker

3) *working with text*

- a) Online teachers need to respond to students' written submissions electronically – instead of a red pen, we use many colored fonts. We need the ability to mark students' messages to online discussions because online discussions are an important part of the online course evaluation for all of our online courses. When

we mark students' contributions to online discussions, we differentiate the teacher's comments from the student's own writing using colored text.

- i) Using FirstClass, a teacher can give students feedback for their online class discussion or any writing assignment by using Reply with Quote, and choosing from many different text colors, styles and fonts. In FirstClass, students send us most of their written work simply as a FirstClass message because of the ability of FirstClass to edit and mark-up text. This method of submitting assignments is simple yet effective for both students and teachers.
- ii) Blackboard users can't stylize text or change fonts unless they know how to write raw HTML tags. For example, to Reply to a student's message, a teacher would have to copy and paste the student's text into the teacher's message window, and then type the HTML tags character by character to mark a student's written work. Here's a sample:

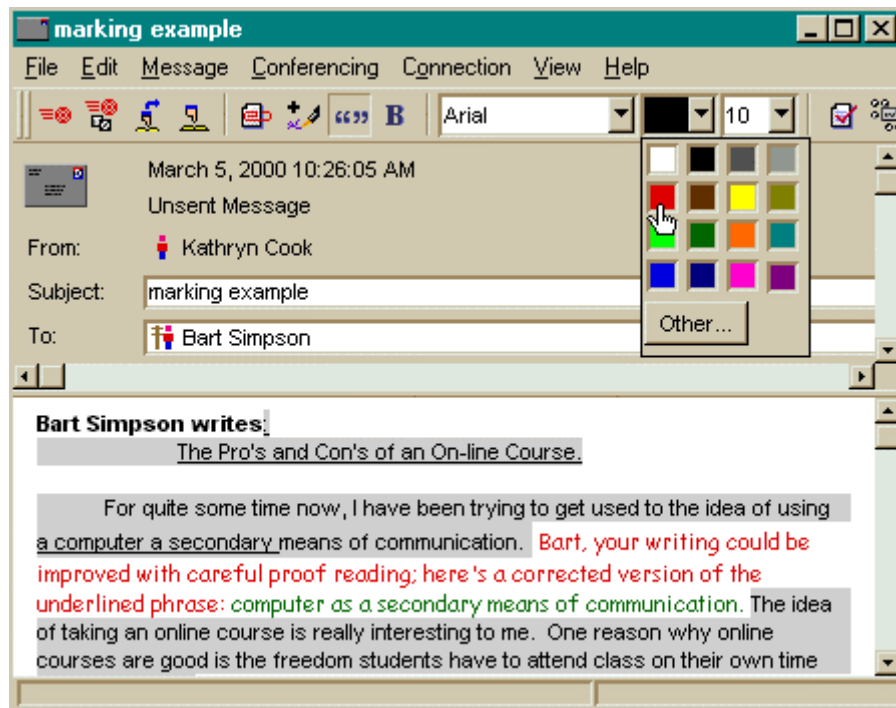


The teacher marks by writing HTML tags in Blackboard

After writing the HTML tags, here's how the teacher's message appears to the student in Blackboard:

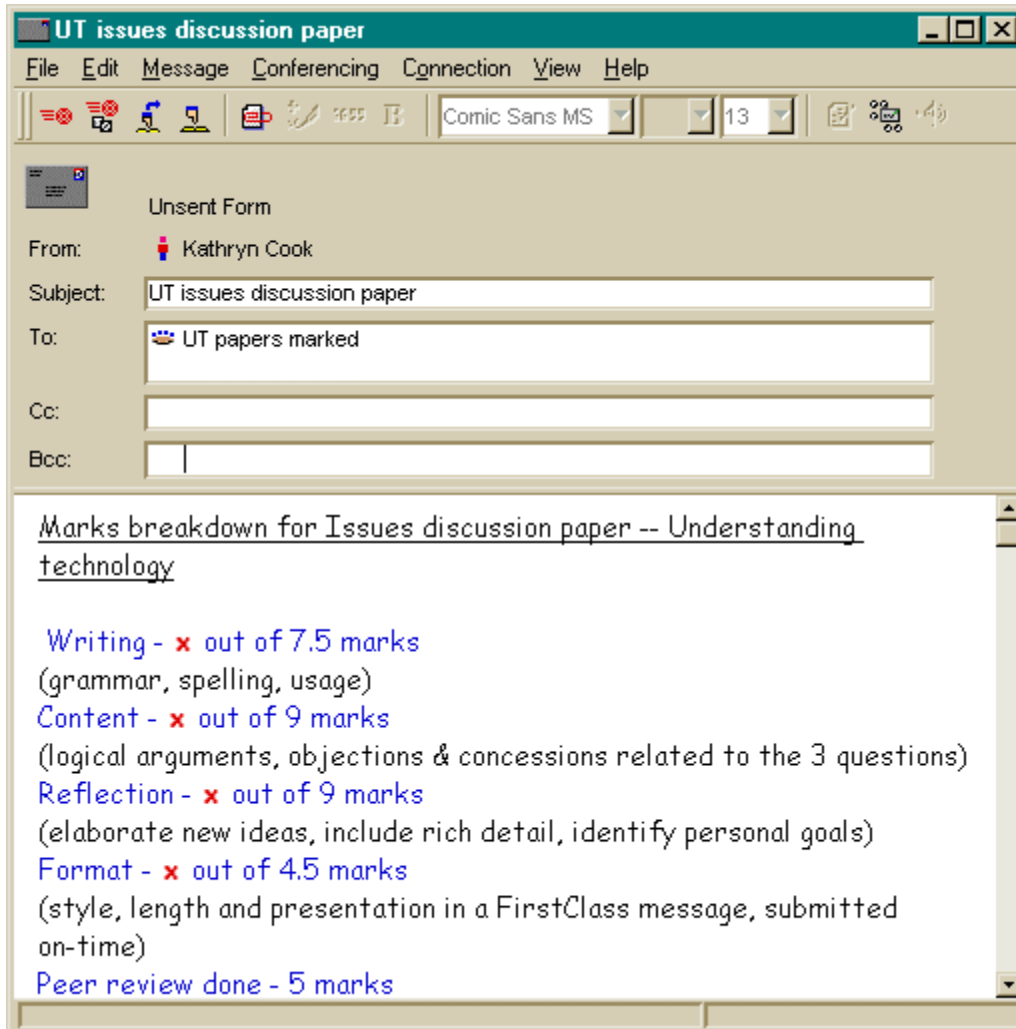
Current Forum: Episode 1 Read 1 times
Date: 05-Mar-2000 10:07:27
Author: Cook, Kathryn <kathryn_cook@gold.georgianc.on.ca>
Subject: Re: Pros and Cons of Online Courses [\[Remove\]](#)

For quite some time now, I have been trying to get used to the idea of using a computer a secondary means of communication. **Bart, your writing could be improved with careful proofreading. Here's a corrected version of the underlined phrase: using a computer as a secondary means of communication.** The idea of taking an online course is really interesting to me. One reason why online courses are good is the freedom students have to attend class on their own time and schedule.



