

RapidBuilder[®] **v6.0** **Deluxe**

Technical Brief

Table of Contents

What is RapidBuilder?	5
Benefits of RapidBuilder’s Advanced Technology	6
True Simplicity	6
At Last! No More Programming	7
Increased Productivity and Cost-Effectiveness	7
Powerful Features of RapidBuilder.....	7
Step-by-Step Authoring Wizard	7
Continuous Desktop Capturing (for Creating Software Simulations/Screencasts)	7
Recorded Mouse Clicks.....	8
Recorded and Authored Keystrokes	9
Recorded and Authored Mouse Movements.....	9
Non-Recorded Content Files	9
E-Learning Projects/Courses.....	9
Assessment Content	10
SCORM Compliance	11
508 Compliance.....	12
Language Customization.....	12
<i>Import/Export Text.....</i>	<i>12</i>
<i>Playback Language Customization</i>	<i>12</i>
Powerful Compression	13
Navigation Bar	13
Course Navigator.....	14
Thumbnail Frame View.....	15
Frames/Screens	16
Edit Objects	16
<i>Video Stage.....</i>	<i>16</i>
<i>Flash Stage.....</i>	<i>17</i>
<i>Mouse Plot.....</i>	<i>17</i>
<i>Instruction Box and Text Field.....</i>	<i>17</i>
<i>Rotated Text Field.....</i>	<i>18</i>
<i>Image</i>	<i>18</i>
<i>Animated GIF.....</i>	<i>18</i>
<i>Terminal Object.....</i>	<i>19</i>

	3
<i>Menu Builder</i>	19
<i>Highlighter</i>	19
<i>Drag and Drop</i>	19
<i>Validation Field</i>	19
<i>Wildcard Characters in the Validation Field</i>	20
<i>Login Field</i>	20
<i>Combo Box</i>	21
<i>Sound Track Selector</i>	21
Button Objects	21
<i>Hyperlink</i>	21
<i>Radio Button</i>	22
<i>Check Box</i>	22
<i>Progress Button</i>	22
<i>Customizable Playback Controls</i>	22
Draw Objects and Tools	23
Other Features	23
<i>Animation</i>	23
<i>Screen Templates</i>	24
<i>Hide and Show</i>	24
<i>Copy/Clear Text</i>	24
<i>Global Objects</i>	24
<i>Attempt/Hint Feedback</i>	24
<i>Internal Variables</i>	24
<i>User-Defined Variables</i>	25
<i>System Variables</i>	25
<i>Automatic Timeout Events</i>	25
<i>Spell Checker</i>	25
<i>Find/Replace Text</i>	25
<i>Object Grouping and Common Property Formatting</i>	26
<i>Password Protection</i>	26
<i>Hot Key Customization</i>	26
Import RBX, Movie, Audio, and Image Files	26
Resource Editor	26
Sound Support	27
<i>Sound Linked to a Frame</i>	27
<i>Sound Linked to a Hyperlink</i>	27
<i>Sound Recorder</i>	27
<i>Import Audio</i>	28
<i>Background Sound</i>	28
<i>Sound Tracks</i>	28

	4
<i>Text-to-Speech (Automatic Audio)</i>	28
<i>Audio Interruption</i>	28
Colors	29
<i>Color Palette</i>	29
<i>Gradient Fills</i>	29
Deploying RapidBuilder Files	29
<i>RapidPlayer Runtime</i>	30
<i>RapidPlayer ActiveX Control for Internet Explorer</i>	30
<i>RapidPlayer Plug-in for Netscape</i>	30
Publishing to Other Media Formats	31
Printed Documentation	31
Playback Security Options	31
Back-end Administration and Tracking (with XStream LMS)	32
The Superior Results of RapidBuilder	34
Professional Training Tutorials	34
Attractive Product Demos	35
Animated On-Screen Presentations	35
Contact Information	35

What is RapidBuilder?

RapidBuilder v6.0 Deluxe is XStream Software's 100% Programming-free Software Simulation, Courseware, and Documentation Authoring technology. It enables developers to create, customize, and deploy fully Interactive or Non-Interactive Software Simulations/Screencasts, Courses, Assessments, Demos, Tutorials, Presentations, and other types of Multimedia Content Files that realistically duplicate the functionality of the live Windows environment.



Figure 1: RapidBuilder Interface

Using RapidBuilder, software simulations and screencasts may be easily recorded for any 16 or 32-bit Windows, web-based, or text/DOS-based application. Simulations/screencasts are recorded using a continuous “pixel-based” capturing technique. Instead of taking a snapshot of each screen within the software application, RapidBuilder captures pixel changes from screen to screen (similar to a video camcorder). Therefore, during recording, all desktop activity and full-motion user interactions (i.e., actual application screens, screen changes, mouse clicks, keystrokes, mouse pointer movements, dialog box interactivity, menu interactions, etc.) are completely captured. This continuous capturing capability enables developers to create fully interactive or non-interactive software simulations or screencasts with minimal time and effort. As soon as capturing is completed, the recorded simulation/screencast is fully generated (with all of the recorded screens automatically linked together) and is immediately ready for playback. The developer can play the ready-made simulation/screencast without the need to perform any authoring/editing.

The developer can record a software simulation and reuse it many times to create all of the following types of files:

- **Let Me Try** – Interactive simulation providing direct user interaction (i.e., user interacts with the simulation by clicking the mouse and/or pressing keys).

- **Show Me** – Non-interactive simulation that plays back as a hands-free “movie”, which the user simply watches without participating.
- **Teach Me** – Simulation that combines interactive and non-interactive elements together. The non-interactive “Show Me” elements can provide demonstration to the user, and the interactive “Let Me Try” elements enable the user to practice learned skills.
- **Test Me** – Developers may use RapidBuilder to create interactive assessment-type content in two ways. First, the developer may build interactive “Let Me Try” simulations that test the user’s ability to perform specified tasks without providing any hints or guidance. Second, the developer may create question-based assessment content (as part of any simulation file or content file) by using RapidBuilder’s available objects to build different types of knowledge-check questions.
- Printed Files
- Documentation, Manuals or Printed Materials
- Self-Running Videos

RapidBuilder can also be used to create non-recorded content. Content-based frames/screens can be added to recorded simulations, and developers can create exclusive non-recorded content files of all types, including CBTs, WBTs, assessments, tutorials, presentations, slideshows, product demos, help files, and more. In addition, RapidBuilder serves as an e-learning development tool that can be used to create lesson-based projects/courses and SCORM-compliant content with built-in bookmarking and tracking capabilities.

Simulations and content files created in RapidBuilder can be customized and enhanced with a large variety of interactivity and multimedia features, including images (both static and animated), text, audio, video, Flash files, recorded voice-overs and sound clips, multiple sound tracks, hyperlinks and buttons, menus, links to external files and web pages, text entry fields, combo boxes, mouse pointer animations, highlighting actions, drag-and-drop actions, colors, shapes, and a lot more.

Once created, RapidBuilder files may be saved and deployed in a variety of different media formats, including RBX/RPR (native file format), Flash (SWF), XML, DHTML, Executable (EXE), Various Video Formats (AVI, ASF, MPEG, MOV), SCORM, and Sharable Content Objects (SCOs). Files can be deployed over the Web, over a Local Area Network (LAN) or Wide Area Network (WAN), and on CD-ROM. In addition, RapidBuilder files can be printed to paper and exported to Microsoft Word (DOC) format, which is ideal for creating manuals, user guides, technical material, and other types of hard-copy documentation or reference material.

RapidBuilder is a fully scalable software solution (in terms of both development and deployment). There is no limitation on the number of authors or end users. RapidBuilder files may be distributed royalty free (via CD-ROM, LAN/WAN, or Web) to any number of users without incurring any additional costs.

Benefits of RapidBuilder’s Advanced Technology

True Simplicity

RapidBuilder combines the power of a rich multimedia-authoring environment with the simplicity of a desktop-capturing tool. The lack of programming makes creating any type of interactive simulation or screencast as easy as clicking a button. With RapidBuilder, you can capture live sessions of screen activity and user actions in real time. Using RapidBuilder’s variety of editing tools, a recorded session can be edited and enhanced with the latest in advanced multimedia and interactivity. Once editing is complete, all it takes is the click of a button to save and compress the finished simulation/screencast as an optimized RapidBuilder file that is immediately ready for playback. Producing cutting-edge simulations/screencasts has never been simpler.

At Last! No More Programming

The biggest advantage of RapidBuilder's technology is that it totally eliminates the need for programming or coding of any kind. RapidBuilder handles the difficult work by building interactive simulations and screencasts automatically. For the first time ever, any application simulation/screencast can be created on demand, without the burden of complex programming.

Increased Productivity and Cost-Effectiveness

With RapidBuilder, you can create superior tutorials, demos, and simulations/screencasts quickly and inexpensively. Freed from the restraints of time-consuming programming, developers can produce polished simulations on demand. The high speed of RapidBuilder allows fast and efficient production of context-specific simulations that may be edited on the fly.

In addition, the use of RapidBuilder eliminates the need for highly paid programmers and designers, along with the software tools and other facilities that are required for their tasks. By greatly decreasing the amount of manpower and equipment required, RapidBuilder significantly shrinks the costs associated with development.

Powerful Features of RapidBuilder

RapidBuilder incorporates many unique features that stress power, speed, and particularly flexibility. It can be fully utilized by general, non-technical users to develop and run a wide variety of sophisticated software simulations, screencasts, courses, tutorials, demos, presentations, and other types of content files.

Step-by-Step Authoring Wizard

RapidBuilder includes an automated Authoring Wizard, which facilitates step-by-step creation of any type of RapidBuilder file.

Using a simple series of screens, the intuitive wizard guides the developer through each of the steps involved in creating and/or modifying a Simulation File, Project/Course File, SCORM Course, Sharable Content Object (SCO) File, or Template File. Thus the wizard can be used to streamline and simplify the development of new RapidBuilder files and the editing/updating of existing RapidBuilder files.

When creating or editing a RapidBuilder file, the developer has the flexibility to either use the automated wizard or manually perform the authoring/editing using the traditional tools provided in RapidBuilder.

Continuous Desktop Capturing (for Creating Software Simulations/Screencasts)

RapidBuilder uses a **continuous** "pixel-based" desktop capturing technique. Rather than taking a snapshot of each screen within the software application, RapidBuilder captures pixel changes from screen to screen during the live recording (similar to a video camcorder). This enables RapidBuilder to record and completely capture all live desktop activity and full-motion interactions with 16 or 32-bit Windows or web-based applications (including screen changes, mouse movements, mouse clicks, keyboard entries, menu interactions, dialog box interactivity, etc.). RapidBuilder's unique capturing capability enables developers to create interactive or non-interactive software simulations/screencasts easily (i.e., with reduced time and effort).

