

**Seertech Solutions**

**Oracle iLearning**

# **CONTENT INTEROPERABILITY GUIDE**

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## 1. DOCUMENT OVERVIEW

This information guide will provide elearning Courseware Developers with the requisite knowledge of the technical specifications and dependencies of the Oracle iLearning Learning Management System (LMS).

This requisite knowledge is essential in ensuring elearning Courseware Developers deliver courseware modules for deployment that are in line with the requirements of the LMS.

This information guide contains information on the following topics:

5. Oracle iLearning Supported Technical Standards as they relate to elearning courseware deployment
6. Courseware Development considerations for client environment
7. Background to the Oracle iLearning Course Player
8. Key guidelines for elearning courseware development in Oracle iLearning including:
9. Use of the Oracle iLearning Course Player in various scenarios
  - a. Recommendations for Managing Player and Session Timeout
  - b. Recommended Course Requirements
  - c. Recommended Navigation Requirements
  - d. Recommended Style Requirements
10. Recommended elearning courseware testing procedures
11. Recommended elearning courseware authoring packages with known interoperability with Oracle iLearning.
12. Seertech Solutions contact details and elearning courseware support process

This document is intended to address only those specific issues of courseware development that relate to successful Oracle iLearning deployment, based on 10 years of accumulated Seertech experience in supporting customers and developers with their elearning courseware deployments via Oracle iLearning.

This document will need to be read in conjunction with relevant customer policies and process documents relating to the specifics of content development for their organisation.

For more information, help or support with elearning courseware deployment via Oracle iLearning, please refer to the final section of this document.

The Seertech Solutions Team.

## 2. DOCUMENT AUDIENCE

The audience for this information guide includes all elearning Courseware Developers, Instructional Designers and Project Managers responsible for the deployment of elearning courseware on Oracle iLearning.

## 3. EXCLUSIONS AND ASSUMPTIONS

**Exclusions:** This information guide does not address general courseware design elements that relate to the design requirements set out by the end user customer, or general good design and development practices in general that do not directly relate to the deployment of elearning courseware in Oracle iLearning. Additionally, this information guide does not address development for adherence to relevant AICC or SCORM standards.

**Assumptions:** It is assumed that the reader is familiar with the latest version of the document ‘Oracle iLearning - Content Management User Guide’ as it relates to the loading, publishing and offering of elearning courseware via Oracle iLearning.

## 4. TERMINOLOGY

Before we look at the specifics of content interoperability with the LMS, it is important to understand some key basic terms that will be used throughout this document:

Term	Description
<b>ADMIN</b>	<p>This relates to roles that contain administration privileges within Oracle iLearning – specifically as they relate to the Course Creator role which is responsible for the uploading/importing of elearning content to the LMS, and subsequent publishing/offering of the initial elearning content.</p> <p>A course creator will be responsible for loading the course content and configuring the course offering for display in the iLearning course player. This process is contained in ‘Oracle iLearning - Content Management User Guide’ and specific Job Guides for the organisation.</p>
<b>AICC</b>	<p>This term refers to courseware standard – Aviation Industry CBT Committee – which is supported by Oracle iLearning in HACP method.</p> <p>Oracle iLearning supports all mandatory data elements only.</p>
<b>CMI</b>	<p>Computer Managed Instructions. This is an adapter used by the LMS to effect launch and communication between the courseware and the LMS.</p>

