

## Disposition of Comments for Draft 8 → Draft 9 (2001-11-30)

This report covers two sets of comments as incorporated into Draft 9 (2001-11-30):

- Ballot Comments on Draft 6 (the remaining batch of Dan Rehak's comments, i.e., better, more consistent description of LTSA system components)
- Global change to diagrams, based on Dan's suggestions
- Removing subclause 11.7 in informative Annex C (illustrations) because it contained out of date information.
- Currently, there are no more comments to incorporate into Draft 9, i.e., all resolvable comments have proposed resolutions.
- Some comments still require more information and are marked with Pending status.

Note:

- The cutoff for Draft 9 comments is 2002-01-11 23:00 UTC -- please send comments to the 1484.1 WG mailing list ASAP.

## Ballot Comments on Draft 6

The following are comments received in the LTSA Draft 6 ballot.

### Comments Received During Extended Period for Draft 6

Comment #	Disposition Status	Comment Details/Change Description
D06/DB01	Completed. Added to draft 7.	Please add my name to the list of working group members.
D06/DB02	Completed. Done in draft 7.	Table of Contents field needs to be updated so that the new entries/changes are reflected.
D06/DB03	Completed. Done in draft 9.	In section 3.9, 2nd sentence: "Bus notation is useful when the are a large number of subsystems, the functions or ..." should be changed to "Bus notation is useful when there are a large number of subsystems, the functions or...".
D06/DB04	No change. The preferred spelling is "recordkeeping".	According to my dictionaries, the word 'recordkeeping' should be separated into two words, 'record keeping'. This change should be made consistently throughout the document.
D06/DB05	Completed. Corrected in draft 7.	In section 5.5, last paragraph, first sentence: 'The stakeholder perspectives is considered a separate...' should be changed to 'The stakeholder perspectives layer is considered a separate...'.
D06/DB06	Completed. Changed in draft 7.	In my dictionaries, 'judgment' is a preferred spelling, as opposed to 'judgement' as is used in section 10.13.

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D06/RR01	<p>Completed.                  Much editorial material removed from draft 7. Annexes C and D are merged. Reduced the size of the document by about 30 pages.</p>	<p>In my experience, the need to provide a common vocabulary and set of concepts for discussing Learning Technology Systems Architecture is primarily the need to be able to communicate the function and scope of products and services, both internally within a company and externally to customers and consumers. I feel the current document is too long, too complex, and has too much 'editorial' material to have any wide impact in this regard.</p>
D06/RR02	<p>Pending.                  Preliminary response: Need more information on which ADL and IMS documents were attempted to map into LTSA framework. In the context of LTSA, APIs are the lowest layer, so an API specification isn't really an "architecture", per se, in the context of defining system architecture. Regardless, need more information from Robby, Claude, or Phil on *systems* (not APIs) that don't map to LTSA.                  [Resolution: API issues are not at the level that LTSA is describing. We have found no inconsistencies, based on the information provided.]</p>	<p>I tried to map the architecture which has been loosely discussed in ADL, IMS and other circles on to the normative layer of the draft document (Figure 4). The latest architectural discussions speak in terms of services, not resources. As far as I can tell, this is a different view than that taken by the LTSA document. I *may* be able map each 'learning service' to one or more boxes in Figure 4, but at the level of API's the data is flowing between systems, not data stores, and I believe it will take work to determine if the draft could be made to fit the direction in which learning technology may be moving over the next year. Since I have not done this work, and indeed since I don't have a crystal ball that would allow me to properly do the work, I feel that an abstain is the only appropriate response.</p>
D06/BT01	<p>Completed.                  Changed in draft 7.</p>	<p>Clause 1.2, page 9: The arrows make the intent of the sentences unclear, and this lack of clarity is exacerbated by the removal of the italicized clauses from the parentheses that they were in in draft 5. It would seem to be clearer to replace the parentheses, and replace the arrows with 'i.e.', '.</p>
D06/BT02	<p>Completed.                  Subclause 1.3 was removed in draft 7. See also disposition of BT04.</p>	<p>In Clause 1.4, page 14, it states that Clause 1 is informative in its entirety. However, subclauses 1.3, 1.4, and 1.5 are individually described as informative, leading the naive reader to assume that subclauses 1.1 and 1.2 are, in fact, normative.</p>
D06/BT03	<p>Completed.                  All terms listed in D06/BT03 are now identified as "informative", except for "learner" which is a normative part of LTSA. Changes incorporated into draft 7.</p>	<p>In Clause 3, the choice of which definitions to identify as informative and not normative seems arbitrary. In particular, 3.25 (distance learning) is identified as informative, but 3.36 (nomadic learning) is not. I would suggest identifying the following subclauses as informative: 3.24 (developer), 3.33 (learner), 3.35 (learning experience), 3.36 (nomadic learning), and 3.37 (nomadicity).</p>

