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Product Name	Blackboard Learning System CE 6.1 Enterprise License	Moodle Rooms	Sakai Community Release 2.5
Developer Name	WebCT / Blackboard / Angel	Moodle Rooms	Sakai
Licensing & Hosting	\$67,000, does not incl. config. Serves up to 2,000 students	\$36,000 incl. basic config. Serves up to 4,000 students	\$25,000 incl. full config and Tier 2 and Tier 3 support, serves up to 7,000 students
Functional Comparison			
Communication Tools			
Discussion Forum	<p>A spell-checker is available for student and instructor responses.</p> <p>Discussion forums can be threaded, blog format or journals (individual or group). Discussion forums can be viewed by topic, by date, and by thread. Discussion threads are expandable and collapsible to view an entire conversation in one screen. Instructors can associate a discussion with any course content. Posts can contain URLs, file</p>	<p>Students can enable or disable posts to be sent to their email. Students can receive posts by email as daily digests of subject Students can subscribe to forum RSS feeds.</p> <p>A spell-checker is available for student and instructor responses.</p>	<p>Students can enable or disable posts to be sent to their email. Students can receive posts by email as daily digests of subject lines or A spell-checker is available for student and instructor responses.</p>

Post can be set to be rateable - for both entry in to the gradebook, and/or peer review. The roles

There are several options for discussion forums functionality in Sakai. The Forums tool supports threaded conversations categorized by forums created by an instructor. Forums can be created based upon template settings that determine access controls, moderation ability, and permissions for users in designated roles. Forums can be organized and rearranged at any time by an instructor. Instructors can view statistics on individual student participation. Participation can be

JForum (Forum and Private Message Tool) is a forum based discussion tool that supports an unlimited number of discussion forums sorted into categories that are created and managed by an instructor. Posts in JForum can be plain text, formatted text or html and can include attachments, images or URLs. Instructors can associate a discussion with course content in other tools. Discussion forums may be group based if desired and instructors can determine the level of student involvement in each forum. Instructors may moderate discussions at the forum level. Discussion threads Access to forums can be restricted to designated groups.

			<p>Users can enable or disable posts being sent to their email. Users can maintain a separate user profile. Instructors or students can send either an internal private message or an external email to the author of a post from within the reply screen. Users can connect directly to Yahoo messenger from within the reply screen and send an instant message. Users can request notification when a reply to their post is made. Topics may be searched by title or content. Graphic indications display</p> <p>Jforum supports grading of discussion forums and topics, optionally integrated with Sakai's gradebook. It also offers forum facilitators the ability to view the number of posts per student in a forum or the number of replies in a post - and to view one's contributions collectively</p>
<p>Discussion Management</p>	<p>Posts may be peer reviewed by other students. Instructors can view statistical summaries of discussions displaying participation which can</p> <p>Discussion topics can be made gradable and a grading interface provided. Grading can be assigned by grading form (rubric), numeric or alphanumeric grade. Instructors can limit discussions to specific time periods. Instructors can enable or disable anonymous posting, and determine whether student posts</p>	<p>Instructors can allow students to create discussion groups. Instructors can set up moderated discussions where all posts are screened. Posts may be peer reviewed by other students. Instructors can view statistical summaries of discussions displaying participation which can be used to generate grades.</p>	<p>Instructors can allow students to create discussion groups. Instructors can set up moderated discussions where all posts are screened. Posts may be peer reviewed by other students. Instructors can view statistical summaries of discussions displaying participation which can be used to generate grades.</p>

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Additional Functionality Forums tool

- * Ability to create a template for permissions at the forum level and use that template for related topics.
 - * Ability to lock a topic, allowing users to read topic postings, but not respond.
 - * Ability to restrict a forum and/or topic to a specific group or section.
 - * Ability to grant fine grained permissions on a role, group or section
- Permissions include:
- o New forum
 - o New topic
 - o New response
 - o Response to response
 - o Change settings
 - o Read
 - o Post to gradebook
 - o Mark as read
 - o Revise none, own or all postings
 - o Ability to set a default gradebook assignment for a topic
 - o Ability to save a draft of a forum and its topics
- ADDITIONAL JFORUM FUNCTIONALITY
- * Forums can be made visible/invisible on a designated date.
 - * Forums can be locked/unlocked on a certain date (can read but not post).
 - * Forums and categories can be sorted.

- * Unlimited forum and category creation.
 - * Supports sticky and announcement topics.
 - * User control of email notification and profile options.
 - * Bookmark functionality for favorite topics.
 - * Search functionality across a site's forums.
 - * "Watch" functionality for hot topics.
 - * Mark discussion as read functionality.

