Department of Defense
INSTRUCTION

SUBJECT: Development, Management, and Delivery of Distributed Learning

References: (a) DoD Directive 1322.18, "Military Training," September 3, 2004
(b) DoD Instruction 1322.20, "Development and Management of Interactive Courseware for Military Training," March 14, 1991
(c) DoD Directive 8320.2, "Data-Sharing in a Net-Centric Department of Defense," December 2, 2004
(d) DoD Directive 8100.1, "Global Information Grid (GIG) Overarching Policy," September 19, 2002
(e) through (o), see Enclosure 1

1. PURPOSE

This Instruction implements DoD policies, assigns responsibilities, prescribes procedures, and establishes information requirements to develop, manage, and deliver distributed learning for DoD personnel pursuant to Reference (a).

2. APPLICABILITY

2.1. This Instruction applies to the Office of the Secretary of Defense, the Military Departments, the Chairman of the Joint Chiefs of Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities in the Department of Defense (hereafter referred to collectively as the "DoD Components").

2.2. This Instruction excludes:

2.2.1. Full-scale simulators, part-task training aids and devices, unless there is a structured learning component.

2.2.2. Interactive Multimedia Instruction and courseware developed in a non-digital format or media (e.g., paper, film, and magnetic tape), according to Reference (b).

2.2.3. Those portions of instructor and faculty-led web-based instruction incorporating instant messaging, e-mail, live telecasts, webcasts, or interactive television.

3. <u>DEFINITIONS</u>

Terms used in this Instruction are defined in Enclosure 2. Additional terms are defined in Enclosures 3 and 4.

4. <u>POLICY</u>

It is DoD policy that:

4.1. Embedded training and distributed learning shall be considered as the first option to meet training requirements of defense technology projects and acquisition programs (Reference (a)).

4.2. The DoD Components shall share training resources to the maximum extent possible. A joint architecture and common standards for training technology shall be developed (Reference (a)).

4.3. Information is shared as broadly as possible except where limited by law, policy, or security classification. Data assets produced as a result of the assigned responsibilities are visible, accessible, and understandable to the rest of the Department of Defense as appropriate and in accordance with DoD Directive 8320.2 (Reference (c)).

5. <u>RESPONSIBILITIES</u>

5.1. The <u>Under Secretary of Defense for Personnel and Readiness</u> (USD(P&R)) shall:

5.1.1. Issue instructions and guidelines to implement distributed learning. Exercise authority for developing, managing, and delivering distributed learning. Serve as the proponent for distributed learning policy, programs, and guidelines for education, training, and job performance aids according to Reference (a).

5.1.2. Develop policy for and oversee joint architectures for standards for integrating distributed learning environments to support training to include capabilities, implementation, and conformance to common standards.

5.1.3. Oversee distributed learning development, supporting all DoD acquisition programs, including policy for embedded training and performance aids.

5.1.4. Identify procedures for determining distributed learning content and product conformance to the current published Sharable Content Object Reference Model (SCORM) requirements.

5.1.5. Plan for the long-term maintenance of SCORM through the Advanced Distributed Learning (ADL) Initiative.

5.1.6. Develop, fund, and maintain the ADL Registry (ADL-R).

5.1.7. Monitor implementation of this Instruction and related programs and issue such additional policy and guidance as may be necessary.

5.2. The <u>Under Secretary of Defense for Acquisition, Technology, and Logistics</u> (USD(AT&L)) shall:

5.2.1. Require DoD acquisition category level I programs initiated after the effective date of this Instruction to comply with this Instruction. This includes embedded training and performance aiding, per subparagraph 5.1.6 of Reference (a). Acquisition category level II and III programs initiated after the effective date of this Instruction should comply where appropriate and cost effective.

5.2.2. The <u>Defense Technical Information Center</u> (DTIC), under the USD(AT&L) and operating under the authority, direction, and control of the Director, Defense Research & Engineering, shall operate and maintain the ADL-R according to Enclosure 3.

