



GE AICC/SCORM eLearning - Technical Specifications

Revised 9/26/2016

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Categories	Check List Items	Remarks
Core Load Specifications		
All eLearning developed for GE is expected to work well with the Core Load specifications provided below:		
Browsers	<input type="checkbox"/> Desktop/Laptop: Internet Explorer 8, and Internet Explorer 11 Enterprise Mode, FireFox (latest) and Chrome (latest), Safari (latest) <input type="checkbox"/> iPad: Safari	
Operating Systems	<input type="checkbox"/> Desktop/Laptop: Windows 7, MAC OS X <input type="checkbox"/> iPad: iOS 8 and up	
Hardware Model	<input type="checkbox"/> iPad: iPad 3 and above	
Minimum Resolution	<input type="checkbox"/> Desktop/Laptop: 1024 x 768 <input type="checkbox"/> iPad: Fit landscape mode	
Plugin Support	<input type="checkbox"/> iPad: NA	
Learning Standards		
	<input type="checkbox"/> All eLearning courseware needs to follow AICC HACP, SCORM 1.2, or SCORM 2004 standards <input type="checkbox"/> GE recommends the use of SCORM 1.2 standards	
LMS Platform		
	<input type="checkbox"/> GE currently uses SumTotal v. 8.9 (currently known as GE Learning)	
Approx. Timeline for hosting a course in GE Learning		
	<input type="checkbox"/> Budget for approximately 2 weeks from raising a GCRM ticket to have a course hosted in GE Learning Production	
Generic AICC/SCORM Publish Settings in Rapid Authoring tools		
	<input type="checkbox"/> Standard - AICC/ SCORM 1.2 / SCORM 2004 <input type="checkbox"/> Set Pass Percentage – 80%(Recommended) <input type="checkbox"/> Completion Criteria – Completion of Course & Quiz (or) Completion of only Course (or) Completion of only Quiz <input type="checkbox"/> Status Representation – Incomplete/Complete (or) Passed/Failed	
Authoring / Development Tools		
GE recommends the use of tools/templates that publish an HTML5 output, which is mobile/device compatible.		
Rapid Authoring Tools	<input type="checkbox"/> Recommended but not restricted to: Articulate Storyline, Articulate Presenter, Captivate, Ancile uPerform, Trivantis Lectora, Techsmith Camtasia	
Custom Development	<input type="checkbox"/> Recommended: HTML5 template created using HTML, JavaScript, CSS 2, and XML	
Develop Exams		



	<ul style="list-style-type: none"> <input type="checkbox"/> For exams developed using Rapid Authoring tools, use these publish settings: <ul style="list-style-type: none"> o AICC packages <ul style="list-style-type: none"> ▪ Exam embedded within the course: Pass back the actual score and status of "Complete/Incomplete" ▪ No exam embedded within the course: Pass back the status of "Complete/Incomplete" o SCORM packages: <ul style="list-style-type: none"> ▪ Exam embedded within the course: Pass back the actual score and status of "Passed/Failed" ▪ No exam embedded within the course: Pass back the status of "Complete/Incomplete" 	
Usage of Plugins		
	<ul style="list-style-type: none"> <input type="checkbox"/> Use of Flash or plug-ins are not allowed as Mobile devices will block Flash and Java content by default and there are no provisions to enable them <input type="checkbox"/> New content should not rely on plugins including Flash and other third party proprietary plugins, especially if you foresee a shelf-life of more than two years for the content 	
Usage of Media		
Video	<ul style="list-style-type: none"> <input type="checkbox"/> Videos should not be longer than three minutes <input type="checkbox"/> Video player must have "progressive download" capability <input type="checkbox"/> All video files need to be optimized <input type="checkbox"/> Video files should include a transcript and CC text <input type="checkbox"/> Maximum video file size should not exceed 5 MB 	
	<p>Encoding setting needs to strictly follow the guidelines:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Video Container: MP4 <input type="checkbox"/> Video Codec: H264 <input type="checkbox"/> Bitrates: 768kbs VBR / 30fps (key frames per second) <input type="checkbox"/> Size: 480p (720×480, 704×480, 640×480, 480×480) <input type="checkbox"/> Filtering: Deinterlace <input type="checkbox"/> Audio Codec: AAC <input type="checkbox"/> Bitrates: 64kbs VBR mono 	
Audio	<ul style="list-style-type: none"> <input type="checkbox"/> Audio Format: MP3, MP4 (recommended) <input type="checkbox"/> Codec: MP3, AAC (recommended) <input type="checkbox"/> Use the same settings provided for Video, without the video channel 	
Images	<ul style="list-style-type: none"> <input type="checkbox"/> For photographic type images, JPG is best <input type="checkbox"/> For logos or images with blocks of flat color and no gradients, GIF or PNG8 <input type="checkbox"/> For images using effects such as drop shadows or glows, which also require transparency, choose PNG24 	