As soon as capturing is completed, the recorded software simulation or screencast is fully generated (with the recorded interactivity built in and all of the recorded screens automatically linked together) and is immediately ready for playback. The developer is able to play/deploy the ready-made simulation/screencast without the need to perform any authoring/editing.

NOTE: XStream Software also offers a special version of RapidBuilder that fully captures all interactivity in text/DOS-based applications (in addition to Windows and web-based applications). This type of simulation capturing functionality is very difficult to find in other simulation products/technologies.

Other simulation/screencast capturing features include the following:

- Developers may control how much of the desktop area will be captured (i.e., the entire desktop, a selected screen area, or only active windows) as well as define a large number of additional pre-capture settings to determine the scope and content of the recorded simulation/screencast.
- When selecting an area of the desktop screen to be captured, the developer may specify the coordinates (X1, Y1, X2, and Y2) of the selected screen area, or the developer may specify the height and width of the selected screen area (which is useful if the developer needs to specify the exact dimensions of the recorded simulation so that it can be precisely fitted into a particular playback window). Alternatively, for more precise selection, the developer can directly select an area of the actual desktop/application to be captured. Prior to recording, an adjustable selector box can be placed over the live desktop and repositioned/resized as desired. The area of the screen within the boundaries of the selector box will be captured. In addition to selecting the screen area prior to recording, the developer also has the option to dynamically adjust the location and size of the selected screen area during the actual recording session.
- RapidBuilder can record software simulations/screencasts that are **interactive** (where the end user directly interacts with the simulation by clicking the mouse and pressing keys), **non-interactive** (where the simulation plays back as a self-running “movie” that the end user simply watches without participating), or a **combination** of both interactive and non-interactive elements.
- You may record additional simulation steps from within an existing simulation/screencast. When recording is initiated, new screens/frames are automatically inserted immediately before the currently selected frame. This capability enables you to fix any errors made during recording or add any additional steps that were missed during the initial capture. Similarly, multiple paths or multiple techniques for accomplishing an action can easily be specified on the screen without having to record each path separately.
- RapidBuilder enables you to automatically generate text captions/instructions for the user actions recorded during capturing. You can use RapidBuilder’s default automatic instruction generation options or customize a large variety of options to control the display of the automatic instructions.
- You may record background sound/narration while simultaneously capturing your software simulation/screencast.

Recorded Mouse Clicks

In RapidBuilder, any mouse clicks made during the recording are captured and automatically available during playback.

During the authoring stage, each captured mouse click can be easily resized, moved to another location on the screen, changed to another type of mouse click, disabled, or removed. For each mouse click, the developer may also customize the target image (i.e., the icon image representing the mouse click area on the screen) and the mouse over image (i.e., the cursor image that appears when the mouse pointer is placed over the mouse click area). In addition, each mouse click can be set to perform a different action (such as playing an audio clip, displaying a pop-up text message, linking to a specified frame/screen within the file, launching an external course or assessment file, or exiting playback of the current file) when correctly clicked by the user at runtime.

Recorded and Authored Keystrokes

In RapidBuilder, any keystrokes typed during the recording are captured and automatically available during playback.

Each captured keystroke can be easily changed to another type of keystroke, disabled, or removed. In addition, during the authoring stage, the developer may manually specify multiple keystrokes on each frame/screen. Each keystroke (recorded during capturing or added during authoring) can be set to perform a different action (such as navigating to another frame/screen, launching an external file, playing an audio file, displaying a pop-up text message, exiting playback, etc.) when pressed by the user at runtime.

Recorded and Authored Mouse Movements

In RapidBuilder, all mouse pointer movements made during the recording are captured and automatically available during playback.

In addition, during authoring, multiple mouse movements can be added to each frame/screen in the file. These added mouse movements can be initiated manually (by the user) or automatically (by the system) at playback time, and an action/event (i.e., navigating to another frame/screen or launching an external file) may be automatically triggered once the mouse movement has completed. In addition, for the mouse movements, developers can define the cursor image that will display when the mouse movement is being shown on the screen. This can be changed from screen to screen, or the same cursor image can be applied across multiple screens.

Non-Recorded Content Files

In addition to recording software simulations, RapidBuilder can be used to create all types of non-recorded content.

Content-based screens (including appended/inserted frames, pre-defined screen templates, imported video frames, and imported images) can be added to recorded simulations, and developers can also create exclusive non-recorded content files of all types, including courses, CBTs, WBTs, assessments, tutorials, presentations, slideshows, product demos, help files, and more.

Developers have the flexibility to create RapidBuilder files containing only captured/recorded screens, files containing only authored content screens, and files containing a combination of captured screens and content screens.

E-Learning Projects/Courses

RapidBuilder includes capabilities for creating powerful e-learning projects/courses (with built-in bookmarking and progress tracking capabilities).

A course created in RapidBuilder is divided into a set of lessons that consist of topics and subtopics. Each topic and subtopic can contain one screen (referred to as a “frame” in RapidBuilder) or multiple screens. The user can progress through the course in a linear fashion or by picking and choosing the lessons, topics, subtopics or specific frames to progress through and the order in which to progress through these elements that comprise a course.

The projects/courses created in RapidBuilder may be deployed as standalone files, and they may also be registered and deployed through the web-based **XStream Learning Management System (LMS)** for comprehensive tracking and reporting.

Key project/course features include the following:

- **Course Navigator** – This is an object tree that organizes and maps out all the lessons, topics, subtopics, and external files contained in the current project. The developer may easily browse the tree to view and keep track of the different components of the project.

- **Splash Screen** – The developer may create an opening splash screen that the end user will view when running the project. It is typically used to display such information as the title of the course, the name of the company or educational institution, logos and other graphics, an introduction or overview message, etc.
- **Login Screen** – The developer may create a login screen for authenticating end users on the project.
- **Menu Screens** – The developer may create one or more menu screens for accessing the various lessons, topics and subtopics contained in the project. RapidBuilder provides a powerful Menu Builder object, which can be used to automatically or manually build different types of menus within a project. If a menu is set to be built automatically, it will automatically include links to all the lessons, topics, and subtopics existing in the project.
- **Project Themes** – Developers may create prefabricated course templates (project themes) that may be used to create new projects in order to define their structure. This saves initial project development time by enabling the developer to begin with a pre-defined course shell.
- **Progress Tracking** – Projects support progress tracking in conjunction with XStream's Learning Management System (LMS) technology. Any end user who logs in to an LMS-registered project (using a login name and password from a valid LMS login account) will have his/her progress through lessons, topics, and subtopics tracked by the LMS. Each time the end user exits a lesson file or a topic/subtopic within a lesson, the event is tracked and stored in his/her LMS account as a completion milestone.
- **On-Demand Personalized Progress Reports** – Using RapidBuilder's drag-and-drop object palette, developers may easily add Progress Button objects to any of the screens/frames within a project. During playback, when a Progress Button is clicked by the end user, it automatically generates a prefabricated progress report based on the personal tracking data stored in the end user's LMS account.
NOTE: In addition to the capabilities for generating user-level progress reports for a project, system administrators using XStream LMS (XStream's web-based Learning Management System) may generate a large variety of administrator-level project reports.
- **Bookmarking** – Projects support bookmarking, meaning that any end user of the project is able to bookmark a specific lesson and topic/subtopic before exiting playback. The next time the end user logs in to the project, he/she will be prompted to return to the bookmarked location.

Assessment Content

While creating learning content with RapidBuilder, developers can use the available tools to create different types of knowledge-check questions at various points throughout the course. Knowledge-check questions enable users to gauge their own understanding and retention of the material that is being presented as part of the course (and then decide whether they need to restudy or review previous portions or modules of the course).

Using the available objects in RapidBuilder's drag-and-drop palettes, developers may create the following types of knowledge-check questions directly within a learning content file:

- Multiple Choice
- Check List
- True or False
- Text Entry (Fill-in-the-Blanks and Essay)
- Hot Spot
- Drag and Drop
- Single-Select Combo Box

- Multi-Select Combo Box
- Edit Combo Box

NOTE: In addition to using RapidBuilder to develop knowledge-check questions directly within a learning content file, developers can also create full-fledged interactive assessment files (with complete scoring, tracking, and analysis/reporting capabilities) using the following XStream authoring tools:

- **RapidExam** – This tool enables developers to create full-fledged Question-based Assessments (including certifications, exams, proficiency tests, quizzes, questionnaires, surveys, etc.) with full scoring, tracking, and analysis/reporting capabilities. Developers may build assessments containing splash screens, login screens, pre-test introduction screens, 12 different question styles (including true or false, multiple choice, check list, hot spot, drag and drop, match list, fill-in-the-blanks, essay, combo box, edit combo box, list box, and matrix), built-in progress & scoring reports, exam achievement/completion certificates, and post-test ending feedback/content screens. Exams may be customized and enhanced with a host of interactivity and multimedia elements, including graphics, audio, video, buttons/hyperlinks, status bars, animations, visual effects, security settings, and much more. Multiple deployment formats include EXM (native file format), XML, EXE, SCORM, IMS QTI, and Printed Format. Built-in streaming capabilities enable smooth web playback (with no additional hardware/software required).
- **Performance Analyzer** – This tool enables developers to create Simulation-based Assessments. These assessments present real-life, interactive software scenarios that accurately measure, score, track, and report on a user's ability to perform specific application tasks. By having the user perform specific tasks within a simulated software environment (as if he/she were working in the actual software application), the assessment tests the user's performance and hands-on knowledge of each task. All correct and incorrect actions performed by the user during the assessment are automatically scored, tracked, and reported by the system. Simulation-based assessments are therefore ideal for testing users' performance and responses to real-life scenarios, and they provide accurate analyses of users' strengths, weaknesses, and areas that require additional training/reinforcement. The technology provides a multitude of options for incorporating interactivity and multimedia elements within an assessment, including images, text, audio, video, animations, Flash files, links to external files and web pages, and much more. Multiple deployment formats include RPE (native file format), Flash, EXE, and SCORM. Built-in streaming capabilities enable smooth web playback (with no additional hardware/software required).

The types of assessments described above can be either deployed independently or seamlessly integrated with the learning content files created with RapidBuilder (as Certifications, Quizzes, Reviews, Proficiency Tests, Pre-tests, Post-tests, etc.).

