
**Industrial automation systems — Product
data representation and exchange —**

**Part 55:
Integrated generic resource: Procedural
and hybrid representation**

*Systèmes d'automatisation industrielle — Représentation et échange
de données de produits —*

*Partie 55: Ressources génériques intégrées — Représentation
procédurale et hybride*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2005

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 0111
Fax + 41 22 749 0947
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

1	Scope	1
2	Normative references	2
3	Terms, definitions and abbreviations	2
3.1	Terms defined in ISO 10303-1	2
3.2	Terms defined in ISO 10303-11	3
3.3	Terms defined in ISO 10303-42	3
3.4	Terms defined in ISO 10303-43	3
3.5	Terms defined in ISO 10303-108	4
3.6	Other terms and definitions	5
3.7	Abbreviations	5
4	Procedural model	6
4.1	Introduction	6
4.2	Fundamental concepts and assumptions	6
4.2.1	Procedural models	7
4.2.2	Hybrid models	8
4.2.3	Explicit selected elements	8
4.2.4	Dual models	9
4.2.5	Representation of constructional operations in procedural models	10
4.2.6	Implicit and explicit constraints	11
4.2.7	Suppression of constructional operations	12
4.2.8	Exchange of procedural and hybrid models	12
4.2.9	Variational cases of procedural and hybrid models	12
4.3	Procedural model entity definitions	13
4.3.1	explicit_procedural_representation_relationship	13
4.3.2	explicit_procedural_representation_item_relationship	14
4.3.3	procedural_representation	15
4.3.4	procedural_representation_sequence	16
4.3.5	user_selected_elements	17
4.3.6	indirectly_selected_elements	18
5	Procedural shape model	20
5.1	Introduction	20
5.2	Fundamental concepts and assumptions	20
5.2.1	Procedural shape models	21
5.2.2	Hybrid shape models	22
5.2.3	Explicit selected elements in a shape model	22
5.2.4	Dual shape representations	22
5.2.5	Design rationale for shape models	22
5.3	Procedural shape model type definitions	23
5.3.1	shape_representation_item	23
5.4	Procedural shape model entity definitions	23
5.4.1	explicit_procedural_shape_representation_relationship	23
5.4.2	explicit_procedural_geometric_representation_item_relationship	24
5.4.3	procedural_shape_representation	25
5.4.4	procedural_shape_representation_sequence	25
5.4.5	procedural_solid_representation_sequence	26