PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: 2001-10-01	Proposer: ISO/IEC JTC 1/SC 32
Secretariat: National Body	**ISO/IEC JTC 1 N** XXXX

A proposal for a new work item shall be submitted to the secretariat of the ISO/IEC joint technical committee concerned with a copy to the ISO Central Secretariat.

Presentation of the proposal - to be completed by the proposer Guidelines for proposing and justifying a new work item are given in ISO Guide 26.

Title (subject to be covered and type of standard, e.g. terminology, method of test, performance requirements, etc.) Foundations for Logical Languages

Scope (and field of application)

The standard will be a language designed for use in the interchange of knowledge among disparate computer systems. It will be a logically comprehensive language with a declarative semantics, and it will provide for the representation of knowledge about knowledge.

Two semantically equivalent syntaxes will be specified within the standard – the Knowledge Interchange Format (KIF) and Conceptual Graphs (CG).

The standard will be divided into three parts. Part 1 (First-Order Logic) specifies the syntax and semantics of a language equivalent to first-order logic. Part 2 (Infinitary Logic) is an expansion of the language of Part 1 that specifies the syntax and semantics of an infinitary logic. Part 3 (MetaKIF) is an expansion of the language of Part 1 that formalizes the syntax and semantics of the metatheory of first-order logic.

Purpose and justification - attach a separate page as annex, if necessary

The creation of disparate knowledge-based systems by different programmers, at different times, and in different knowledge representation languages has led to barriers to interoperability among these systems. By providing a logically comprehensive language, KIF will have the capability of expressing arbitrary logical sentences within these systems. A declarative semantics will make it possible to understand the meaning of expressions in the language without appeal to an interpreter for manipulating those expressions.

Although there are many areas of continuing research on knowledge representation, only those concepts that are universally accepted within the knowledge representation and mathematical logic communities will be proposed for standardization. This will be restricted to languages that are equivalent in expressiveness to first-order logic, infinitary logic, and the metatheory of first-order logic.

Programme of work

If the proposed new work item is approved , which of the following document(s) is (are) expected to be developed?
____ a single International Standard more than one International Standard (expected number: .....)
__X__ a multi-part International Standard consisting of ....3..... parts
____ an amendment or amendments to the following International Standard(s) .....
____ a technical report , type .....

Relevant documents to be considered

Cooperation and liaison

Preparatory work offered with target date(s)
NOTE: Drafts of Part 1 and Part 2 are attached. An outline for Part 3 is attached; a draft of Part 3 is expect are expected by August 2002.
Signature:
Will the service of a maintenance agency or registration authority be required? .....No..... - If yes, have you identified a potential candidate? ..... - If yes, indicate name ..... Are there any known requirements for coding? .....No..... -If yes, please specify on a separate page Does the proposed standard concern known patented items? .....No..... - If yes, please provide full information in an annex

Comments and recommendations of the JTC 1 Secretariat - attach a separate page as an annex, if necessary

Comments with respect to the proposal in general, and recommendations thereon: It is proposed to assign this new item to JTC 1/SC XX

Voting on the proposal - Each P-member of the ISO/IEC joint technical committee has an obligation to vote within the time limits laid down (normally three months after the date of circulation).

Date of circulation: YYYY-MM-DD	**Closing date for voting:** YYYY-MM-DD	**Signature of JTC 1 Secretary:** Lisa A. Rajchel

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
A Business Requirement		
A.1 Market Requirement	Essential _X__ Desirable ___ Supportive ___	**KIF is being used as the basis for ontology-based standards work, particularly the Process Specification Language (ISO 18629) within TC184/SC4/JWG8 and the Standard Upper Ontology project within IEEE.**
A.2 Regulatory Context	Essential ___ Desirable ___ Supportive ___ Not Relevant _X__	
B. Related Work		
B.1 Completion/Maintenance of current standards	Yes ___ No_X__	

B.2 Commitment to other organization	Yes ___ No_X__	
B.3 Other Source of standards	Yes ___ No_X__	
C. Technical Status		
C.1 Mature Technology	Yes _X__ No___	
C.2 Prospective Technology	Yes ___ No_X__	
C.3 Models/Tools	Yes ___ No_X__	
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes ___ No___	
D.2 Interoperability	Yes _X__ No___	KIF is explicitly intended to support the interoperability of knowledge-based systems by enabling the specification of the semantics of terminology within the systems.
E. Other Justification		

Notes to Proforma

A. Business Relevance. That which identifies market place relevance in terms of what problem is being solved and or need being addressed.

A.1. Market Requirement. When submitting a NP, the proposer shall identify the nature of the Market Requirement, assessing the extent to which it is essential, desirable or merely supportive of some other project.

A.2 Technical Regulation. If a Regulatory requirement is deemed to exist - e.g. for an area of public concern e.g. Information Security, Data protection, potentially leading to regulatory/public interest action based on the use of this voluntary international standard - the proposer shall identify this here.

B. Related Work. Aspects of the relationship of this NP to other areas of standardization work shall be identified in this section.

B.1 Competition/Maintenance. If this NP is concerned with completing or maintaining existing standards, those concerned shall be identified here.

B.2 External Commitment. Groups, bodies, or fora external to JTC 1 to which a commitment has been made by JTC for cooperation and or collaboration on this NP shall be identified here.

B.3 External Std/Specification. If other activities creating standards or specifications in this topic area are known to exist or be planned, and which might be available to JTC 1 as PAS, they shall be identified here.

C. Technical Status. The proposer shall indicate here an assessment of the extent to which the proposed standard is supported by current technology.

C.1 Mature Technology. Indicate here the extent to which the technology is reasonably stable and ripe for standardization.

C.2 Prospective Technology. If the NP is anticipatory in nature based on expected or forecasted need, this shall be indicated here.

C.3 Models/Tools. If the NP relates to the creation of supportive reference models or tools, this shall be indicated here.

D. Any other aspects of background information justifying this NP shall be indicated here.

D. Conformity Assessment and Interoperability

D.1 Indicate here if Conformity Assessment is relevant to your project. If so, indicate how it is addressed in your project plan.

D.2 Indicate here if Interoperability is relevant to your project. If so, indicate how it is addressed in your project plan.