SCORM Compliance

RapidBuilder is a SCORM-compliant technology. The **Sharable Content Object Reference Model (SCORM)**, published by the Advanced Distributed Learning (ADL) project, is a collection of standards and specifications (adapted from multiple sources) that are used to enable interoperability, accessibility and reusability of web-based learning content.

As a continually evolving standard, there have been several versions of SCORM. RapidBuilder supports **SCORM 2004** (the most current version of SCORM) as well as **SCORM v1.2** and **SCORM v1.1** (previous versions of SCORM that are still widely used). A learning content file that complies with the SCORM specifications can be easily deployed and managed using any Learning Management System (LMS) that supports SCORM (including XStream's own web-based XStream LMS). For the purposes of SCORM, an LMS is any system for managing and deploying e-learning content.

A developer working in RapidBuilder may build custom SCORM courses by creating new SCOs, converting existing RapidBuilder files into SCOs, and importing third-party SCOs created using XStream's SCORM-compliant RapidExam, Performance Analyzer, and RapidSVG technologies as well as other third-party SCORM-compliant authoring technologies.

Authored SCORM courses may be registered and deployed through the web-based XStream Learning Management System (LMS) or any third-party SCORM-compliant LMS for comprehensive tracking and reporting.

508 Compliance

RapidBuilder is a 508-compliant software technology, meaning that it incorporates certain accessibility features required to make it readily accessible to all users, including users with disabilities.

Section 508 of the U.S Rehabilitation Act requires that departments and agencies of the U.S government develop, procure, maintain, or use electronic and information technology that enables users with disabilities to access and use information/data in a way that is comparable to that of all other users. Accordingly, in order to comply with the technical requirements of Section 508, a particular software technology must enable users to customize display, keyboard, mouse, and sound settings to meet their individual needs.

The universal accessibility obtained through 508 compliancy is a significant advantage because it makes the technology more user friendly and enables more users within an organization to take advantage of the technology.

The 508-compliant technology of RapidBuilder supports the use of keyboard equivalents for all mouse actions. The various RapidBuilder objects, dialog boxes, buttons, pop-up menus, and other features may be accessed and manipulated using designated keyboard keys or key combinations (instead of using the “point and click” functionality of the mouse device). These keyboard equivalents provide an alternative for visually impaired users or physically disabled users who may not be able to utilize the mouse device.

Language Customization

While creating RapidBuilder files, developers may need to create files for users who speak a language other than English. RapidBuilder includes extensive language customization capabilities.

NOTE: XStream Software also offers a special version of the RapidBuilder technology that fully supports the **Unicode** character set (for encoding multiple written languages). Unicode is an industry standard that allows text and symbols from all languages to be used within an application. RapidBuilder Unicode supports the use of many different international languages, including Asian languages, within authored simulations and content files. Therefore, developers using RapidBuilder Unicode have the flexibility to create multilingual simulations and courses for distribution to a globally diverse international audience. For more information about RapidBuilder Unicode, contact XStream Software at info@xstreamsoftware.com.

Import/Export Text

RapidBuilder enables the developer to export the text from selected frames/objects in the current RapidBuilder file to an XML file for the purpose of language translation. The translated text may later be imported from the XML file back into the RapidBuilder file in order to replace the original text. Thus the developer can easily create multiple versions of the same RapidBuilder file in different languages.

Playback Language Customization

Although the developer may author the RapidBuilder file in any desired language, there is still the question of RapidBuilder’s built-in, system-related text strings (including error/information messages, objects with built-in text, printed frames that include document properties, playback bar tool tips and other built-in player text that cannot be edited by the developer), which are displayed during playback of RapidBuilder files. Because the built-in RapidBuilder text strings are displayed in English by default, end users who are unfamiliar with the English language may not understand them. Therefore, the developer requires the capability of applying a different language to the built-in text strings within a given RapidBuilder file.

To accommodate the need for different languages, RapidBuilder includes a **Playback Language Selector**, which enables developers to translate RapidBuilder's default English-language text strings into any desired language. The translated text strings are saved to a language file, which may then be imported into RapidBuilder and applied to any file. During playback of the file, the selected, translated text strings (which were applied from the language file and stored in the RapidBuilder file) are displayed as appropriate.

Powerful Compression

One of RapidBuilder's core strengths is its powerful proprietary compression algorithms.

- A recorded sound clip has a compression of approximately 97%. This is similar to MPEG Layer 3.
- Objects from the Edit, Button, and Draw palettes achieve a compression rate of approximately 80%. This allows for richly authored frames without the worry of greatly increased file size.
- A typical Windows application, such as Microsoft Word, will be captured and compressed at a rate of approximately 100:1. This assumes that the session is recorded at 800x600 with 256 colors.

Navigation Bar

The **Navigation Bar** is used to browse, navigate, and edit the individual frames/screens that make up the RapidBuilder file.

Key features of the **Navigation Bar** include the following:

- The **Navigation Bar** features two **Frame Bars**: **All Frames** and **Frames With User Action and Sound**. The developer simultaneously views a bar with colored rectangles representing all frames in the session and a bar with colored rectangles representing only the frames that contain captured mouse clicks/keystrokes or associated sound files. This makes it much easier when the developer wishes to navigate/edit only those frames containing mouse clicks or keystrokes.
- The **Navigation Bar** also contains a **Sound Bar**, which displays sound tracks as visual audio data. A sound track is a captured sound session or imported audio file that is spread over and synchronized with a range of simulation frames. Each sound track that has been added to the simulation may be viewed individually on the **Sound Bar** as a jagged line overlaying the rectangles (representing frames). The developer may play the sound as well as perform various types of editing on it.
- There are multiple methods of navigating frames, including clicking a rectangle representing the desired frame, clicking the arrow buttons or the horizontal slider on the **Navigation Bar**, typing a frame number in the Go To box and pressing <ENTER>, or using the keyboard by pressing <CTRL> + Left Arrow or Right Arrow.
- The **Navigation Bar** features selector nodes that can be clicked and dragged to select a range of frames. The keyboard can also be used for this task by pressing <ALT> + Left Arrow or Right Arrow. Once frames are selected, they can be cut, copied, pasted, deleted and undeleted.
- Frames may be easily cut/copied and pasted in order to be reordered or reused within the current file or other RapidBuilder files. Frames may also be deleted temporarily or permanently.
- Captured mouse clicks and keystrokes may be disabled on a selected range of frames on the **Navigation Bar**. In addition, captured mouse pointer movements may be disabled on one or more frames in order to eliminate the presence of two mouse pointers (i.e., the live pointer and the superimposed pointer image) during playback. This can help to make playback more realistic.
- On the **Navigation Bar**, the developer may assign a custom cursor image to selected frames in order to replace the regular system mouse pointer. During playback of the selected frames, the system mouse pointer (e.g., standard white arrow) will be replaced by the specified cursor.
- On the **Navigation Bar**, the developer may assign a custom target object image and mouse over image to multiple frames simultaneously. A target object image is an icon that represents a captured

mouse click area on a frame. A mouse over image is a cursor that appears in place of the regular system mouse pointer when the mouse is passed over a captured mouse click area during playback. The target object image and mouse over image that have been assigned to one or more action frames may also be hidden so that they are not shown during playback.

- On the **Navigation Bar**, the developer may assign a frame delay value to multiple frames simultaneously. This value represents the number of seconds (between 1 and 60) that each frame is displayed on the screen during playback before moving on to the next frame.
- The developer may also customize the look of the **Navigation Bar** by changing the default colors and size of the rectangles within the **Frame Bars** and **Sound Bar**.

Course Navigator

The **Course Navigator** is a fully functional design tree, mapping out and organizing the contents of each existing simulation (.RBX) file and project (.RPR) file in a navigable tree structure. The developer may easily browse the tree to view, manage, navigate, and edit the screens/frames within each simulation file and project file that is currently opened in RapidBuilder.

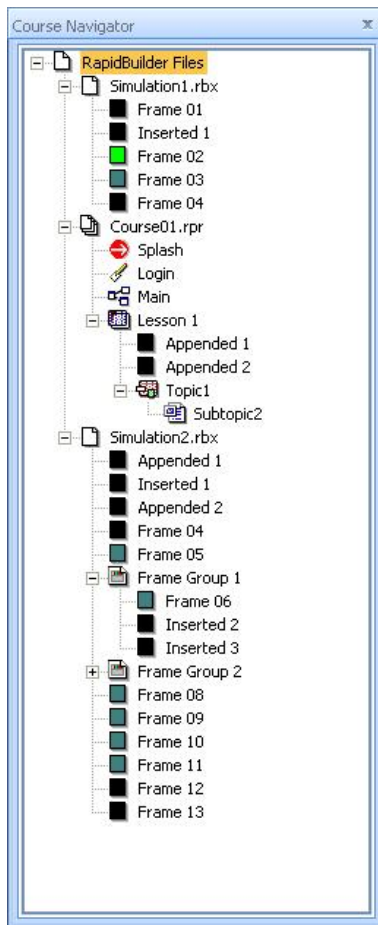


Figure 2: Course Navigator

Features of the enhanced Course Navigator include:

- Each opened simulation file and course file is displayed as a separate node in the design tree (under the top-level “RapidBuilder Files” node).
- By browsing the tree, the developer may centrally navigate and manage all opened simulations and courses. Under each simulation node, all recorded frames and appended/inserted frames added to

the simulation file are displayed as individual sub-nodes. Under each course node, the Splash Screen, Login Screen, and Main Menu Screen for the course are displayed as individual sub-nodes, and each Lesson (.RBX) file added to the course is also displayed as an individual sub-node. In addition, under each lesson node, all recorded frames, appended/inserted frames, topics, and subtopics added to the lesson file are displayed as sub-nodes.

- Quick and easy navigation between files and frames: The developer simply single-clicks any file or frame in the tree to display it in the viewer.
- The tree provides an alternate means of manipulating/editing frames (in addition to the Navigation Bar), allowing the developer to perform such editing tasks as cutting/copying & pasting frames, repositioning frames, deleting frames, renaming frames, previewing the playback of frames, etc.
- The developer may organize frames into Frame Groups. This enables the developer to more easily manage, browse and manipulate groups of frames that are related in some fashion. The capability to create frame groups is particularly useful in large simulations and content files containing hundreds of frames. The developer is able to organize the file into easily manageable portions, making it much easier to quickly locate and work with defined sections of the file.
- For each frame node in the tree, there are shortcut menu options for recording new simulation frames or adding new content frames before or after the current frame. This makes it easier for the developer to quickly record or add new frames at any point within a simulation, course, or lesson file.