<p><b>Course Player</b></p>	<p>This is the Oracle iLearning Course Player application which launches the courseware (via the course initial file that is executed when a learner clicks on the ‘Play’ button in the LMS) and provides navigation between content objects, tracks progress, bookmarking, lesson status and result, total time taken in course etc.</p> <p>All elearning courses and assessments launch in the Course Player, regardless of whether they are native courses, SCORM or AICC courses.</p>
<p><b>HACP</b></p>	<p>HACP is the communication protocol used to run AICC courses. HACP stands for Hypertext AICC Communications Protocol and uses form posts to Get and Set data on the LMS. More recent uses of HACP have adopted ajax technology to negate the need for page refreshes when posting data.</p>
<p><b>Initial File</b></p>	<p>This is the courseware file launched when the course play button is selected by the learner. This may be a .html file, .swf, .pdf or other file type that may or may not have navigation to other course files built into it.</p>
<p><b>JVM / JRE</b></p>	<p>These acronyms refer to Java Virtual Machine / Java Runtime Environment that is required for the communication between the SCORM courses and the LMS, as well as for iLearning authored assessment display / tracking. Sun JVM / JRE environment 1.5+ is supported by the LMS, with the exception of JVM / JRE environment 1.6_11 which has a known bug and does not work with the LMS.</p>
<p><b>LMS</b></p>	<p>This is the abbreviated term for Oracle iLearning Learning Management System. The current version is 5.2.</p>
<p><b>Native Course</b></p>	<p>This is a course where the initial file is a non-standards based file (eg: Not SCORM or <a href="#">AICC</a>). Examples are .doc, .pdf, .ppt, .xls, .jpg, .txt or other file types.</p>
<p><b>Offering</b></p>	<p>This is an ‘instance’ of a course – eg: a class. There may be multiple offerings (or classes) for a given course object, however generally there is only one offering created for an elearning course.</p> <p>Enrolment and iLearning Course Player properties are set at the offering level by the Course Creator, and an offering must be created before the course can be accessed by a learner.</p>
<p><b>Publishing</b></p>	<p>The act of making the course available for offering. This is actioned through a ‘one click’ publishing method in the LMS, and is undertaken by the Course Creator.</p>
<p><b>RCO</b></p>	<p>Stands for ‘Reusable Content Object’. This is the same as a SCO (Oracle just uses a different name), and is the ‘parent’ of the course metadata, as well as the physical content files.</p> <p>RCO’s can be nested to any level under a user defined hierarchy structure, can have their own object names, can be linked to each other, copied or referenced to or from each other.</p>

<p><b>SCO</b></p>	<p>Stands for ‘Shareable Content Object’, which is a standardized learning object that can communicate to learning management and content management systems. This is the same as an RCO (see above), and is the ‘parent’ of the course metadata, as well as the physical content files.</p> <p>Courseware developers will package one or more SCO’s in an eLearning Course, which will be linked by navigation within the course or via navigation contained in the course player.</p>
<p><b>SCORM</b></p>	<p>‘Shareable Content Object Reference Model’. SCORM is a collection of standards and specifications for web-based elearning. It defines communications between client side content and a host system called the run-time environment (The LMS). SCORM also defines how content may be packaged into a transferable ZIP file.</p> <p>SCORM is a specification of the <a href="#">Advanced Distributed Learning</a> (ADL) Initiative, which comes out of the Office of the <a href="#">United States Secretary of Defense</a>.</p> <p>SCORM 2004 introduces a complex idea called sequencing, which is a set of rules that specifies the order in which a learner may experience content objects. In simple terms, they constrain a learner to a fixed set of paths through the training material, permit the learner to "bookmark" their progress when taking breaks, and assure the acceptability of test scores achieved by the learner. The standard uses XML, and it is based on the results of work done by <a href="#">AICC</a>, <a href="#">IMS Global</a>, <a href="#">IEEE</a>, and <a href="#">Ariadne</a>.</p> <p>Oracle iLearning is certified to support SCORM 1.1, 1.2 RTE-1 and 2004.</p>
<p><b>XSD</b></p>	<p>These are .xsd schema files that are needed by the LMS for SCORM based content to ensure that the imsmanifest.xml file is well formed and valid as it relates to course structure required attributes and nodes etc.</p> <p>For Oracle iLearning, there are specific .xsd files that <b>MUST</b> be used in lieu of authoring application produced files in order for the course to successfully import to the LMS. The four .xsd files required are:</p> <ul style="list-style-type: none"> <li>▪ adlcp_rootv1p2.xsd</li> <li>▪ ila_mdextensions.xsd</li> <li>▪ imscp_rootv1p1p2.xsd</li> <li>▪ imsmd_rootv1p2p1.xsd</li> </ul>

