SC4 WG16 CAD visualization

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ISO/TC84/SC4/Resolution about WG16

- Title of WG16: Formats for Visualization and other derived forms of product data
- Meeting Date: 2017-11-10
- Soonhung Han as Convenor and Christophe Mouton as Deputy Convenor each for a three year term

ISO/TC 184/SC 4 Plenary Meeting #: 74th
Meeting Date: 2017-11-10
Meeting Location: Jeju, Korea
SC 4 Resolutions: Draft

Resolution: "J"

Title: Establish WG 16 (Page 1)
From:
PPC

Introduction:
There are a number of proposed NP and tasks related to 3D visualization and other forms of consumption of product data. These NPs have been raised within SC 4 and also other subcommittees. It is therefore proposed to create a new WG which may be joint with JTC 1/SC 24 and TC 171/SC 2 to undertake these work items.

Objective:
To define the terms of reference for the proposed WG in preparation for the acceptance of one or more relevant work items.

Resolution:
SC 4 requests its Secretariat to create WG 16 with the following title and scope

Title: *Formats for Visualization and other derived forms of product data*

Scope:

- Develop and maintain format and interface standards for 3D visualization of product models, including visualization of different classes of derived information such as geometry, product structure and others.
- Develop and maintain standards for consumption of data derived from and associated with product models.
- Develop and maintain standards for interfaces from SC 4 product definition standards.
- Establish liaison with other standards activities working on information models for 3D visualization.

SC 4 requests its Secretariat to assign any NP within scope to WG 16. SC 4 appoints Soonhung Han as Convenor and Christophe Mouton as Deputy Convenor each for a three year term, with appreciation for this offer to serve in that capacity.

Attached documents: Yes ☐ None ☒

Click here to enter text.

SC4 visualization requirements in 2008

Attachment C

Formats candidate list

Note that this is an open list and that the order
on which the formats are registered is meaningless.

Format usual name	Source
U3D	http://www.ecma-international.org/
X3D	http://www.web3d.org/
3D-XML	http://www.3ds.com/
JTOpen	http://www.jtopen.com/
MPEG-4	ISO/IEC/JTC1/SC29/WG11
COLLADA	http://www.collada.org
Lattice 3D XVL	http://www.lattice3d.com

Visualisation requirements

Status of Document

Reference :	Visualisation ad hoc group report Industrial requirements for product data visualisation
Date :	2008-06-12
Author :	Oscar ROCHA RENAULT SAS oscar.rocha@renault.com
Type :	Report
Doc-ID :	
Revision :	3.0
Status :	Final Version

Ad hoc group members

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JYD	DELAUNAY, Jean-Yves	Airbus	jean-yves.delaunay@airbus.com
SHH	HAN, Soon Hung	KAIST	shhan@kaist.ac.kr
MH	HARDWICK, Martin	StepTools	hardwick@steptools.com
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DL	LEAL, David	Caesar Systems	david.leal@caesarsystems.co.uk
OR	ROCHA, Oscar	Renault SAS	oscar.rocha@renault.com
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MU	UNGERER, Max	ProSTEP	ungerer@prostep.de
KY	YEE, King	Boeing	king.g.yee@boeing.com