Thumbnail Frame View

RapidBuilder enables the developer to access thumbnail images of all the frames (or a selected range of frames) in the current RapidBuilder file. The developer may view all or part of the simulation at a glance by quickly scrolling through the thumbnails. In addition, the developer has the flexibility to adjust the size of the thumbnails that are displayed.

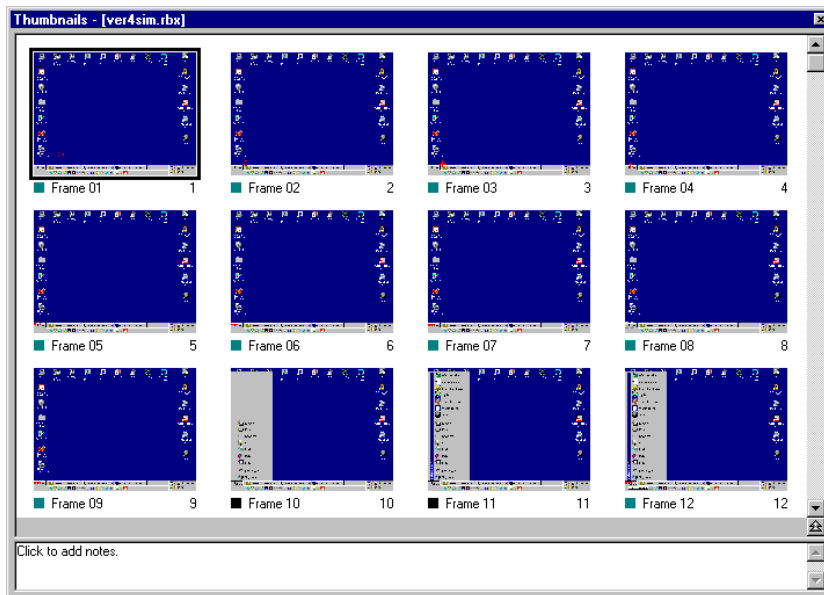


Figure 3: Thumbnail Frame View

Frame thumbnails provide an alternate means of frame navigation and may be used to browse and edit frames in the same way as the **Navigation Bar**.

For each thumbnail, the developer may also enter notations. This can be especially useful within files developed over an extended period of time or by multiple developers.

Frames/Screens

In RapidBuilder, content (i.e. non-recorded) frames/screens can be added to recorded simulations or used exclusively to create non-recorded content files of all types. Developers may append/insert new content frames/screens as well as import external RapidBuilder frames, video/movie frames (AVI, MOV, MPEG, MPG), and images (BMP, GIF, JPG, PNG, exported PowerPoint Slides, etc.) into a simulation as individual screens. The variety of objects and the options available here are enormous.

Therefore, RapidBuilder can very easily be used to create files based exclusively on software simulations, files based exclusively on non-recorded content frames, and files containing a mix of captured software simulation frames and non-recorded content frames.

During editing, the developer can make various adjustments and enhancements to a frame, including the following:

- Frames may be referenced by number or name. They may be renamed and used as quick references in “go to” objects such as Hyperlinks. For example, instead of typing “16” as a frame reference, the developer may enter the name of the frame (e.g., “intro1” or “main menu”).
- Frames may be cut, copied, and pasted (to reorder and reuse frames).
- Frames may be deleted temporarily or permanently.
- Multiple sound files may be attached to a frame. During playback, separate sounds may be initiated by entering/leaving the frame or performing a specific action on the frame. The following sound file formats are supported: ASF, .AU, .MP2, .MP3, and .WAV.
- Captured user actions (e.g., mouse clicks or keystrokes) on a captured frame can be enabled or disabled. This allows you to easily convert an interactive simulation to a non-interactive simulation, or convert a non-interactive simulation to an interactive simulation. Alternatively, you could make certain parts of a simulation non-interactive and other parts interactive.
- On any frame, the developer can specify a frame delay from 1 to 60 seconds. This represents the amount of time the frame is displayed on the screen during playback.
- Special blurring, fading, and dissolving effects may be applied when transitioning from one frame to another during playback. The developer can select from various available effects, including wiping, blinding, pushing, and sliding, as well as the speed of the transition effect (slow, medium, or fast).
- The developer can designate any frame as the point at which playback will end.

Edit Objects

RapidBuilder includes a palette of **Edit** objects that may be used to enhance simulation content. They are as follows:

Video Stage

The **Video Stage** is a scaleable window through which the developer can import and play linked or embedded video files. As a visually appealing, multimedia alternative to text and graphics, the **Video Stage** can be added to any tutorial, demo, or presentation to help keep the end user interested and engaged.

- Multi-file support gives the developer the greatest possible range of video files to choose from. The **Video Stage** supports ASF, .AVI, .MOV, .MPEG, and .MPG video files.
- Video files can be played in both RapidBuilder and RapidPlayer. This allows the developer to preview and test the video file during the editing stage. It is not necessary to compile and run the entire RapidBuilder file in order to play the video file.

- The **Video Stage** can be configured to play a specified portion of a larger video file. Since a video file is composed of frames, the developer may specify one frame as the in point (the frame where playback will begin) and another frame as the out point (the frame where playback will end). By specifying different in point and out point ranges within a single large video file, the developer can reduce the number of files that must be linked or embedded.

Flash Stage

The **Flash Stage** is a scaleable window through which the developer may import and play linked or embedded Flash (.SWF) files. Flash files may be played both during editing and during playback.

NOTE: The **Flash Plug-in** (5.0 or higher) is required to support playback of Flash (.SWF) files.

The **Flash Stage** features the same options and properties as the **Video Stage** object. The only difference is that the **Flash Stage** plays Flash (.SWF) files exclusively, while the **Video Stage** plays video (.ASF, .AVI, .MOV, .MPG, and .MPEG) files.

NOTE: RapidBuilder provides maximum flexibility regarding the use of Flash files in simulation development. The developer may export a RapidBuilder file to Flash format (using the “**Export to SWF**” option) as well as import a Flash file into a RapidBuilder file (using the **Flash Stage** object). A RapidBuilder file could even be saved as a Flash file and then imported into another RapidBuilder file using the **Flash Stage**.

Mouse Plot

The **Mouse Plot** allows the developer to plot mouse positions in a frame in order to create smooth mouse pointer animations. It is ideal for creating demonstrations or instructional simulations in which the end user simply sits back and watches the online animation, which can be combined with sound and video to produce a visual-based “movie” of screen activity.

- **Mouse Plot** animation will play at the same time as recorded sound or frame-attached sound.
- **Mouse Plot** animation can be set as Automatic or Manual, allowing the developer to choose whether the animation starts automatically at runtime or must be prompted by a mouse click from the end user.
- The developer may customize the speed at which the **Mouse Plot** animation will occur on the screen.
- The developer can customize the **Mouse Plot** by importing any external cursor image to replace the standard mouse pointer image. RapidBuilder also includes some built-in cursor images that can be used.
- The **Mouse Plot** also includes hyperlinking capabilities. The developer can specify a frame or external file to go to when the animation completes.

Instruction Box and Text Field

The **Instruction Box** and **Text Field** are both used to display text in a file. The **Instruction Box** is a resizable window that displays text, while the **Text Field** allows the developer to add text directly to frames. The **Instruction Box** is designed to display extraneous text (such as text-based instructions or technical information), which is not part of the frame content. It is ideal for displaying how-to instructions or steps for tutorials and training materials. The **Text Field** is ideal for displaying any type of text in all areas of a file.

- Any text in a **Text Field** or **Instruction Box** can be made into an interactive link or “hotword”. When clicked during runtime, a hotword can display a user-defined message in a pop-up window, load a message from an external file and display it in a pop-up window, jump to another frame in the current file, or run an external .RBX, .RPR, or .EXM file.

- RapidBuilder includes an industry-standard **Format Bar** with options for customizing the appearance (i.e., font, style, size, color, bold, italic, etc.) of selected text in a **Text Field** or **Instruction Box**.
- **Record Fields – Text Fields and Instruction Boxes** can be defined as “record” fields. This enables the design and properties of the **Text Field** or **Instruction Box** to be shared across multiple frames, and each frame can contain different content. This makes it easy for developers to quickly add **Instruction Boxes** and **Text Fields** across multiple screens without having to copy and paste the **Instruction Box/Text Field** and its associated properties from screen to screen.
- Selected text within a **Text Field** or **Instruction Box** may be cut/copied and pasted within the object and also cut/copied and pasted from one **Text Field/Instruction Box** to another **Text Field/Instruction Box**. Text may also be dragged from one **Text Field/Instruction Box** and dropped in to another **Text Field/Instruction Box** on the frame.
- In addition to text, images may be displayed within **Text Fields** and **Instruction Boxes** as inline graphics.
- The **Text Field** and **Instruction Box** both include a text search engine that allows the developer to locate specific text during the editing stage.
- An **Instruction Box** can be spread over a given number of succeeding frames rather than having to add the same **Instruction Box** to each individual frame. This ability to spread over frames allows the same **Instruction Box** to constantly appear on screen during playback, which is ideal for consulting instructions while performing a procedure.
- Text in a **Text Field** can be displayed on screen with exploding or dissolving effects at runtime. This is a visually appealing feature that will enhance the overall appearance and sophistication of the simulation.
- **Text Fields** may be styled as call-outs for purposes of labeling and identifying specific items or areas. There are various types of call-out styles available for a **Text Field**, including Rectangle, Cloud, Round Bubble, etc.

Rotated Text Field

The **Rotated Text Field** is a special **Text Field** object that the developer may rotate on a central axis by clicking and dragging its corner selection nodes. This enables text to be displayed on the frame with different degrees of rotation.

Image

The **Image** component allows the developer to assign a custom image file to be displayed on a frame or as the background image of an appended/inserted frame. An image can be aligned, stretched, and positioned in a frame. RapidBuilder supports .BMP, .GIF, .JPG, and .PNG image files.

- The developer may rotate an **Image** object on a central axis by clicking and dragging its corner selection nodes. This enables the image to be displayed on the frame with different degrees of rotation.

Animated GIF

RapidBuilder supports the use of animated .GIF files within RapidBuilder files. Using the **Animated GIF** object (which features the same options and properties as the **Image** object), the developer may assign an animated GIF image file to be displayed on a frame.

NOTE: The developer may play the animated .GIF file during editing in RapidBuilder. Right-clicking the animated .GIF object displays a shortcut menu that includes Play and Stop controls. During playback, the animated .GIF file will play automatically as soon as it appears on screen.