Marking written work using FirstClass – one click changes font type, size or color

- iii) Because teachers using Blackboard can't easily change font or color when marking students' written work online, students will be using word processing software for most writing assignments. If the teacher insists on MS Word documents, students who do not have MS Word at home may be required to do their work on-campus; doing schoolwork at home is a major advantage of taking an online course. If the teacher accepts word-processed documents created with any type of software, the teachers will be faced with documents in many different formats (WordPerfect, MS Works, etc.). Using MS Word or other word-processing software for marking text submissions adds extra steps for both students and teachers – it is not as simple as marking a basic e-mail message. Blackboard makes the problem of dealing with documents in different formats much more of an issue than using FirstClass.
- b) The ability to create rubrics for online marking speeds up the marking process, and helps the teacher be more consistent and fair in providing feedback to students.
- i) We use personal stationary in FirstClass to create rubrics for marking online. When we create the personal stationary, it is setup to be sent to a personal conference created specifically for storing students' work with a Bcc: to the student. One-click on the FirstClass stationary form, stored in our Mailbox, brings up this pre-made message. All the teacher has to do is enter the student's name in the Bcc: field, and enter the numerical marks. This is a very efficient method of marking online.

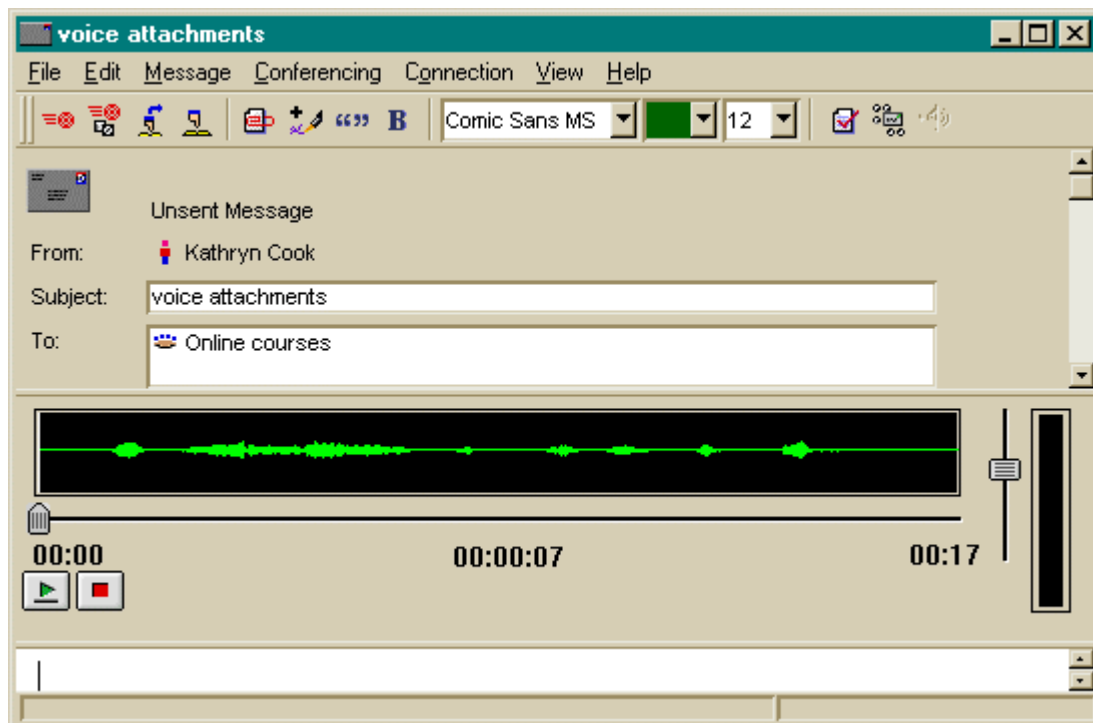


A rubric for marking using personal stationary forms in FirstClass

- c) Being able to choose a default font and color is a way of humanizing the computer-mediated communication (CMC) environment. Choosing their own font and text color helps students project their identities in a medium that lacks physical presence, and this makes the CMC experience more satisfying. The ease and functionality of voice attachments also increases social presence in CMC environments.
- i) Using FirstClass, users can set preferences for default text; there is no mechanism for setting default font and color in Blackboard. In FirstClass, users can also change View properties of their Mailbox, Desktop, folders, and

depending on their permission level, in Conferences. This feature allows learners to tailor the interface to their preferred learning style. Some of these View preferences are possible in Blackboard, but to a far lesser extent.