 - * Ability to move, delete, lock, and unlock topics.
 - * Ability to lock a topic, allowing users to read topic postings, but not respond.
 - * Ability to restrict a forum and/or topic to a specific group or section.
 - * Ability to grant fine grained permissions on a role or group basis.
 - * Support for 12 foreign languages.
 - * Grading of discussion forums and topics, optionally integrated with Sakai's
 - * Ability for facilitators to see number of posts per student in a forum or number
 - * Ability to view one's contributions collectively on one page.
- Permissions include:
- o Category access
 - o Forum access
 - o Ability to post Sticky, Announcements, or Task topics
 - o Read only Forums
 - o Enable Bookmarks
 - o Enable Attachments

			<ul style="list-style-type: none"> o Allow Download of existing attachments o Ability to set number of allowed attachments, file upload size, and types allowable attachment extensions. o Set users as moderators o Disallow moderation in specific forums o Ability for roles edit, delete, move, lock and unlock topics
File Exchange	<p>Students can submit assignments using drop boxes. Administrators can define disk space limitations for each user.</p> <p>Students have a private folder into which they can upload and download files. Students may</p>	<p>Students can submit assignments using drop boxes. Students can share the contents of their personal folders with other Administrators can define disk space limitations for each user.</p> <p>Students can share files using the forum, the wiki, or their personal</p>	<p>Students can submit assignments using drop boxes. Students can share the contents of their personal folders with other Administrators can define disk space limitations for each user.</p> <p>There are numerous tools that support file exchange in Sakai. Some of these</p> <p>Dropbox which allows students and instructors to share files via upload or webdav capability on a site. Dropbox offers email notification for new items and color coding for boxes</p> <p>Resources tool supports single or multi-file upload of content to group dropboxes for file exchange. Permissions can be set appropriately for groups at the folder level.</p> <p>Assignments tool supports more traditional submission of text or uploaded assignments to instructors</p>

			<p>Files can also be shared with individuals or groups using the Blog tool, Wiki tool, Mailtool, Messages tool or JForum, allowing for peer review of</p> <p>A collection of a user's work can also be shared in a number of the Sakai ePortfolio tools such as the Matrix,</p> <p>In addition: * Sakai optionally allows students to create their own project sites and add fellow students to these sites. This effectively puts all of the Sakai tools (chat, threaded discussion, calendar, file sharing, etc) in the hands of student defined groups to use as</p>
Internal Email	<p>Students can use the built-in email functionality to email</p> <p>Students can use a searchable address book.</p> <p>Instructors can email the entire class at once at a single address</p> <p>Students can elect to forward their mail to an external address.</p> <p>The internal email system supports archiving, searching and attachments. Students can spell</p>	<p>Students can use the built-in email functionality to email individuals or</p> <p>Students can use a searchable address book.</p> <p>Instructors can email the entire class at once at a single address</p> <p>Students can elect to forward their mail to an external address.</p> <p>The messaging feature permits mail to classes, message history, etc.</p>	<p>Students can use the built-in email functionality to email individuals or</p> <p>Students can use a searchable address book.</p> <p>Instructors can email the entire class at once at a single address or alias.</p> <p>Students can elect to forward their mail to an external address.</p> <p>There are multiple options within Sakai for internal email and email notification</p> <p>The MESSAGES tool allows users to send email either internally to a site members Messages box or externally to a recipient's email address. Messages can be sent to an individual, group of individuals or all individuals in a given role on a site. A wysiwig editor allows</p>

The MAILTOOL allows users to send email to site members external email boxes. Messages can be sent to an individual, group of individuals or all individuals in a given role on a site. A copy of the message can be archived in the email archive tool. A wysiwig editor allows for text/html editing and senders may attach files to messages and

JFORUM also optionally supports internal private messaging. Users may choose to view messages internally or have them redirected to an external

Each of the three options support message composition using an HTML editor with Spell check enabled, and multiple attachment handling.

Additionally, the Announcements and Wiki tools allow instructors to broadcast messages to a class or group of students in a class. Announcements are posted in the Announcements tool and are displayed in the home page of a site, and they can (selectively) be sent to the students' personal email,

<p>Online Journal/Notes</p>	<p>Students can attach notes to any page.</p> <p>Students can combine their notes with the course content to create a printable study guide.</p> <p>Journal discussion type provides a way for students to share notes and thoughts with the instructor and or</p>	<p>Students can keep notes in their blog or profile.</p>	<p>While there is no online journal tool per se, this functionality can be met in a number of ways within Sakai. Students can create online journals using the Blogger tool in their personal workspace or in the context of a course. Blogger allows for the creation of an online weblog composed of text, links, uploaded files or documents contained within the system. Online journals or weblogs may be kept within a user's</p> <p>Students can also use the Wiki tool to create collaborative online journals and keep up-to-date notes on course content. RSS feed is supported in the Wiki tool, giving users the option to view</p> <p>The Resources tool in a user's personal workspace or course sites can also be used to create, store, and organize students' notes or online journals.</p>
<p>Real-time Chat</p>	<p>The chat tool supports unlimited simultaneous group discussions. Instructors may moderate chats and suspend students from the chat. The chat tool supports a structured way for students to ask questions and instructors to respond. The system creates archive logs for all chat rooms.</p>	<p>The chat tool supports a limited number of simultaneous rooms. The chat tool supports unlimited simultaneous group discussions. Students can create new rooms.</p> <p>Instructors may moderate chats and suspend students from the chat.</p>	<p>The chat tool supports a limited number of simultaneous rooms. The chat tool supports unlimited simultaneous group discussions. Students can create new rooms.</p> <p>Instructors may moderate chats and suspend students from the chat.</p>