## 5. ORACLE iLEARNING SUPPORTED TECHNICAL STANDARDS

The following table outlines key courseware technical standards supported by Oracle iLearning:

Type	Standard
Assessment (XML)	IMS QTI 1.01
SCORM	<ul style="list-style-type: none"> <li>▪ 1.1</li> <li>▪ 1.2 RTE-1 (Mandatory Data Elements Only)</li> <li>▪ 2004 (from Oracle iLearning 5.2)</li> </ul>
AICC Metadata	HACP Method <ul style="list-style-type: none"> <li>▪ Mandatory Data Elements Only</li> </ul>
Native Content	Any launch-able content type
File Transport Method	<ul style="list-style-type: none"> <li>▪ JAR</li> <li>▪ Native</li> <li>▪ ZIP</li> </ul>
Internal FTP Client?	Yes – within course import wizard, supports unzip on content server
Mime Types Supported	User Defined
SCORM API Run Time Environment	Sun Java 1.5+ (Sun JVM / JRE 1.6_11 is <b>NOT</b> supported due to a known bug with this version of the JVM / JRE) Note that this is only required for SCORM communication and assessment tracking and scoring
Browser Type / Version Support	<ul style="list-style-type: none"> <li>▪ Microsoft Internet Explorer 6.x, 7.x</li> <li>▪ Mozilla Firefox 2.x, 3.x</li> <li>▪ Apple Safari 3.x, 4.x</li> </ul>

## 6. COURSEWARE DEVELOPMENT CONSIDERATIONS

Specific end user client PC and infrastructure support standards will be determined by the client environment. Generally consideration will need to be given to the following elements:

Consideration	What to look for?
Operating System	Name and Version
Operating System interface	Specific OS display type (Vista Aero, XP Classic etc)
Screen Resolution	Target client PC screen resolution (eg: 1024 x 768 etc). Remember to set a base-line for development.  Seertech provides a tool to determine available screen resolution size by sizing your target screen real-estate – ie this becomes the available ‘canvas’ size. The tool can be located here: <a href="http://www.seertechsolutions.com/all_assets/resources/developer/whatsmycanssize.zip">www.seertechsolutions.com/all_assets/resources/developer/whatsmycanssize.zip</a>
Colour Quality	Eg: 32Bit colours, web safe colours etc
RAM Sizing	Target PC RAM sizing
Processor Sizing	Target PC CPU sizing
Hard Disk Sizing	Target PC HDD sizing (free space requirement)
Sound Availability	Availability of PC Sound Card, software and headphones/speakers
Browser Type and Version	Eg: Internet Explorer 7.1
Browser / Security Settings Enabled	Check key browser settings such as: <ul style="list-style-type: none"> <li>▪ Popup Blockers status</li> <li>▪ Cookie Setting status</li> <li>▪ Javascript enabled status</li> <li>▪ Image enabled</li> </ul>
Web Players and Objects	Check requirement / availability for web players and objects eg: <ul style="list-style-type: none"> <li>▪ Flash player and version number</li> <li>▪ Adobe Acrobat and version</li> <li>▪ Media player type and version</li> </ul>
Proxy Settings	What will be the proxy server configuration for caching content files? How often is this refreshed? How will this be configured?
Network Speed / Server Response Times	What are the network speed and bandwidth considerations for deployment to target audience in worst, average, best case scenarios? Is Quality of Service available and if so, how is courseware traffic prioritized? This is an important consideration as