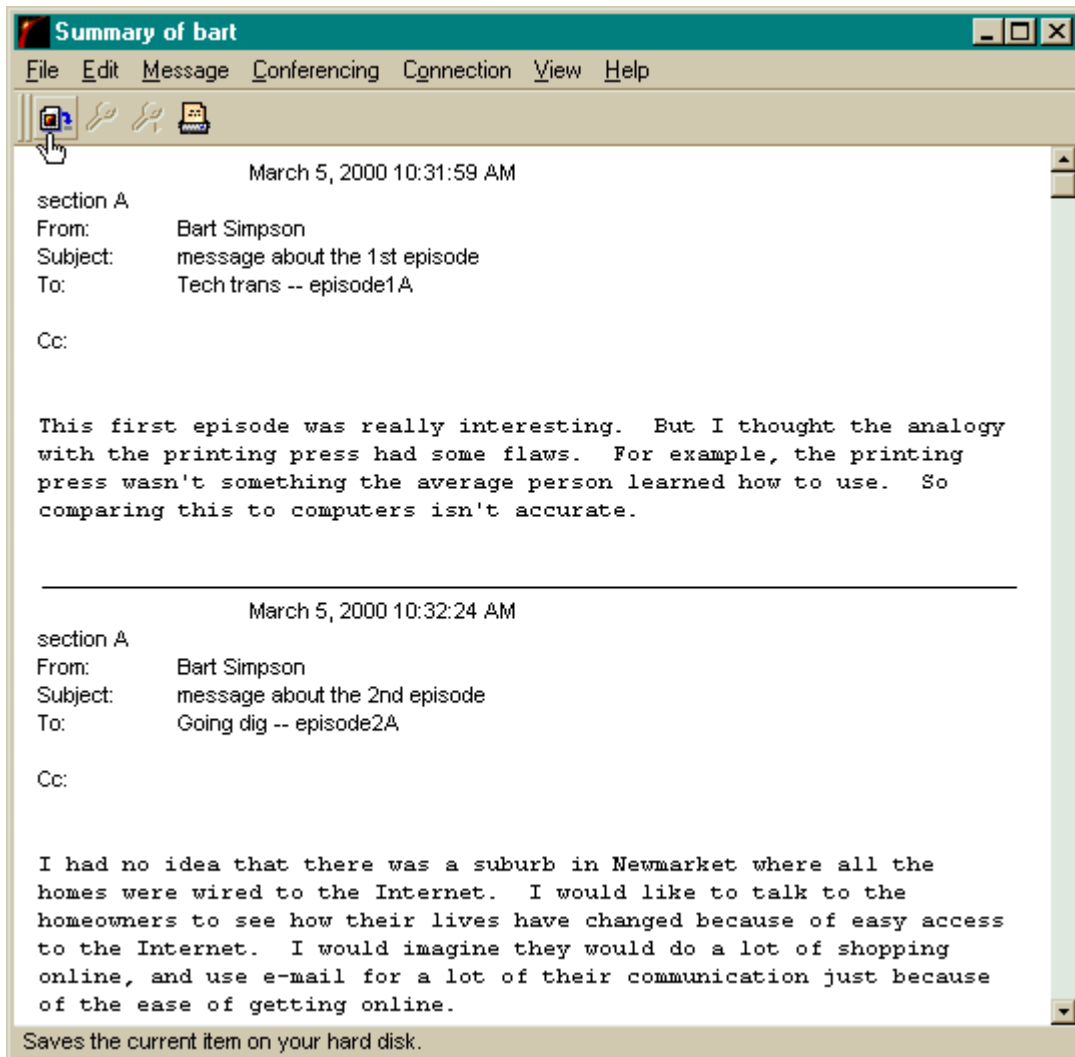
- ii) Voice attachments in FirstClass display an audio player that records, plays, rewinds, fast forwards, pauses, shows a wave line of the voice inflection as well as the time in minutes and seconds, and a volume control button.



The voice attachment player in FirstClass

- d) Another reason changing fonts and colors is important, is for collaborative writing assignments or peer reviews. Students need to keep track of who wrote what by assigning different colors and fonts to each individual.
 - i) Using FirstClass this is easily done, but using Blackboard would require knowledge of HTML tags.
- e) Summarizing text from a thread or for a particular student is a great way to give feedback or assess a student's progress. Also, asking students to summarize their own contributions is a reflection strategy for written work.

- i) Using FirstClass, a search will find all of the messages from a particular student or for a keyword; the search command finds items from any number of sub-folders or sub-conferences depending on where the search is initiated. The FirstClass search result can then be summarized with just one click. Also, the text generated from a FirstClass Summarize Selected command can easily be saved as ASCII text, or copied and pasted.



Summarizing selected messages in FirstClass

- ii) A summarize feature is available in Blackboard, but each message must be individually selected. It's very easy to miss selecting a student's message, as shown in the screen shot on the next page. Also, the resulting text file, saved

from a displayed web page, would require some clean up by the teacher before sending a response to the students. The Blackboard Collect messages feature will be very tedious and time-consuming when summarizing an entire semester’s work for one student because the Collect messages command must be repeated for each and every discussion forum – it does not work across multiple forums.

<input type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Cook, Kathryn	27-Jan-2000	
<input type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Cook, Kathryn	27-Jan-2000	
<input type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Cook, Kathryn	24-Feb-2000	New
<input checked="" type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Simpson, Bart	24-Feb-2000	
<input type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Cook, Kathryn	25-Feb-2000	
<input type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Cook, Kathryn	25-Feb-2000	
<input type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Cook, Kathryn	25-Feb-2000	
<input type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Cook, Kathryn	25-Feb-2000	New
<input checked="" type="checkbox"/>	Re: 1st me...	Simpson, Bart	27-Feb-2000	
<input checked="" type="checkbox"/>	<input type="checkbox"/> Re: 1st me...	Simpson, Bart	27-Feb-2000	
<input type="checkbox"/>	Re: 1st me...	Simpson, Lisa	03-Mar-2000	New
<input type="checkbox"/>	<input type="checkbox"/> second thread	Cook, Kathryn	24-Feb-2000	New
<input type="checkbox"/>	<input type="checkbox"/> Re: second thread	Simpson, Lisa	25-Feb-2000	New
<input checked="" type="checkbox"/>	<input type="checkbox"/> Re: second thread	Simpson, Bart	27-Feb-2000	New
<input type="checkbox"/>	Re: second thread	Simpson, Lisa	03-Mar-2000	New
<input type="checkbox"/>	<input type="checkbox"/> third thread	Cook, Kathryn	24-Feb-2000	New
<input type="checkbox"/>	<input type="checkbox"/> Re: third thread	Simpson, Lisa	25-Feb-2000	New
<input checked="" type="checkbox"/>	Re: third thread	Simpson, Bart	27-Feb-2000	New
<input type="checkbox"/>	<input type="checkbox"/> a technology issue from episode 1	Simpson, Bart	24-Feb-2000	
<input type="checkbox"/>	Re: a technology issue from ep...	Simpson, Lisa	03-Mar-2000	New
<input type="checkbox"/>	a fourth thread	Simpson, Lisa	03-Mar-2000	

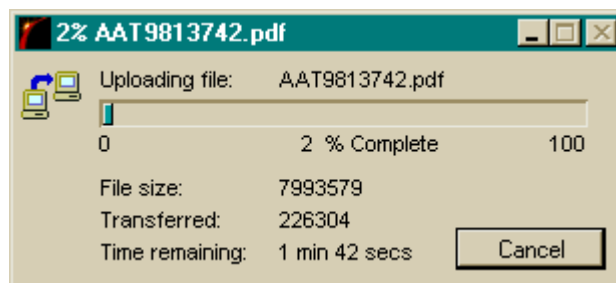
Selecting messages for the Collect messages feature in Blackboard

4) sending and saving attachments

- a) Although we find it preferable to avoid using attachments when possible, there are times when an online teacher must accept an assignment as an attachment. So it is important that sending and receiving attachments is a fluent, understandable and easy process for both students and teachers. Students need reassurance from

a system that files have been sent, and teachers need efficiency when dealing with a large number of attachments.