	<p>The system does not limit the number of simultaneous rooms. Students can see who else is online across the entire system and invite them to a chat room. That is combined with whiteboard tool, see</p>	<p>The chat tool supports a structured way for students to ask questions and instructors to provide answers. The system creates archive logs for all chat rooms.</p>	<p>The chat tool supports a structured way for students to ask questions and instructors to provide answers. The system creates archive logs for all chat rooms.</p> <ul style="list-style-type: none"> * Instructors can create an unlimited number of new chat rooms or give students permission to do so. Multiple chat rooms may be used within a single * The system clearly displays who is in the chat (a dot by the user's name in Users Present*), alerting site participants that others are in the chat *Chat history may be preserved on the site or cleared at an instructor's *Instructor's may set up a room as the default to which all site participants are directed and later point the chat tool to a different room. (ie for setting up Office *Fine grained permissions allow instructors to alter ability for students to
<p>Whiteboard</p>	<p>The whiteboard supports image and PowerPoint uploading. The whiteboard supports mathematical symbols. The software can archive a recording of whiteboard sessions</p> <p>Whiteboard usage can be moderated, and is combined with the chat tool (see chat description</p>		<p>The whiteboard supports image and PowerPoint uploading. The whiteboard supports mathematical symbols. The software supports graphing, polling, and instructor moderation. The software supports group web browsing. The software supports application desktop sharing.</p>

			<p>The software can archive a recording of whiteboard sessions for future</p> <p>The software supports two-way voice chat.</p> <p>Agora is a real-time eCollaboration tool designed for use in Sakai. It offers tightly integrated features that support video conferencing, desktop sharing, whiteboard and instant messaging. Presentation management tools allow annotations, drawing canvas and whiteboard, resource sharing, scalable</p> <p>The Sakai CLE has also been integrated with Elluminate Live and Horizon Wimba and supports the</p>
Productivity Tools			
Bookmarks	<p>Students can share their bookmarks.</p> <p>Students can create bookmarks in a private folder.</p> <p>Students can bookmark any content material in a course.</p>		
Calendar/Progress Review	<p>Instructors and students can post events in the online course</p> <p>Instructors can post announcements to a course</p> <p>Students have a personal home page that lists all courses in which the student is enrolled, new email and all course and system-wide</p> <p>Students can view their grades on completed assignments, total points possible, course grade, and compare their grades against</p>	<p>Instructors and students can post events in the online course</p> <p>Instructors can post announcements to a course</p> <p>Students have a personal home page that lists all courses in which the student is enrolled, new email and all course and system-wide</p> <p>Students can view their grades on completed assignments, total points possible, course grade, and compare their grades against the</p>	<p>Instructors and students can post events in the online course calendar.</p> <p>Instructors can post announcements to a course announcement page.</p> <p>Students have a personal home page that lists all courses in which the student is enrolled, new email and all course and system-wide events from</p> <p>Students can view their grades on completed assignments, total points possible, course grade, and compare their grades against the class</p>

	<p>Calendar entries can be linked to course materials and activities. Events can be repeating. Institutional calendar events and</p>	<p>Students can subscribe to RSS feeds to be notified of changes to</p>	<p>Students can subscribe to RSS feeds to be notified of changes to materials.</p> <p>Calendaring/Progress Review functionality</p> <ul style="list-style-type: none"> * Users each have a personal workspace home page that provides a calendar summary of upcoming activities, deadlines, events, etc in any * Users can create new items on the calendar in their personal workspace and import events from calendars in Microsoft outlook, Meetingmaker, or as * Instructors and students can post events in the online course calendar. * Instructors can send progress reports via the Calendar or Announcements * Students can view their grades on completed assignments, total points possible, course grade, and compare their grades against the class * Students can subscribe to RSS feeds to be notified of changes to materials in *ePortfolio tools such as the Matrix, Wizard, and Portfolios allow users to submit material, receive feedback, assessment etc and see their progress *The Checklist tool allows users to track progress on formal and informal steps towards fulfillment of graduation or institutional requirements.
Searching Within Course	Students can search all course content.	Students can search all course content.	Students can search all course content.

	<p>Students can search all discussion threads.</p> <p>Students can search all assignments, course content, discussion threads, and email messages in their course. Students can constrain a search using filters.</p>	<p>Students can search all discussion threads.</p> <p>Students can search chat or virtual classroom session recordings.</p>	<p>Students can search all discussion threads.</p> <p>The Sakai Search tool, is a powerful tool that allows a Google-like search of all content in a Sakai instance. Anything that is a Sakai entity can be indexed and searched. This includes all Content placed in ContentHostingService which includes content in Resources, Attachments, Portfolio tools, rWiki, and all messages in Chat, Email, Announcements, and Messages. The search tool reads all MS Office type</p> <ul style="list-style-type: none"> *The Wiki tool allows search across Wiki pages * JForum Discussion & Private Messages includes search capability of topics and messages. * The Help Tool includes search functionality of Help documentation included with the application.
<p>Work Offline/Synchronize</p>	<p>Students can compile and download the content for an entire course into a format that can be</p> <p>Instructors can publish course content on a CD-ROM that can be linked to dynamically from</p>		<p>Students can download course content and discussion group content with a PDA.</p> <p>Some off-line functionality is provided in the Melete, Assignments, Gradebook and Wiki tools, as well as via the new</p> <ul style="list-style-type: none"> * Instructors can download the content of lessons (Melete Lesson Builder) into a format that can be printed, stored, or edited locally using a web publishing