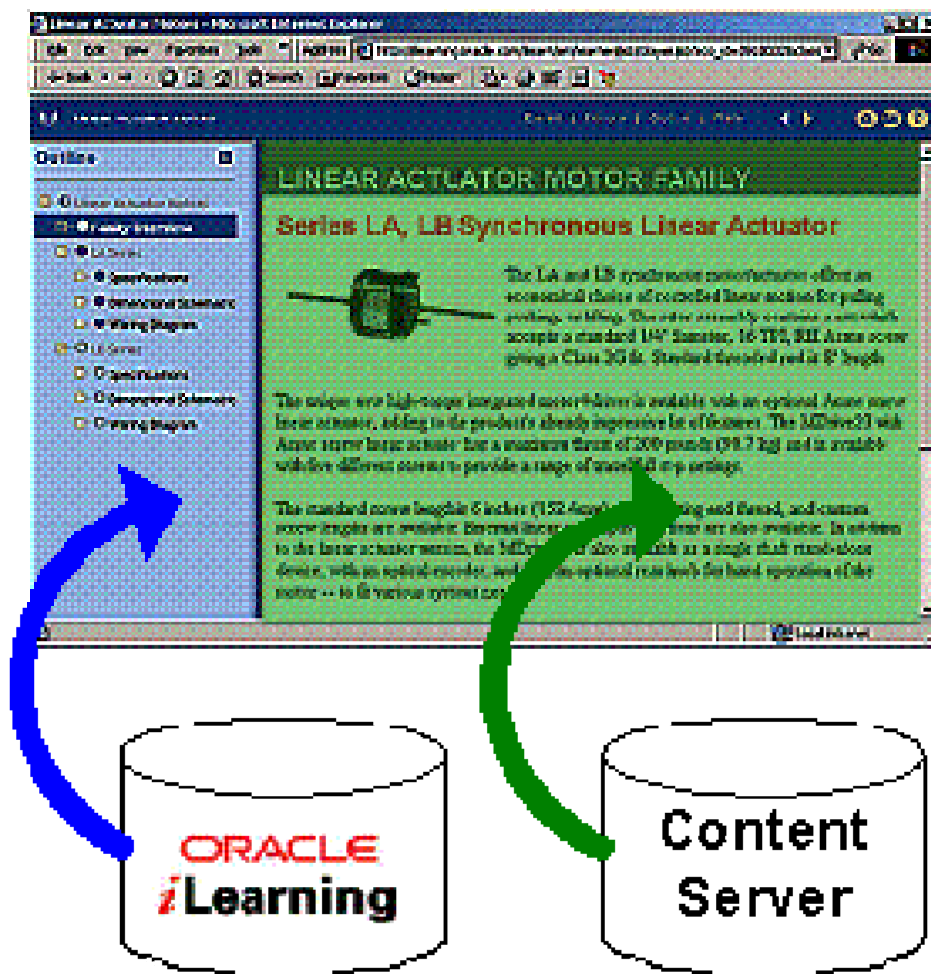
	excessive use of the available network bandwidth can result in slow downloads and running of the course and in some cases loss of session data.
Approximate Maximum File Size	Are there any restrictions on maximum file or image size within content?
File Compression Utility	What file compression utilities are available within client PC specification (eg: WinZip) and how will large files be compressed / decompressed?
Target course page size	Are there restrictions on course page sizing? Eg: 100KB per page maximum.
W3C Accessibility Standard Conformance	What level of conformance with Web Content Accessibility Guidelines is required? ie: Level 1, Level 2 etc?
Additional Information	For multi file courses recommended to use WinZip A Pilot is strongly recommended for modules with video &/or audio to ensure all learners are able to view the files.
Oracle Course Player Functions Enabled	Determine the Course Player display requirements – viz: <ul style="list-style-type: none"> <li>▪ Player Outline on-off (note Outline consumes 208 pixels of horizontal screen real estate including frame). The Outline can be docked / undocked from the frame if the Dock/Undock icon is selected for appearance in the Player Toolbar</li> <li>▪ Toolbar on-off (Toolbar is required for navigation and exit for non-popup courses). Toolbar uses 42 pixels of vertical screen real estate.</li> <li>▪ Navigation via 'Next' &amp; 'Back' buttons in Toolbar</li> <li>▪ Inclusion of links to Reference Material, Forums, Email, Chat, Rating, Personal Notes, Online Help (this is Course Player Help) in Toolbar</li> <li>▪ Inclusion of Course Player Exit or Close function in Toolbar</li> </ul>
Course Popup in Own Window	Oracle iLearning allows for the course content to popup in its own window, with allowance for specifying horizontal and vertical window size. It is generally best to use course popup in own window if: <ol style="list-style-type: none"> <li>1. The course is a single SCO; and</li> <li>2. Is AICC or SCORM ; and</li> <li>3. Has navigation built in to the SCO; and</li> <li>4. Popups are NOT blocked by client settings</li> </ol> Otherwise, use the course player content pane.