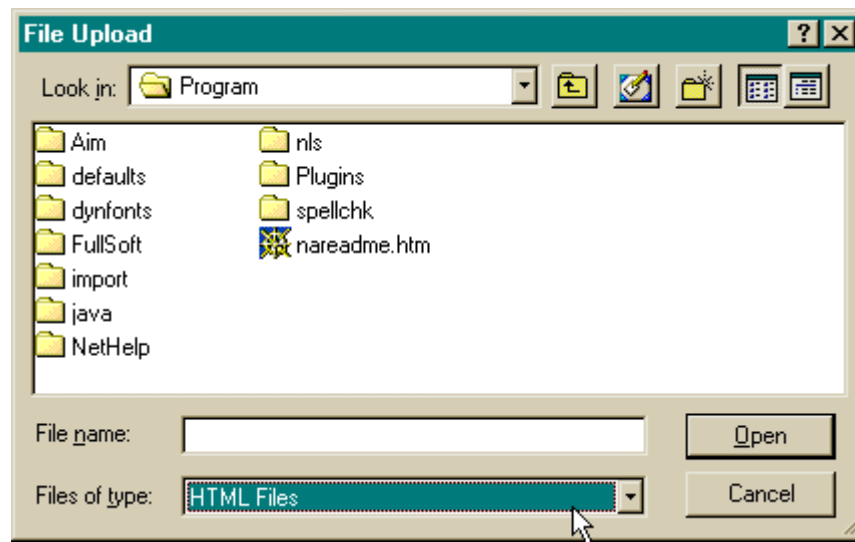
- i) Sending attachments takes five separate steps using Blackboard; and it is confusing for users that attachments are only possible in certain parts of the system. When uploading large files, it may appear to the student that Blackboard has stalled because there is no information about the status of the file transfer.
- ii) In FirstClass, attaching files takes one or two steps; this can be done from anywhere in the system, and a dialogue box appears showing the status of the upload. The file transfer status box is both informative and reassuring to users, particularly for larger files. Also, there is an audible blip to signal when the transfer is complete. FirstClass remembers the directory where an upload was last initiated, and returns to that same location when a second transfer is requested. Uploads in FirstClass can be initiated by simply dragging selected files into a folder on the users' FirstClass Desktop. Finally, FirstClass will upload or download multiple files at once.



File transfer dialogue box in FirstClass

- iii) When saving attachments in FirstClass, double-clicking the attachment icon opens a download status box, and then the appropriate application is launched automatically – it's one step for the user. This is especially a time-saver for teachers marking a large number of attached documents.
- iv) When using Netscape and browsing directories for files to attach, the open dialog box in Blackboard always defaults to HTML files, even when the dialog box is opened to locate an image file or an MS Word document. It is

an annoying extra step to have to always select All Files from the drop down box. This is also a hurdle for students attempting to upload an assignment to their teacher; some students may not be aware of the HTML file extension, and think their assignment is lost. (This is not a problem using Internet Explorer.)



Open file dialogue box in Blackboard – the default file type is HTML

5) *messaging*

- a) Being able to view message history is a vital tracking device for online teachers. Message history allows teachers to identify at-risk students. Message history also helps teachers determine the timeliness of student responses to online discussions. For example, we need to know whether a student is writing all of his online messages in a mad rush during the last week of the term, or participating regularly over the course of a semester. Preliminary research projects conducted by Kathryn, as well as a colleague at U of T, show that regular active participation is a key factor for student success in online courses. Finally, message history documents student participation in the event of an appeal.

- i) In Blackboard, teachers will only know who's read messages by seeing who replied; there's no way to track message history.
- ii) In FirstClass, message history tracks the date, the time, and the user id for when the message was created, sent, read (opened), replied to, forwarded, unsent, or if an attachment was saved. We both depend heavily on this feature when evaluating students' participation in online discussions.

	What	When		Who
	Created	05/03/00 10:58 AM		Kathryn Cook
	Sent	05/03/00 11:00 AM		Kathryn Cook
	Read	05/03/00 11:00 AM		Bart Simpson
	Attachment saved	05/03/00 11:01 AM		Bart Simpson
	Forward	05/03/00 11:01 AM		Bart Simpson
	Reply	05/03/00 11:01 AM		Bart Simpson

Message history in FirstClass

- b) In CMC environments, the messaging capability of the communication system has a great impact of the flexibility and usefulness of that system. The CMC system must also be able to accommodate large classes where there is active participation – it must support loading hundreds of messages in a forum.
- i) When the message base is large in a Blackboard forum, the subject line in a thread with more than eight replies, is gradually truncated. By default the Blackboard system collapses a message thread so only the creator of the thread is visible. Students will have to expand the thread to know who has contributed. Although users can choose to expand a thread one message at a time, when the thread is fully expanded there is a lot of scrolling in the

discussion board area of Blackboard (see the image on page 13 for an expanded thread view).

Discussion Board

Forum: UT Assignments

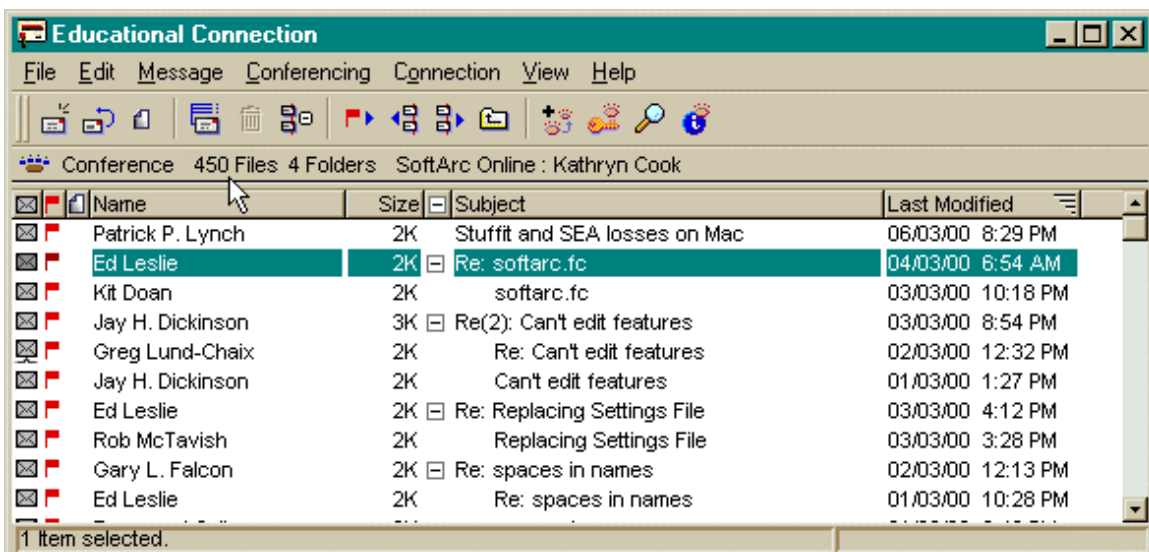
VIEW UNREAD MESSAGES EXPAND ALL COLLAPSE ALL SEARCH

