

RECOMMENDATIONS FOR A COURSE MANAGEMENT/COLLABORATION TOOL

April 30, 1998

OVERVIEW

This report summarizes the activities of a committee formed by a consortium of CIS, CIDDE, and ULS to evaluate potential collaboration/coursemanagement tools for faculty.

Based on the evaluation completed to date, it is recommended that:

- CourseInfo, a course management tool developed by the Interactive Learning Network, undergo a technical trial to compare the administrative requirements with that of WebCt.
- A training program be developed that addresses the functional operation of the software, as well as the instructional implications of online course materials.
- A dissemination strategy be addressed that would allow faculty enough preparation time to develop online course materials prior to the beginning of term.

Meeting notes along with essential links and other information are located at

<http://www.pitt.edu/~washburn/ccs.htm>.

PURPOSE

In July 1997, the Center for Instructional Development & Distance Education (CIDDE), the University Library System (ULS) and Computer Information Systems (CIS) requested that a committee examine potential conferencing packages for faculty. This request stemmed from the fact that faculty routinely expressed a need for the ability to interact with students in ways that extend beyond the capabilities of e-mail.

Although the committee was initially charged with investigating conferencing tools, further clarification resulted in a re-direction of those efforts towards collaborative course management tools. 'Conferencing' refers to the ability for two or more people to communicate in either a synchronous or asynchronous atmosphere. Collaborative course management tools incorporate conferencing with other instructional tools such as the ability to display course materials, generate quizzes or manage student data. It was felt that course management tools more accurately reflect the needs of the faculty.

Faculty routinely ask CIDDE what resources and training the University provides towards collaborative discussion groups and for developing online course materials. These requests have generated from the College of Arts and Sciences (Economics, Psychology, History, FineArts, English, etc.), the Graduate School for Public and International Affairs, the Law School, the School of Engineering, the Graduate School of Education, the School for Health and Rehabilitation Sciences,

and the Graduate School for Public Health. Furthermore, the need for conferencing technology was cited in a recent summary report “Meetings with Deans on Distance Education and the use of Technology for Teaching.” (Davis, 1997).

The need for course management tools with collaborative capabilities is even greater when considering distance education. The ability to display and access course documents and provide students and instructors with a common interaction area is essential towards meeting the needs of remote students. When students cannot meet on a regular basis, a sense of a class community is difficult to establish without a consistent setting for course materials, communication and support. Common collaborative tools provide a sense of 'connection' between students and instructors.

COMMITTEE MEMBERS

Committee members included staff from CIDDE, ULS and CIS, in addition to faculty and other personnel interested in collaborative course tools at the University. Several people joined the committee throughout the evaluation period because they either expressed an interest in the topic or wanted to actively investigate online course management alternatives.

Committee Members	Department
Fern Brody	ULS
Jeff Cepull	CIDDE
John Clochesy	Nursing
Marian Dougan	CIS
Kathleen Ferraro	Family Medicine
Jane Feuer	English
Ahmad Hajjainuddin	Instruction and Learning
Doris Hayashikawa	ULS
Rick Henker	Nursing
Doug Hobson	Health and Rehabilitation Science
Carl Kuzmich	CIDDE
Nick Laudato	CIDDE
Irina Livezeanu	History
John Martin	CIS
Richard Oravetz	CIDDE
Keith Popendeiker	CIS
Stephanie Rago	CIS
Barbara Seels	Instructional Design & Technology
Mike Sherman	Instruction and Learning
Carol Washburn	CIDDE
Tom Waters	Pharmacy

EVALUATION STRATEGY

The following process was adopted as an evaluation strategy:

1. Software solutions currently used by instructors were reviewed and discussed.
2. Criteria were developed for the initial selection of software based on the findings and issues raised throughout the group discussions.
3. Comparison and descriptive studies of course management tools by other institutions or organizations were researched.
4. Selected software that met the criteria was investigated, demonstrated, and specific features discussed.
5. Two software packages, TopClass and WebCt were selected as viable candidates and installed on a central evaluation server. In April, CourseInfo was placed on a University server following a short trial on a CIDDE evaluation server.
6. Faculty and students were asked to evaluate the software. A technical trial also occurred with WebCt and Topless in order that CIS could evaluate the administrative requirements. Additional faculty were recruited to assist in the software evaluation.
7. Listservs were monitored that are associated with Distance Learning (DEOS-L@LISTS.PSU.EDU), the World Wide Web (WWWDEV@hermes.csd.unb.ca), and the American Association for Higher Education (AAHESGIT@LIST.CREN.NET). Participants often commented on software solutions or asked for advice on problems they encountered.
8. General recommendations were developed based on the evaluations and general experiences noted.

1. Software Solutions Currently Used By Instructors

There are a variety of resources currently used by faculty. Electronic mail provides the capability for individual communication between students and faculty. Listservs allow an instructor or student to communicate to a group. These resources typically do not permit the inclusion of links to other web sites, thereby necessitating the need for students for access multiple resources in order to obtain course information.

CIDDE is aware of some of the various software packages used throughout the University. These packages have been brought to the attention of CIDDE by faculty requesting feedback on course materials, through demonstrations of their online courses, or from requests for help with problems encountered using the software.

FrontPage develops, displays, and links documents within a course, and the software offers an add-on conferencing feature. Faculty in GSPIA, Psychology, and the School of Education currently use FrontPage.

Nicenet is a courseware package housed on a server at the Searle Center for Teaching Excellence at Northwestern University. Nicenet offers asynchronous conferencing and document display within the confines of specific courses. University of Pittsburgh faculty from the History department, Higher Education, Instruction & Learning, and the Graduate School for Public Health currently use Nicenet with their classes.

Web Crossing is a conferencing package that has been used at the School for Health and Rehabilitation Sciences.

Netscape Communicator is already available on the University servers and *Collabra*, which is a component of Communicator, was suggested as one option that might fulfill the needs of faculty.

The School of Pharmacy uses a system developed by the webmaster for online materials. While the faculty in Pharmacy are positive about these tools, they cannot be transferred to the general university setting.

2. Criteria for Evaluation

Prior to investigating specific software packages, the following criteria were developed as a means for performing a functional task and technical assessment of potential applications.

Synchronous: Can two or more individuals communicate at the same time, using a chat room atmosphere?

Asynchronous: Can individuals respond to or create messages to topics at different times?

Threaded Discussions: Can individuals respond to specific messages and/or view other responses under the same category, as one might contribute to an outline?

Multimedia Capabilities: Can text, graphics and video be uploaded?

Moderator Functions: Does the faculty member have control over the creation, modification and deletion of a course?

Online: Is documentation available in the form of an online manual that provides text and screen displays?

Easy Integration: Does the application allow either uploading or linking to existing files or WebPages?

Printability: Are students able to print pages or frames?

Specific File Formats: Can common file formats be imported and displayed via a browser?