Terminal Object

The **Terminal Object** can be used to simulate a command prompt environment or text-based applications. This enables developers to create realistic simulations of router terminals, telnet applications, text chatting applications, etc. This capability enables end users to practice entering commands and receiving responses as they would when using real text-based terminals or applications.

Menu Builder

The **Menu Builder** component can be used to automatically or manually build different types of menus within a RapidBuilder file.

Developers may create vertical menus (similar to the Windows-style Start menu) or regular menu bars (either fixed on the screen or floating). If a menu is set to be built automatically, it will automatically include links to all the lessons, topics, and subtopics existing in the file. If a menu is set to be built manually, the developer can determine what links he/she would like to include within it.

For each menu option provided within the menu, the developer can determine what action will be performed. Some examples of actions include opening web pages, going to another frame in the current file or another RapidBuilder file, playing external files, etc. This object has a large variety of options that can be configured and defined.

Highlighter

The **Highlighter** object can be used to simulate highlighting actions during simulation playback. These highlighting actions include text highlighting, cell highlighting (e.g., to simulate selecting multiple cells in a spreadsheet), or area highlighting (e.g., to simulate drawing an object/shape on the screen).

Drag and Drop

The **Drag and Drop** object can be used to simulate drag and drop actions during simulation playback. The drag and drop action will enable users to click on an item/object/element on the screen and then use the mouse to drag it to another location on the screen. This enables developers to simulate any type of drag and drop operation in any software application.

Validation Field

The **Validation Field** object is a text entry field, which enables the user to enter values (words or phrases) at runtime on a frame. These can be validated against one or more correct values specified by the developer. These values can be exact values or values created using wildcard characters. For each value, the developer can specify the key that will initiate the validation process. Therefore, for different values, either the same validation key or different validation keys can be used.

In addition to validating strings of text, paragraphs of information can also be validated. Essentially, the developer can specify a list of keywords that should be included in the paragraph. For each keyword, a list of synonyms or related words can also be specified by the developer. In addition, the developer can specify a list of excluded words, which are single-word or multi-word text strings that cannot be included in the paragraph. At playback time, if the typed paragraph contains all the keywords specified (or any synonyms for any of the words), the system would validate the paragraph correctly. Similarly, if the typed paragraph contains any of the excluded words specified, the system would validate the paragraph as incorrect.

For each combination of values and keys, the developer can specify the event that will take place if the user types in the correct value. Available events include displaying a pop-up message/image, performing a navigation action (such as moving to the next frame or another frame in the current file or moving to another file or to a specific frame in another file), playing an exam/assessment file, exiting the file, and more.

Other key features of the **Validation Field** include the following:

- In addition to action keys, the **Validation Field** supports other types of actions for initiating events:
 - **On Auto Entry** – The event is performed automatically once the end user enters a text string containing the maximum number of characters (defined by the developer).
 - **On Exact String** – The event is performed automatically as soon as the user enters the exact correct string.
 - **On Focus Lost** – The event is performed automatically if the user has not entered text in the **Validation Field** (or has entered incorrect text in the **Validation Field**) and then takes the focus off of the **Validation Field** (i.e., clicks on another part of the screen).
 - **On Time Out** – The event is performed automatically once a specified number of seconds have elapsed. The developer may even specify that a designated text string will be entered in the **Validation Field** automatically after a specified number of seconds. The automatic text entry may be accompanied by a key-clicking sound effect, and the developer may define the speed at which the automatic text entry will occur.
- As another alternative to an action key, a **Hyperlink** button may be configured to validate text entered in one or more **Validation Fields** on a frame.
- A validation text string can be configured to be case-sensitive.
- The developer may specify the capability to move the cursor/focus to another **Validation Field** (on the same frame) upon pressing a specific key or performing a specific action for the **Validation Field**. This functionality enables developers to emulate the true form-based navigation capability available in many applications today.
- A **Validation Field** can be configured so that it automatically expands as text is inputted at runtime. This can be useful for purposes of convincing simulation and design layout (e.g., creating a simulation that renames a file similar to Windows Explorer).

Wildcard Characters in the Validation Field

The **Validation Field** also supports a variety of wildcard characters, which may be used to substitute for one or more text characters within the validation string. This capability enables developers to create sophisticated validation strings and patterns with tremendous flexibility and power.

Login Field

The **Login Field** object is used in the development of login screens for projects/courses. In a project/course file, a maximum of two (2) **Login Field** objects may be added (i.e., one for the login ID and one for the password). When the project/course file is played, the end user must enter a login ID and password in the fields in order to be authenticated and gain access to the project/course.

Depending on which access mode has been set for the project/course, the **Login Fields** will function differently:

- In **Standalone** access mode, the project/course is deployed to users (locally, on CD-ROM, over a network, or over the web) as a standalone file that is not registered in the LMS. Consequently, there will be no data collected by the LMS for tracking or reporting. In this case, the project/course does not actually require a login screen because it is not necessary for users to log in to the file. However, if there is a login screen included in the file, any user may log in by entering "**superuser**" as the login ID and password.
- In **LAN** or **Web** access mode, the project/course is deployed to authorized users over a network (LAN/WAN) or over the web. In order to be launched/played, the project/course must first be registered in the LMS in order to be managed and tracked. Only authorized LMS users who have been assigned to the registered project/course will be able to access it, and authorized users'

progress through the project/course will be fully tracked and reported by the LMS. The project/course must include a login screen so that authorized users will be able to log in to it using their assigned login ID and password.

Combo Box

The **Combo Box** object enables the developer to simulate the appearance and functionality of a regular Windows-style combo box. There are 3 available combo box styles:

- **Combo Box** - The end user will be able to display the **Combo Box's** drop-down list box and select one of the listed items (text strings), which will then appear in the text field portion of the **Combo Box**.
- **Edit Combo Box** - The end user will be able to display the **Combo Box's** drop-down list box and select one of the listed items (text strings), which will then appear in the text field portion of the **Combo Box**. In addition, the end user may type text in the text field portion of the **Combo Box**. As the text is typed, the closest match is automatically selected from the listed items (text strings) in the drop-down list box.
- **Multi-selection Combo Box** - The end user will be able to display the **Combo Box's** drop-down list box and select multiple listed items (text strings) by clicking them while pressing the <CTRL> key. The selected items will appear (separated by commas) in the text field portion of the **Combo Box**.

For each value or combination of values selected by a user in a **Combo Box**, a particular event may be triggered at playback time. Available events include performing a navigation action (such as moving to the next frame or another frame in the current file or moving to another file or to a specific frame in another file), displaying a pop-up text message, playing an exam/assessment file, playing an external file (of any type), launching a URL, exiting the file, and more.

Sound Track Selector

The **Sound Track Selector** object is a combo box that enables the end user to select and play individual sound tracks in a file with multiple sound tracks running across a single range of frames. During editing, the developer may configure multiple, overlapping sound tracks to run across the same range of frames. During playback, the end user may choose which of the different sound tracks to play by selecting them from the **Sound Track Selector**.

Button Objects

RapidBuilder includes a palette of **Button** objects that may be used to enhance simulation content. They are as follows:

Hyperlink

The **Hyperlink** object allows the creation of different types of interactive buttons and links in a RapidBuilder file.

A **Hyperlink** can look like a button or a different type of object depending on the options that are set. Multiple **Hyperlinks** may be added to each frame/screen. **Hyperlinks** can be used to perform a variety of different types of actions, including linking to another frame in the current file, linking to another RapidBuilder/RapidExam/Performance Analyzer file, linking to a frame in another RapidBuilder file, validating text entry fields on the frame, copying text between fields on the frame or clearing text displayed in specific fields, displaying graphical images, playing video or audio files, displaying text messages in a pop-up box, exiting the RapidBuilder file, linking to an external application or any external file, launching an assessment (test, exam, quiz, etc.), launching a web page, running JavaScript, launching the user's e-mail software, and more.

Other key features of the **Hyperlink** include the following:

- In addition to left, right, and double click actions, the **Hyperlink** supports other types of actions for initiating events:
 - **On Mouse Enter** – The event is performed when the mouse pointer is placed over the Hyperlink.
 - **On Mouse Leave** – The event is performed when the mouse pointer is taken off of the Hyperlink.
 - **On Time Out** – The event is performed automatically once a specified number of seconds have elapsed.
- A **Hyperlink** may be configured to validate the state of multiple Radio Buttons, Check Boxes, Combo Boxes, and other Hyperlinks on the current frame/screen. This is useful for simulating multiple configuration settings.
- The **Hyperlink** supports rollover functionality. The developer may specify a rollover color to be displayed when the mouse pointer is placed over the Hyperlink during playback.
- A **Hyperlink** may be specified as a non-wait object, meaning that playback will not pause to wait for a user action to be performed on the Hyperlink. This feature is particularly useful when playing a non-interactive simulation or a series of non-interactive frames. For example, if the developer has placed a non-wait **Exit** button on all frames within a non-interactive simulation, the system will not pause on each frame to wait for the button to be clicked. Instead, the simulation will continue until the user decides to click the **Exit** button. At this time, the system would exit the simulation file.

Radio Button

The **Radio Button** object simulates the appearance and functionality of a Windows-style radio button. It is used to select one option from a group of mutually exclusive options (e.g., choose one answer from a group of possible answers).

NOTE: The developer may apply the “**Exclusive Radio Button**” setting to any group of **Radio Buttons** and/or **Hyperlinks** (styled as **Radio Buttons**). The setting specifies that all existing radio buttons within a group of radio buttons will work exclusively within the group. In other words, during playback, the end user will only be able to select one radio button within the group of radio buttons (thus duplicating the single-option selection functionality of a Windows-style radio button).

Check Box

The **Check Box** object simulates the appearance and functionality of a Windows-style check box. It is used to select one or more options from a group of options (e.g., choose several answers from a group of possible answers).

Progress Button

The **Progress Button** object may be used within a project/course to display a personalized progress report for the end user currently logged in to the file.

Once an end user successfully logs in to an LMS-registered project/course, he/she may click any existing **Progress Button** to display a personalized progress report, which is automatically generated from tracking data stored in the end user's back-end XStream LMS database account.

Customizable Playback Controls

RapidBuilder provides capabilities for developers to create custom playback controls within RapidBuilder files. This is accomplished using the **Playback Control Button** and **Slider Control** objects.

The **Playback Control Button** enables the developer to add various types of playback controls (i.e., Play, Pause, Rewind, Fast Forward, Stop/Exit, First Frame, and/or Last Frame) to a RapidBuilder file. Thus end users can be given maximum flexibility and control over the playback of the file.

