

**ISO/IEC JTC 1
Information Technology**

Document Type: New Work Item Proposal

Document Title: New Work Item: Amendment (Amd1) to ISO/IEC 19775-1.2:2008

Document Source: SC 24 Secretariat

Reference:

Document Status: This document is circulated to JTC 1 National Bodies for concurrent review. If the JTC 1 Secretariat receives no objections to this proposal by the due date indicated, we will so inform the SC 24 Secretariat

Action ID: Act

Due Date: 2010-04-11

No. of Pages: 6

Our ref.: DIH

Date: 2010-01-08

Secretariat of ISO/IEC JTC 1/SC 24

Computer graphics, image processing and environmental data representation"

Title:	New work item (NP): Amendment (Amd1) to ISO/IEC 19775-1.2: 2008
Source:	WG6 Convenor
Replaces:	--
Document Type:	NP for ballot
Project:	ISO/IEC 19775-1: 2008 Amd1
Status:	This document is circulated to SC24 P-members for ballot.
Action ID:	For ballot. Please use the electronic committee balloting application.
Due Date:	2010-04-08
Distribution:	P, O, L, Members Secretariat JTC 1, ITTF, SC 24 Chairman and WG Convenors
Date of Distribution:	2010-01-08
Distribution Medium:	Web

New Work Item Proposal

7 July 2009

PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: 2009-07-07	Proposer: ISO/IEC JTC 1/SC 24
Secretariat: BSI	ISO/IEC JTC 1 N XXXX ISO/IEC JTC 1/SC 24 N 3146

A proposal for a new work item shall be submitted to the secretariat of ISO/IEC JTC 1/SC 24, with a copy to the ISO Central Secretariat.

Presentation of the proposal - to be completed by the proposer.

Title Amendment to ISO/IEC 19775-1.2:2008(E) X3D Architecture and base components
Scope The new work to be addressed is an amendment to ISO/IEC 19775-1.2. The work to amend includes the following: 1) Improved consistency in the naming and typing of fields and functional interfaces within the Script node 2) Modifications to support additional functionality for Computer-Aided Design (CAD) 3) Modifications to support additional functionality for 3D geospatial modelling and navigation 4) Modifications to support functionality required by upgrades to H-Anim (ISO/IEC 19774) 5) Modifications to support functionality needed for medical modelling and imaging, including volume rendering and annotation 6) Algorithm fixes within the existing specification, including those related to Follower nodes 7) New nodes for animating cameras for digital cinematography and digital photography. 8) New nodes and fields to support physical units 9) New nodes and fields to support projective textures 10) Other changes to improve overall document consistency. The intent is to produce a merged document incorporating the existing specification with the approved amendment.

Purpose and justification

1) Improved consistency in the naming and typing of fields within the Script node

Several inconsistencies in the use of Script node fields (especially the overloading of names) have been identified. These inconsistencies lead to either incorrect or partial implementations of the specified functionality. A detailed review has identified several possible solutions. New text will be developed that is consistent and provides for full and consistent implementations.

2) Modifications to support additional functionality for Computer-Aided Design (CAD)

A Web3D working group has identified a number of needed features to support the CAD space. These include support for B-Rep geometry representations and the application of NURBS nodes to represent CAD models. The text will be developed and submitted for this amendment.

3) Modifications to support additional functionality for 3D geospatial modelling and navigation

A Web3D working group has identified a number of needed features to support 3D geospatial modelling and navigation. These include elimination of the need for a georigin field, new nodes to make globe viewing more efficient, and possible support for additional SRFs. Draft text will be developed and submitted for this amendment.

4) Modifications to support functionality required by upgrades to H-Anim (ISO/IEC 19774)

A Web3D working group is updating the H-Anim specification. This specification is normatively referenced by the X3D specification. The X3D specification needs to be updated to remain consistent with these changes. Draft text will be developed and submitted for this amendment.

5) Modifications to support functionality needed for medical modelling and imaging, including volume rendering and annotation, ...

A Web3D working group has identified a number of needed features to support the medical modelling and imaging space. These include support for volume rendering and enhanced support for annotation of models for visible display of explanatory information. Draft text will be developed and submitted for this amendment.

6) Algorithm fixes within the existing specification, including those related to Follower nodes

A few algorithms related to the Follower node have been found to need revision to correctly represent the desired behaviour. The replacement text will be developed and submitted for this amendment.

7) New nodes for animating cameras for digital cinematography and digital photography

New functionality to provide improved viewing of scenes and offline rendering.

8) New nodes and fields to support physical units

X3D currently uses predefined physical units of meters and seconds. These changes would allow the content creator to specify other physical units. Draft text will be developed and submitted for this amendment.

9) New nodes and fields to support projective textures

The existing texture mapping capability of X3D will be extended to support the use of projected texture images into a view volume. Draft text will be developed and submitted for this amendment.

10) Other changes to improve overall document consistency

As the changes described above are developed and mapped to the current text of the standard, additional consistency problems may be identified and should also be fixed. Suitable text for improving the current text will be developed, as necessary.

Programme of work

☐ a single International Standard

☐ more than one International Standard (expected number:)

☐ a multi-part International Standard consisting of parts

☒ an amendment or amendments to the following International Standard(s):
ISO/IEC 19775-1.2.

☐ a technical report, type

And which standard development track is recommended for the approved new work item?

☐ a. Default Timeframe

☒ b. Accelerated Timeframe

☐ c. Extended Timeframe

Relevant documents to be considered

ISO/IEC 19775-1.2

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Co-operation and liaison

Web3D Consortium

Preparatory work offered with target date(s)

SC 24 is prepared to undertake the preparatory work required for this new work item. This project begins at level 3 for all the standards to be amended. The schedule for the amendment is as follows:

PDAM ballot	FPDAM ballot	FDAM ballot	Publication
6/2010	1/2011	8/2011	2/2012

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

Are there any known accessibility requirements and/or dependencies?.... NO

- If yes, please specify on a separate page.

Are there any known requirements for cultural and linguistic adaptability?... NO

- If yes, please specify on a separate page.

Comments and recommendations of the JTC 1 or SC 24 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 24

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:	Closing date for voting:	Signature of Secretary:
2010-01-08	2010-04-08	David Hyde

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	Validity	Explanation
A. Business Requirement		
A.1 Market Requirement	Essential <input checked="" type="checkbox"/> Desirable <input type="checkbox"/> Supportive <input type="checkbox"/>	The ISO/IEC 19775-1 standard is an essential component of several IT applications currently in use. The proposed amendment is essential to the successful operation of those applications and to the adoption of this standard by several additional market segments.
A.2 Regulatory Context	Essential <input type="checkbox"/> Desirable <input type="checkbox"/> Supportive <input type="checkbox"/> Not Relevant <input checked="" type="checkbox"/>	
B. Related Work		

B.1 Completion/Maintenance of current standards	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	ISO/IEC19775-1.2; ISO/IEC/19776 (All parts)
B.2 Commitment to other organisation	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Web3D Consortium
B.3 Other Source of standards	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
C. Technical Status		
C.1 Mature Technology	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	The proposed additional technology is mature. Addition of these proposed amended items is essential to their use and completeness as well their continued longevity.
C.2 Prospective Technology	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
C.3 Models/Tools	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Exemplar models and tools are available for demonstrating all capabilities and all changes
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
D.2 Interoperability	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
E. Adaptability to Culture, Language, Human Functioning and Context of Use		
E.1. Cultural and Linguistic Adaptability	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
E.2. Adaptability to Human Functioning and Context of Use	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
F. Other Justification		