Database Interface: Does the software use an SQL compliant database?

Batch Registration: Can an electronic roster of students be uploaded

Access Restrictions: Can access be restricted to a portions of a course, such as student information and grades?

Secure Protocol & Authentication: Can other authentication such as Kerberos be used with this package?

Platform: Does it run on different operating systems?

Web-based: Is the interface web-based?

Learning Curve: What type of learning curve is expected for faculty? What type of learning curve is expected for students?

Administration of privilege: Is the faculty member the administrator in deciding what students will or will not have access to?

CIS Installation: Can the software be installed on University servers?

Resources: What resources are required?

Transparent technology: Other software is not necessary for the functioning of the package.

Client cost: What costs must the client incur?

University cost: What are the operational costs to the University?

Extensibility: Is the product upgraded routinely?

Scalability: Can space, number of users, etc. be increased.

Client Requirements: What hardware and software would students need for optimal functioning?

Questions to be answered during a technical evaluation:

Performance and Reliability support: What type of support is available?

Estimated Maintenance: What are operational requirements?

Ratio of Up/Down time: How much time is the software available to the users?

3. Comparison and descriptive studies of course management tools already performed

Several comparisons of course management tools have been published on the web to serve as a resource for others interested in these tools. Due to the multitude of applications available, it was decided to view the comparisons already completed, as one means to begin selecting software for further consideration.

University of Manitoba

(<http://www.umanitoba.ca/ip/tools/courseware/evalmain.html>)

The University of Manitoba developed a web page for instructors that compared the features of TopClass, LearningSpace, WebCt and Toolbox. WebCt was the only software at the time of the comparison that offered a chat feature. Both TopClass and WebCt allowed students to make private annotations of course material as well as a student presentation area. In WebCt, a student could view his/her own grades and compare those to a class summary.

Douglas College, New Westminster, British Columbia

<http://www.ctt.bc.ca/landonline/>

This site is a collaborative effort by the British Columbia Standing Committee on Educational Technology, the Centre for Curriculum, Transfer and Technology and the Office of Learning Technologies. Dr. Bruce Landon from Douglas College performed the analysis to help educators evaluate and select online delivery software. He describes and compares the most viable integrated and component applications currently in use in Canada. The comparison focuses on:

- Technical specifications
- Instructional design values
- Media capabilities
- Tools
- Ease of use
- Potential for collaboration and connectivity
- Contact information
- Application reviews

At the time of the review the applications evaluated included WebCt, TopClass, Virtual University, Learning Space, WebCourse in a Box, First Class, TeamWeave, NortonConnect, Allaire Forums. (**The Interactive Learning Network from CourseInfo was not part of the comparison when reviewed in 1997. Since that time, CourseInfo has been added to the comparison list.)

According to the background description located on the website:

"This site offers several ways in which to compare the applications:

A software features table for both integrated and component applications compares availability of various learner, instructor and technical administration tools. Expanded information is provided in a separate table for each individual application. The technical information tables compare server requirements, as well as start-up costs, technical support costs, etc. User ratings tables show the comparisons of features as evaluated by users. These tables offer the option of comparing data based on

assigned importance values, or customizing the weightings of the criteria to reflect specific institutional environments."

The data incorporated into the analyses comes from various resources including other application reviews such as PC Magazine and PC Week, as well as user ratings. The site was designed using a hierarchical approach incorporating evaluation tables that begin with broad categories and move into specific functions and features. This interface is based on a weighted averaging principle designed to combine information in order to arrive at a rational decision.

PCWeek Labs

(<http://www8.zdnet.com/pcweek/reviews/0818/18chart.html>)

PCWeek Labs performed an evaluation of the Internet-based training tools: TopClass, IconAuthor, QuestNet, Authorware, LearningSpace and Phoenix, listing the pros and cons of each of these packages.

Arizona State University

(<http://www-distlearn.pp.asu.edu/webtools/index.html>)

Arizona State University posted a comparison of several course management/course development tools in the following areas: ownership, classification, status, main features, pros and cons, system requirements and cost.

4. Specific software was investigated, demonstrated, and discussed

The comparison studies, the software alternatives adopted by faculty or recommended by faculty, and the criteria developed by the committee were used as a catalyst for the exploration of software.

Several applications were discarded after discussion because of limitations noted upon investigation. For example, CyberProf is used at the University of Illinois, but it was still undergoing beta testing at the time of our discussion. While WebCrossing had a clean and easy interface, it lacked many of the features available in other applications. The University of North Carolina (<http://www.unc.edu/courses/ssp/tools.html>) offers a set of tools for faculty interested in developing online materials and activities. However it was determined that faculty at the University of Pittsburgh might initially prefer a more seamless interface between instructional functions such as a discussions group, display areas and quiz generators. Other applications were dismissed because of security concerns, the hardware requirements or the presenting interface.

Based on these explorations, the following software comparisons were completed:

Features	Communi-cator	First Class	Net Forum	NiceNet	Top Class	WebCt	Course Info
Synchronous	x	x				x	x
Asynchronous	x	x	x	x	x	x	x
Threading	x	x	x	x	x	x	x
Multimedia	x	x	text	Text, graphics	x	x	x
Moderator Functions	Administrator has to create the group	x	x	x	x	x	x
Online	x	x	x	x	x	x	x
Easy Integration	x	x	x	x	x	x	x
Printability	x	x	x	x	x	x	x

Specific File formats	x	x			x	x	x
Database Interface							sql database
Batch Registration							x
Access Restrictions	On the server end	x			x	x	x
Secure protocol & authentication	x	x			x	x	At the web server or through log in
Platform independent	x	Nt MAC	Unix	x	x	x	x
Web-Based	x	future				x	2.x browser or higher
Learning Curve	Medium-high	Low-medium	Low	Low	Medium-high	Medium	Low
Administration of privilege	On the server end	x			x	x	Faculty member
Local installation	x	x			x	x	x
Resources required	Web server, browser, news server, calendar server, e-mail server	Client and server software	Web browser	Web browser	Web browser	Web browser	Web browser
Transparent technology	x		x	x		x	x
Client cost	Graphics capable computer Web browser & internet connection	Client software	Graphics capable computer Web browser & internet connection	Graphics capable computer Web browser & internet connection	Graphics capable computer Web browser & internet connection	Graphics capable computer Web browser & internet connection	Graphics capable computer Web browser & internet connection
University cost							
Extensibility	Routine upgrades				Routine upgrades	Routine upgrades	Routine upgrades
Scalability							
Client Requirement	Browser and necessary hardware						
Performance Reliability Support	On-campus support				poor	x Users group	Online, e-mail, telephone,
Estimated maintenance							Daily backups & periodic upgrades
Ratio up/down time							

5. Installation of Selected Packages

Based on the preliminary investigation, the committee recommended installing WebCt and TopClass on a University evaluation server. CIS, ULS, and CIDDE shared the costs for installing these packages, and installation occurred in December 1997. There was some reservation about evaluating TopClass since synchronous conferencing was not a feature and knowledge of HTML was required. However, WBT systems, the developer of TopClass, indicated that these problems would be rectified in future upgrades. The committee rationalized that the friendly interface (as compared to WebCt) and the high ratings in the comparison studies warranted further investigation. CourseInfo was selected for investigation at a later date due to the apparent simplicity of the interface. CourseInfo was installed on a CIDDE evaluation server in March of 1998 for initial study, and on a University evaluation server in April.