Each of the above elements will have consideration on how the course is built, what course functionality is enabled, how it is configured to display in the course player etc, and should be checked by the courseware developer BEFORE proceeding with courseware design/development.

## 7. CONTENT GUIDELINES & ORACLE DEPENDENCIES

### Background - The Oracle iLearning Player

There are several options for configuring the player, but the most common option is to have a toolbar across the top of the window, an outline frame to the left, and the actual course content played in the frame to the right.



The Oracle iLearning player generates the toolbar and outline frames. Note that these frames are created and served from the Learning Management System (LMS) server, which in many cases is a different server from where the content is stored. Each launchable topic in the course outline frame has a content location stored in the database. When a learner selects a

Reusable Content Object (RCO) in the outline, the corresponding content is loaded from a content server into the content frame on the right.

Note that Course Player options for any course deployed via iLearning are configured using the same method illustrated below:

### ***Content Development Guideline Summary***

- 1) **Frame Friendly** - Custom content may contain browser frames of its own and may manage those frames how it wishes, however, it must affect only those frames that it creates. The iLearning player described above uses frames regardless if the outline or toolbar is turned on or off in the player preferences.
- 2) **Screen Size of Content.** Depends on company policy but note that if the content is displayed in the player IE toolbars (or company browser), iLearning outline and toolbar sizes need to be considered. These are:
  - Outline horizontal size **208 pixels**
  - Toolbar vertical size **42 pixels**

A standard screen size for content deployed in the content frame if the target screen resolution is 1024 x 768 is **790 x 545**. Seertech provides a tool to determine available content frame size by sizing your content frame directly on screen using your target screen resolution – ie this becomes the available ‘canvas’ size. The tool can be located here:

[www.seertechsolutions.com/all\\_assets/resources/developer/whatsmycanvassize.zip](http://www.seertechsolutions.com/all_assets/resources/developer/whatsmycanvassize.zip)

- 3) **Use of the iLearning player** – In a bid to support many different content types Oracle has included a default tracking mechanism (AUTO) as well as support for CMI and AICC based tracking. This means that a course could be constructed simply by linking to a flash object. This object would play in the iLearning player and get tracked by default without any CMI calls. This is the simplest and cheapest approach to content development. PDF’s, PowerPoint and other objects can be tracked in this way. If a course is purchased off the shelf it may be unavoidable to not have it pop up in its own window, but there is no reason why it would not work with iLearning. If content is being built specifically for the company using iLearning then the following guidelines should be followed:

- If it does not need CMI then don't use it, default tracking (AUTO in Tracking Type) works great and gets around the timeout issue described below. Note that if using AUTO as the tracking type and using multiple RCO's in the same parent course structure, you will be required to either:
  - Display the course in the player Outline; and/or
  - Display the 'Next / Previous' buttons in the Player Toolbar

Each of these options can be configured when managing the offering properties of the course.

- The Outline navigator works well and enables content developers to build smaller modules reducing again the timeout issue below.
- If the Instructional design precludes the use of the player outline and the module is completely self contained CMI based completion would probably be required. One big module does bring into play the timeout potential.
- DO NOT USE POP UP widows unless absolutely required as this confuses the user and can create tracking issues with Timeouts and learners actually closing the player window thinking the content is self contained.