5.3. The <u>Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer</u> shall coordinate network security issues and training delivery infrastructure and architectures related to distributed learning with USD(P&R) pursuant to Reference (c) and DoD Directive 8100.1 (Reference (d)).

5.4. The <u>Heads of the DoD Components</u> shall:

5.4.1. Develop and implement regulations and procedures for developing, managing, and delivering distributed learning consistent with this Instruction and other applicable DoD Directives.

5.4.2. Support the other DoD Components in sharing, exchanging, and reusing distributed learning content.

5.4.3. Provide life-cycle management for distributed learning content.

5.4.4. Designate a single Repository Proponent to be responsible for authorizing the registration of a learning content repository according to Enclosure 3.

6. <u>PROCEDURES</u>

The DoD Components shall follow procedures concerning front-end analysis (FEA), SCORM conformance, repositories, registration, intellectual property, royalties, and licensing of distributed learning:

6.1. Distributed learning content shall be developed using a FEA to identify costs, target audience(s), content, learning objectives, and optimal delivery method(s).

6.2. All acquired or developed DoD systems shall conform to the SCORM (current version) to ensure accessibility, durability, reusability, maintainability, and interoperability. This includes DoD systems designed to:

6.2.1. Deliver, track, report on, and manage distributed learning content, learner progress, and learner interactions.

6.2.2. Deliver, track, report on, and manage content and systems.

6.3. All acquired or developed SCORM-conformant content packages (CPs) shall:

6.3.1. Include metadata.

6.3.2. Be registered in the ADL-R according to Enclosure 3.

6.3.3. Be maintained in DoD Components' repositories that are searchable and accessible, consistent with DoD information security and information technology policies, according to DoD CIO Memorandum (Reference (e)).

6.3.3.1. These repositories shall be registered in the ADL-R according to Enclosure 3. Content with classified metadata is exempted from registering in the ADL-R under this subparagraph pending published guidance for alternative content management.

6.3.3.2. The ADL-R shall be searched prior to beginning any new distributed learning content development or acquisition to identify available content suitable for sharing, reuse, or repurposing, through minor revisions, as part of the formal FEA process. The Defense Automated Visual Information System/Defense Instructional Technology Information System shall also be searched for learning content in other media.

6.4. Intellectual property rights shall be described in the ADL-R. Contract documents for distributed learning content shall invoke DFARS Subpart 227.71 and 227.72 (Reference (f)) to obtain the rights needed for the Government to be able to secure the minimum necessary rights and/or product according to Enclosure 4.

6.5. Distributed learning content creation, sequencing, online display, and delivery software and licenses shall be acquired or procured on an upfront royalty basis. The Government shall not agree to pay royalties, recurring license or run-time fees, use tax, or similar additional payments for distributed learning content developed for and by the Department of Defense in other than unusual circumstances, such as intellectual property disputes.

6.6. Distributed learning content acquired or developed before the effective date of this Instruction (also referred to as legacy content) may be registered in the ADL-R at the discretion of the DoD Components. Specific procedures for registering non-SCORM conformant content will

be published separately. Legacy content shall be made SCORM conformant and registered in the ADL-R whenever the owner of that content determines it is relevant, appropriate, and cost-effective. This includes browser-based visual information products developed according to DoD Instruction 5040.02 and DoD Instruction 5040.07 (References (g) and (h)).

    6.7. Both the repositories and the learning content available through the repositories will be identified using the Corporation for National Research Initiatives (CNRI) Handle System®. DTIC, in conjunction with CNRI and the respective DoD Components, will establish unique identifiers for each repository and its learning content (see Enclosure 3).