The **Slider Control** object enables the developer to add customized slider controls to a RapidBuilder file. A slider control enables users to quickly navigate to a desired frame within the file and also provides progress indication. The functionality of the Slider Control object is similar to the slider functionality available within applications such as Windows Media Player.

NOTE: RapidBuilder also provides a built-in Playback Bar with predefined navigation controls. This Playback Bar may be optionally displayed or hidden during playback of a RapidBuilder file.

Draw Objects and Tools

RapidBuilder includes a palette of **Draw** objects and tools that allow the developer to enhance frames with different lines, shapes, and custom art. They are as follows:

- **Line** objects can be used to connect text fields, point to frame features, create tables and diagrams, and more. A line can be styled as an arrow, and its size, color and width can be adjusted. It can also be displayed in different styles, including Solid, Dash and Dot.
- **Round Rectangle**, **Rectangle**, and **Ellipse** objects can be used to create tables or visually enhance a captured or inserted frame. The size, color, border style, and border width of these objects can be adjusted. They can also be set to Opaque or Transparent, and they can be filled with a solid color, diagonal lines, vertical lines, horizontal lines, and more.
- The **Fill Color** tool allows the developer to select any color from the **Color Palette** and use it to color draw objects or inserted/appended frames.
- The **Color Selector** allows the developer to select any color from an inserted image or captured frame and save it as a color in the **Color Palette**. This color can then be applied to any shape object.
- The **Pencil** tool allows the developer to draw free-form lines on a frame. The color of the lines can be adjusted.
- The **Air Brush** tool allows the developer to draw free-form lines with an airbrush effect. The color of the spray can be adjusted, and different coverage levels can be selected.
- The **Paint Brush** tool allows the developer to draw free-form lines with different levels of thickness and different styles. The color of the strokes can be adjusted. Different brush shapes (rounded, squared, ribbon up, ribbon down) as well as different levels of stroke thickness can be selected.
- The **Polyline** tool allows the developer to draw straight lines with angles. The color and thickness of the line can be adjusted.
- The **Polygon** tool allows the developer to draw a polygon (any shape with 3 or more straight line segments). The fill color and line thickness can be adjusted.

Other Features

Animation

The developer may add various types of animation to a RapidBuilder file:

- **Frame transition effects** – Special visual effects (such as wiping, sliding, blurring, fading, and dissolving) may be applied when transitioning from one screen to another during playback. The developer may also specify a sound file to play while the frame transition effect is occurring on screen.
- **Object slide-outs** – Objects may be configured to animate (or slide) on to the screen with a specified visual effect.
- **Image animation on buttons** – Multiple images may be cycled on **Hyperlink**, **Radio Button**, **Check Box**, and **Playback Control Button** objects to create custom image animations.
- **Mouse pointer animation** – The **Mouse Plot** object may be used to plot paths for pointer animation.

- **Text animation** – Text may be displayed with dissolving and exploding effects during playback.

Screen Templates

RapidBuilder provides extensive capabilities for customizing and using screen/frame templates.

The built-in Template Editor provides a large number of pre-designed templates (i.e., background screens, text screens, navigational elements, playback control elements, splash screens, login screens, menu screens, and more). RapidBuilder also provides a large variety of pre-designed JPEG images that can be used in the development of frame/screen backgrounds, instruction boxes, and buttons. These professionally designed images provide a quick starting point for developers to create various screen elements and develop custom screen templates.

Developers may create their own custom templates (containing any type of object/element that is available in RapidBuilder) and share them across multiple developers and files.

The developer also has the capability to save any frame from any RapidBuilder file as a template and then use it across many different files. Essentially, any frame (containing a variety of reusable objects with pre-set properties and events) can become a template.

Hide and Show

Objects may be configured to hide (disappear) and show (reappear) on the screen in a continuous cycle or for a set number of times. This is useful for creating pulsing or blinking visual effects and for controlling which objects are hidden or displayed on screen under different circumstances. The hide and show events may even be accompanied by specified sound effects.

Copy/Clear Text

The developer may configure copy/clear text events to be initiated during playback. Text may be copied from one **Text Field/Instruction Box** to another when the screen is entered/exited or when the end user clicks a specific **Hyperlink** button. In the same manner, text may also be cleared from a specified **Text Field/Instruction Box**.

Global Objects

RapidBuilder enables developers to quickly reuse objects/elements across multiple frames by making them Global. Objects can be set to be Global across certain frames or all frames within the RapidBuilder file. This makes it easy to have similar objects/elements appearing across multiple frames. It also makes it easy to update the object/element (since modifying a global object/element automatically updates it on every frame where it is used). This also helps keep the file size down because only one copy of a global object/element is stored internally.

Attempt/Hint Feedback

Attempt messages may be created to provide feedback to the end user during playback. Multiple attempt messages may be configured to display for each of the end user's subsequent attempts to correctly click the mouse, press a key, click a **Hyperlink**, or enter text in a **Validation Field**. After each incorrect attempt at performing the action, a different message can be displayed to the user. In addition, for each attempt message, there can be a hint message displayed to the user. After the last attempt, an automatic "Do it for Me" action can be specified to have the system automatically perform the action for the user.

Internal Variables

Predefined variables (representing certain dynamic information contained within the simulation environment) can be used within various RapidBuilder objects/elements, including text fields and buttons.

These variables are used to dynamically display system information to the end user during playback, including current frame number, current frame name, and total number of frames in the file. The capability of adding internal variables enables the developer to present useful information to the end user as the simulation is progressing.

User-Defined Variables

The developer may define custom variables for **Validation Fields** and **Login Fields**. During playback, when a user enters a value into a **Validation Field** or **Login Field** configured to set a variable, the variable name will be dynamically assigned the value entered by the user.

User-defined variables can be used as part of various objects available in RapidBuilder, including text fields and buttons. At runtime, the system will dynamically replace these variables with the appropriate value entered by the user. This capability is useful for dynamically collecting and displaying user-specific information throughout the playback of a RapidBuilder file.

System Variables

Memory locations may be assigned with the name of a system variable, which contains navigation information that is dynamically and automatically assigned by the system during playback. System variables provide developers with another way to implement navigation between frames and files.

Automatic Timeout Events

RapidBuilder enables developers to specify automatic timeouts for certain frame and object events. At runtime, a timeout event will be performed automatically by the system once a specified number of seconds have elapsed. Supported timeout events include the following:

- For a frame, any of the following events may be configured to occur automatically after a specified number of seconds have elapsed: linking to an audio file, linking to another frame, linking to an external RapidBuilder or RapidExam file, displaying an attempt/hint message, displaying a pop-up validation message, or exiting playback.
- For the **Validation Field** object, the developer may specify that the validation text string will be entered in the field automatically after a specified number of seconds have elapsed. The automatic text entry may be configured to occur at a fast, medium, or slow speed, and it may be accompanied by key entry sound effect.
- For a **Hyperlink** object, any of the following events may be configured to occur automatically after a specified number of seconds have elapsed: linking to an external file or URL, linking to an audio file, linking to a video file, linking to another frame, linking to an external RapidBuilder or RapidExam file, displaying a pop-up validation message or image, copying or clearing text, or exiting playback.

Spell Checker

RapidBuilder includes a standard **Spell Checker**, which enables the developer to scan screens and objects in order to detect and correct spelling errors.

During a spell check, if a word is not recognized, the developer can click the **Add** button in the **Spell Checker** to add the word to the custom dictionary file. In addition, the developer may edit the custom dictionary file directly (using any text editor) in order to add words to it.

Find/Replace Text

RapidBuilder includes a standard **Find/Replace** text-searching feature, which enables the developer to quickly find and optionally replace any text within the RapidBuilder file.

Object Grouping and Common Property Formatting

Multiple objects may be clustered into a group in order to be selected, edited, dragged, and resized as a single object. Groups may also be nested within other groups.

The common properties of multiple selected objects may be accessed in order to set properties for multiple objects simultaneously.

Password Protection

RapidBuilder enables developers to assign passwords to files in order to prevent unauthorized editing. Once a password has been assigned to a file, the file can only be subsequently opened in RapidBuilder once the correct password has been entered.

Hot Key Customization

RapidBuilder enables the developer to customize the hot keys (i.e., shortcut keys) that will be used to start, stop, and pause/resume desktop capturing as well as turn validation capturing on and off.

Hot key customization is particularly useful in a situation where one of the default RapidBuilder hot keys is the same as a key combination used within the application that needs to be captured. For example, if the application uses **ALT + X** for a command, then the default **ALT + X** hot key (used to stop desktop capturing) needs to be changed to another key combination, such as **ALT + Q**. Once this is done, the **ALT + X** key combination can be used during desktop capturing without stopping the capturing process. (It will instead be captured as a validation key).

Import RBX, Movie, Audio, and Image Files

RapidBuilder enables the developer to import external .RBX, Movie, Audio, and Image files into a RapidBuilder file. Rather than linking to an external video or sound file, the developer may embed the video or sound directly into simulation frames to be rendered and compressed, thus making it a permanent part of the file. As a result, the developer has only the single RapidBuilder file to manage, without any linked media files. This makes distribution much simpler and also saves disk space.

RapidBuilder also provides the capability of importing multiple images (.BMP, .GIF, .JPG, and .PNG files) into a RapidBuilder file in a single instance. This enables, for example, multiple exported images from another application (e.g., slides from Microsoft PowerPoint) to be incorporated into a RapidBuilder file in a single step.

NOTE: Selected images are imported to the RapidBuilder file as individual frames. Each imported image becomes part of the background of the frame.

Resource Editor

The **Resource Editor** is RapidBuilder's central repository of linked or embedded media files, including audio, video, Flash, images, icons, and cursors. It is used to retrieve and manage media files and associate them with specific objects and frames.

- The **Resource Editor** organizes files by extension into 8 main resource types:
 - **Images** – BMP, .GIF, .JPG, and .PNG image files.
 - **Video** – ASF, .AVI, .MOV, .MPEG, and .MPG video files.
 - **Flash** – SWF files.
 - **Audio** – ASF, .AU, .MP2, .MP3, and .WAV audio files.
 - **Icons** – ICO icon files.