Faculty from the School of Pharmacy, Arts and Sciences, Education, Information Science, and Health and Rehabilitation Science anticipated using either WebCt or TopClass for the 98-2 term. Unfortunately, the volume of students from courses employing one of these packages did not materialize for several reasons. Some courses did not have the projected enrollments and the instructors felt that student discussions and activities would not be facilitated by online interaction. Most instructors said that they needed more lead time to become familiar with the software and plan their materials. Other faculty reported that in order to save time, they used materials with which they were already familiar.

Subsequently, two Information Science courses (Management of Information Systems) used WebCt and CourseInfo. One Instruction and Learning course (Formative and Summative Evaluations) evaluated TopClass.

An instructional designer from CIDDE, and a professor and doctoral candidate from Instructional Design and Technology completed functional task assessments of WebCt and CourseInfo.

In addition, anecdotal reports of evaluations of some of the packages were received from the Bradford Regional Campus, the School of Health and Rehabilitation Sciences, Family Medicine, and the History Department.

During the trial period for WebCt and TopClass, administrative support was available through CIS. A common web page permitted users to access either of the packages as well as a link to the CIS helpdesk. Training/functional support was offered through CIDDE.

6. Evaluations

Evaluations occurred from three perspectives:

- Faculty
- Student
- Technical

Faculty

Faculty completed a formal survey regarding their overall reactions and ease of use towards the functions of the software. (See Appendix 1). Three evaluations from faculty were received referring to WebCt, one regarding CourseInfo, and two pertaining to TopClass. All of the instructors had created some type of web pages in the past. Not all questions were answered by all of the instructors.

The hours needed to become familiar with the software:

WebCt: 8 (1)
15 (1)

TopClass: 8 (1)
10(1)

CourseInfo: 5-6 (1)

This process took the following amount of time:

- WebCt: Less than a day (1)
More than a week (2)
- TopClass: One to two days (2)
- CourseInfo: Four to five days (1)

Ratings:

- 1=Difficult and confusing
- 2=Easily handled using support documentation
- 3=Intuitive, documentation unnecessary
- 4=Not a feature of the software
- 5=I didn't use this feature

Individual Evaluation Responses
(items rated by a 4 or 5 are not recorded here)

	WebCt	CourseInfo	TopClass
Setting Up the Course			
Organizing/customizing the Home Page	1, 3	3	1,
Organizing the Overall Course	2, 2	1	2, 2
Uploading files	2, 3	3	1, 1
Zippping/Unzipping multiple files			
Editing text and html files	2, 3	3	2, 2
Deleting files	3, 3	3	2, 3
Copying/Moving files	3, 3	3	1
Previewing files in a directory	3,	3	2, 3
Creating directories	3	3	1
Adding single pages	3, 3	3	2, 3
Adding a hierarchy of pages			1, 2
Adding links to external sites	2, 3	3	3
Adding hyperlinks within a course	2		3
Modifying page appearance	3, 3	1	2, 2
Linking to images			1, 2
Linking to Java applets			1
Importing images	3	3	1, 2
Importing Java applets			1
Glossary and References			
Developing a glossary	2	3	2
Searching for words in the glossary	3	1	3
Liking words from the text to the glossary		1	
Adding References			
Student Evaluation Questions			
Generating multiple choice questions	3	3	1
Including images in the questions	3	1	
Adding answers to the questions	3	1	1
Reordering questions and answers	2		5
Student Administration			
Storing student data	1		
Viewing student data			
Editing Student data	3		
Uploading and downloading grade information	3, 3		

Uploading Student Information from a file	3		
Interacting with Students			
Giving students privileges			2
Assigning chat areas to students			2, 1
Participating in a bulletin board	3		3, 2
Participating in a chat session	3		3, 1

Rating Scale: 1=Completely disagree, 5= Completely Agree			
Knowledge of HTML is unnecessary	3, 4, 2	3	1
I would use this package with other classes	4, 5, 4	5	2, 3
This package facilitated teaching with online materials	3, 5	4	2, 3
Time investment was worth it	3, 3, 3	4	3, 2
Training for faculty is unnecessary	2, 3, 2	3	1, 1
I received few complaints from students	4, 4		4
Students enjoyed using the software	4, 4		4
Student statistics were valuable	4, 4	3	3
Helpline assisted with questions	3, 3, 4		4
Features compatible with the browser	4, 1, 5	5	5, 5
Appealing look and feel	2, 5, 5	4	5, 5

General comments:

WebCt

1. Submitted by Barbara Seels and Ahmad Hajizainuddin from Instruction and Learning

Strong Points	Weak Points
<ol style="list-style-type: none"> 1. Managing Files and Directory <ol style="list-style-type: none"> a. It is easy to move groups of files within the directory. Clicking on the file types will mark all files of that type and they can be easily moved to new directory or subdirectory. b. List of files can be hidden and displayed by clicking on the little triangle, something similar to NT explorer 2. Documentation <ol style="list-style-type: none"> a. The online documentation is quite elaborate and easy to follow. Each major process or function is illustrated with screen images of the relevant process. This makes the instruction much easier to follow. 3. Ease of uploading and downloading files. <ol style="list-style-type: none"> a. No problem in uploading and downloading of files, text documents, html files, images, audio and video files. Video files may take a little longer to upload though. (Probably because of their size.) 4. Great Data base Management—you can do query, reports from the data stored in the system data base or from external data base. 5. Flexibility and Maneuverability <ol style="list-style-type: none"> a. Users are given the chance to make changes in the presentation. Icons can be arranged in rows and columns specified by the users. The user can also use his/her own icons if he/she wishes. b. Able to do minor editing and modification to the page. (Knowledge of HTML is necessary.) 6. Writing test questions is easy. You don't have to worry about line break tags. Just type in the question stem and click add new answer to put in the answer choice. 7. Reordering pages and questions is easy. <ol style="list-style-type: none"> a. It is easy to rearrange files in the directory, and reorder questions in the quiz session is as easy as clicking a button. 8. It uses frames to make the icons more accessible. (Meaning users don't have to scroll down to look for navigation icons or design menus.) 	<ol style="list-style-type: none"> 1. No exit—Once you log in you can't log out unless you close the browser. 2. The QuickStart tutorial lacks detail. <ol style="list-style-type: none"> a. The WebCT quick start is very brief (only 1 page)—<i>Maybe that's why they call it quick start.</i> It begins with the sentence "The top frame shows...Milestones." They didn't explain what milestones is. Perhaps this is something that ought to be explained to the faculty when they were trained to use this software. 3. The sequence of the designer tools in the Design Mode is not natural. <ol style="list-style-type: none"> a. The arrangement of the designer tools in the design mode is not in sequence with the natural process of course creation. The designer tools sequence begins with Customize Homepage, Add, Course Settings, Course Management, Update Student View, File Manager, and WebCT QuickStart. When you click on Add it opens up a link, but how can you get it working when there is no page to link with. The Add tool should be preceded by the File Manager, so that files and images can be uploaded to the system. 4. You have to give your html files a title in between the title tag. If not, when you move the file to the path editor it gives an untitled name. 5. Steep learning curve. It took me more time learning to use this software compared to Topclass and CourseInfo. 6. Constructing test item—you may have some problem if you have more than one answer to the question as you only have the options to select only one correct answer.