7. <u>EFFECTIVE DATE</u>

This Instruction is effective immediately.
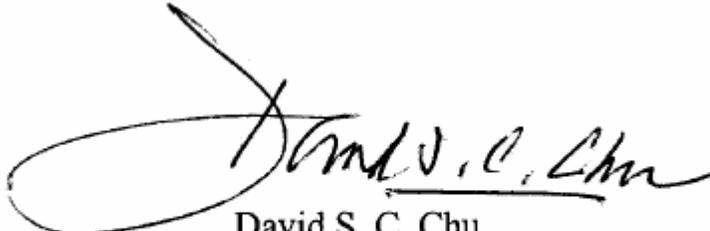
David S. C. Chu
Under Secretary of Defense
(Personnel and Readiness)

Enclosures-4
    E1. References, continued
    E2. Definitions
    E3. ADL Registry Description
    E4. Acquisition Guidelines for Distributed Learning Content and Systems

E1. ENCLOSURE 1

REFERENCES, continued

(e)   DoD Chief Information Officer Memorandum, "DoD Net Centric Data Strategy," May 9, 2003

(f)   Defense FAR Supplement, Subpart 227.71, "Rights in Technical Data," and Subpart 227.72, "Rights in Computer Software and Computer Software Documentation," June 21, 2005

(g)   DoD Instruction 5040.02, "Visual Information (VI)," August 30, 2005

(h)   DoD Instruction 5040.07, "Visual Information (VI) Production Procedures," August 30, 2005

(i)   DoD Directive 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," May 5, 2004

(j)   DoD Directive 8000.1, "Management of DoD Information Resources and Information Technology," February 27, 2002

(k)   DoD Directive 8500.1, "Information Assurance," October 24, 2002

(l)   DoD Directive 8910.1, "Management and Control of Information Requirements," June 11, 1993

(m)   Office of Management and Budget Memorandum, "Policies for Federal Agency Public Websites," December 17, 2004[1]

(n)   MIL-PRF-29612B, Performance Specification Training Data Products, current edition[2]

(o)   MIL-HDBK-29612-3A, Development of Interactive Multimedia Instruction (IMI), August 31, 2001[3]

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[1] This reference is available from www.firstgov.gov/webcontent/index.shtml.
[2] This reference is available from http://dtswg.fedsun.navy.mil/documents.htm.
[3] This reference is available from http://dtswg.fedsun.navy.mil/documents.htm.

E2. ENCLOSURE 2

<u>DEFINITIONS</u> (additional definitions are in Enclosures 3 and 4)

E2.1.1. <u>Accessibility</u>. The ability to locate and access content from multiple locations and deliver that content to other locations.

E2.1.2. <u>Advanced Distributed Learning</u> (ADL). An evolving, outcomes-focused approach to education, training, and performance aiding that blends standards-based distributed learning models emphasizing reusable content objects, content and learning management systems, performance support systems/devices, web applications services, and connectivity.

E2.1.3. <u>ADL Registry</u> (ADL-R). A DoD service, managed by DTIC, for registering the existence, location, description, and other relevant properties of distributed learning content developed or acquired by the Department of Defense. The ADL-R enables the discovery and reuse of content regardless of its location and/or origin. The registry and associated procedures provide a centrally searchable set of records representing the distributed content objects. The registration process results in each content object being identified by a unique and persistent identifier that may be used as a constant reference to the object over changes in its location and other access details. The identifier system used will be an implementation of the Corporation for National Research Initiatives Handle System.

E2.1.4. <u>ADL Initiative</u>. The ADL Initiative provides a collaborative Federal framework for using distributed learning sponsored by the Department of Defense. The ADL Initiative provides access to the highest-quality education, training, and performance aiding that may be tailored to individual needs and delivered cost-effectively, anytime and anywhere.

E2.1.5. <u>Corporation for National Research Initiatives</u> (CNRI). A not-for-profit organization formed in 1986 to foster research and development for the National Information Infrastructure. CNRI promotes various collaborative activities that create productive synergies among government agencies, universities, and private organizations; it undertakes targeted research in technologies for management of digital objects and high-speed networking.

