

Blackboard Patents the LMS

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Editor's Note

This was originally posted to [Michael Feldstein's blog](#) on July 27, 2006.

I'm surprised there hasn't been more uproar about this yet. The ever-brilliant US Patent and Trademark Office has apparently [granted Blackboard a patent](#) for...well...pretty much anything remotely related to learning management systems. As I read it, Blackboard basically owns the patent on any sort of groupware at all that is used for teaching purposes. This could have very serious consequences for both proprietary and Open Source competitors--and I define "competitors" as loosely as possible. (You could probably slam Drupal with this under the right circumstances, for example.)

For your convenience, I have copied the "Summary of the Invention" section from the [patent](#):

In accordance with these and other objects, provided is a system for providing to a community of users access to a plurality of online courses, comprising a plurality of user computers and a server computer in communication with each of the user computers over a network. Each user computer is associated with a user of the system having predefined characteristics indicative of a predetermined role in the system. Each role provides a level of access to data files associated with a course, and a level of control over data files associated with a course. The server computer has means for storing data files associated with a course, means for assigning a level of access to each file, wherein the level of access is associated with the ability of a user to access the file, means for determining an access level of a user requesting access to a file, and means for allowing access to a file associated with a course as a function of the access level of the user.

The user roles comprise a student role associated with a student user, an instructor role associated with an instructor user, and an administrator role associated with an administrator user (roles may be mixed; for example when an instructor of one course, is also a student in another course). The instructor user is provided with an access level to enable the creation and editing of a plurality of course files associated with a course. The course files include an announcement file, a course information file, a staff information file, a course documents file, an assignments file, a dropbox file, an asynchronous communication file, and a synchronous communication file.

The student user is provided with an access level to enable reading of course files associated with a course. The student user is also provided with an access level to enable modification of some of the files associated with a course. Also, the user may be provided with an access level to enable creation of a student file associated with a file for which the student user is able to read. The file that the student is able to read may be an assessment file created by the

instructor user, and the student file created by the student user is a response to the assessment file. The assessment file may be a plurality of examination questions selected by the instructor user to assess the ability of the student user. The examination questions may be selected by the instructor user from a predetermined pool of available examination questions. The examination questions also may be created by the instructor user substantially at the time of the creation of the assessment file and optionally added to the pool. The student file may be reviewed by the instructor user and assigned a grade, which would be made available online to the student user. The instructor user may collate the grades obtained from reviewing a number of student files, and the collated grades may be made available online to all student users associated with the course (e.g.: an average for the class, a pie or bar chart, etc.).

The student will also be able to read an assignment file created by the instructor user, and the student file created by the student user is a response to the assignment file.

The "digital dropbox" may contain a plurality of files transferred to the server computer from one or more student users associated with the course. The instructor user may be provided with access to the files in the dropbox file, whereby the instructor user may download, edit and upload the files in the dropbox.

A user may be required to enter a login sequence into a user computer in order to be provided with access to course files associated with that user. The user is then provided with access to all courses with which the user is associated after entry of the logon sequence. The user is provided with a web page comprising a plurality of course hyperlinks, each of the course hyperlinks associated with each course that the user has been enrolled either as an instructor or as a student. Selection of a course hyperlink will provide the user with a web page associated with the selected course; the web page having content hyperlinks and buttons to various content areas associated with the course. The content hyperlinks and/or buttons include an announcement area hyperlink, a course information hyperlink, a staff information hyperlink, a course documents hyperlink, an assignments hyperlink, a communications hyperlink, and a student tools hyperlink. Selection of the announcement area hyperlink provides a web page including a group of course announcements. Selection of the course information hyperlink provides a web page including information regarding the associated course. Selection of the staff information hyperlink provides a web page including data regarding the instructors of the associated course. Selection of the course documents hyperlink provides a web page including a listing of documents associated with the course, which may be active hyperlinks to the documents. Selection of the assignments hyperlink provides a web page including a group of course assignments. Selection of the communications hyperlink provides a web page including hyperlinks to a group of communication tools including an asynchronous communication tool and a synchronous communication tool.

In another aspect if the invention, provided is a system for providing to a community of users access to online courses, including a server computer in communication with user computers over a network, wherein the server computer has means for creating course user accounts from a file of existing user accounts associated with an external computer. In this manner, existing legacy systems having large members of user accounts stored in memory may be integrated with this system without having to re-enter user data into the system (so-called batch enrollment).

In yet another aspect of the invention, provided is a method for providing online education, which includes the steps of establishing a course to be offered online, offering the course to be taken online to a group of student users; and providing access over the network to the course files to a student user who has enrolled in the course. The establishment of the course includes an instructor user generating a set of course files for use with teaching the course, then transferring the course files to a server computer for storage thereat, and then making access to the course files available to a predefined community of student users having access to the server computer over a network.

Preferably, at least one of the course files comprises a course assignment, and the student user creates a student file in response to the course assignment and transfers the student file to the server computer. The instructor user accesses the student file from the server computer, reviews the student file to determine compliance with the course assignment, and the instructor user assigns a grade to the student file as a function of the determination of compliance with the course assignment. The instructor user may post the grade to a file on the server computer accessible only to the student user with which the grade is associated. The instructor user may repeat these steps for a number of student

users that are enrolled in the course, and then perform a statistical analysis on the grades assigned to the student users. The results of the statistical analysis may be made available to the student users enrolled in the course.

An asynchronous communication tool accessible to student users enrolled in the course may be provided for enabling asynchronous communication amongst the student users. Likewise, a synchronous communication tool accessible to student users enrolled in the course may be provided for enabling synchronous communication amongst the student users.

The present invention also enhances the prior art by providing a flexible infrastructure for colleges, universities, and other institutions wishing to facilitate on-line registration and tuition payment. More specifically, the present invention can accommodate different billing methods, including, but not limited to, billing on a per-credit-hour basis, and billing on a per-registrant basis. Tuition may be paid by credit card, debit card, check, or other verifiable payment method. Payment verification may be performed by the present invention, or the present invention may interface with third-parties providing payment verification services. In addition, the present invention allows on-line billing information to easily interface with a college, university, or other institution's standard billing practices. Integrating with existing billing practices simplifies transition to automated systems.

In addition, the present invention may be configured as an open system wherein anyone can connect to a server over the Internet and create a course online that may be taken by anyone else connected over the Internet. Thus, anyone may create a virtual classroom available to anyone else, regardless if they are affiliated with a particular institution such as a University. For example, a lawyer may create a course in patent law online, and configure the system to require entry of a password to enroll. The lawyer may then disseminate the passwords to desired students who can enroll in the course. Alternately, the lawyer can request the system to require payment to enroll in the course such as by credit card.



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