Show Options

<input checked="" type="checkbox"/> 1st message	Cook, Kathryn	27-Jan-2000	
<input checked="" type="checkbox"/> second thread	Cook, Kathryn	24-Feb-2000	2 New
<input checked="" type="checkbox"/> third thread	Cook, Kathryn	24-Feb-2000	2 New
<input checked="" type="checkbox"/> a technology issue from episode 1	Simpson, Bart	24-Feb-2000	1 New
a fourth thread	Simpson, Lisa	03-Mar-2000	New

Default forum view in Blackboard

- ii) FirstClass conferencing can support hundreds of messages in one conference more efficiently because of the size and appearance of message icons in conferences, and because the FirstClass client loads a large conference much faster than a web browser. Trevor currently has over 1,000 messages in one of his online courses at the halfway point in the semester.



The appearance of a large conference in FirstClass

- c) The ability to send and receive Internet e-mail, as well as hyper-linking of URLs, expands the possibilities for online learning. Teachers can invite guests, or subject experts, and students can communicate with distant peers. Also, being able to make bookmarks is a navigation aid for users in a CMC system.

- i) Blackboard is primarily a course management tool -- not a communications tool like FirstClass; users must have an e-mail address on another system to use Blackboard e-mail. Blackboard users can't send e-mail to Internet addresses unless the user is enrolled in the same Blackboard course; Blackboard users can't receive Internet e-mail. If a message is sent to an incorrect e-mail address, the user has no way of knowing it was not delivered. Furthermore, only the teacher can add Internet resources to the External Links section, and the only way to hyperlink a URL in a discussion forum message, is if a teacher or student knows how to write raw HTML tags.

Communication Center

Send Message to All Users in SURVEY_01

To: bart.simpson@online.georgianc.on.ca,
kathryn_cook@gold.georgianc.on.ca,
lisa.simpson@online.georgianc.on.ca

From: Kathryn Cook (kathryn_cook@gold.georgianc.on.ca)

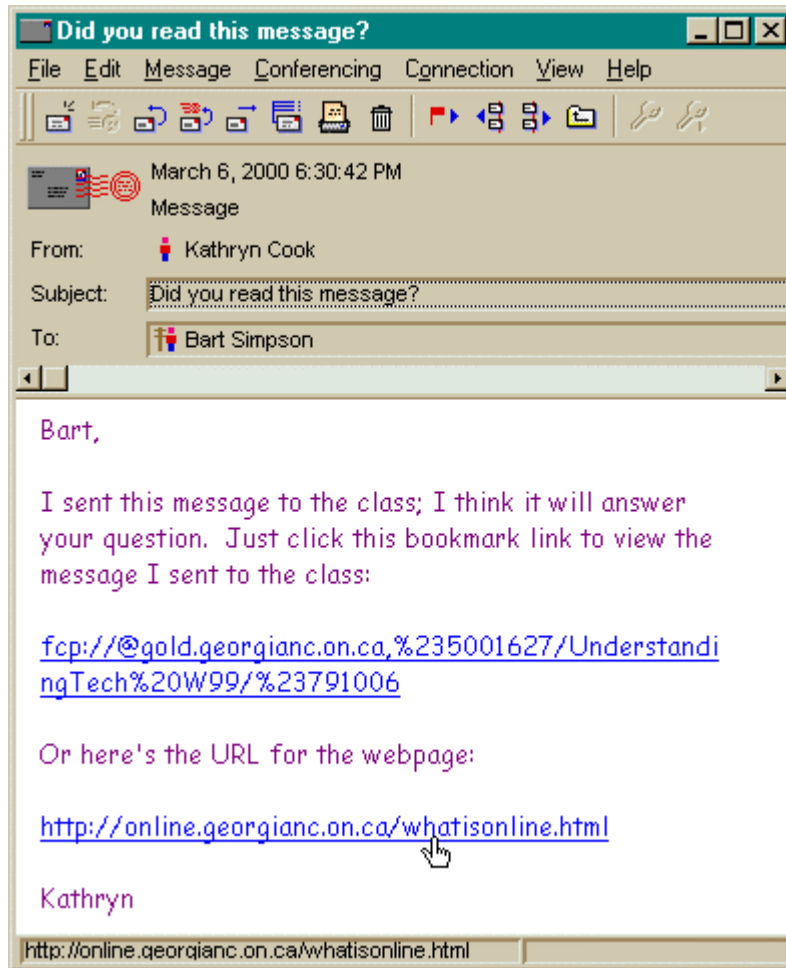
Subject:

Message:

E-mail can only be sent to users in a particular Blackboard course

- ii) FirstClass is a full-featured e-mail system, and users can send and receive Internet mail to any address. Listserv messages can be sent to a FirstClass conference, allowing an online class to share the experience of belonging to a

listserv without adding to the number of items in a user's own Mailbox. Furthermore, links to web pages are automatically hyper linked in FirstClass messages, so students wanting to share Internet resources with their classmates do not need to know HTML. This feature makes it far easier to share URL's with another user or discussion group, and many of our course assignments depend upon this automatic hyper linking feature so students can share Internet resources with the class. Also, if a message is undeliverable or incorrectly addressed the FirstClass Post Office sends a message to the user informing him of the reason. Finally, FirstClass has a bookmark feature that locates items in FirstClass; students just click on the FirstClass protocol (fcp://) link sent by their teacher, and the document or message in question opens immediately, even if the item is buried many levels deep in the conferencing structure. We find sending students a FirstClass protocol bookmark just once is often enough to teach them FirstClass conference navigation.