E2.1.6. <u>Defense Automated Visual Information System</u> (DAVIS). DAVIS provides an online resource (http://dodimagery.afis.osd.mil/davis[4]) about visual information (VI), audiovisual productions, and interactive multimedia instruction products able to support training, command information, and operational missions.

E2.1.7. <u>Defense Instructional Technology Information System</u> (DITIS). An online, unrestricted, full-text searchable standard DoD-wide database containing content-descriptive about Interactive Multimedia Instruction products typically used in military training (http://dodimagery.afis.osd.mil/davis). DITIS provides content descriptions about proposed

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[4] Inquiries on the links should be referred to help1322@jointadlcolab.org.

productions, productions in progress, and completed courseware products. DITIS products are available for all DoD Components and United States Coast Guard customers.

E2.1.8. <u>Distance Learning</u>. Structured learning that does not require the physical presence of the instructor.

E2.1.9. <u>Distributed Learning</u>. Structured learning mediated with technology that does not require the physical presence of the instructor. Distributed learning models can be used in combination with other forms of instruction or it can be used to create wholly virtual classrooms.

E2.1.10. <u>Distributed Learning Content</u>. Sharable Content Objects, learning objects, and media assets used in distributed learning.

E2.1.11. <u>Durability</u>. The ability to withstand technology evolution and/or changes without costly redesign, reconfiguration, or recoding.

E2.1.12. <u>Embedded Training</u>. Capabilities built into, strapped onto, or plugged into operational materiel systems to train, sustain, and enhance individual and crew skill proficiencies necessary to operate and maintain the equipment.

E2.1.13. <u>Front-End Analysis</u>. A structured process used to examine training requirements and identify alternative approaches to training job tasks. The process identifies job tasks to be performed, analyzes the skills and knowledge needed to perform them, assesses the technologies available for training the skills and knowledge, performs a media analysis to recommend the best mix of delivery media, and provides cost and lead-time comparisons for the feasible alternatives.

E2.1.14. <u>Interactive Multimedia Instruction</u> (IMI). Applies to predominantly interactive, electronically delivered training, education, and instructional support products. IMI products include instructional software and software management tools used to support instructional programs.

E2.1.15. <u>Interoperability</u>. The ability to take instructional components developed in one system and use them in another system.

E2.1.16. <u>Learning</u>. Acquiring knowledge, skills, and attitudes (integrating education, training, and performance support in a comprehensive, mutually supportive system).

E2.1.17. <u>Legacy Content</u>. Content developed and managed using DITIS, in accordance with Reference (b), and non-SCORM-conformant content developed prior to the effective date of this Instruction.

E2.1.18. <u>Metadata</u>. Information describing characteristics of data; data or information about data; or descriptive information about an entity's data, data activities, systems, and holdings. For example, learning resources that are described with discovery metadata may be systematically searched for and retrieved for use and reuse (Reference (c)).

E2.1.19. <u>Performance Aiding</u>. Applications designed to run simultaneously with other applications or embedded within other applications that provide support for the user in accomplishing specific tasks; e.g., an Interactive Electronic Technical Manual, Interactive Electronic Technical Publication, Interactive Electronic Technical Document, or Interactive Electronic Technical Information System.

E2.1.20. <u>Production</u>. In visual information, a complete, linear or non-linear presentation, sequenced according to a plan or script, that is created from original or stock motion or still images, with or without sound, for the purpose of conveying information to, or communicating with, an individual or audience.

E2.1.21. <u>Repository</u>. A storage and retrieval mechanism for digital media that may or may not be searchable.

E2.1.22. <u>Reusability</u>. The flexibility to incorporate instructional components in multiple applications and contexts.

E2.1.23. <u>Sharable Content Object</u> (SCO). The SCO represents a collection of one or more digital assets that include a specific launchable asset that utilizes the SCORM Run-Time Environment to communicate with Learning Management Systems (LMS). An SCO represents the lowest level of granularity of learning resources that can be tracked by an LMS using the SCORM Run-Time Environment.