- **Cursors** – CUR cursor files.
- **Default Icons** – A group of 54 default icons provided with RapidBuilder. They may be used to replace the default square brace icon representing a captured mouse click.
- **Default Cursors** – A group of 8 default cursors provided with RapidBuilder. They may be used to replace the regular system mouse pointer on selected frames during playback.
- The **Resource Editor** manages all resources as components of resource (.RSE) files. It maintains a default RapidBuilder resource (.RSE) file containing all imported file links. It also maintains a separate resource (.RSE) file for each opened RapidBuilder file. (This .RSE file will be opened in the **Resource Editor** whenever the corresponding RapidBuilder file is opened, and it will contain all imported file links assigned to objects and frames within the RapidBuilder file).
- The developer can replace or rename any selected resource link, and any selected resource link can be permanently removed from the **Resource Editor** (but not from the disk).
- A **Preview** window allows the developer to see what a selected image, cursor, or icon file looks like before adding it to an object or frame.
- For each resource link, the developer may specify one or more keywords to serve as tags for searching purposes. During a search of the **Resource Editor**, the developer will enter a keyword, and all resource links with keywords that match the entered keyword will be displayed.

Sound Support

RapidBuilder enables the developer to enhance simulation content with a wide variety of sound:

Sound Linked to a Frame

The developer may link one or more sound files (ASF, .AU, .MP2, .MP3, or .WAV) to any individual screen in a RapidBuilder file. Each sound file will play when the screen is entered/exited during playback or when a particular action is performed on the screen by the end user during playback.

Multiple audio files may be imported to a single frame. In addition to an audio file that plays automatically when the frame appears on screen during playback, the developer may specify other different audio files linked to specific mouse click actions, validation keys, and automatic timeouts.

Sound Linked to a Hyperlink

The developer may link one or more sound files (ASF, .AU, .MP2, .MP3, or .WAV) to a **Hyperlink** button in a RapidBuilder file. Each sound file will play when the **Hyperlink** is clicked in a certain way by the end user during playback.

Sound Recorder

RapidBuilder's **Sound Recorder** allows the developer to record sound from any available sound device. A sound clip can be recorded on any frame within a RapidBuilder file, and the recorded sound will play automatically once the file is run.

- After recording sound during the editing stage, the developer can immediately play back the recorded clip to hear how it sounds.
- Sound can be recorded from any sound device present on the developer's system, including CD-ROM and Microphone. The developer may record his/her own voice-overs for guided practice simulations.
- A sound clip recorded on a frame may also be saved to disk as an audio file. Once the developer has recorded sound from an available sound device, he/she may click the **Save** button to open a **Save As** dialog box. From this dialog box the developer may save the sound clip as a .WAV or .ASF audio file.

The saved audio file may then be imported to RapidBuilder's **Resource Editor** and used for other frames and objects.

Import Audio

The developer may import ASF, .AU, .MP2, .MP3, and .WAV audio files directly into the frames of a RapidBuilder file to be rendered and compressed. An audio file may be imported to a single frame/screen or across a range of frames/screens.

Background Sound

The developer may add background sound that runs on a range of simulation frames during playback. RapidBuilder supports two (2) types of background sound:

- **Captured Background Sound** – Sound may be captured from a selected sound device (e.g., Microphone or CD-ROM) as the developer simultaneously captures interactions (mouse clicks and keystrokes) with the live Windows desktop. The captured sound will be embedded and synchronized with the captured frames as a sound track.
- **Background Sound File** – The developer may assign a linked sound file (ASF, .AU, .MP2, .MP3, or .WAV) to run in the background during playback of the RapidBuilder file. The sound may be looped a set number of times or played in a continuous loop, and it may also be faded in and out over a set time (e.g., 2 seconds).

Sound Tracks

The developer may add multiple sound tracks to a RapidBuilder file. In a sound track, the sound runs along a track that is spread over a given range of screens. During playback, the sound is synchronized with the screens.

- A sound track may be created in 2 different ways:
 - Automatically by capturing background sound while simultaneously capturing the live Windows desktop.
 - Manually by assigning an external sound file or importing an audio file.
- Each sound track added to a file is displayed as visual audio data on the **Sound Bar**. The developer may perform various types of editing on a sound track. Selected sound may be cut/copied and pasted from one part of the sound track to another as well as to another sound track. Selected sound may also be deleted.

Text-to-Speech (Automatic Audio)

RapidBuilder's **Instruction Box** and **Text Field** objects support Text-to-Speech functionality.

Text within an **Instruction Box/Text Field** may be converted into speech audio data during playback of the RapidBuilder file. The developer has the option of including playback control buttons on the **Instruction Box/Text Field** so that the end user may control the playback of the speech.

Audio Interruption

After linking an audio file to a frame, the developer may specify whether the playback of the audio file may be interrupted during frame playback. In the **Frame Properties** window, the developer may select one of the following options from the "**Allow Audio Interruption**" property:

- **Yes** – This is the default option. Playback of the audio file is ended as soon as the end user performs an action on an object (such as a **Hyperlink**, **Radio Button**, etc.) configured with a "**Go To**" event.

For example, if the end user clicks a **Hyperlink** to navigate to the next frame, playback of the audio file will immediately stop, and the end user will be taken to the next frame.

- **No** – The frame remains displayed on the screen until the entire audio file is finished playing.

NOTE: Audio interruption may also be configured at the global level (so that it is automatically enabled or disabled for all of the frames in the file).

Colors

RapidBuilder enables the developer to apply advanced color settings to files.

Color Palette

The **Color Palette** provides a palette of 256 default colors, and it also includes facilities for defining and adding custom colors. It is used in conjunction with the **Fill Color** tool to set the foreground color and background color of appended/inserted frames and **Draw** objects.

The **Color Palette** includes two different palettes:

- **Default** - Displays the standard 256-color palette. In addition, custom colors may be appended to the end of the default color palette. New colors will be saved between sessions.
- **Custom** - Displays custom color palettes created and saved by the developer. A custom color palette may be created by customizing colors on the **Color Selector** tab and then dropping them into place on the custom color palette. The custom color palette may then be saved as a .CLR palette file, which may be loaded to the palette at any time.

Gradient Fills

The developer may apply a gradient fill to the background of appended/inserted frames. A gradient fill is a combination of any 2 colors that are gradually blended together in one of 8 different styles.

Deploying RapidBuilder Files

RapidBuilder files may be deployed locally, on CD-ROM, over a network (LAN/WAN), or over the Web (Internet, Intranet, or Extranet). Local deployment is accomplished with XStream's RapidPlayer Runtime player, and Web deployment is accomplished with RapidPlayer ActiveX (for Internet Explorer) or RapidPlayer Plug-in (for Netscape).

Deployment of RapidBuilder files is accomplished with the following tools:

RapidPlayer Runtime

RapidPlayer is XStream's Universal Runtime Player.



Figure 4: RapidPlayer Runtime

RapidPlayer is used to play RapidBuilder simulation (.RBX) files and project (.RPR) files from a CD-ROM, local hard drive, or LAN drive. It may also be used to play RapidExam exam (.EXM) files, offline exam (.EXO/.RPO) files, and Performance Analyzer evaluation (.RPE) files.

Automatic streaming capabilities enable RapidBuilder files to play smoothly even across slow Internet connections. RapidPlayer's streaming technology starts and ends on the client's machine and requires no additional software on the server side. Streaming is accomplished by buffering frames in the background and displaying them as needed. RapidBuilder files are optimized for low bandwidth environments such as dial-up modem based connections.

NOTES

- RapidPlayer plays files regardless of the screen resolution/color depth in which they were created. If for example a file created at 1024x768 is played in 800x600 resolution, then scroll bars (both horizontal and vertical) are displayed on the screen. Likewise, if a file created at 800x600 is played in 1024x768 resolution, then the playback window will occupy the center of the screen.
- A DLL version of RapidPlayer is also included with RapidBuilder. It may be used to play RapidBuilder files from a third-party application.

RapidPlayer ActiveX Control for Internet Explorer

XStream's ActiveX Control streams and plays RapidBuilder files over the Internet through the Internet Explorer browser. It is available from XStream's download page at <http://www.xstreamsoftware.com/downloads.htm>.

RapidPlayer Plug-in for Netscape

XStream's plug-in for Netscape streams and plays RapidBuilder files over the Internet through the Netscape browser. It is available from XStream's download page at <http://www.xstreamsoftware.com/downloads.htm>.

Publishing to Other Media Formats

In addition to native .RBX/.RPR format, a RapidBuilder file may be published and deployed in various media formats, including the following:

- **Flash (SWF)** – Flash files may be played in browsers without loading a separate plugin.
- **XML** – XML files may be played in browsers without loading a separate plugin.
- **Dynamic HTML (DHTML)** – DHTML is an extension of HTML that enables the creation of more dynamic and interactive web pages. A DHTML-based simulation or course may be played through a web browser without loading a separate plugin.
- **Executable (EXE)** – A RapidBuilder file may be merged with the RapidPlayer runtime player, thereby creating a self-executing .EXE file. The .EXE file may then be distributed to end users without having to provide the RapidPlayer application separately (since it is included within the self-executing .EXE file).
- **Various Video Formats** – A RapidBuilder file may be saved in AVI, ASF, MPEG, or MOV format and played like any other video file.
- **SCORM 2004, v1.2, and v1.1 Courses**
- **Sharable Content Objects (SCOs)**

Printed Documentation

RapidBuilder files can be printed directly to paper and exported to Microsoft Word (DOC) format. This is ideal for converting simulations and content files into manuals, user guides, technical material, and other types of hard-copy documentation or reference material.

Developers may print RapidBuilder files to paper to create document versions of content files. The look and content of a printed document may be customized by configuring various available print settings, including selecting which frames/screens to print, specifying the number of frames that will be printed on each page, specifying margin and header/footer settings, specifying whether to print the frame name/number along with each frame, specifying whether to print document details/properties text on a separate title page, and more. In addition, before actually printing to paper, the developer may access a Print Preview window to view virtual pages showing how each printed frame will look.

Developers may export RapidBuilder files to Microsoft Word (DOC) format. An exported document file may be easily customized by selecting the frames/screens and text items to be exported and then defining the look of the document (by configuring page layout settings, defining the spacing between frame images and text, specifying a document title, specifying captions for exported frame images and text sections, including/excluding specific objects from exporting, defining page margin and header/footer settings, defining which types of frames/screens will be exported, specifying that hotwords and thumbnail notes will be exported, and more). Developers can also export to Word using pre-defined Word Templates that have been created.

Playback Security Options

RapidBuilder enables the developer to configure a number of security options for a file:

- The Print Screen key may be disabled during playback, which prevents end users from taking unauthorized snapshots of simulation content.
- The simulation may be configured to fill the entire screen area during playback, which prevents any distractions from other screen areas.
- Task switching may be disabled during playback, which prevents the end user from using the mouse or keys to switch to another task or program window.

