

IEEE-SA Standards Board Project Authorization Request (PAR) Form (2000-Rev 1)

Note: For use with help hyperlinks offline, download [guide.html](#) and [par2000.html](#) into the same directory. After completing this form, please e-mail it to the [NesCom Secretary](#).

Instructions for Downloading the PAR Form

1. <u>Sponsor Date</u> of Request [2000 Oct 27]	2. <u>Assigned Project</u> Number [P1600.1]	3. <u>PAR Approval</u> Date <u>7 December 2000</u>
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Copyright release must be submitted with [appropriate signatures](#) by FAX (1-732-562-1571)

[X] PAR Signature Page on File {IEEE Staff to check box}

4. Project Title, Recorder and Working Group/Sponsor for this Project

Document type and title: {Place an X in only one option below}

- [X] **Standard for**{document stressing the verb "shall"}
- [..] **Recommended Practice for**{document stressing the verb "should"}
- [..] **Guide for** {document in which good practices are suggested}

Title: [Standard Upper Ontology -- High-Level Concepts, Definitions and Relationships Processable by Computer]

Name of Working Group (WG): [Standard Upper Ontology (SUO)]

Name of Official Reporter (usually the WG Chair) who must be an SA member as well as an IEEE/Affiliate Member: [James Schoening]

IEEE-Standards Staff has verified that the Official Reporter (or Working Group Chair) is an IEEE and an IEEE-SA member: [X] (Staff to check box)

Contact Information:

Telephone [732-532-5812] FAX: [732-532-7551]

E-mail: [James.Schoening@mail1.monmouth.army.mil]

Name of Working Group Chair (if different than Reporter): [...]

IEEE-Standards Staff has verified that the Working Group Chair is [...] (Staff to check box)
an IEEE and an IEEE-SA member:

Contact Information:

Telephone [...] FAX: [...]

E-mail: [...]

Name of Sponsoring Society and Committee: [Computer Society, SAB SCC]

Name of Committee Sponsor Chair: [Paul Eastman]

IEEE-Standards Staff has verified that the Sponsor is an IEEE and an IEEE-SA member: [X] (Staff to check box)

Contact Information:

Telephone [602-861-3652] FAX: [602-861-0251]

E-mail: [p.eastman@rfnetworks.com]

5. Type of Project

a. **Is this an update to an existing PAR?** [NO]

If YES, indicate PAR Number/Approval Date [P####-YEAR]

If YES, is this project in ballot now? [yes/no]

[Indicate changes/rationale for revised PAR in Item #16. This should be no more than 5 lines.]

b. Choose one from the following:

☒ New Standard

☐ Revision of existing Standard {number and year} [...]

☐ Amendment (Supplement) to an existing standard {number and year} [...]

☐ Corrigenda to an existing standard {number and year} [...]

6. Life Cycle

☒ Full Use (5-year life cycle)

☐ Trial Use (2-year life cycle)

7. Balloting Information

Choose one from the following:

☒ Individual Sponsor Balloting

☐ Entity Sponsor Balloting

☐ Mixed Balloting (combination of Individual and Entity Sponsor Balloting)

Expected Date of Submission for Initial Sponsor Ballot: [Dec 2002]

8. Fill in Projected Completion Date for Submittal to RevCom [Dec 2004]

9. Scope of Proposed Project:

[what is being done, including technical boundaries on the work. This should be brief (less than 5 lines recommended). For Standard revisions the scope should reflect the scope of the resultant standard, including the scope of the original standard, supplements and additions.]

This standard will specify an upper ontology that will enable computers to utilize it for applications such as data interoperability, information search and retrieval, automated inferencing, and natural language processing. An ontology is similar to a dictionary or glossary, but with greater detail and structure that enables computers to process its content. An ontology consists of a set of concepts, axioms, and relationships that describe a domain of interest. An upper ontology is limited to concepts that are meta, generic, abstract and philosophical, and therefore are general enough to address (at a high level) a broad range of domain areas. Concepts specific to given domains will not be included; however, this standard will provide a structure and a set of general concepts upon which domain ontologies (e.g. medical, financial, militaryengineering, etc.) could be constructed.