General Impressions:

I found this software to be a little bit more complex. More time is needed to learn about the many functions of this software. However, the time spent learning to use it is worth it. It makes managing online courses much easier. I had no problem creating an index and glossary for the page. One little problem though, you cannot create a glossary page by itself (like a dictionary). It has to be created on each individual page of your html files. Course instructors have to go to each individual page and select a word that they would like to be defined and then type in the appropriate definition. Once this process is completed, only then the list of words will appear in the glossary page.

2. *Features Most Beneficial:*

- “Calendar” (2)
- “Slides” (1)
- “Tracking” (1)

3. *I would like to see this package improve:*

- “In adding answers to student evaluation questions, while the feedback is immediate it is not prescriptive.”
- “When including images in questions, the 'title' box in the 'edit' mode is confusing.”
- “Add a feature for students to easily submit files to the instructor... better control of the aesthetics.... allow some material to be 'public', not requiring a login to view.”

CourseInfo

1. *Submitted by Barbara Seels and Ahmad Hajizainuddin (Instruction and Learning)*

Strong Points	Weak Points
<p>1. Page Menu</p> <p>a. The page menu is intuitive, easy to use, and the user has the option to select the novice or expert menu. (This is helpful.)</p> <p>b. Dr. Seels likes how the menu is presented. You can go right to page editor unlike WebCT.</p> <p>2. Uploading and downloading files is easy.</p> <p>a. No problem to download and upload files to the system. You can also include text documents, word processing files, data base files such as Excel and Access to your course work. However, you can't make changes to this file after you have uploaded it to the system. Thus, it is better to make changes in your Word document, reconvert it and upload it to the system. One thing to remember is that you cannot have a duplicate name. Faculty has to be oriented on how this process works.</p> <p>3. Constructing quizzes and test items is easy. You can construct a variety of questions with a maximum of 30 questions at a time. You also have the option to save your quizzes and continue working on them (adding items or modifying items) at a later time.</p>	<p>1. Modify documents—none of its modifying functions change the appearance of your material. You can only modify the description (text) that you type in to describe your links.</p> <p>2. N options to modify your html files that you uploaded to the system compared to WebCT and TopClass.</p> <p>3. When you put html file as links in your course, when you click on them, they will open up with the software buttons made available as in WebCT. (<i>WebCT uses frame</i>) Users have to use the browser back button to get back to the course menu. This could be a problem if you include many external links in your html file.</p>

General Impressions:

It is the easiest software to learn compared to TopClass and WebCT. Users can get away with putting up online materials without a working knowledge of html. Coursework can be linked to text documents and database files (such as Word and Excel). The surface feature of this software is ‘sleek’ and pretty straight forward. I believe users can easily navigate through this software without going through the software documentation.

2. *Features Most Beneficial:*

- “Threaded discussion option”

3. *I would like to see this package improve:*

- “Tests were only multiple choice...I would like to see 'handouts' in the documents file that can be written on and submitted directly to the instructor...in the course organization, it seemed to take long to change things but also the areas of change were limited.”

TopClass

1. *Submitted by Barbara Seels and Ahmad Hajizainuddin (Instruction and Learning)*

- The documentation was poorly organized
- The process of creating student lists, folders, and pages of the course was easy enough
- Proficiency in using html is necessary
- Uploading files created using an html editor (Microsoft FrontPage 97 or Netscape Composer) routinely resulted in several error messages
- The 'Check Link ' was difficult and confusing, without any help offered. The documentation is not clear, and once again, HTML is necessary.
- Creating announcement and discussion groups was easy.
- Viewing student submissions was easy.
- Team teaching may be difficult because the instructor can only look at the submission of works by students that she created. It is not possible to look at the submission of other students created by the co-instructor of the course.
- Creating online test items were confusing and little documentation was available. Test items had to be constructed one at a time, and the looping process to perform this task is tedious. No reordering option of the test items is available. Manual editing is required and knowledge of html is essential.
- The interface design was appealing and pleasing, but the icons are not labeled and conflicted with the browser navigation button.

Summary of General Reactions: TopClass

Strong Points	Weak Points
<ol style="list-style-type: none">1. Potential of the technology.2. Directions are clear. Easy to read, and easy to recognize icons.3. The click and point features, (buttons for multiple choice, and relative ease of typed in answer)4. Not so difficult to use.5. The overall look. It is clean and attractive and easy to work with.6. Being able to type my responses and answers.7. Menus.	<ol style="list-style-type: none">1. Not a whole lot of interactivity. The response to my inputs was not immediate, had to wait to submit whole test. Could use some prompting for answers (clues), not just a fill in the blank.2. Aside from the frustration of using the exercise part, it was the lack of cues and buttons on the main screen, and the necessity to scroll down to the bottom to find things. Also not being able to read messages from the send message screen (no button to get to that from the screen I was on). Lack of listing of messages sent (or hiding somewhere that I didn't find!) was also annoying. I didn't know if my messages were sent or not.3. When I started to evaluate this site, and I wanted to switch back to see other menus of the site, the previous items that I responded to were erased. I had to do it again.4. The password block at each stage.5. I didn't like the navigational tools at the bottom of the screen. For me, it was easier to use the tools on the browser toolbar. I am probably just more accustomed to using the toolbar for the browser, however.6. Navigation and confusion of task—students should be better prepared to manage the software.

Other Faculty Responses

In addition to the formal survey responses, faculty who had experimented with the demonstration versions but did not necessarily participate in a functional task assessment offered these comments:

1. (Re: CourseInfo: Don Lewicky, an administrator from the Bradford Campus submitted this comment. He had previously tried to attract faculty to WebCt but reported that he couldn't get faculty interested because the interface looked too complicated.)