E2.1.24. <u>Sharable Content Object Reference Model</u> (SCORM). The SCORM is a collection of specifications that defines a browser-based learning Content Aggregation Model, Run-time Environment, and Sequencing and Navigation protocols for reusable content objects. At its simplest, it is a model that references a set of interrelated technical specifications and guidelines designed to meet DoD high-level requirements for distributed learning content.

E2.1.25. <u>Visual Information</u> (VI). Information in the form of visual or pictorial representations of person(s), place(s), or thing(s), with or without sound. VI includes still photographs, digital still images, motion pictures, analog and digital video recordings, and hand- or computer-generated graphic art and animations that depict real or imaginary person(s), place(s), and/or thing(s), and related captions, overlays, and intellectual control data.

E3. ENCLOSURE 3

ADL REGISTRY DESCRIPTION

E3.1. OVERVIEW

E3.1.1. The DTIC shall maintain the ADL-R as the DoD's central registry for content repositories and SCORM Content Packages (CPs). The ADL-R shall become operational 60 days after approval of this Instruction. After that date, all content repositories that store SCORM CPs shall be registered with the ADL-R. All newly developed SCORM CPs must be stored in a registered repository and individually registered with the ADL-R.

E3.1.2. The ADL-R shall store metadata about SCORM CPs and the repositories in which they are stored. The DTIC shall provide a service to enable searching of the registered metadata and shall return results with identifiers that may be resolved to appropriate access points.

E3.2. TERMS

E3.2.1. Content Aggregation Model (CAM). A set of responsibilities and requirements for building content and content organizations (e.g., course, lessons, modules) based on a natural taxonomy. The CAM contains information on creating CPs, applying metadata to the components in the CP and applying sequencing and navigation details in the context of a CP.

E3.2.2. Content Package (CP). Content that is packaged in a known manner and file format, providing a consistent form for describing content structures, learning content, the metadata that describe the various components of the content structures, and sequencing and navigation rules.

E3.2.3. Content Repository. An accessible digital storage system containing SCORM CPs.

E3.2.4. Handle. A handle is a unique persistent digital object identifier composed of two parts separated by a forward slash: a prefix, that for the ADL-R will always begin with 100.50, and a suffix consisting of a string of numbers and/or characters unique to that prefix; e.g., 100.50/abc. The prefix includes a unique identifier assigned to a repository or other defined collection, such as "100.50.10" in the example where "10" is assigned to the ADL Initiative. The suffix identifies a registered package such as "abc" in the example. For the Department of Defense, the prefix will always be numeric while the suffix may be alphanumeric depending on a repository's preferred schema; e.g., a Visual Information Record Identification Number (VIRIN).

E3.2.5 Learning Content Repository. A metadata repository for SCOs) that logically functions as a catalog, providing a robust, central storage of metadata provided by content providers, output interfaces to the repository that shall provide data to external services, such as search, and browse, and input interfaces that shall enable the addition of new data and update of existing data.

E3.2.6. <u>Naming Authority</u> (NA). A Naming Authority is a unique identifier assigned to a repository and used as the first part of a handle.

E3.2.7. <u>Registered Repository</u>. An activity approved by the DoD Component that has a DTIC-managed account with the ADL-R.

E3.2.8. <u>Repository Manager</u>. The entity given administrative rights to the ADL-R for a learning content repository.

E3.2.9. <u>Repository Proponent</u>. The office representing the DoD Component that shall authorize repositories to be registered with the ADL-R.

E3.2.10. <u>SCORM Content Packages</u> (CPs). CPs as defined by the SCORM Content Aggregation Model (current version).