			<p>* Instructors can download assignments with attachments in one simple click for off-line grading. A folder is created on the instructor's desktop with sub-folders for each student and their attachment</p> <p>* Solo enables users to synchronize and work off-line with Announcements, Resources and Melete lessons.</p>
Orientation/Help	<p>Students can access context sensitive help for any tool. The system includes online tutorials for students that help students learn how to use the</p>	<p>Students can access context sensitive help for any tool. The system includes online tutorials for students that help students learn how to use the</p>	<p>Students can access context sensitive help for any tool. The system includes online tutorials for students that help students learn how to use the system.</p> <p>The Sakai CLE comes with context sensitive help enabled and a designated, searchable Help tool. Help content can be customized and hosted</p>
Student Involvement Tools			
Groupwork	<p>Instructors can assign students to groups. The system can randomly create groups of a certain size or a set. Students can self-select groups.</p> <p>Each group can have its own discussion forum. Each group can have its own chat or whiteboard. Each group can be given group-specific assignments or activities. Groups may be private or instructors can monitor groups.</p>	<p>Instructors can assign students to groups. Students can self-select groups.</p> <p>Each group can have its own discussion forum. Each group can have its own chat or whiteboard. Each group can be given group-specific assignments or activities. Groups may be private or instructors can monitor groups.</p>	<p>Instructors can assign students to groups. The system can randomly create groups of a certain size or a set. Students can self-select groups.</p> <p>Each group can have its own discussion forum. Each group can have its own chat or whiteboard. Each group can be given group-specific assignments or activities. Groups may be private or instructors can monitor groups.</p>

	<p>Instructors can selectively release any course content or activity to a group.</p>		<p>There are a variety of ways of structuring group activities in the Sakai CLE. Through use of group providers, instructors can have students automatically assigned to sections. Alternatively, instructors or teaching assistants may create groups manually and give students the ability to sign up for groups or change groups to which</p> <ul style="list-style-type: none"> * Groups can be facilitated by a designated individual in an instructor or * Instructors can selectively release course content or activities to a group. * Access to assignments can be group specific. * Access to resources can be group specific * Access to Discussion Forums can be to group specific. In discussion forums groups may be private or instructors * Access to Calendar items can be group specific * Groups can be auto-provisioned or manually created * Students can sign up for and change groups, if given appropriate permissions <p>Sakai also supports the ability to allow students and instructors to create project sites, enabling users to have a private site with a full set of site tools (email archive, forums, chat, resources,</p>
<p>Community Networking</p>		<p>Students can create online clubs, interest, and study groups at the Students from different courses can interact in system-wide chat</p>	<p>Students can create online clubs, interest, and study groups at the Students from different courses can interact in system-wide chat rooms or</p>

			<p>Sakai supports the ability to allow students, instructors, researchers, administrators, etc to create project sites for networking and collaboration. Project sites provide a space for users to engage in various types of collaboration with a full set of tools (calendar, announcements, resources, discussion, email archive, group wiki pages, blogger, forums, chat, etc.) at their disposal for group work. Additionally, course and project sites can be made "joinable," allowing</p>
<p>Student Portfolios</p>	<p>Students can create a personal home page in each course. Students can use their personal home page to selectively display Students can export their personal home page.</p>	<p>Students can create a personal home page in each course.</p>	<p>Students can create a personal home page in each course. Students can use their personal home page to selectively display their Students can export their personal home page.</p>

	<p>Students are given a private folder for content by default. A personal profile tool is included in the product and empowers students to choose what information to share with classmates. The Blackboard Portfolio for CE and Vista is available at additional cost and provides additional features for creating of a personal portfolio. See Blackboard website.</p>		<p>The Sakai CLE includes the full set of Open Source Portfolio (OSP) tools. Sakai's portfolio tools allow students to create rich, multi-media presentations of their work and share these with designated audiences inside and outside the system. Other tools allow faculty to build educational scaffolds to assist students in reflecting upon and presenting evidence of learning in relation to course, department, extracurricular or institutional standards, criteria or goals. A rich set of data artifacts and templates for collecting student artifacts and facilitating reflection upon them is included. Relatively new Goal Management and Reporting tools rounds out the arsenal, allowing anyone at an institution to define a set of goals, map goals to established criteria, and track student performance based on submission of assignments or other data artifacts</p>
Administration Tools			
Authentication	<p>The system can authenticate against an external LDAP server. The system can authenticate using the Kerberos protocol. The system supports Shibboleth.</p> <p>The system supports the Central Authentication Service (CAS). The system can authenticate against IMAP, POP3 or secure</p>	<p>Administrators can allow guest access to all courses. The system can authenticate against an external LDAP server. The system can authenticate using the Kerberos protocol. The system supports Shibboleth.</p> <p>The system supports the Central Authentication Service (CAS).</p>	<p>Administrators can allow guest access to all courses. The system can authenticate against an external LDAP server. The system can authenticate using the Kerberos protocol. The system supports Shibboleth.</p> <p>The system supports the Central Authentication Service (CAS).</p>