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D06/BT04	Completed. Clause 1.3 was removed. Clause 5 had much wording removed.	In Clause 5, page 25, Figure 3 seems to be essentially a duplicate of Figures 1 and 2. Is there a reason for the duplication?
D06/BT05	No change. The terms in Clause 3 are definitions. In subclauses 10.7.*, the terms are further explained in the context of the methodology used for LTSA.	Subclauses 10.7.2 and 10.7.3 seem to duplicate, in much greater detail, information already presented in Clause 3, subclauses 3.13, 3.17, 3.18, 3.22, 3.28, 3.38, 3.43, and 3.47. Is there a reason for the duplication? Further, Clause 3 is normative and Clause 10 is not, suggesting that the (much sparser) definitions in Clause 3 are the ones that count.
D06/BT06	Completed. Annex D was removed in almost its entirety.	The caption to Figure 48 on page 72 doesn't make sense ('Learner in not a computer.'. 'Learner is not a computer', maybe?
D06/BT07	Completed. Annex D was removed in almost its entirety.	Similarly for the caption to Figure 53 on page 75 ('... insight to best learning experience.'. '... insight to the best learning experience.'? '... insight to drive the learning experience.'?)

As per the 2000-12 1484.1 WG meeting, the following are comments received in the extended comment period to 2000-12-15: No comments we received.

Comment #	Disposition Status	Comment Details/Change Description
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*No Comments Were Received*

## Comments Received After Deadline

The following are comments received after the 2000-12-15 deadline for Draft 6 (for incorporation into Draft 7). They will be resolved and incorporated into Draft 8 or 9.

Comment #	Disposition Status	Comment Details/Change Description
D06/DR01	Completed in Draft 9.	The various descriptions of the 19 LTSA components are not consistent in their presentation in the normative text. Some components are described by what the component is. Some components are described by what to component does. Some descriptions are abstract while others are concrete. The most definitive definition is often in the figure title In general, the individual descriptions cannot be read in isolation, and they are not consistent in detail. Acceptable resolution 1) Rewrite the description of each component addressing all of the comments below. General comments:
D06/DR02	Completed in Draft 9.	All components must be described consistently (and should be in boring standard's words). This includes using the same set of items and level of detail for each, presented in the same order.
D06/DR03	Completed in Draft 9.	The consistency issues apply to wording, headers, text, figures, figure titles, etc.