E3.3. <u>REPOSITORY REGISTRATION</u>

E3.3.1. Content repositories containing SCORM CPs shall be registered with the ADL-R. The access rights and means to the registered repositories shall be subject to all local policies with regard to authentication, security, and intellectual property rights. Access restriction and its enforcement shall be the responsibility of the Repository Manager. The content repository shall conform to DoD net-centric principles for allowing visibility and access to content, Reference (a). This includes exposing repository content as web-accessible modules where applicable. Additionally, the content repository shall be searchable via mechanisms provided by enterprise core services including the Enterprise Discovery Interface and specifications according to DoD Directive 4630.5 (Reference (i)), DoD Directive 8000.1 (Reference (j)), DoD Directive 8500.1 (Reference (k)), and DoD Directive 8910.1 (Reference (l)).

E3.3.2. The Repository Manager shall provide metadata describing the repository to the ADL-R. The ADL-R metadata requirements for repositories are maintained on the ADL-R web site http://handle.dtic.mil/100.3/1. The metadata set includes tags (elements) such as **a unique identifier, description, owner, usage rights, access information,** etc. The unique identifier is a Handle (based on the Handle System®) that uses the NA assigned to the registered repository.

E3.3.3. The Repository Manager shall submit the metadata to the ADL-R.

E3.4. <u>CP REGISTRATION</u>

E3.4.1. SCORM CPs shall be stored in a content repository. The access rights and means to the content shall be subject to all local policies with regard to authentication, security, and intellectual property rights. Access restriction and its enforcement shall be the responsibility of the Repository Manager. The content repository shall conform to DoD net-centric principles for allowing visibility and access to content within (Reference (l)). This includes exposing repository content as web-accessible modules where applicable. Additionally, the content repository shall be

searchable via mechanisms provided by enterprise core services including the Enterprise Discovery Interface and specifications (References (i), (j), (k), and (l)).

E3.4.2. The Repository Manager shall provide metadata describing each SCORM CP to the ADL-R. The ADL-R metadata requirements for CPs are maintained on the ADL-R web site http://handle.dtic.mil/100.3/1. The metadata set includes tags (elements) such as **a unique identifier, description, keywords, usage rights, access information,** etc. The unique identifier is a Handle (based on the Handle System®) that uses the NA assigned to the repository.

E3.4.3. The Repository Manager shall submit the metadata to the ADL-R website.

E3.5. REPOSITORY MANAGEMENT

E3.5.1. Each DoD Component shall designate a Repository Proponent that shall be responsible for authorizing the registration of a repository. The Repository Proponent shall verify to the ADL-R managers that repositories within its organization are authorized to have registration administration rights.

E3.5.2. Content Registration. Following registration of the repository, the Repository Manager is thereafter responsible for registering new SCORM CPs with the ADL-R to the ADL registration process in accordance with section E3.4.

E3.5.3. The Repository Manager shall notify DTIC, as necessary, when the mission, function, or organizational alignment of the repository changes.[5]

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[5] Procedures involving repository management, additional functions, and new features will evolve as repositories join the ADL-R federation. The most current information is published on the ADL-R web site http://handle.dtic.mil/100.3/1.

E4. ENCLOSURE 4

ACQUISITION GUIDELINES FOR DISTRIBUTED LEARNING CONTENT AND SYSTEMS

E4.1. INTRODUCTION

This Enclosure includes guidance for assisting Defense acquisition professionals to include appropriate language for SCORM conformant products in their contracting documents. These are only high-level statements. More detailed requirement statements regarding the application of SCORM may be required for specific procurements.

E4.2. TERMS

E4.2.1. ADL Certification Testing Center. An activity approved by the ADL Initiative, to perform SCORM conformance testing on a fee-for-service basis and provide certification documentation, as appropriate.

E4.2.2 Certification. A product or service is certified when a qualified, neutral third party conducts a formal evaluation process typically using a rigorous, accurate, reliable, validated software test suite, and evaluation methodology. Certification (with policy, law, etc.) is for a specific version only of the product being tested. Certification may lapse after a specific duration and may be lost or revoked. The certifying body stands behind its evaluation of the product or service.