Back-end Administration and Tracking (with XStream LMS)

RapidBuilder works with **XStream LMS**, which is XStream Software's powerful, web-based Learning Management System (LMS) within XStream's hosted web environment and digital workspace. The system includes full capabilities for registering, tracking, and reporting on RapidBuilder files.

XStream LMS is a secure, feature-rich communication, collaboration, and learning management system within an easy-to-use web environment accessible to a global audience. It enables management of all types of online learning content (including SCORM content) and offline scheduled events with optional capabilities for web-based communication and collaboration.

XStream LMS is available as a cost-effective **hosted service solution** (which minimizes total cost of ownership and accelerates deployment time for quick realization of benefits) or as a **client-installed solution**. It is the ideal web solution for any organization that needs to efficiently share and manage information and facilitate real-time communication and collaboration across the enterprise. With XStream LMS, everyone within an organization can use the same secure system to perform administrative tasks, access assigned learning content, communicate and collaborate on any topic or project, and manage/access any type of content or files that may be used within the organization. Full flexibility is provided to customize and organize the use of the LMS within the organization.

XStream LMS includes the following features and capabilities:

- **Decentralized administration capabilities (with comprehensive security)** – Control the access and user rights of each administrator (i.e., each administrator may have full access to all aspects of the LMS or only partial access to certain elements within the LMS, and each administrator has defined rights that control the type of functions the administrator can perform at each level).
- **Hierarchical administration capabilities (with comprehensive security)** – Customize and organize the use of the LMS by creating multiple organizational units (with complete security for the LMS data/content within each organizational unit). Each organizational unit can contain its own users/groups, designated administrators, assigned content matter/events, user rights, etc.
- **SSL Security** – The LMS can be made accessible using either the HTTP or HTTPS protocol. The HTTPS protocol provides SSL security using 128-bit encryption, providing a completely secure environment for all transactions, including file uploads/downloads.
- **Learning Content Capabilities** – The LMS can register, track, and report on various types of learning content and SCORM content created with RapidBuilder, RapidExam, Performance Analyzer, RapidGuide, and other third-party SCORM-authoring technologies. A large variety of information and settings may be configured for each learning content matter registered in the system, including the capability to define the Start Date and Expiry Date for each learning content matter.
- **Event Capabilities** – Schedule, track, and report on offline events of all types, including instructor-led training sessions, meetings, workshops, seminars, conferences, trade shows, etc. Administrators may track the number of seats available for each scheduled event and enable registration and cancellation of registrations. Administrators may also send an event registration URL (via email or using some other method) to enable users to self-register for the event using the URL. Other capabilities include alternate scheduled event registrations, event roster generation (along with other reports), and the ability to change an event's status (open, completed, or cancelled).
- **Self-Registration Capabilities** – Users without accounts are able to self-register in the system by creating their own accounts online. An account creation confirmation e-mail (containing login credentials) is automatically sent to a user after he/she registers.
- **Required Learning Paths/Curriculums** – Administrators may define learning paths containing assigned content matter/events that must be completed by the user.
- **Recommended Learning Curriculums** – Users may also access supplementary assigned content matter/events not included as part of required learning paths.
- **Learning Catalogs** – Administrators may create defined learning catalogs containing groupings of online and offline content matter. For each learning catalog created, administrators can also define if

assigned users can directly access the online content or if they need to request access to it. Access requests are made via means of notifications that are fulfilled by administrators assigning the user to the requested content matter. The user then receives a confirmation message stating that the content matter has been assigned to the user.

- **E-mail Notification Capabilities** – E-mail reminders (i.e., reminder messages automatically sent to participants before the content matter is taken) and e-mail notifications (i.e., results automatically sent to participants after the content matter has been taken) can be configured for learning paths and each type of content matter within XStream LMS. Administrators can configure the e-mail messages for each type of content matter separately and define who has access to the different e-mail reminders/notifications that have been configured.
- **Prerequisites** – Administrators may establish prerequisites for each content matter (including conditions such as progress, time taken, score, and attendance at the content matter level) before a user may launch/register for the content matter. This controls the conditions that must be met by the user before being able to launch/register for a content matter.
- **Bookmarking Capability** – While logged in to a registered RapidBuilder file, RapidExam file, or SCORM v1.2 course, an authenticated user may stop at and mark a specific screen/frame before exiting in order to return to that location upon the next login.
- **Reporting Capabilities** – Over 150+ predefined reports (with a large variety of permutations/combinations) are available. User reports may be generated from the user, group, or department-level points of view, and content matter reports may be generated from the content matter/event or learning path points of view. Reports may be viewed online, printed, exported to other formats (including Microsoft Excel, Adobe PDF, and Rich Text Format), and e-mailed.
- **Customize User Interface Elements** – Customized banner images and welcome pages may be specified for each organizational unit within the LMS. Other interface elements (such as fonts, colors, etc.) may be customized via Cascading Style Sheets (CSS).
- **Offline Exams** – System administrators may generate RapidExam exams (.EXM files) and performance exams (.RPE files) as offline exams. Assigned users can take offline exams without being connected to the LAN or the Internet. Upon completing the offline exam, the end user transfers the results to an administrator, who then uploads the results to the LMS for tracking and reporting purposes.
- **Archiving Capabilities** – The system can automatically store all deleted content matter/events and associated data in an archived location. The archived content may be subsequently restored to the LMS or permanently removed.
- **Section 508 Compliance** – Includes full support for the accessibility requirements specified in Section 508 of the U.S Rehabilitation Act. XStream LMS is a 508-compliant technology that may be fully accessed by users with physical disabilities or limited mobility.
- **Unicode Support** – Includes support for the Unicode character set (for encoding multiple written languages).
- **Multi-Language Support** – Supports English, French, Danish, and Norwegian (with upcoming support for additional languages).

In addition to its learning management elements, XStream LMS provides **optional** access to powerful Communication and Collaboration Capabilities, which enable users to share files, collaborate on the development of learning content and other types of content, and engage in live chat and discussions.

The following communication and collaboration capabilities are available as part of the LMS:

- **File Transfer/Sharing Capabilities** – These capabilities enable collaboration on the development of content matter files, images, media files, etc. Files and documents (created using any application) can be easily uploaded to the system, organized in folders and subfolders, and shared with other users.

- **Threaded Discussion Forums** – Users can initiate one-on-one, topic-based discussions with other users.
- **Interactive Chat Sessions** – Users can initiate synchronous text-based chat sessions with other users on demand. One or more invited internal users or external users may join the chat. Internal LMS users invited for a chat may be notified via animated marquee to join a chat in progress. External users may participate in chatting by receiving a URL that they can use. Each chat session can be saved and made available to other users.
- **“Notify Me” Capability** – This capability allows users to keep track of changes occurring within the LMS. A user may choose to be automatically notified (by e-mail) as soon as a change occurs in a selected LMS component, or he/she may choose to receive a daily summary of all changes made to a selected LMS component or all changes made to the complete LMS.
- **Electronic Mail Facility** – Users may compose, send, receive, and store e-mail messages. Since anyone can send e-mail to the mailbox, it is particularly useful for receiving e-mail from people outside of the LMS.
- **Calendar** – Provides a mechanism for users to keep track of upcoming events or activities. Events can be organized and viewed by day, week, month, or year.
- **Notes** – Users can post general notes pertaining to the LMS.
- **Web Links** – Users can create shared links or shortcuts to Web URLs. A link is a shortcut to a web site. It allows you to specify whether a web page referred to by the link should be opened in a new window or not.
- **Comments** – Users may add comments to various objects within the LMS. Comments are user-defined annotations or notes that provide extra details, recommendations, hints, tips, or other general information to any user accessing the LMS object.
- **Live Video Conferencing or Desktop Sharing Sessions** – Users can create and conduct live, browser-based web conferencing sessions known as iMeetings. Any authorized user may create an instant meeting (to be started on demand) or a scheduled meeting (to be started at a specified date and time). The meeting host can share his/her entire desktop, including any application or document on the computer, with everyone attending the meeting. This is ideal for demonstrating products, training, and collaborating while interacting with the audience. Live video (via a web cam) allows attendees to see the host/presenter and become more involved in the meeting or presentation. Live meetings may also be recorded as on-demand video (synchronized with audio over the phone or coming from speakers) that can be accessed and played back by authorized users.

The Superior Results of RapidBuilder

With the most advanced technology and innovative features ever seen in a software tool of its kind, RapidBuilder can effectively meet the needs of everyone from CBT developers to technical trainers. For anyone who requires interactive, multimedia content quickly and simply, RapidBuilder is the ultimate solution. The following are just a few examples of the types of powerful simulations that can be developed with RapidBuilder:

Professional Training Tutorials

Developers can use RapidBuilder to create highly professional, straightforward tutorials for different software programs and technical procedures. With the ability to incorporate voice-overs, video, text, graphics, jump buttons, instruction boxes, and more, it's easy to create visually appealing, user-friendly content. Without any programming, developers in any organization can build quick, on-demand training simulations to familiarize employees with new software and other high-tech systems. In addition, RapidBuilder can be used to produce more detailed and extensive material for training software products. For the makers of computer-based training (CBT) software, RapidBuilder is an ideal tool that will allow

them to develop their products faster and easier. As the technology of RapidBuilder rids them of the need for programmers, CBT development organizations can decrease their production costs significantly.

Attractive Product Demos

RapidBuilder is the perfect demonstration tool for any organization. Demo builders can create multimedia simulations that visually demonstrate the features or functionality of any software product with animation, music, video, and graphics. Companies can use RapidBuilder to produce professional, attractive demos for employees and customers. As a useful supplement to traditional customer support, demos illustrating the solutions to specific technical problems can be created in minutes and distributed to customers on demand.

Animated On-Screen Presentations

Sales and marketing teams can create visually appealing, dynamic presentations for customers and corporate clients, complete with graphics, video, music, voice-overs, and real-time animation. Using this technology, companies can produce impressive, convincing product presentations and press packages that highlight the features and benefits of their products. Trainers can supplement conventional training material with virtual libraries of movies that allow students to view on-screen functions and procedures in real time. Computer troubleshooters can create movies showing how to address specific errors or problems. In addition, a troubleshooter who requires help in identifying the source of a technical error can use RapidBuilder to create a movie of screen activity before and after the occurrence of the error. The movie can then be examined by other professionals in the organization or even distributed to outside experts for further analysis.

Contact Information

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