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D06/DR04	Completed in Draft 9.	Each component's description must begin with a straight forward declarative description of what the component is (and only what it is). E.g., the xxx store is a data store element which contains ..., the yyy process is an active processing component for ...
D06/DR05	Completed in Draft 9.	The normative text should make sense if the figure is missing.
D06/DR06	Completed in Draft 9.	Consistency: The description must include a description of the component as either a flow, process or store. The name must be expanded to include this consistently throughout the document: e.g., behavior flow. Each component's description must include a description of how the component operates or what function(s) it provides, i.e., what it does. Each component's description must include a description of how the component interacts with each the other elements it is connected to. There must be a separate description of the interaction for each connected element, for each flow/interaction direction.
D06/DR07	Completed. Included in Draft 7.	Each component description must include the letter code used on the ICS.
D06/DR08	Completed in Draft 9.	The document says component names are prefixed with LTSA. This is generally not true. The component descriptions must be modified to include this prefix throughout.
D06/DR09	Appears to be inconsistent with other suggestions for retaining only normative wording and removing examples. The examples at the end of the document are sufficient, especially because they are complete examples, rather than isolated component examples wiith little context to help the reader. This approach affords a better separation of normative and informative wording. Some brief examples were included in Draft 9.	Each component description must include multiple examples.
D06/DR10	Completed in Draft 9.	Each component description must be described independently, e.g., without circular definitions.
D06/DR11	Completed. No action required by this item: it is just a preface to the other comments.	Specific comments: --The following *outlines* the problems with each of the current component descriptions. "What it does" applies explicitly to the text. These issues present the broad nature of the problems with the description of each component, not all problems are detailed.

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D06/DR12	Completed in Draft 9.	Learner entity: -- what it is -- OK -- what it does -- OK -- connectivity -- not clear -- examples -- not explicit -- Implementation description should be separate from what it does.
D06/DR13	Completed in Draft 9.	Learning preferences: -- what it is -- no description -- what it does -- no description -- connectivity -- not formally described -- examples -- none -- All of the description is a discussion of a negotiation process. -- This negotiation process is not part of the LTSA -- Use of external entities is confusing
D06/DR14	Completed in Draft 9.	Behavior: -- what it is -- weak description: "conveys the learner entity's component to the evaluation component" -- what it does -- why is coding relevant for the abstract architecture, why is this simply not just a flow (or should coding and encoding be part of every other flow component), why is evaluation process included in the data flow. -- connectivity -- OK -- examples -- couples encoding or evaluation rather than being standalone
D06/DR15	Completed in Draft 9.	Evaluation: -- what it is -- describe only in terms of what it does -- what it does -- OK -- connectivity -- OK -- examples -- describes use of context, not evaluation processing example
D06/DR16	Completed in Draft 9.	Performance information stored/retrieved" -- what it is -- no description -- what it does -- no description, text describes evaluation process -- connectivity -- described as one way -- examples -- none
D06/DR17	Completed in Draft 9.	Learner records: -- what it is -- OK -- what it does -- weak -- connectivity -- not all described -- examples -- intermixed with the description of what it is and what it does
D06/DR18	Completed in Draft 9.	Performance/preference info received by coach -- what it is -- no description -- what it does -- OK -- connectivity -- request path is not obvious -- examples -- none

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D06/DR19	Completed in Draft 9.	Performance/preference info stored by coach -- what it is -- described only in terms of coach process -- what it does -- OK -- connectivity -- -- examples -- intermixed with rest of description
D06/DR20	Completed in Draft 9.	Assessment info -- what it is -- not described in text -- what it does -- described in terms of coach process why does coach do an "optimal" process -- connectivity -- -- examples -- none
D06/DR21	Completed in Draft 9.	Coach -- what it is -- is described as what it does, not what it is -- what it does -- description is scattered -- connectivity -- mixed in description of what it does -- examples -- none
D06/DR22	Completed in Draft 9.	Query -- what it is -- no description of what it is, described as what coach does -- what it does -- weak -- connectivity -- not explicit -- examples -- none
D06/DR23	Completed in Draft 9.	Learning resources -- what it is -- no description -- what it does -- OK -- connectivity -- not all flows described -- examples -- only one flow
D06/DR24	Completed in Draft 9.	Catalog information -- what it is -- described via process -- what it does -- not described -- connectivity -- not described -- examples -- none
D06/DR25	Completed in Draft 9.	Locator received by delivery -- what it is -- OK (figure title uses awkward example) -- what it does -- none -- connectivity -- none -- examples -- only one
D06/DR26	Completed in Draft 9.	Locator sent by delivery -- what it is -- no description -- what it does -- weak -- connectivity -- none -- examples -- only one
D06/DR27	Completed in Draft 9.	Learning content -- what it is -- intermixed with what it does unclear how the resource store process it as in: "retrieved by the learning resource" -- what it does -- intermixed with what it is -- connectivity -- none -- examples -- none