	<p>Administrators can set up fail-through authentication against a secondary source (e.g. the system's own database) in the event that the primary source</p> <p>The system can support multiple organizational units and virtual hosts within a server configuration.</p>	<p>The system can authenticate against IMAP, POP3 or secure NNTP.</p> <p>Administrators can set up fail-through authentication against a secondary source (e.g. the system's own database) in the event that the primary source (e.g. the system's own database) in the event that the primary source (e.g. LDAP server)</p> <p>The system can support multiple organizational units and virtual hosts within a server configuration.</p>	<p>The system can authenticate against IMAP, POP3 or secure NNTP.</p> <p>Administrators can set up fail-through authentication against a secondary source (e.g. the system's own database) in the event that the primary source (e.g. LDAP server)</p> <p>The system can support multiple organizational units and virtual hosts within a server configuration.</p> <p>*Administrators can protect access to individual courses with a username and password</p> <p>*The system can authenticate against an external LDAP server or using the Kerberos protocol.</p> <p>*Administrators can set up fail-through authentication against a secondary source (e.g. the system's own database) in the event that the primary source (e.g. LDAP server)</p> <p>*Single Sign On option is supported.</p> <p>*User logins can be encrypted with the Secure Sockets Layer protocol.</p>
Course Authorization	<p>The system supports restricting access based on roles and roles can also be customized by the Administrators can create an unlimited number of custom organizational units and roles with specific access privileges to Administrators can distribute the permissions and roles across multiple institutions or</p>	<p>The system supports restricting access based on roles and roles can also be customized by the Administrators can create an unlimited number of custom organizational units and roles with specific access privileges to Administrators can distribute the permissions and roles across multiple institutions or</p>	<p>The system supports restricting access based on roles and roles can also be customized by the service Administrators can create an unlimited number of custom organizational units and roles with specific access privileges to course Administrators can distribute the permissions and roles across multiple institutions or departments hosted in</p>

	<p>Instructors or students may be assigned different roles in</p>	<p>Instructors or students may be assigned different roles in different</p>	<p>Instructors or students may be assigned different roles in different</p> <p>Sakai is unique in its blending of public and private access to content in the system. Visitors to a Sakai instance may use Search capability on the Gateway site to search for course or project sites in the system. Site owners may choose to make a variety of different content on their site visible from this Gateway search, allowing them to give partial access to items such as announcements, resources, syllabus entries, etc. especially useful in the case of waitlisted students, students searching for information on a course, or collaborators who wish to share research results publicly without adding outsiders to their site. Sites may also be made publicly joinable at the discretion of their owners. Joinable sites may be joined by anyone with a userid in the system. A rich authorization schema provides for unparalleled levels of</p>
<p>Registration Integration</p>	<p>Instructors can add students to their courses manually or allow Administrators can transfer student information bidirectionally between the system and an SIS using IMS Enterprise The software supports data interchange with student information systems through an</p>	<p>Instructors can add students to their courses manually or allow Administrators can batch add students to the system using a delimited text file.</p> <p>Administrators can transfer student information bidirectionally between the system and an SIS</p>	<p>Instructors can add students to their courses manually or allow students to Administrators can batch add students to the system using a delimited text file.</p> <p>The software supports data interchange with student information systems through an event-driven API.</p>

The software supports integration with SCT Banner, SCT Luminis, Datatel, PeopleSoft 8 or customized integration with other
The software is compliant with the IMS Enterprise Specification for Student Data.

Administrators can transfer student information bidirectionally between the system and an SIS using IMS Enterprise Specification
The software supports data interchange with student information systems through an
The software supports integration with SCT Banner, SCT Luminis, Datatel, PeopleSoft 8 or customized integration with other
The software is compliant with the IMS Enterprise Specification for Student Data.

The software supports integration with SCT Banner, SCT Luminis, Datatel, PeopleSoft 8 or customized integration with other SIS or portal
The software is compliant with the IMS Enterprise Specification for Student Data.

There are several methods available for integration with an SIS system. The native course management API (CM API) provides a batch synchronization process that imports course management data into the CLE from an institution's SIS system. It supports auto provisioning of enrollments, site memberships and section membership and allows course administrators to create sites as needed by assigning

- * Course management membership roles and/or enrollment statuses are converted to Sakai roles using a role resolver configuration file stored in the
- * Automatic assignment of TAs to sections reflected in SIS data via
- * Ability to search on student name and id via Sections tool
- * Automatic management of sections & memberships for official registrants in courses via Sections tool
- * Manual option of creating sections and memberships
- * Student sign-up and switching of sections

			<p>* Course administrators to create sites as needed by assigning available</p> <p>* Instructors and/or TAs to create their own sites and sections at will</p> <p>A light weight alternative is available for integration with student registration data. This mechanism offers batch creation of sites, users, enrollments and</p> <p>Registration Information is available from within the system via two tools: The Roster tool provides a list of all users in a site, a link to an individual user's profile, a picture the user has made available to all users, and an official photo ID for use by the</p> <p>The Profile tool allows a user to enter or choose to display public and personal information, including a university ID picture if available. The profile tool can have university provided or self-reported information about any user in the system. It can be edited, restricted/opened/hidden and can include personal images or institutionally provided images. The Profile tool now includes a new privacy management feature, which allows</p> <p>Users who have logged into the system may search for another user's profile using this tool and may view any information another user has chosen to</p>
Hosted Services	The product provider offers a hosted solution.	The product provider offers a hosted solution.	The product provider offers a hosted solution.