JT - ISO 14306

- ISO 14306:2012, Industrial automation systems and integration -- JT file format specification for 3D visualization
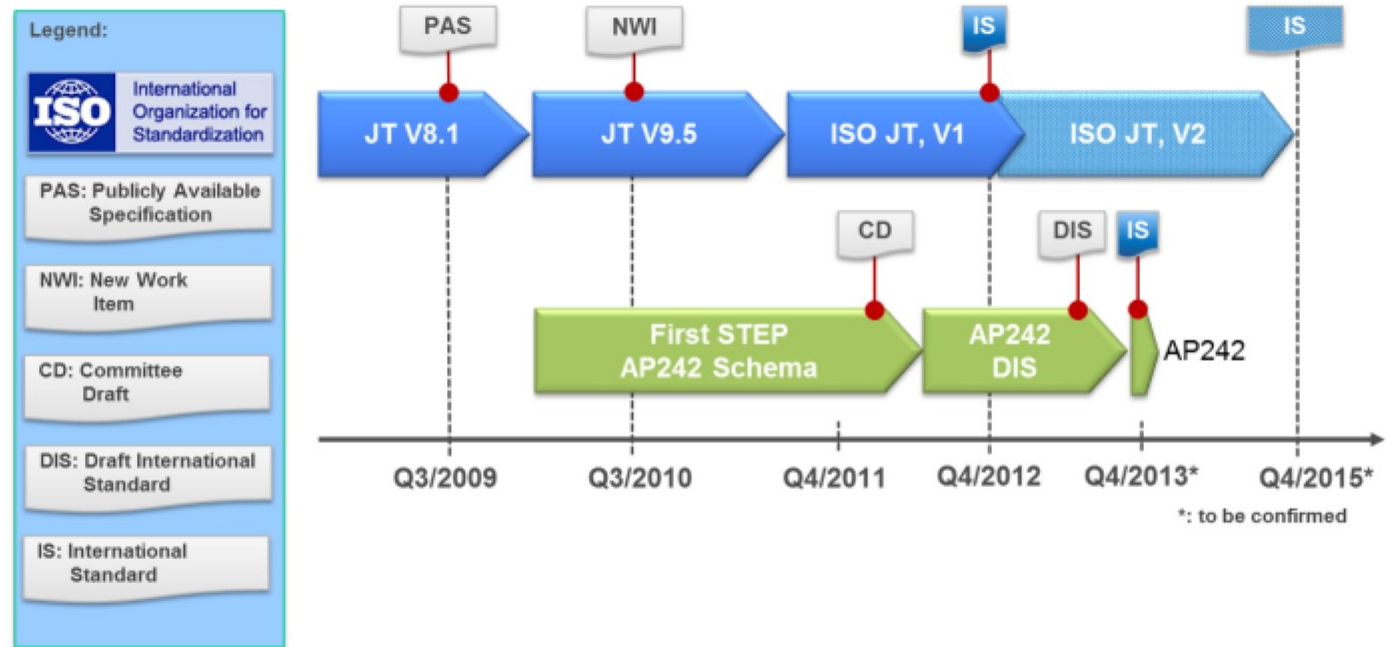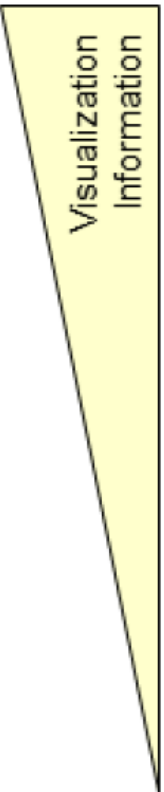
- http://www.iso-jt.org/

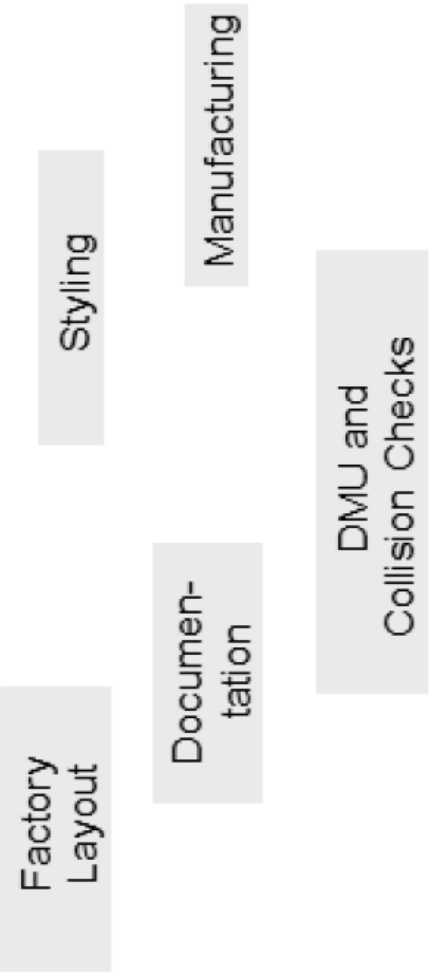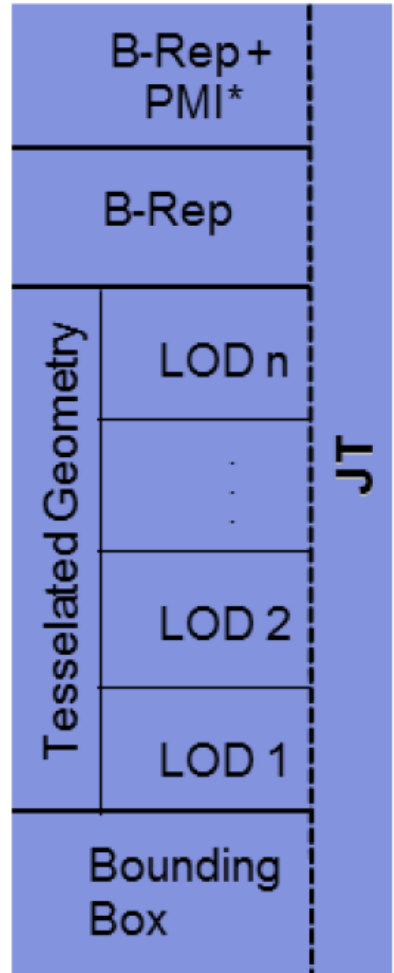Fig. 8.   Figure 4: ISO Roadmap for JT and STEP AP242