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D06/DR28	Completed in Draft 9.	<p>Delivery</p> <ul style="list-style-type: none"> <li>-- what it is -- what it does</li> <li>-- what it does -- OK</li> <li>-- connectivity -- not fully described</li> <li>-- examples -- weak</li> </ul>
D06/DR29	Completed in Draft 9.	<p>Interaction content</p> <ul style="list-style-type: none"> <li>-- what it is -- OK</li> <li>-- what it does -- OK</li> <li>-- connectivity -- OK</li> <li>-- examples -- none</li> </ul>
D06/DR30	Completed in Draft 9.	<p>Multimedia</p> <ul style="list-style-type: none"> <li>-- what it is -- sending is confusing, isn't it just presenting</li> <li>-- what it does -- weak</li> <li>-- connectivity -- OK</li> <li>-- examples -- none</li> </ul>
D06/DR31	Used single generic term "learner information". Made global change. Completed in Draft 9.	<p>Performance and preference information is overloaded in both the learner records store and the two control flows between the coach process and the learner records store, i.e., a flow conveying two different kinds of information and relying on a single component to store different information. The result is confusing.</p> <p>Acceptable resolutions</p> <ol style="list-style-type: none"> <li>1) Split into two sets of flows and two stores</li> <li>2) Develop a single generic term to encompass both use preference and performance information as examples of this more abstract data flow and store.</li> </ol>
D06/DR32	Completed in Draft 9.	<p>The description of locators versus catalog information is confusing. The coach process issues a query control flow to the learning resources process which returns a catalog information flow. The coach process then passes a locator dataflow to the delivery process, implying that the coach process creates the locator. While this may be true, the description is confusing. Also, it is unclear if what should be passed to the delivery process is the locator for the catalog info or the locator for the learning content.</p> <p>Acceptable resolutions:</p> <ol style="list-style-type: none"> <li>1) Clarify, be explicit in detail</li> </ol>
D06/DR33	Changed to "locator send by coach". Completed in Draft 9.	<p>The use of direction in the "Locator received by delivery" and "Locator sent by delivery" seems to imply a particular processing and ordering in the flow, rather than an abstract model (e.g., why not locator sent by coach). If the data flow is the same information, use the same term. A data flow is a component, used in a particular context. The component name should not include the content and processing or flow/processing direction</p> <p>Acceptable resolutions:</p> <ol style="list-style-type: none"> <li>1) Use a term for the component which does not imply more than the data flow.</li> <li>2) Modify all data flows to include all directional information and all contexts.</li> </ol>

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D06/DR34	Completed in Draft 9.	<p>"Performance information stored/retrieved by evaluation component". As above, the component should be title with a name which does not imply context.</p> <p>Acceptable resolutions:</p> <ol style="list-style-type: none"> <li>1) Use a term for the component which does not imply more than the data flow.</li> <li>2) Modify all data flows to include all directional information and all contexts.</li> </ol>
D06/DR35	<p>Disagree with the issue: none of the other flows would be labeled as a query because none of the other flows represent "query" kind of information, i.e., search parameters information (also, note that query is a control flow). Yes, searching may occur elsewhere in actual learning technology systems, but it isn't diagrammed in LTSA because it is a lower level detail. No change.</p>	<p>"Query" component is too generic a term. Many other dataflows in the architecture could be labeled query.</p> <p>Acceptable resolutions:</p> <ol style="list-style-type: none"> <li>1) Use different, more specific term</li> </ol>
D06/DR36	<p>Completed. Changed "submitter" to "claimant" in Draft 7.</p>	<p>Submitter's name, submission date -- these fields imply that the ICS is being submitted to someone, i.e., some sort of registration or database.</p> <ul style="list-style-type: none"> <li>-- what is being submitted?</li> <li>-- to whom is it being submitted?</li> <li>-- if it is being submitted to LTSC, then what processes does the LTSC or the WG need to put into place to manage this?</li> </ul> <p>Acceptable resolutions:</p> <ol style="list-style-type: none"> <li>1) drop these fields</li> <li>2) reword to drop "submit" from entries, e.g., created by, created on. In addition, the introduction to the ICS in the appendix requires appropriate wording changes to describe the use and delivery/submission or creation of an ICS</li> </ol> <p>Alternative resolution:</p> <ol style="list-style-type: none"> <li>1) detail the complete submission process for further comment and review by the WG</li> </ol>