10. Purpose of Proposed Project:

[Why it is being done, including intended users, and benefits to users This should be brief (less than 5 lines recommended). For Standards revisions, the purpose should be the purpose of the original standard **and** include why the standard is being revised.]

A. AUTOMATED REASONING: The standard will be suitable for automated logical inference to support knowledge-based reasoning applications. B. INTER-OPERABILITY: The standard will provide a basis for achieving Inter-Operability among various software and database applications.

1) Application developers can define new data elements in terms of a common ontology, and thereby gain some degree of interoperability with other conformant systems.

2) Applications based on domain-specific ontologies that are compliant with this standard will be able to interoperate (to some degree) by virtue of the shared common terms and definitions.

3) The SUO will play the role of a neutral interchange format whereby owners of existing applications will be able to map existing data elements just once to a common ontology. This provides a degree of interoperability with other applications whose representations conform to SUO. This entails the SUO being able to be mapped to more restricted forms such as XML, database schema, or object oriented schema.

C: APPLICATION AREAS

1) E-commerce applications from different domains that need to interoperate at both the data and semantic levels.

2) Educational applications in which students learn concepts and relationships directly from, or expressed in terms of, a common ontology. This will also enable a standard record of learning to be kept.

3) Natural language understanding tasks in which a knowledge-based reasoning system uses the ontology to disambiguate among likely interpretations of natural language statements.

11. Intellectual Property {Answer each of the questions below}

Are you aware of any patents relevant to this project?

[No] { Yes, with detailed explanation below / No }

[...] {Explanation }

Are you aware of any copyrights relevant to this project?

[Yes] { Yes, with detailed explanation below / No }

[This standard will be constructed from both new content and from existing content found in other ontologies, many of which are copyrighted. We will obtain written approval before utilizing any such material. We are already working with an IEEE attorney to obtain rights to one such ontology.] {Explanation }

Are you aware of any trademarks relevant to this project?

[No] { Yes, with detailed explanation below / No }

[...] {Explanation }

Are you aware of any registration of objects or numbers relevant to this project?

[No] { Yes, with detailed explanation below / No }

[...] {Explanation }

12. Are you aware of any other standards or projects with a similar scope?

[No] { Yes, with detailed explanation below / No }

[This is the only effort to develop an upper ontology as a standard.] {Explanation }

13. International Harmonization

Is this standard planned for adoption by another international organization?

[No] { Yes/No/?? if you don't know at this time }

If Yes: Which International Organization [...]

If Yes: Include coordination in question 13 below

If No: Explanation [There are no plans at this time to develop this as an international standard.]

This is a new group, which is new to the standardization process, and for which it is too early in this process to determine the intent to develop this as an international standard. This group does have a few members that are experienced in international standards, so this topic will be addressed when the time is right.]

14. Is this project intended to focus on health, safety or environmental issues?

[No] { Yes/No/?? if you don't know at this time }

If Yes: Explanation [...]

15. Proposed Coordination/Recommended Method of Coordination

Mandatory Coordination

SCC 10 (IEEE Dictionary)	by DR {Circulation of DR afts }
IEEE Staff Editorial Review by	by DR
SCC 14 (Quantities, Units and Letter symbols)	by DR

Coordination requested by Sponsor:

[IEEE Computer Society Virtual Intelligence Standards Committee]	by [DR]	{ circulation of DR afts/ LI aision memb/ CO mmen memb }
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[SCC20]	by [DR]	{ circulation of DR afts/ LI aision memb/ CO mmen memb }
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[...]	by [...]	{ circulation of DR afts/ LI aision memb/ CO mmen memb }
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[...]	by [...]	{ circulation of DR afts/ LI aision memb/ CO mmen memb }
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Coordination Requested by Others:

NCITS/K5 vocabulary and terminology by LI

NCITS/J* and ISO/IEC JTC1 SC22 Programming Languages by LI

NCITS/L8 and ISO/IEC JTC1 SC32 WG2 metadata by LI ISO/IEC JTC1 SC36 and IEEE LTSC by LI

16. Additional Explanation Notes: {Item Number and Explanation}

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