	<p>The product provider offers a hosted system that includes service level agreements with guaranteed system availability, utilizes a network of high-performance, fault-tolerant servers, a secure facility with environmental control, redundant and conditioned power, a modern alarm/security system, 24x7x365 monitoring, a direct T3 connection with second redundant T3 connection, and daily offsite</p>		<p>Hosting and support services from Commercial Affiliates.</p> <p>The Sakai Commercial Affiliates offer a range of hosting and support options. For a listing of Commercial Affiliates, see the Sakai Project.org site.</p>
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Course Delivery Tools

<p>Test Types</p>	<p>Multiple choice</p> <p>Multiple answer Matching Jumbled sentence Calculated Fill-in the blank Short answer Survey questions</p> <p>Essay</p> <p>Questions can contain other media elements (images, videos,</p>	<p>Multiple choice</p> <p>Multiple answer Matching Ordering Jumbled sentence Calculated Fill-in the blank Short answer</p> <p>Survey questions</p> <p>Essay</p> <p>Questions can contain other media elements (images, videos, Custom question types can be defined.</p>	<p>Multiple choice</p> <p>Multiple answer Matching Fill-in the blank Short answer Survey questions Essay</p> <p>Questions can contain other media elements (images, videos, audio) Custom question types can be defined.</p>
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<p>Automated Testing Management</p>	<p>The system can randomize the questions and answers. Instructors can create self-assessments. Instructors can set a time limit on a test. Instructors can permit multiple attempts. The students are allowed to review past attempts of a quiz.</p> <p>Instructors can specify whether correct results are shown as The system supports proctored tests.</p> <p>The system supports a MathML editor for the inclusion of mathematical formulas in</p>	<p>The system can randomize the questions and answers. Instructors can create self-assessments. Instructors can set a time limit on a test. Instructors can permit multiple attempts. The students are allowed to review past attempts of a quiz.</p> <p>Instructors can specify whether correct results are shown as The system supports proctored tests. The system supports Remote Quiz Protocol which allows questions to be rendered and scored externally to the system via standards-based</p>	<p>Instructors can create self-assessments. Instructors can set a time limit on a test. Instructors can permit multiple attempts. The students are allowed to review past attempts of a quiz. The system supports a MathML editor for the inclusion of mathematical formulas in both questions and Instructors can specify whether correct results are shown as feedback The system supports proctored tests.</p> <p>The system can randomize the questions and answers.</p>
<p>Automated Testing Support</p>	<p>Instructors can create personal test banks. Questions can be imported from external test banks that support The system provides test analysis data.</p>	<p>Instructors can create personal test banks. Instructors can create system wide test banks. Questions can be imported from external test banks that support The system provides test analysis data.</p>	<p>Instructors can create personal test banks. Instructors can create system wide test banks. Questions can be imported from external test banks that support QTI. The system provides test analysis data.</p> <p>Instructors can import an assessment as a test or as a question pool. Additionally, instructors can create new tests and quizzes in MS Word and import using the import feature in the</p>

Online Marking Tools	<p>Instructors can choose to mark each student on all questions or to mark each question on all</p> <p>Instructors can choose to evaluate student responses</p> <p>Instructors can enable students to rate and comment on</p>	<p>Instructors can choose to mark each student on all questions or to mark each question on all</p> <p>Instructors can choose to evaluate student responses anonymously.</p> <p>Instructors can enable students to rate and comment on submissions</p>	<p>Instructors can choose to mark each student on all questions or to mark each question on all students.</p> <p>Instructors can choose to evaluate student responses anonymously.</p>
Online Gradebook	<p>When an instructor adds an assignment to the course, the software automatically adds it to</p> <p>Instructors can add grades for offline assignments.</p> <p>Instructors can add details to the gradebook in custom columns.</p> <p>Instructors can export the scores in the gradebook to an external</p> <p>Instructors can create a course grading scale that can employ either percents, letter grades, or</p> <p>Gradeable assignments, discussions and assessments are automatically added to the gradebook when added to a course. Name columns are frozen</p>	<p>When an instructor adds an assignment to the course, the software automatically adds it to</p> <p>Instructors can add grades for offline assignments.</p> <p>Instructors can add details to the gradebook in custom columns.</p> <p>Instructors can export the scores in the gradebook to an external</p> <p>Instructors can create a course grading scale that can employ either percents, letter grades, or</p>	<p>When an instructor adds an assignment to the course, the software automatically adds it to the</p> <p>Instructors can add grades for offline assignments.</p> <p>Instructors can add details to the gradebook in custom columns.</p> <p>Instructors can export the scores in the gradebook to an external</p> <p>Instructors can create a course grading scale that can employ either percents, letter grades, or pass/fail</p> <p>The Sakai Gradebook also supports weighting, and import/ export of single grades or whole grade sheet from an excel spreadsheet. Grades can be exported to registrar with minor</p>
Course Management	<p>Instructors can selectively release assignments, assessments, and announcements based on specific start and stop dates.</p> <p>Instructors can release materials based on a single criteria (date, grade, etc.) or instructors can use Boolean expressions to identify</p>	<p>Instructors can selectively release assignments, assessments, and announcements based on specific start and stop dates.</p> <p>Instructors can personalize access to specific course materials based on group membership.</p>	<p>Instructors can selectively release assignments, assessments, and announcements based on specific start and stop dates.</p> <p>Instructors can link discussions to specific dates or course events.</p>