Automatic hyper linking and book marking in a FirstClass message

- iii) In Blackboard, messages can only be sent to users enrolled in a specific course; for example, Trevor's students can't send e-mail to Kathryn's students in Blackboard (see image on page 18). This also applies if one course is duplicated into many sections. There is no such limitation in FirstClass, and students are at liberty to contact any FirstClass user they choose.
- d) It is important that there are mechanisms for dealing with a novice's common errors – users need to fix their mistakes. For example, students often send messages to the wrong place, especially during the early weeks of an online course.

- i) In FirstClass, messages are easily moved by dragging and dropping them to the appropriate conference or folder. Alternatively, students can be shown how to Unsend the misplaced message, and re-direct the note to the appropriate conference. By using Unsend students have a chance to learn from their mistakes, and at the same time are instructed about the mental model of a conferencing system. FirstClass also has an Undelete feature.
- ii) With Blackboard, messages can only be removed if wrongly placed – they can not be moved, undeleted or unsend.

6) *synchronous communications*

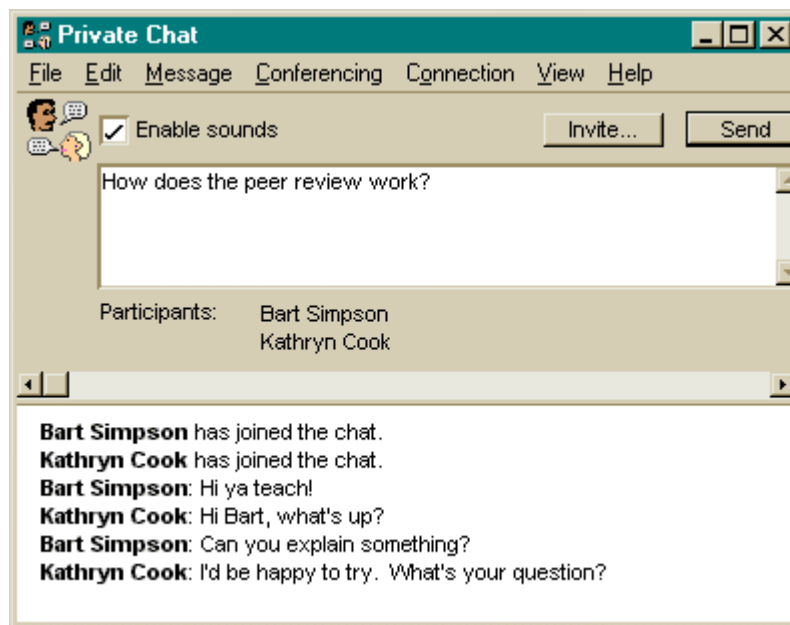
- a) Although we don't require synchronous communications for any part of our online course evaluation, it is an important mechanism for us in providing support for our online students. We are online a lot, and students can ask us a simple question and receive an immediate response by using a chat feature.
- i) The Virtual Classroom chat function in Blackboard takes 3 minutes to load on a 56K modem connection using a Pentium III computer, and over 1 minute to load from a network connection. We doubt students will use chat to ask a quick question if they have to wait for the Java applet to load. Furthermore, many students do not have cable modems or Pentium III computers at home; the Virtual Classroom is of little practical use when load time exceeds 10 minutes, as it did in our test using a slower computer and connection speed.

Chat Loading

Please Wait...

- ii) In Blackboard, teachers must log into the Virtual Classroom in order to be available to students for synchronous communications.

- iii) Blackboard's Virtual Classroom, with its white board feature, could be useful for teachers who require synchronous activities. But we prefer to tap the potential of asynchronous delivery because of the greater freedom afforded to students when class participation can be at anytime and from any place.
- iv) In FirstClass, users are automatically available for a chat unless the user turns this preference off. FirstClass chat is simple, straight forward, easy to use, and very fast.



FirstClass chat example

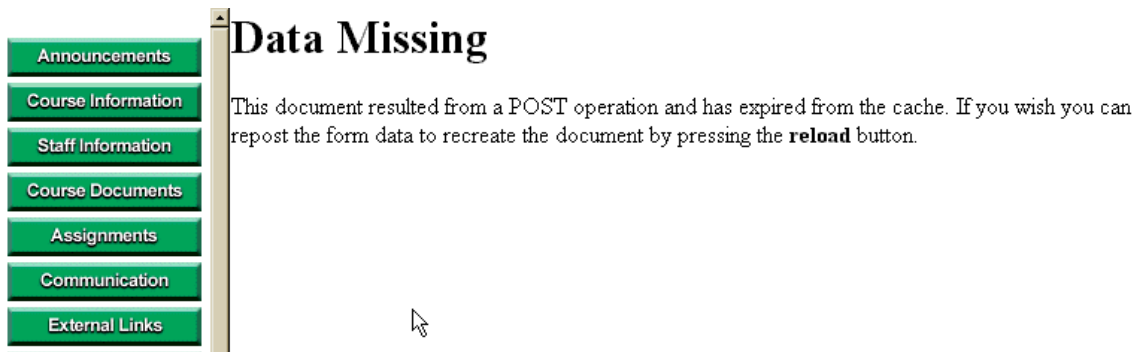
- v) Blackboard's Virtual Classroom chat is not available for Macintosh computers that are using Netscape.

7) *stability of the CMC system*

- a) There is nothing more frustrating for online teachers and students than system failures or glitches. Students new to online learning will be hampered in their progress to understand a CMC system. Anxiety levels rise when things don't

work, and apprehension is detrimental to our learning environment. Teachers often bear the brunt of students' displeasure over system failures.

- i) There has been only one trial course on Blackboard to date, yet online teachers will be putting hundreds of students through Blackboard courses in the fall.
- ii) There are stability problems at this time with Blackboard, and page loads often become tiresomely slow.
- iii) Using Netscape's back button when logged into Blackboard often results in this error message:



A frequently encountered error message in Blackboard

- iv) A messaging system also needs to be consistent in all parts of the program to help users build a mental model of the CMC system.
 - (1) In Blackboard, adding HTML tags to text boxes is not reliably supported. In course Announcements, HTML tags can be used to change font, color, size, etc., but in External Links, HTML tags show up in the display and are not rendered. Apparently this was deliberately done in External Links so that teachers could add web links without learning HTML. Only teachers can add items to External Links.