As a general rule, use these considerations as to whether to use popups or not:

**Use course Launch in Own Window if:**

1. The course is AICC or SCORM based; and
2. If the course is a single or multiple SCO; and
3. The course navigation is maintained within the SCO's (Only Intra-SCO navigation is supported); and
4. Popups are NOT blocked on the client PC

If the customer wishes to control the course dimensions absolutely, then using course popup window may be unavoidable. Note that in the case of using SCORM / AICC courses and course launching in its own window, the LMS will launch a small popup window that will facilitate the communication between the course in the popup window and the LMS. It is a known issue that if the client environment includes popup blockers,

these will interfere with the launching of the communications popup and affect lesson status result transfer to the LMS.

**Use course launch in Player Window if:**

1. The course is a native course (ie; PDF, word etc); or
2. The course has multiple SCO's; or
3. You want to add an assessment or evaluation to the course as the final SCO; or
4. The client browser environment has popup blockers enabled.

Note that in the case of courses launching in the Player Window, consideration will need to be made for the Outline and Toolbar size impacts as they relate to available screen resolution for the course.

**4) Single or Multiple SCO** – There can be several factors that will determine if the content will be delivered as a single SCO or multiple SCO. Some of the things that you and your client must consider when collaborating on this decision are:

- Will the course contain multiple assessments that need to be tracked individually
- Does each topic need to be tracked individually for **reporting** purposes? The reason I emphasize for reporting purposes is because an individual score for each topic and progress can be stored by creative use of suspend\_data in a single SCO, however this data will not available for reporting purposes.
- How stable is the network? If the network is not very stable or bandwidth is limited it is advisable to break a course up into several SCOs so that learners progress is saved and committed to the LMS when navigating between the different SCOs (topics).
- Will the course contain complex learning paths that need to be controlled by the LMS prerequisites?

**5) Cross SCO Navigation** – Navigating between SCOs can only be achieved by using the Course Player Toolbar or by using the Course Player Outline. The SCORM 1.2 specification does not provide an API for navigating between SCOs. It is possible to target the Oracle iLearning SCO navigation buttons but it is **highly recommended that you do not** due to the same domain policy that browsers enforce on JavaScript execution. The Course Player Toolbar will only allow linear navigation between SCOs (next/back). The Course Player Outline provides a tree view of the course and its SCOs.

- 6) **Player Pre-requisites** – It is possible to control the access of SCOs based on completion of other SCOs on the system. Pre-requisites may be used when building a course that contains multiple SCOs but must be completed in a particular order, for example a pre and post assessment. When using pre-requisites it is recommended that the Course Player Outline is used as this provides a visual indication to the learner as to which SCOs within a course are available to access and which they cannot. Navigation between SCOs with pre-requisites can sometimes be problematic as writing a completion to the LMS does not force a refresh of the Course Player Outline or the Course Player Toolbar, meaning that the next SCO may not appear available even when the pre-requisite is met until the learner has exited and then re-entered the course. To circumvent this, it is a good idea to use an intermediary SCO that the learner is able to access. This will then force the Course Player Outline and Course Player Toolbar to refresh and allow the learner to progress. The intermediary SCO simply asks the question “Is the next button now available, if so click to continue to the next topic. If the next button is not available you still have to complete topic n, click on...etc”

We have developed a simple resource which includes an instructional HTML page and a PDF guide to implementing the solution at the following URL:

[http://www.seertechsolutions.com/all\\_assets/resources/developer/cross-sco.zip](http://www.seertechsolutions.com/all_assets/resources/developer/cross-sco.zip)

- 7) **Player Timeout & Course Exit** – One issue with using one large content object that bookmarks and tracks via CMI is in relation to the iLearning player/application timeouts. Navigation within the custom content will not reset the timer and will ***not actually write back a successful attempt without a valid exit from the iLearning player.***

This means that the learner could spend 2 hours in a module and then exit close the player which has timed out and the progress would not be written back to the database. Progress is written on exit or navigation within modules (precluded by one big module).