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Visual Design		
Branding	<ul style="list-style-type: none"> <input type="checkbox"/> Refer to Brand Central for GE visual branding guidelines – refer http://www.gebrandcentral.com/ 	
Text and Fonts	<ul style="list-style-type: none"> <input type="checkbox"/> Recommended: GE Inspira font for development <input type="checkbox"/> Use consistent color for text and graphics throughout a course <input type="checkbox"/> Use San Serif fonts and avoid decorative font families <input type="checkbox"/> Break up blocks of text to make it easier for the learner to scan the content 	
Standards for Mobile Devices		
	<ul style="list-style-type: none"> <input type="checkbox"/> All UI design is to be touch optimized <input type="checkbox"/> There should be no important messages in tooltips or right-click <input type="checkbox"/> Images need to be large in order to be navigated by touch <input type="checkbox"/> If using Quick Response (QR) Codes, makes sure images to be scanned are large enough and in good focus <input type="checkbox"/> Keep in mind of the following screen sizes: 960x540 iPhones , 2560x1440 tablet <input type="checkbox"/> Use of flash is not supported on all mobile devices. Refrain from using flash <input type="checkbox"/> Limit scrolling to one direction <input type="checkbox"/> Keep mobile screen simple and uncomplicated <input type="checkbox"/> Extensive Mobile Web Best Practices are available at - https://www.w3.org/TR/mobile-bp/ 	
Web Content Accessibility/ 508 Compliance		
	<ul style="list-style-type: none"> <input type="checkbox"/> Comply with current industry standards concerning training and website accessibility to individuals with vision and hearing impairments and/or other disabilities. <input type="checkbox"/> Keep navigation simple and the style consistent <input type="checkbox"/> Include closed captioning text with videos and animations <input type="checkbox"/> Screen readers are used to read the alternative text (alt tags) in a web browser. Use alt tags when possible <input type="checkbox"/> When displaying graphics and data, provide a meaningful description for the learner beneath the chart <input type="checkbox"/> Minimize the use of complex navigation, like drop down lists and excessive clicking <input type="checkbox"/> Do not render text into picture formats. Screen readers cannot read static images 	

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Development and Coding Guidelines		
	<ul style="list-style-type: none"> <input type="checkbox"/> All resources have to be externalized <input type="checkbox"/> All text resources have to be stored in flat files and editable via any text editor. XML and JSON formats are recommended <input type="checkbox"/> All URL have to be relative and it is strictly forbidden to have hard coded links to the LMS in the module <input type="checkbox"/> Vendors and/or course owners shall provide all course (final output) and source files (assets) when sending a GCRM request to host the course files in Production. <input type="checkbox"/> Externalize hyperlinks within the courses going to documents. <input type="checkbox"/> Do not include links to content/sites that require SSO access and/or require a separate set of credentials. <input type="checkbox"/> Do not include native media elements in the training (for example, do not include Web-Ex format of videos in training. Always convert the videos into a MP4 format and ensure that they are included as part of a SCORM/AICC package.) <input type="checkbox"/> Read and Acknowledgements: Files such as Documents, mp4, video files etc. should have a SCORM/AICC wrapper and/or be developed in a Rapid Authoring tool and submitted as a package for hosting on the LMS 	
Testing of Courses		
	<ul style="list-style-type: none"> <input type="checkbox"/> Prior to providing to LMS solutions team, eLearning developer needs to test and verify that course is working based on GE Core Load Specs <input type="checkbox"/> All eLearning courses need to be tested based on GE Core Load Specs on F5 VPN or myApps <input type="checkbox"/> All courses must be confirmed in Production that they behave as tested in Dev/Staging area <input type="checkbox"/> Each course shall be tested for mobile compatibility 	
	<p>LMS solutions team shall test each course on the LMS Dev environment to check:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Whether the content launches fine from the LMS <input type="checkbox"/> Whether course launches on the last exited page <input type="checkbox"/> Whether on completion of the course, the course is marked complete in the LMS and given credit <input type="checkbox"/> Whether all functionality built into the course works the way it was set out to do <input type="checkbox"/> Whether the Bookmark functionality works fine <input type="checkbox"/> Whether all the course content is in place without any broken links 	

Additional Resources

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- Link to Branding Guidelines: <http://www.gebrandcentral.com/>
- Link to Web Content Accessibility: <https://www.w3.org/WAI/intro/wcag>
- Link to section 508: <http://www.section508.gov/>
- Link to Mobile Development Standards: <https://www.w3.org/TR/mobile-bp/>