	<p>Instructors can set up specific course content that is released on a specific date and must be completed by students before Instructors can link discussions to specific dates or course events.</p> <p>Instructors can personalize access to specific course materials based on group membership.</p> <p>Instructors can personalize access to specific course materials based on previous Instructors can personalize access to specific course materials based on student</p> <p>Program and institutional goals may be specified using the "Goals" tool and tied to particular activities in the</p>	<p>Instructors can personalize access to specific course materials based on previous course activity.</p> <p>Instructors can personalize access to specific course materials based on student performance.</p>	<p>Instructors can personalize access to specific course materials based on group membership.</p> <p>Instructors can release learning sequences or materials based on start dates (Lesson Builder tool AND Resources tool). Conditional release of material based on pre-defined criteria such as student performance in another</p>
Student Tracking	<p>Instructors can track the frequency and duration of student access to individual course Instructors can get reports showing the time and date and frequency students as an Instructors can get reports showing the number of times, time, date, frequency and IP address of each student who accessed course content,</p>	<p>Instructors can track the frequency and duration of student access to individual course components. Instructors can get reports showing the time and date and frequency students as an Instructors can get reports showing the number of times, time, date, frequency and IP address of each student who accessed course content,</p>	<p>Instructors can track the frequency and duration of student access to individual course components. Instructors can get reports showing the time and date and frequency students as an aggregated group</p>

	<p>Instructors can review the navigation record of each student.</p> <p>Usage statistics can be aggregated across courses or</p> <p>Instructors can export all student tracking data. Instructors can share tracking information with students.</p>	<p>Instructors can review the navigation record of each student.</p> <p>Usage statistics can be aggregated across courses or</p>	<p>The Sakai CLE includes a Site Statistics tool which can be used to collect and display statistical data about the class as a whole or about student activity within the class. Instructors can review this from a tool on the course home page and export results or share them in the context of their course site. As yet, there are no tools for generating reports from this data but this capability</p>
Content Development Tools			
Accessibility Compliance	<p>The product provider self-reports that the software complies with Section 508 of the US</p> <p>The product provider self-reports that the software complies with the WAI WCAG 1.0 Level A</p> <p>The product complies with many of the WAI WCAG 1.0 AA and AAA guidelines are also. To help with content accessibility, the software implements many features for</p>	<p>The product provider self-reports that the software complies with Section 508 of the US</p> <p>The product provider self-reports that the software complies with the WAI WCAG 1.0 Level A</p> <p>The product provider self-reports that the software complies with the WAI WCAG 1.0 AA guidelines.</p> <p>The product provider self-reports that the software complies with the WAI WCAG 1.0 AAA guidelines.</p>	<p>The product provider self-reports that the software complies with Section 508 of the US Rehabilitation Act.</p> <p>The product provider self-reports that the software complies with the WAI WCAG 1.0 Level A guidelines.</p> <p>The product provider self-reports that the software complies with the WAI WCAG 1.0 AA guidelines.</p> <p>All core components of the Sakai application are reviewed for accessibility standing. The latest results can be found here: http://confluence.sakaiproject.org/conflu</p>

<p>Content Sharing/Reuse</p>		<p>Instructors can share content with other instructors and students through a central learning objects repository. The repository can be system-wide or for individual. Tools are available to enable version tracking and linking to specific versions as well as the creation and management of</p> <p>Using the Cisco CRS repository.</p>	<p>Instructors can share content with other instructors and students through a central learning objects repository. The repository can be system-wide or for individual organizational units. The repository supports IEEE LOM and metadata application profiles such as, Dublin Core, Cancore, and custom profiles.</p> <p>Material can be imported or copied from one course site to another upon site creation. Material in the content repository of a site can be accessed across the system by any user who is a member of the site and has permission to "read" the content. Additionally, each user has a personal workspace, which can be used to store and/or distribute materials across the entire system. Materials from this workspace can be imported into any course or project site. This allows each instructor or student to maintain their own local space which is accessible only to themselves but can</p>
<p>Course Templates</p>	<p>The software provides support for template-based course creation. Course content may be uploaded through WebDAV.</p> <p>Course templates may contain selective release criteria and custom gradebook columns that</p>	<p>The software provides support for template-based course creation. The system allows administrators to use an existing course or a pre-defined template as a basis for a new course.</p>	<p>The software provides support for template-based course creation. The system provides course design wizards that provide step-by-step guides that take faculty and course designers through the completion of common course tasks, such as setting up the course homepage, Course content may be uploaded through WebDAV.</p>

	<p>The system allows administrators to use an existing course or a pre-defined template as a basis for a</p>		<p>The system allows administrators to use an existing course or a pre-defined template as a basis for a new</p> <p>The Sakai CLE allows instructors or their designees to re-user material from existing sites. Material can be selected on a per tool basis, enabling an instructor to migrate assignments in one site, discussion topics in another</p>
Customized Look and Feel	<p>The system provides default course look and feel templates. Instructors can change the navigation icons and color. Instructors can change the order and name of menu items for a course.</p> <p>Institutions can create their own look and feel templates across the entire system, including their own institutional logos, headers, and footers.</p>	<p>The system provides default course look and feel templates. Instructors can change the navigation icons and color. Instructors can change the order and name of menu items for a course.</p> <p>Institutions can create their own look and feel templates across the entire system, including their own institutional logos, headers, and footers.</p> <p>The system can support multiple institutions, departments, schools or other organizational units on a single installation where each unit can apply its own look and feel templates as well as institutional</p>	<p>Instructors can change the navigation icons and color schemes for a course. Instructors can change the order and name of menu items for a course. Institutions can create their own look and feel templates across the entire system, including their own institutional logos, headers, and footers. The system can support multiple institutions, departments, schools or other organizational units on a single installation where each unit can apply its own look and feel templates as well as institutional images, headers</p>