8) *system searches*

- a) Being able to conduct a search within a system is a powerful tool for users. Teachers often need to locate a student's messages, or the teacher's own replies, or the content of an idea. All users have more control over the learning environment when the search function is robust.
- i) The search function in Blackboard is very limited, and seems inconsistent because there are actually two separate search functions. A system search is initiated by clicking on the Search button of the left menu frame in a Blackboard course. This search only locates keywords from the titles of Course Information, Staff Information, Course Documents, Assignments and External Links documents. A system search does not locate an individual or keyword for the whole course database, nor does it locate keywords contained within the contents of Course Information, Staff Information, or Course Documents. The Search in the discussion board area finds individual users' contributions or keywords but only from within a particular discussion forum. Search does not find users or keywords in all course discussion forums at once. For example, a system search for the keyword Bart produced no hits. But a search in the Episode 1 discussion forum does locate Bart's name. NB – Bart's name cannot be searched in all UT discussion forums at the same time.

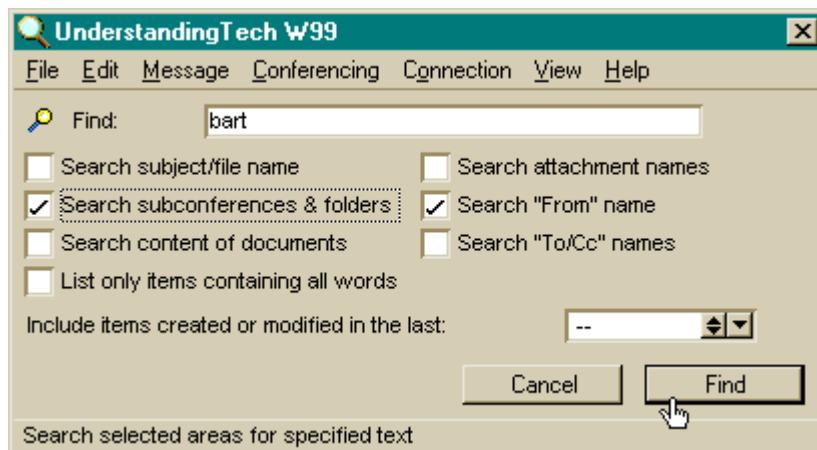
The screenshot shows a search interface with a green header labeled "Search". Below the header, there is a "Search For" field containing the text "bart" and a "Search" button. Underneath, the "Restrict To" section has five checkboxes, all of which are unchecked: "Course Information", "Staff Information", "Course Documents", "Assignments", and "External Links". Below this is a grey button labeled "Search Results:". The interface is clean and functional, typical of a web-based search tool.

Search Results for bart

Sorry, No results found for *bart*

Blackboard system search for a user's name

- ii) In FirstClass, we depend on its ability to Search multiple conferences and sub-conferences for a student's name to get a list of all of the student's contributions to course discussions; we then summarize the student's contributions. This is how we evaluate students' online discussion messages. A FirstClass search only has to be done once for each student since it will search sub-conferences and folders.
- iii) A FirstClass search can locate keywords in the body of a message or document. A search can be conducted from any level within the system, and unlike Blackboard, is consistent through out in what a search can find. FirstClass searches even support the Boolean operator AND (List only items containing all words). See the image below for all of the search parameters that are possible in FirstClass.



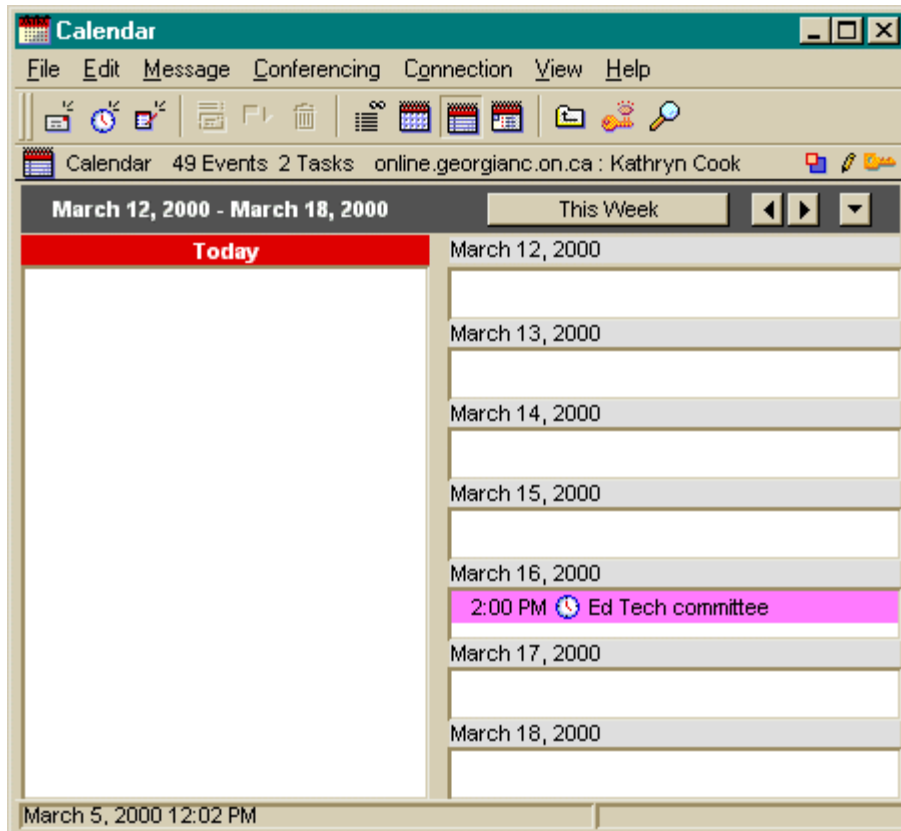
FirstClass search parameters

- iv) FirstClass also has a Find and Replace feature, which is very useful when composing lengthy course materials or editing HTML documents in your HomePage folder.