This situation can also occur if the user closes down the browser window without first exiting the course by clicking on the ‘Home’ or ‘Exit’ buttons located ON THE PLAYER TOOLBAR. By closing down the browser window, saved lesson status information may NOT be written to the LMS user performance tables. The system will still attempt to write the data but does not have the same control as when the ‘Home/Exit’ button is click. Exit from the course MUST be via user clicking on ‘Home’ or ‘Exit’ on the player toolbar to give the system the best possible chance to track the session data.

Oracle has acknowledged this is a problem and is providing a fix in version 5.2 of the product (July 2009). In the short term please educate learners of this limitation, extend the timeout of iLearning to as large as possible (based on normal content duration) and split content into multiple RCO's if possible. A standard timeout set is 8 hours for the Player and 8 hours for the Session at least until the timeout issue is resolved in 5.2.

8) **Testing & Development** - It is highly recommended that custom content is tested in the Oracle iLearning player throughout the development process. Content developers should not produce finished courses before testing with Oracle iLearning to ensure interoperability. From a development perspective, the following testing process is recommended:

1. View an existing content piece in the client iLearning environment that is representative of the course you will be developing. This will include reviewing use of the Player Window, navigation, use of Toolbar options etc. Ensuring your content is going to fit in the content player window without producing excessive scrolling is vital at the early stages of development.
2. Develop a Test Object for deployment in iLearning. This should as a minimum test the following:
  - Bookmarking
  - Write Score (if applicable)
  - Change lesson status (pass or complete)
  - Course Resume – check
    1. Date, time, progress shown from cumulative prior session
    2. Topic completion
    3. Lesson completion
  - Check Suspend data – use “&,\*,[,~,|”
3. Test your developed courses periodically in ADL Test Suite or Reload Editor before loading to the LMS. Unless course sequencing is required, use SCORM 1.2 RTE-1 as the development standard, or if you use RTE-2+, ensure that the course checks for support for RTE-2+ and can revert to RTE-1 if RTE-2+ support is not available. Ensure (for SCORM courses), that you insert the Oracle XSD's in lieu of the authoring package created ones.

Please refer to the Oracle Content Deployment Guidelines provided as part of this document as it has a detailed description of many content related issues.



## General Course Requirements

Course Requirements	Guidelines
Screen dimensions	All screens should be built for a maximum screen size of 790 x 545 pixels (if using 1024 x 768 as standard screen resolution). An option should be provided for the learner to expand the course template if they are using a 1024 monitor. This will also be dependent on whether the developer will use the iLearning course player outline as a navigation instrument in the course.
Language	All onscreen text must be written in plain English.
How to complete this course	The home page must contain an explanation of how the learner should complete the course, the course duration, and assessment requirements. The page should also cover off how to ensure effective tracking.
Topic summaries	On the home page, each topic or section of the course must contain a summary so that they learner understands its content and expected completion time. This is generally done by a rollover.
Logos	Logos are only presented in the top left corner of the course template. The use of the corporate logo is governed by the project manager.
Help	The course should contain a help section to answer potential learner questions.
Pop-ups	The course should not contain pop-up windows that spawn from the course content pages and the course should operate within the iLearning environment.

## Navigation Requirements

Navigation Requirements	Suggested Guidelines
Navigation prompts	Nav prompts should be clearly displayed to advise the learner of the next action. (eg *Click Continue to view the case study)
Navigation buttons	Primary nav buttons should be clearly displayed at bottom of the course template.
Button labels (primary)	The available nav button labels in the Player Toolbar are: 'Outline', 'Home', 'Exit', 'References', 'Help', 'Previous', 'Next', 'Rating', 'Notes', 'Chats', 'Forums'. Each of these controls display of either course pages (in case of navigation
Button labels (interactions)	The available interaction labels are: 'Listen', 'View', 'Play', 'Done'.