"Rick Nelson (Professor in Business MGT) and I took a tour of Course Info. We are both very impressed with the ease of use and underlying functionality. This looks like a very useful tool that I think I can sell to the faculty. We support the recommendation that Course Info be the tool that provides the framework for basic online course instruction. When will a decision be made? We would like to use it for Rick's course in the fall. "

2. (Re: Comparison of WebCt and CourseInfo: Nick Laudato from Information Science submitted this response in comparing the two packages)

"My class, Management Information Systems, has been utilizing the web throughout the term. For the first month, I posted the syllabus, notes, and PowerPoint presentations on my personal web page. I then created WebCt accounts for each student and recreated all of my personal web page in WebCt, while adding some of the additional features it provides (chat, discussion groups, calendar, student groups). Finally, last week, I repeated this process with CourseInfo. My students have completed evaluation forms for both WebCt and CourseInfo.

At class yesterday, I asked each student to commit to one of the following five positions:

- A. I prefer the standard web pages
- B. I prefer WebCt
- C. I prefer CourseInfo
- D. I prefer NO web pages/Web pages are not necessary
- E. Abstain/Don't care/No Preference

The 23 students attending class answered as follows:

- 6 answered A. I prefer the standard web pages
- 10 answered B. I prefer WebCt
- 7 answered C. I prefer CourseInfo
- None answered D. I prefer NO web pages/Web pages are not necessary
- None answered E. Abstain/Don't care/No Preference"

3. (Re: WebCt: Irina Livezeanu from the History Department submitted this response. She had had a graduate student helping her set up her course in WebCt, but lost the student support after the beginning of the semester).

My suggestion, however, is that WebCt should be adopted but with very good support and technology, and plenty of time before a given semester to get organized on the WebCt page for a course.

Each faculty that participates should be assigned a particular WebCt aide from CIDDE or wherever who can train and offer daily support in the beginning; and a computer person should make sure that the faculty involved have the appropriate computer hardware and software (i.e. sufficiently updated to run Word that easily converts files into html-files, etc.) I am currently trying to get the FAS dean to let me have a UNA computer in the next couple of months--as opposed to October--so that I can get ready with a WebCt site BEFORE the fall semester. Otherwise next year is shot for me as far as WebCt.

4. (Re: General reaction from the School of Pharmacy, submitted by Tom Waters, Webmaster).

I have received a variety of feedback from faculty and students, though most of it really speaks to the need for better pre-planning on the faculty member's part. They have tried to do stuff at the last moment, and haven't taken the time to be familiar with the software; end up frustrated, and give up on it. Student's express feeling like guinea pigs, and not too appreciative. They haven't been willing to give it a fair chance....Since we have one course on the web following the system we used last semester, and one faculty member who insists on doing things his own way, the students feel as if they are being expected to go to different sites and "learn" to use them rather than allowing everything to be at one place/one system.

5. (Re: Comparison of TopClass, WebCt and CourseInfo: Audix message from Kathleen Ferraro, Family Medicine)

"Course Info is very, very good for the conference stuff that Jane Feurer (English Department) and I are working on. I was wondering if the demo is going to be here over the next month or so, so that we

can start loading our stuff into it. I wanted to make sure that if we did, it wouldn't disappear. I don't want to go through a lot of work and then have to repeat it."

Summary of Faculty Evaluations

Of the three packages evaluated, TopClass appeared to be the most difficult to use. Knowledge of HTML is required, and the inadequacy of the online documentation and navigational scheme is frustrating. Of the three faculty who became familiar with this package as well as CourseInfo, CourseInfo was preferred due to the simplicity in using the functions.

The functional assessment categories of WebCt and CourseInfo were rated similarly. However, the overall impressions cited by evaluators were more favorable to CourseInfo. The simplicity of the interface was also cited as a motivational factor for instructors to use the software.

The calendar characteristic of WebCt was viewed as a favorable feature not available in CourseInfo, however this feature is expected in a upgrade of CourseInfo anticipated for release this summer.

During the committee meeting, some members suggested that because CourseInfo does not offer the variety of options (ex. page design etc.) available with WebCt, it should be offered to faculty with limited experience creating web materials. In this way, faculty will be more motivated to spend time on the instructional aspects of their course, rather than devoting development time to the appearance of specific icons.

Student Evaluations

Students from the following courses evaluated the software (see Appendix 2)

Course:	Software:
Management of Information Systems	WebCt CourseInfo
Formative and Summative Evaluation	TopClass

Management of Information Systems (Instructors: Nick Laudato, Dennis DeSantis)

*Not all students answered every question

Frequency of Responses (n=23)

Survey questions:

Did you access the course primarily from:

On-campus computer workstation -8
Personal computer, dial-up modem - 16

How often did you log into the course?

More than once a day -1
Once a day - 4
Once a week - 9
Less than once a week - 7

During the course, how many times did you try to log on but failed to get connected?

0-5 times - 20
6- 10 times - 0
More than 10 times- 3

Approximately how many total hours do you think it took you to learn to use the courseware?

CourseInfo

0-3 hours - 23
4-6 hours -0
7-9 hours-0
More than 10 hours-0

WebCt

0-3 hours-21
4-6 hours-0
7-9 hours-0
More than 10 hours-1

Were you comfortable using the courseware in:

CourseInfo

0-2 weeks - 23
3-5 weeks
6 or more weeks

WebCt

0-3 hours - 21
4-6 hours-0
7-9 hours-0
More than 10 hours-0

Frequency of Student Responses

	Strongly Disagree	Disagree	Agree	Strongly Agree
Accessing course information using a Web browser was easy to do Course Info WebCt			9 8	14 14
The screens I looked at or used made sense to me CourseInfo WebCt		1	8 15	12 7
I needed a lot of help to be able to access materials through a web browser CourseInfo WebCt	16 13	6 9		1
The online course materials were useful to me CourseInfo WebCt			14 15	9 4
The instructor gave us enough information to use the courseware CourseInfo WebCt			15 13	8 9
The features of the courseware made it easy for me to meet the course requirements CourseInfo WebCt		3 6	14 9	3 5
The online chat or discussion function was easy to get to and use. CourseInfo WebCt	2 2	6 6	6 8	2 4
Using computers as part of the course made the course more enjoyable CourseInfo WebCt		1 5	14 10	8 7
I would like to see more courses use this courseware CourseInfo WebCt		1 3	10 12	12 7

None of the students reported needing to contact the CIS Help Desk for Assistance.

The following comments were offered as suggestions for software improvement:

WebCt

- Simplicity is better. Going through many levels is clumsy.
- Some pages such as the course notes don't have a return button. It's difficult to go backward or forward for some pages. Sometimes I have to click back and forward button of the web browser.
- The calendar, bulletin board and Instructor Presentations are the only necessary functions. People already have their own e-mail address.
- Chat room not especially useful. Most classmates communicate through other means like e-mail, phone, etc.
- The notes can be printed only one page at a time - time consuming/wasting paper. Chat room not used by students. Really need it?
- (Need) instruction on what things were or how to use them, although it was fairly easy to fumble around and figure things out.
- Additional security required. Need instructions to help use the various icons.
- More comprehensive help features.
- The calendar is a very good part of the software, however most of the other features are redundant. It's easier to use traditional web pages and e-mail distribution lists.