			Instructors can change the skin and color schemes for a course, provided that more skins have been installed in the system. Many custom course skins have been developed by the Sakai community and are available as a free download. Edia, a Sakai Commercial Affiliate based in Amsterdam, has contributed a skin manager tool which
Instructional Design Tools	<p>Instructors can organize learning objects, course tools, and content into learning sequences that are reusable. Instructors can create linear learning sequences organized hierarchically by course, lesson, and topic. Instructors can reuse courses as templates for future lessons.</p> <p>All items can be conditionally released to provide appropriate progression or remediation as needed, based on time, grade book criteria, group membership and user ID.</p>	<p>Instructors can organize learning objects, course tools, and content into learning sequences that are reusable. Instructors can create linear learning sequences organized hierarchically by course, lesson, and topic. Instructors can reuse courses as templates for future lessons.</p>	<p>Instructors can organize learning objects, course tools, and content into learning sequences that are reusable. Instructors can create linear learning sequences organized hierarchically by course, lesson, and topic. Instructors can reuse courses as templates for future lessons.</p> <p>Instructional design capability is currently handled via the Lesson Builder tool, a tool that allows users to create learning sequences. Lessons can be released automatically based on start and stop dates. Lessons can be archived and moved from one site to</p>
Instructional Standards Compliance	<p>IMS Content Packaging 1.1.3 IMS QTI 1.2.1 Microsoft LRN SCORM 1.2</p>	<p>AICC IMS Content Packaging 1.1.3 IMS Content Packaging 1.1.4 IMS QTI 1.2.1 IMS QTI 2.0 IMS Enterprise 1.1</p> <p>SCORM 1.2</p>	<p>IMS Content Packaging 1.1.4 IMS QTI 1.2.1 IMS QTI 2.0 SCORM 1.3</p> <p>* IMS Common Cartridge - Sakai supports import of Common Cartridge</p>

			<p>* IMS Tool Interoperability - Sakai has a contributed tool (University of Michigan) supporting the IMS Tool Interoperability Specification.</p> <p>* Sakai supports SCORM 1.3 using a SCORM loader and SCORM player from the contributed library.</p> <p>* The Melete Lesson Builder supports IMS CP.</p> <p>* The Tests & Quizzes tool supports IMS QTI.</p>
Hardware/Software			
Client Browser Required	Current Browser Requirements	Works fine on Firefox/Windows.	The software supports: Internet Explorer 5.5+, Netscape 7.1+, Mozilla Firefox for Windows, and Netscape 7.1+ or Mozilla Firefox on the Apple OS. Some functions in Sakai will not work well in Safari or Internet Explorer for the
Database Requirements	The system supports Oracle. The system supports MS SQL Server.	The system supports Oracle. The system supports Oracle.	The system supports Oracle and MySQL..
		The system supports MySQL. The system supports PostgreSQL. The application requires only one database and can coexist with	
UNIX Server	A Unix version is available.	A Unix version is available.	A Unix version is available.
Windows Server	A Windows version is available.	A Windows version is available.	A Windows version is available.
Company Details/Licensing			

Company Profile	Blackboard Inc. (NASDAQ: BBBB) is a leading provider of enterprise software applications and related services to the education industry. Founded in 1997, Blackboard enables educational innovations everywhere by connecting people and technology. Millions of people use Blackboard everyday at academic institutions around the globe, including colleges, universities, K-12 schools and other education providers, as well as textbook publishers and student-focused merchants that serve education providers and their students. Blackboard is headquartered in Washington, D.C., with offices in North America, Europe, Australia and Asia.	Moodlerooms provides fully hosted Moodle, is a Moodle partner which provides 10% of all revenue back to Moodle.org for future development.	<p>Sakai Community Profile The Sakai Foundation is a member-supported non-profit corporation with a small staff and modest budget. While membership in the Foundation is optional, over 100 organizations around the world support the foundation so that it can continue its important community activities. These include managing the intellectual property of Sakai, organizing conferences and planning meetings, maintaining the Sakai technology infrastructure including the bug tracking system and project wiki, coordinating</p> <p>The Sakai community draws on the contributions of many organizations and individuals around the world. The Sakai community is responsible for all aspects of evolving the Sakai CLE. No one is closer to the needs of users than the teams designing and developing Sakai. The Sakai CLE is truly designed by higher education, for higher education. Members of the Sakai community believe this community-driven development model will inevitably lead to the best product for use on campus. Whether large or small, institutions may</p>
Costs / Licensing	The annual license fee is based on FTE students in an institution or consortium. Optional annual licenses, with three year terms are	GPL, dowload and isntall, or run it on our servers.	Sakai is currently in use in over 300 institutions around the world and is distributed free of charge and is licensed under the Educational
Open Source		The software is distributed under one of the OSI-approved licenses.	The software is distributed under one of the OSI-approved licenses.

Optional Extras	<u>The Blackboard Portfolio is available as an addon to Vista. In addition, many optional Powerlinks are available from software vendors or customers who have created them.</u>	nWki advanced wiki, outcomes system, gradebook import/export.	Institutions that run Sakai are part of an active and dynamic community of software designers, developers, usability and accessibility experts, support staff, faculty and academic administrators around the world. In addition to tools for course and learning management, Sakai supports the full range of activities common to educational institutions including research and administrative collaboration, group work, portfolio construction and a personal workspace designed to support the individual users knowledge management. Using an open source solution like Sakai gives institutions complete and total
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