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D06/DR37	Completed. Added text to Draft 7 after Pro Forma ICS table.	Digital signature/checksum -- what is this, i.e., what is being signed, e.g., the form or the implementation? -- what is the checksum algorithm? -- what is it computed from, e.g., an MD5 digest of the form? -- what is the purpose of the signature? -- if this is two fields, it should be detailed as such Acceptable resolutions: 1) drop signature/checksum field Alternative resolution: 1) detail the signature/checksum field for further comment and review by the WG
D06/DR38	Completed. Added text to Draft 7 after Pro Forma ICS table.	URL for Related resources -- what are the expected related resources? -- what is the purpose of this field? -- is there guidance for what should be provided? -- URL vs URI vs URN? -- one or many URL(s)? -- is this required? -- what if the related resources are not in electronic form? Acceptable resolutions: 1) drop URL field Alternative resolution: 1) detail the URL field for further comment and review by the WG
D06/DR39	Completed. Added text to Draft 7 after Pro Forma ICS table.	System and Subsystem Description of Implementation (Please attach documents) -- what is this? -- is this required? -- what documents are required? -- what is done with the documents -- who do they go to (i.e., are they submitted)? Attachment only makes sense if the form is being submitted to someone -- what if implementation descriptions are proprietary? Acceptable resolutions: 1) drop description/documentation field Alternative resolution: 1) detail the document field and the use of it and the related documents for further comment and review by the WG
D06/DR40	Completed. Added to Draft 7 in Pro Forma ICS table.	The Conformance section lists letter codes. -- why are these not listed in the ICS? Acceptable resolutions: 1) add letter fields Alternative resolution: 1) present justification for non inclusion for further comment and review by the WG

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D06/DR41	No change. Already discussed in WG. See E-mail from F. Farance on 2001-01-02 11:32.	Should reduce content in LTSA to only normative portions. Options: 1) Reduce the formal normative standard to only the essential content and move the other material to separate documents. As appropriate, the WG can decide if these other documents are formal work of the WG (not as standards, but as the appropriate non standard documents produced by a WG) or can be informal, or returned to the market place for their development, maintenance and dissemination. 2) Resolve that the WG expend the effort to complete the standard in its current form.
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## 1484.1 WG Comments on Draft 7

The following are comments received at the 2001-03 1484.1 WG meeting on Draft 7.

Comment #	Disposition Status	Comment Details/Change Description
D07/WG01	Completed. Added to Draft 8.	Remove wording on bus diagrams because they aren't used.
D07/WG02	Completed. Done in Draft 8.	Move Methodology Annex to second to last Annex. Add note that Annex will be removed upon publication.
D07/WG03	Pending. Need example from ADL and/or Claude.	LTSA doesn't address certain systems.

## 1484.1 Comments on Draft 8

The following are comments received up to and including 2001-11-15.

Comment #	Disposition Status	Comment Details/Change Description
D08/TE01	Completed in Draft 9.	Subclause 11.7 (LTSA description of LTSC WGs) should be removed because (1) the information is out of date, (2) many of the WGs no longer exist, (3) it may be difficult to keep the information current.
D08/TE02	Completed in Draft 9.	Changed "performance info" ==> "learner info" in digrams based on D06/DR31.