CourseInfo

- The icon on the screen is not meaningful.
- I liked the functionality, but not necessarily the design. A bit vanilla. In all, I liked this better than WebCt.
- Many of the links weren't working, otherwise intuitive and easy to use.
- Some of the icons were confusing, but it wasn't bad.
- (Add) a calendar...better icons...other than that it's really good (but I liked the first one (WebCt) better
- A calendar feature like WebCt would be nice
- I like the feature where you can browse the course information without having to 'log-on'. This is helpful for students thinking of taking the class in the future. This is not an option on WebCt. I also like the 'upload' feature available for the student. This could make the submission of information to the instructor easy and could also facilitate group projects. Build a calendar.
- Give more help instruction so that the end users can get help easily.
- Should have a class calendar. I don't think the chat room is much useful unless this is a distance learning course.

- Security. I mean I can use 'back' to get the previous page, even the page of 'change password'.
- I had trouble using the chat module. I used Internet Explorer 4.0 and everytime I accessed the module it just sat there. I don't see the need for a 'homepage' editor. There are so many other tools with more capabilities available, why would you want to pay for this function?
- After logging on, you don't need to log back on again even if you have gone to other web pages. This may pose some security issues. But I like the feature to access general information without login. Overall, it's good software.
- Ability to perform more advanced changes on student web page. What happens if a student uses this package for two courses and has a different logon for each? Some items on the package are performed automatically, such as sending a threaded response, without user feedback. Otherwise the system is very easy to use.
- This package is a little more complicated in terms of navigation. Security issues need to be addressed too. I accidentally hit the home key more often than not and managed to return to the CourseInfo page without re-logging in. Some linked on the page don't work as yet. The interface menu to the left needs to be more descriptive, i.e., unique names.
- I like the 'look' of this a little better than WebCt. This one is lacking a calendar.
- Calendar...Allow to post student's documents...Allow to call student's web page, other than the default set up by the courseware.
- More logical icons associated with the links.
- It should have an address easy to remember.

Formative and Summative Evaluation, I&L 3367 (Instructors: Barbara Seels, Ahmad Hajizainuddin)

Dr. Seels and Mr. Hajizainuddin developed their own online questionnaire for evaluating the TopClass software.

Summary of student I &L 3367 Responses:

N=7

"General consensus among the students were that this software needs improvement. The students felt that the overall look, relatively easy click and point features of the software, and being able to type in their responses and answers are some of the appealing features of this software. On the other hand, the password block, the navigational tools which are only available at the bottom of the screen, and the lack of interactivity especially in the test are some of the least appealing features of this software. On average, half of the students rated the usability of this software as average and the other half rated it to be relatively easy to use."

Other Comments

As indicated earlier, an instructional designer from CIDDE took the role of an instructor, placing course materials within each of the packages to compare the various features. Another instructional

designer looked at the CourseInfo package assuming the role of the student, and forwarded the following response:

Here are the notes I took while going through the "Listening" course. Very, very slow. Took a lot of time and several trials to get into various components. May be just my computer. At first, I could not get into "assignments" and "communication". When the instructor (Rich) was informed, he re-entered some things and then I was able to access those components. This indicates that the instructor has to be very careful to put everything in correctly or students will have many problems. "Course Info", "Staff Info" and "External Links" all worked well. I particularly liked "Assignments". I took the quiz, submitted it and received instant feedback, I dont think that students would have any problems with this feature. "Comunication"__this is not easy to use. Not at all clear where the student should type his/her comments in "Discussion Board".

Summary of Student Evaluations

Unlike the faculty evaluation where CourseInfo was viewed as slightly more positive than WebCt, there was no clear evidence that students would favor one package over the other. Students from the Management Systems Course commented that they preferred WebCt by a slight margin, yet their formal evaluations could be interpreted only as a slight edge over CourseInfo. The only area agreed upon characteristics by students was that they prefer the calendar feature of WebCt.

Technical Evaluation

The purpose of the technical evaluation is to determine the operating efficiency of the software. Questions to be addressed will be the requirement of server resources, memory and disk space, the number of students that can be accommodated and the general operating costs. Information is being still being gathered concerning this portion of the evaluation.

7. Listservs Monitored Associated with Distance Learning

Since September of 1997, three listservs were monitored for impressions referring to specific course management tools:

Distance Education Online Symposium (DEOS-L@LISTS.PSU.EDU)

World Wide Web Developers (WWWDEV@hermes.csd.unb.ca)

American Association for Higher Education (AAHESGIT@LIST.CREN.NET)

Questions were sometimes asked about experience with particular products, and users frequently post replies. An example of one such discussion is noted in Appendix 3.

A specific request was issued on the World Wide Web Developer listserv asking for information about actual experiences using WebCt, TopClass and CourseInfo.

The following responses were received:

"We short-listed our choices of a WWW management and development system to 3 - CourseInfo, TopClass and WebCt. From the list of "must haves" and "nice to haves" that our committee generated, we were able to come , after some discussion, to a choice for WebCt. CourseInfo, has a very nice front end, but lacks many of the database and presentation control features of WebCt. It is also does not yet have much of an installed base, but may have potential."

Director of Academic Technologies for Learning
University of Alberta

"Our college is also implementing WebCt with successful results; options for faculty are useful and productive for student learning. Also, the support and timely help we have received from Murray Goldberg and his staff is to be commended. Check the Guest Account for Intimate Relationships: PSY357 and the Example for Ethics in Politics: POL225 at the address below."

<http://webct.cornell-iowa.edu>

Educational Technology Specialist
Cornell College

"WebCt has a lot more features and is about 40% Faster from what I can tell. CourseInfo has a small # of tools, and only has half the Customization Capabilities of WebCt."

Stream Technology Group

"I received a very negative response about its reliability (or lack of it!) from the Webmaster of one of their customers - I think it was Yale, when I contacted them 3 months ago.

I would greatly appreciate any other information that you may receive about CourseInfo - we have already taken the decision to go with WebCt, and have no complaints about reliability or support so far."

University of Aberdeen

"I can only offer my own experience as a course content developer and virtual instructor, but I would steer clear of TopClass. Its hierarchy is really rigid, it's not for all courses, and its bugs are real. If you spend any time at all on the WBT systems listserv, you will realize that TC users have many persistent problems with the client. I have no experience with the other two tools you mention, but the WebCt buzz is always good."