Save & Exit	The 'Home' (Exit to Home Page)' and 'Exit' (Close Player Window) buttons are always located in the top right corner of the player toolbar or course template. Note that only use 'Exit' if the course has launched in its own window.
Course exit screen	On exiting the course, the end screen must explain how to save the course on Oracle iLearning by clicking the 'Go to Home' button in the player toolbar.
Dialog boxes	A modal dialog box should be displayed when the learner presses the 'save & exit' button to confirm that they wish to exit the course or continue.

### Style Requirements

Style Requirements	Guidelines
Course size / RLO size	<p>The preferred learning duration for a single course is a maximum of 20 minutes.</p> <p>The developer should structure the course as small reusable learning objects (RLO) with the following parameters:</p> <ul style="list-style-type: none"> <li>■ Each RLO of no longer than 2 minutes duration</li> <li>■ Each RLO must link to other RLO's using embedded navigation or the iLearning Course Player navigation (which requires the Outline to be turned 'ON')</li> <li>■ Each RLO should contain consistent navigation elements with other RLO's used in the course</li> <li>■ Each RLO should not be over 2 Mb in Size.</li> <li>■ Each page should be less than 100Kb in size and have a target load time of &lt; 5 seconds.</li> </ul> <p>It is preferable for a page to be constructed (non Flash) for progressive loading if page load times are suspect.</p>
No Plug-ins	The platform uses IE6.0+, Windows Media Player and Macromedia Flash Player 5+ as standard. No other plug-ins can be installed on the platform. Legal mime types can be authorized in the course metadata or in the course properties.
Images	Images should be compressed and smoothed to ensure file size is minimised. The degree of compression is at the discretion of the developer.
Audio	The use of audio in the course is governed by a set of standards noted in the guide.
Video	The use of video in the course is governed by a set of standards

	<p>noted in the guide.</p> <p><a href="http://www.sorensonmedia.com/">http://www.sorensonmedia.com/</a></p> <p>Sorenson Squeeze is a product used by other customers.</p>
SCORM conformance	The course must be tested on the OLM/iLearning platform to ensure correct CMI tracking. This is relevant for SCORM 1.2 and 2004 (Version 5.2 onwards)
Oracle i-learning/OLM conformance	The course should be tested on an internet-based Oracle iLearning test suite provided by Seertech, Oracle Corporation or recommended partner.
Quality assurance	The course must be reviewed by the developer against agreed QA standards to ensure all requirements are met.
Workbench performance test	If the course utilises significant audio and video elements, it must be tested at the company content test lab to ensure it meets minimum performance standards. The performance benchmarks are set at 128kbps, however this may vary depending on end user hardware and connectivity constraints.

## 8. RECOMMENDED CONTENT AUTHORIZING PACKAGES

The following outlines recommended content / authoring packages have been tested by Seertech and known to work with Oracle iLearning as at the date of this document:

### Authoring Tools:

- [Adobe Captivate](#)
- [Adobe Dreamweaver](#)
- [Adobe Flash](#)
- [Articulate Engage](#)
- [Articulate Presenter](#)
- [Articulate Quizmaker](#)
- [Oracle UPK](#)
- [Questionmark Perception](#)
- [Rapid Intake Proform](#)
- [Rapid Intake Unison](#)
- [Trivantis Lectora](#)

### Content / Libraries:

- [Element K](#)
- [Moody's](#)
- [Skillsoft](#)

Inclusion on this list does not mean Seertech endorses the provider or content, only that the content or tools are known to have compatibility with Oracle iLearning. Non-inclusion in this list does not mean that the product or content is not compatible with Oracle iLearning – it just means that we have not tested it yet.

## 9. CONTACT DETAILS

If you have any questions in relation to the information provided in this document, please contact the author:

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