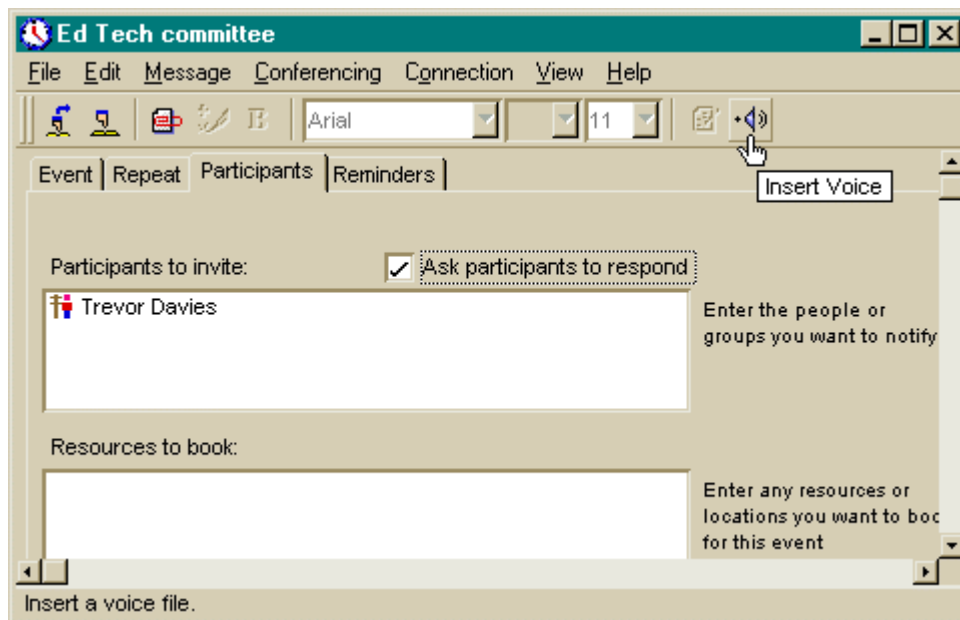
9) *miscellaneous CMC issues*

- a) For a variety of reasons, teachers may want their online course materials hidden from public view. The teacher may be concerned about copyright issues, or the course material may contain private or sensitive information.
 - i) In Blackboard, all users can view the Announcements, and Course Information of any teacher's course.
 - ii) FirstClass is highly customizable as far as who can view or contribute to what conferences. Here's a list of the individual permissions available in any FirstClass conference or calendar: open conference, send items, open items, create sub-conferences, edit permissions, moderator, delete any item, create items, edit read-only items, edit items, save window and view properties, approve items, delete own items, view unrestricted details, search items, add participants, open items, download files and attachments, view permissions, view history, and open calendar.
 - iii) Blackboard allows teachers to enable or disable the following: send e-mail to various Blackboard users or groups, discussion board, virtual classroom, student roster, student pages, and group pages.

- b) A calendar is a very useful pacing mechanism for online teachers, and a cooperative learning tool for students. Calendar reminders can serve as a pacing device without adding to the student's perception of teacher control.
 - i) The FirstClass calendar allows students to invite other students to participate in an event or task as well as send automatic e-mail reminders to other users. Teachers can create and associate more than one type of calendar within a course conference, and allocate all of the permissions and privileges that can be assigned to FirstClass conferences to the group calendars. For example, there could be separate calendars for resources and for assignments, each with different permissions assigned. Also, the FirstClass calendar feature incorporates both tasks and events.

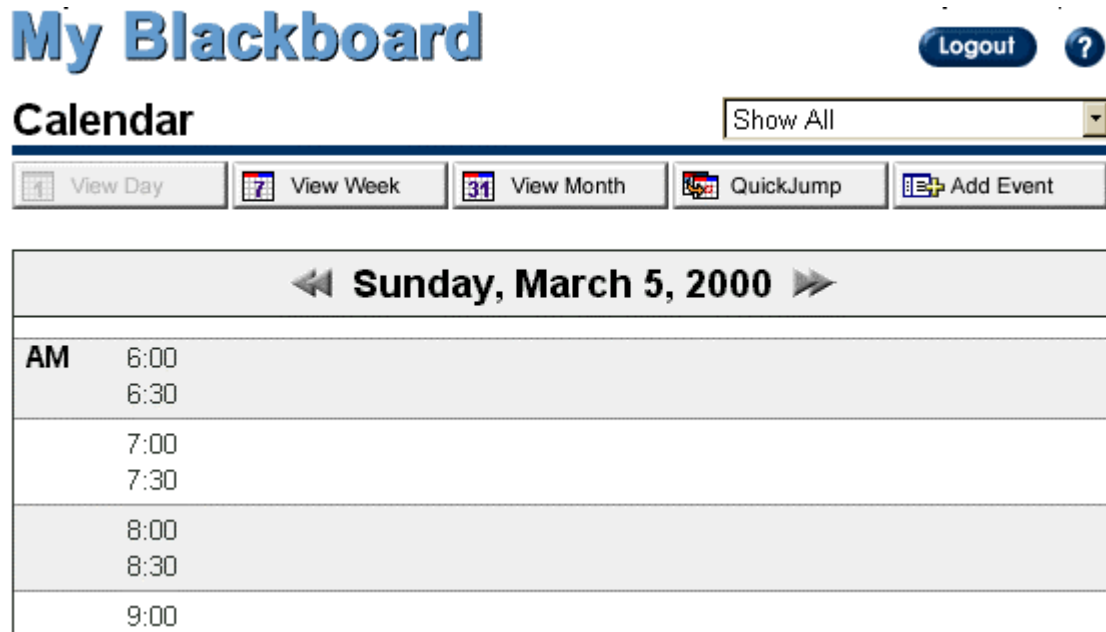


FirstClass calendar



Inviting another user to participate in a FirstClass calendar event

- ii) Blackboard treats tasks and calendar items separately, which we think is confusing for users. Students can add personal events, but they can't invite others to participate in the event or contribute to the course calendar.



Blackboard calendar

- c) Users need easy access to Help files, especially when first learning a CMC system.
 - i) Clicking on the Student Manual in Blackboard opens a new browser window; many students will not know how to get back because they won't notice that a new window has opened.
 - ii) FirstClass Help operates as a standard Windows or Mac menu.

Conclusion

The decision to go with the "one size fits all" Blackboard approach, seems to be based on administrative expediency rather than andragogical principles. We see the appeal for management in developing online courses that run independently of a specific teacher,

and are driven in a standard format. This is a decision that is not based on academic principles. We maintain that what is important is the nature of online interactions between students and teachers. We worry that Blackboard's limited capabilities for text editing, as well as the lack of sub-forums in the structure of the discussion boards, may contribute to less frequent use of online discussions in online courses. Also, fewer student-student interactions detract from the overall sense of community in online courses. We design online courses that get students engaged in active discussion and their own learning, and we need a communication system that supports this. FirstClass is clearly a superior conferencing tool that provides for the online teaching and learning environment we want to construct.