Instructor

"I am very familiar with CourseInfo's software having used it to set up and maintain two sites, <http://courses.lightlink.com/courses/ARME325> and <http://courses.lightlink.com/courses/CEO>. I was hired to evaluate course management software and the first product I researched was Top Class. I found it to be very counter-intuitive and the user interface left something to desire. I have also seen Web CT and rate that product below Top Class. CourseInfo's software combines a very logical hierarchy with an impressive and customizable interface. As far as functionality goes, I pretty much use this site for EVERYTHING related to my class. One extremely useful feature is the ONLINE GRADEBOOK in the Control Panel. I have used this to document assignment grades, daily attendance, online quizzes, and to keep track of who has handed in certain administrative forms. And, when the semester comes to a close, I can easily publish the entire gradebook to an Excel spreadsheet and calculate the final grades in a ridiculously short amount of time."

Multimedia/Web consultant Cornell University

"I am an independent virtual consultant/instructional designer, and am always looking for new and better course development tools. What I have found is that faculty have enough on their hands just re-designing courses for web delivery and don't have the depth/range of skills required to use most web-course development tools.

I found Interactive Learning Network (ILN) by CourseInfo over a year ago while employed at Morehead State University. I was looking for tools to augment/replace compressed video delivery. I reviewed TopClass, WebCT, Learning Space, Web-Course in a Box, and several others, but found that either they did not provide appropriate tools, a clean and easy user interface, or were just too difficult for application across the campus.

When I found CourseInfo, it was a god-send! The institution purchased 2 evaluation copies, and I gave one to a faculty with high levels of skills and one to a faculty who was a novice to the computer. Both were able to successfully navigate the software and create on-line learning experiences for their students. The university has since purchased a full license for ILN, and both the initial test faculty have 2 or more courses completely on-line using ILN.

ILN provides a range of tools suitable for not only delivering content, but also for creating learning communities among students through the use of communication tools.

I have been impressed with CourseInfo's product, as well as their just-in-time support.

Some of the features I felt were necessary were:

1. discussion board
2. in-depth, secure testing
3. on-line gradebook
4. chat area
5. file transfer areas
6. easily understandable instructor interface for development

7. intuitive user interface
8. ability to load external links into class environment so that students aren't taken away from the course by links

I found all of these features, in an easy to use interface, with CourseInfo's ILN.

Feel free to contact me if you would like more information or have any questions."

Independent consultant

8. General Recommendations

Reviewing information gathered so far, the following conclusions are made:

- The few faculty performing preliminary evaluations of TopClass, WebCt and CourseInfo prefer the ease afforded with CourseInfo for putting courses online. The difficulty using TopClass accompanied by the lack of documentation and the frequency of error messages led to the conclusion that it is no longer a viable contender for a course management tool that the committee could recommend.
- Information from students does not indicate a clear preference for either WebCt or CourseInfo, although all three applications have areas noted for improvement. Overwhelmingly, students prefer the calendar function of WebCt, however upgrades of future releases of CourseInfo will offer a similar feature.
- Inquiries to a web developer's listserv resulted in positive and negative aspects in their reports for all of the packages, however nothing positive was posted about TopClass.

Based on the data received and the subsequent conclusions, the following recommendations are made:

- Perform a comprehensive technical evaluation of CourseInfo in order to compare the efficiency of that application with WebCt. The user information acquired to date would result in a recommendation that CourseInfo to be adopted due to the faculty's slightly more favorable response to this package. However, this recommendation cannot be made with full confidence without awareness of the administrative requirements of both applications.
- Faculty must be given enough notice and support in order to develop online materials. The committee recommends that for faculty to implement coursemanagement tools for the fall term, a dissemination and training plan for the package be in place preferably before the end of spring term.
- Incorporate training sessions into a semester training schedule. Training should be performed on four levels:
 - Organizing the course for online delivery
 - Uploading the files and becoming familiar with the features of the software

- Ongoing support in the form of a 24 hour helpdesk
- CIDDE should provide workshops addressing the implications of online instructional materials. Online delivery in itself does not guarantee good instruction and in many cases may impede learning. There are instructional strategies that have been documented as more effective in terms of organizing the course, communicating with students, and presenting instructional activities.
- Improve access to the University network. Of the students who responded to the evaluations, approximately 30% had difficulty accessing the network. This inability to access resources in a timely manner jeopardizes a user's interaction with online instruction.
- It is anticipated that CourseInfo will not be able to meet the needs of the entire faculty at the University. Other packages in development may warrant further attention, and it is suggested that an ongoing concentrated effort revisit this area as the need arises.

Respectfully Submitted,

The Computer Conferencing Selection Committee
April 30, 1998

APPENDIX 1

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FACULTY EVALUATION FORM

I used: Topclass WebCt CourseInfo

Have you created web materials in the past Yes No

How many hours did it take you to become familiar with the software? _____

This process took: Less than a day 4-5 days More than a week
 1-2 days 6-7 days

Referring to the following scale, circle the number that best describes the software's ease of use.

- 1 = Difficult and confusing
- 2 = Easily handled using support documentation
- 3 = Intuitive, documentation unnecessary
- 4 = Not a feature of the software
- 5 = I didn't use this feature

Setting up the course:					
Organizing/customizing the home page	1	2	3	4	5
Organizing the overall course	1	2	3	4	5
Uploading files from the computer to the server	1	2	3	4	5
Zipping or unzipping multiple files	1	2	3	4	5
Editing text and html files	1	2	3	4	5
Deleting files	1	2	3	4	5
Copying and/or moving files	1	2	3	4	5
Previewing files in a directory	1	2	3	4	5
Creating directories	1	2	3	4	5
Adding single pages to a course	1	2	3	4	5
Adding a hierarchy of pages	1	2	3	4	5
Adding links to external sites	1	2	3	4	5
Adding hyperlinks within the course	1	2	3	4	5
Modifying the appearance of pages	1	2	3	4	5
Linking to images	1	2	3	4	5
Linking to Java applets	1	2	3	4	5
Importing images	1	2	3	4	5
Importing Java applets	1	2	3	4	5

Explain Items Rated "1":

- 1 = Difficult and confusing
- 2 = Easily handled using support documentation
- 3 = Intuitive, documentation unnecessary
- 4 = Not a feature of the software
- 5 = I didn't use this feature

Glossary and References:					
Developing a glossary	1	2	3	4	5
Searching for words in the glossary	1	2	3	4	5
Linking words from the text to the glossary	1	2	3	4	5
Adding references	1	2	3	4	5

Explain Items Rated "1":

Student Evaluation Questions					
Generating multiple choice questions	1	2	3	4	5
Generating short answer questions	1	2	3	4	5
Generating essay questions	1	2	3	4	5
Including images in the questions	1	2	3	4	5
Adding answers to the questions	1	2	3	4	5
Reordering questions and answers	1	2	3	4	5

Explain Items Rated "1":

Student Administration and Management					
Storing student data	1	2	3	4	5
Viewing student data	1	2	3	4	5
Editing student data	1	2	3	4	5
Uploading and downloading grade information	1	2	3	4	5
Uploading student information from a file	1	2	3	4	5

Explain Items Rated "1":

Interacting with Students					
Giving specific privileges to students	1	2	3	4	5
Assigning chat areas to students	1	2	3	4	5
Participating through the bulletin board	1	2	3	4	5
Participating in a chat session	1	2	3	4	5

Explain Items Rated "1":

- 1 = Difficult and confusing
- 2 = Easily handled using support documentation
- 3 = Intuitive, documentation unnecessary
- 4 = Not a feature of the software
- 5 = I didn't use this feature

Interacting with Students					
Giving specific privileges to students	1	2	3	4	5
Assigning chat areas to students	1	2	3	4	5
Participating through the bulletin board	1	2	3	4	5
Participating in a chat session	1	2	3	4	5

Explain Items Rated "1":

Using a scale from 1-5, 1 = completely disagree and 5 = completely agree, circle the number that best describes your general reactions.