E4.2.3. Compliant. A product or service is compliant when tested to ensure it performs according to applicable guidelines, instructions, policy, or law. The performance test suite is designed to rigorously test inputs, processes, and outputs. Non-compliance (e.g., to a law or contract) may result in remedial and/or punitive actions.

E4.2.4. Conformant. A product or service is conformant when it adheres to technical specifications, guidelines, recommendations, or best practices to identify the correctness, completeness, and quality of developed product or service. Test assertions are achieved by inspecting results focused on reliability, stability, portability, maintainability, and usability. No form of testing is used other than evaluating actual results against expected results. For a more complete listing of attributes consult International Organization for Standardization standard ISO 9126.

E4.2.5. International Organization for Standardization. A non-governmental network of the national standards institutes of 148 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system www.iso.org.

E4.2.6. Learning Content Management System (LCMS). An environment where developers may create, store, reuse, manage, and deliver learning content from a central object repository. The LCMS systems have search capabilities, allowing developers to quickly find the text or media

needed to build training content. The LCMS products that deliver learning content are a type of the Learning Management System and are subject to the same SCORM conformance requirements as the Learning Management System(s).

E4.2.7. <u>Learning Management System</u> (LMS). Software that automates training event administration through a set of services that launches learning content, keeps track of learner progress, determines the order (sequence) that learning objects are to be delivered, and reports student progress and mastery.

E4.2.8. <u>Learning Object</u>. Any entity, digital or non-digital, that can be used, re-used or referenced during technology supported learning. Examples of technology-supported learning include computer-based training systems, interactive learning environments, intelligent computer-aided instruction systems, distance learning systems, and collaborative learning environments. Examples of learning objects include multimedia content; instructional content; learning objectives; instructional software and software tools; and persons, organizations, or events referenced during technology-supported learning (definition from IEEE 1484 Learning Technology Standards Committee).

E4.2.9. <u>Learning Products</u>. Tools, applications, and content, delivered as tangible and/or mixed media.

E4.2.10. <u>SCORM Run-Time Environment</u>. A data model providing a means for interoperability between SCOs and LMSs. SCORM provides a means for learning content to be interoperable across multiple LMSs regardless of the tools used to create the content. For this to be possible, there must be a common way to launch content, a common way for content to communicate with an LMS and predefined data elements that are exchanged between an LMS and content during its execution.

E4.3. <u>CONTENT VERIFICATION</u>

E4.3.1. <u>Conformance</u>. An error-free repeatable test log output for each CP, produced by the ADL SCORM (current version) Test Suite providing evidence that the CP is CP SCORM (current version) Conformant, shall verify SCORM-conformance.

E4.3.2. <u>Certification</u>. A certificate for each CP, from an approved ADL Certification Testing Center providing evidence that the CP SCORM (current version) Conformant, shall verify SCORM-conformance.

E4.4. <u>SYSTEM VERIFICATION</u>

To verify system conformance, the following alternatives are available:

E4.4.1. <u>Conformance</u>. An error-free repeatable test log output for the learning management system, produced by ADL SCORM (current version) Test Suite providing evidence that the LMS (current version) Conformance Label has been achieved, shall verify SCORM-conformance.

E4.4.2. <u>Certification</u>. A certificate from an approved ADL Certification Testing Center, providing evidence that the learning management system has achieved the LMS SCORM Conformance Label, shall verify SCORM-conformance.

E4.5. <u>REQUEST FOR PROPOSAL</u> (RFP)

The following statements or their equivalents shall be applied to each solicitation to ensure SCORM-conformant content or systems are procured. Statements quoted are offered as sample statements for preparing solicitation documentation. Sample statements provided involve SCORM versions, which need to be updated when solicitation documentation is developed to reflect the latest version.