Result

Large File

Visualization Information

Small File

Configurable File Format

B-Rep+ PMI*

B-Rep

Tesselated Geometry

LOD n

⋮

LOD 2

LOD 1

Bounding Box

JT

Used in

Manufacturing

Styling

DMU and Collision Checks

Documen- tation

Factory Layout

* product manufacturing information
(e.g. geometric and dimensional tolerances)

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ISO/TC171 3D PDF

- ISO/TC171/SC2/WG8 PDF Working Groups, Draft Resolutions, 30 November 2017, San Jose

- ISO/TC171/SC2 resolves to form an Ad Hoc Group with TC184/SC4 to draft a proposal for including ISO 10303 (STEP) as a valid 3D stream. The STEP Ad Hoc Group includes Phil Spreier (Chairman), Peter Noyes, Leonard Rosenthol, and Stuart Galt.

- ISO/TC171/SC2/WG8 resolves to join the TC184/SC4/WG16 ….. to develop and maintain standards for 3D visualization of product models. TC171/SC2/WG8 appoints Stuart Galt as liaison member of the ad hoc group.

Ad Hoc Group TC 171/SC2 and TC 184/SC 4

Wednesday, December 20, 2017   6:02 AM

Agenda

1. Introductions
2. Review of TC 171/SC 2 resolutions
3. Review of TC 184/SC 4 requirements
4. Next Steps

Introductions

Team facilitator for the meeting was Kenny Swope, Chair of TC 184/SC 4 and liaison officer from SC 4 to TC 171/SC 2. Members of the ad hoc group are:

Name	Email	Role
Kenny Swope	Kenneth.a.swope@boeing.com	Liaison Officer from SC 4 to SC 2
Peter Noyes	pnoyes@bluebeam.com	SC 2 Expert
Christophe Mounton	christophe.mouton@edf.fr	SC 4 Expert and Deputy Convenor of SC 4/WG 16
Phil Spreier	phil.spreier@3dpdfconsortium.org	Chair of Ad Hoc Group
SoonHung Han	shhan@kaist.ac.kr	SC 4 Participant and Convenor of SC 4/WG 16
Stuart Galt	stuart.a.galt@boeing.com	SC 2 Expert
Leonard Rosenthal	lrosenth@adobe.com	SC 2 Expert (not present for today's meeting)

TransCAD of KAIST iCAD lab.

- A CAD which is specialized for parametric CAD translations
  - History-based parametrics
- Translate commands stream instead of geometry itself
  - A common set of modeling commands of commercial CAD systems
- Translators for Dassault-Catia, UG-NX, Plant CAD (Intergraph, Aveva)
- WebTransCAD: X3D viewer
- https://www.youtube.com/watch?v=HtPvkA25Uow&feature=youtu.be

Macro-Parametrics

Navigation
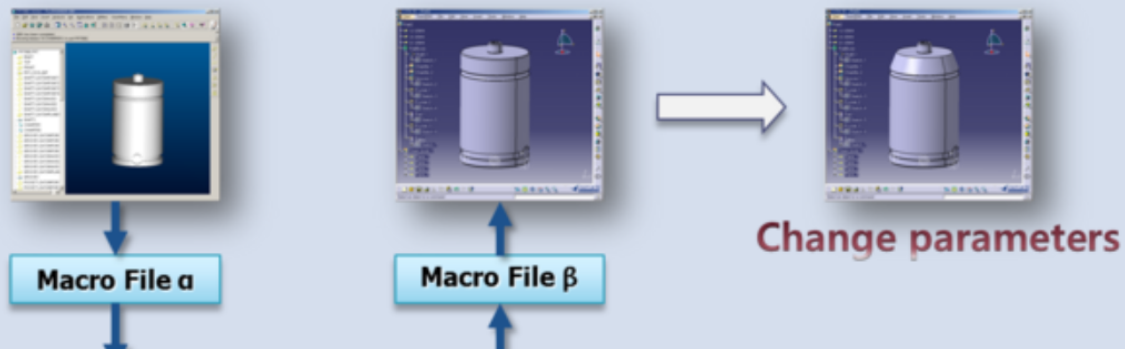
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- CATIA
- UG NX
- CSG
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Macro-Parametrics:Home

(Redirected from Main Page)

Welcome to Macro-parametrics website.

Translation of MACRO file

Macro File α   Macro File β   Change parameters

Thank You