General Reactions					
Knowledge of html is unnecessary	1	2	3	4	5
I would use this package again with another class	1	2	3	4	5
This package facilitated teaching with online materials	1	2	3	4	5
The time investment in setting up the course was worth it	1	2	3	4	5
Training is unnecessary for the majority of faculty	1	2	3	4	5
I received few complaints from students	1	2	3	4	5
Students seemed to enjoy using the software	1	2	3	4	5
The statistics about student usage was valuable	1	2	3	4	5
The Helpline was able to assist with my questions	1	2	3	4	5
The features used were compatible with the browser	1	2	3	4	5
The look and feel of the software was appealing	1	2	3	4	5

Explain Items Rated "1":

The feature(s) most beneficial to me:

I would like to see this package improve:

Other Comments:

Name: _____

APPENDIX 2

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STUDENT EVALUATION SURVEY

Course: _____ Term: _____

I used: Topclass WebCt CourseInfo

Did you access the course primarily from:	
	A computer workstation located in computer as, dorms, offices, or libraries n the Oakland campus
	University of Pittsburgh computer workstations located on regional campuses, RIDC Park, UPARC, and other Pitt locations outside the Oakland area
	A personal computer using dial-up modem access (e.g., from your off campus apartment or house)
How often did you log on to the course?	
	More than once a day
	Once a day
	Once a week
	Less than once a week
During the course, how many times did you try to log on but failed to get connected?	
	0-5 times
	6-10 times
	more than 10 times
Approximately how many TOTAL hours do you think it took you to learn to use the courseware?	
	0-3 hours
	4-6 hours
	7-9 hours
	more than 10 hours
Were you comfortable using the courseware in:	
	0-2 weeks
	3-5 weeks
	6 or more weeks

APPENDIX 3

Example of a Listserv Discussion on the Subject of Course Development Tools

We're using WebCT here at Camosun College in Victoria, BC. We have used Authorware in the past and found the learning curve to be quite steep. Some folks here have developed courseware on Toolbook. Both of these programs were developed before the advent of the web, so any web capabilities they may have are add-ons. WebCT, of course, was designed from the beginning for web courseware delivery, including the "asynchronous chats and submission and evaluation of individual projects/papers" you are looking for. Also, because it is web based, it'll run on any machine equipped with Netscape 2.0 (3.0 recommended) or better. I've searched the WebCT listserv where this question was discussed last spring and later in the summer. Here are two comments from folks who have used both WebCT and Toolbook II.

- - - - -

Subject: Is ToolBookII as good as WebCT

Date:

x-mailer: March 15, 1997

From:

To: "WebCT Users" <webct-users@cs.ubc.ca>

Earlier there was a question about ToolBookII being as good or better than WebCT.

This is a difficult question to answer since it is sort of like comparing apples to oranges. ToolBookII is primarily a tool for the development of CBT (Computer Based Training) products that would run across a LAN or via a CD-ROM. The new version of ToolBook has the ability to export courses (designed w/ a subset of TBK tools) as HTML code for distribution across the Web. Asymetrix also has a plugin for Windows systems, Neuron, that enables TBK native code to run via a browser across the Internet. When this strategy is used, the student must download the plug in and then the entire course to their hard disk before the course can be run. As such, the Internet is essentially only serving the role as a post office sending a virtual CD to a consumer. Depending on the size of the course, the download can take several hours. Also, if the course needs to be updated, the student would have to download a copy again. Also, any communication among students and instructors would have to be done outside the course.

>From our experience, the HTML exported code produced by TBK is heavier than normal HTML thus making the download time for users longer than should be necessary.

The authoring environment does have some nice features that allow authors to drag-&-drop Java applet and easily arrange elements on the screen. Designers can also add their own applets. Also, the quiz functions in TBK are a bit more rich than those in WebCT.

ToolBook's Internet-based course management tool, Librarian, is quite sophisticated and very expensive. There have been some cross platform problems with this tool that currently seem to limit its ability to be used in a mixed platform environment.

Even though we are using both of these products, I decided to go with WebCT for the course I am developing, at least for the time being. I like the fact that WebCT was born on the Web and uses native HTML as the course medium. I also like the fact that the authoring environment and the students' environments are via a browser. WebCT isn't trying to server two masters, CBT and the Web. I also like the ability to carry out minor edits from my browser directly on the course that is resident on the server. I am in Maryland and our server is in Illinois and this feature makes my life easier. I can also use standard FTP and make major corrections on my hard disk. Also, unlike ToolBook II, WebCT has communication tools integrated into the course. If you want to have students use chat, e-mail, or discussion bulletin boards with ToolBook you would have to add these on as external applications. This is a hold over from TBK being a CBT tool. CBT applications are self contained and generally do not use communication among students and between students and instructors. The WebCT communication tools are one of the most important advantages of WebCT over ToolBook.

If you are interested in learning more about ToolBookII check out Asymetrix's website at: www.asymetrix.com.

I hope that this information helps a little.

Subject: Re: ToolBook II Assistant

Date: Wed, 30 Jul 97

x-mailer:

From:

To:

Reply-To:

7/30/97 4:53 AM

>I have tried WebCT b4. Recently I have received some info on Asymetrix's
>ToolBook II Assistant software, which sounds quite good.
>
>How WebCT compares with ToolBook II?

I've tried both and I prefer WebCT. TBK is primarily designed for CD-ROM based Computer based training and has added partial capabilities for web-based learning. They have some good bells and whistles and have an easy interface but you cannot design the course on the web and the course mgmt. module, Librarian, is a \$50,000 extra piece of software that is buggy. TBK is also primarily written in Java and in the player mode, courses can only be used on Win95 and Win31 systems.

For what it does, WebCT is much better in my opinion.

At 07:31 AM 3/17/98 -0500, you wrote:

>My organization is considering the purchase of Macromedia's Authorware or
>Asymetrix's Toolbook to use in converting resident course materials to web-
>based delivery. Most courses will include instructor interventions such as
>asynchronous chats and submission and evaluation of individual projects/papers.
>I have been reading reviews of these programs as well as the message traffic

>about WebCT. Can anyone provide recommendations based on their experiences or
>the experience of their organization?