E4.5.1. <u>Statement of Objectives</u>

E4.5.1.1. Content Sample: The contractor shall ensure distributed learning content is SCORM-conformant.

E4.5.1.2. Systems Sample: The contractor shall ensure the LMS is SCORM conformant.

E4.5.2. <u>SCORM Requirements for Statements of Work (SOWs) and Section C Documents</u>

E4.5.2.1. Content Sample: The contractor shall ensure distributed learning content includes metadata according to the ADL Registry specification and is delivered to the Government as CP(s) that are SCORM-conformant in accordance with the document ADL SCORM (current version) Conformance Requirements (current document version) (date of publication).

E4.5.2.1. System Sample: The contractor shall ensure the LMS is SCORM-conformant in accordance with the document ADL SCORM (current version) Conformance Requirements (current document version) (date of publication).

E4.5.3. <u>Applicable Documents</u>

The following documents shall be cited in the RFP package (keyed to the appropriate Section) for distributed learning content or systems: ADL SCORM (current version), Conformance Requirements Version (current document version) (date of publication).

E4.6. CONTRACT SECTIONS

E.4.6.1. Section E - Inspection and Acceptance

E4.6.1.1. Content Sample. Acceptance shall be based on one of the following:

E4.6.1.1.1. Conformance: An error-free repeatable test log output for each Content Package (CP), providing evidence that the CP SCORM (current version) Conformant conformance label has been achieved, shall verify SCORM-conformance.

E4.6.1.1.2. Certification: A certificate for each CP from an approved ADL Certification Testing Center, providing evidence that the CP SCORM (current version) Conformant conformance label has been achieved, shall verify SCORM-conformance.

E4.6.1.2. System Sample. Acceptance shall be based on one of the following:

E4.6.1.2.1. Conformance: An error-free repeatable test log output for the learning management system, providing evidence that the LMS SCORM (current version) Conformant conformance label has been achieved, shall verify SCORM-conformance.

E4.6.1.2.2. Certification: A certificate from an approved ADL Certification Testing Center, providing evidence that the learning management system has achieved the LMS SCORM (current version) Conformant conformance label, shall verify SCORM-conformance.

E4.6.2. Section H - Special Contract Requirements

Conformance testing for distributed learning content or systems shall be based on one of the following:

E4.6.2.1. ADL SCORM Conformance Test Suite: The contractor shall use the ADL SCORM Conformance Test Suite (Self-Test) to ensure SCORM-conformance. The test suite is available for download from ADL program web sites.

E4.6.2.2. ADL SCORM Certification Requirements: The contractor shall use an ADL certified testing center to achieve formal SCORM certification.

E4.6.2.3. Sample tasks, demonstrations, production tools, models, or prototypes: these may be requested in this section to illustrate SCORM design, development, or implementation capabilities.

E4.6.3. Section M - Evaluation Factors for Award

E4.6.3.1. Key Factor: SCORM-conformance.

E4.6.3.2. Content and System: The offerors will be evaluated on their ability to deliver products that conform to the SCORM specifications.

E4.7. <u>ADDITIONAL GUIDANCE</u>

For more detailed distributed learning guidelines, refer to www.jointadlcolab.org and search "acquisition." All DoD issuances on the ADL Initiative are available from the ADL program web site.

E4.7.1. The contracting officer is encouraged to use the clause DFARS 252.227-7020 of Reference (f) in contracts to deliver distributed learning products when it is necessary so that the service provider, as one of the contract deliverables, copyright the resulting work and/or product and assign the copyright in its entirety to the Government.

E4.7.2. OMB Memorandum (Reference (m)) contains the most current information on Section 508 and other programs. Program managers and vendors need to ensure their deliverables meet these criteria.

E4.7.3. Acquisition personnel are encouraged to follow the general structure and intent of Performance Specification for Training Data Products (Reference (n)) and Development of Interactive Multimedia Instruction (IMI) (Reference (o)) in procuring distributed learning content.