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**ADVANCED MANUFACTURING
TECHNOLOGY - SYSTEMS ARCHITECTURE -
CONSTRUCTS FOR ENTERPRISE
MODELLING**

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CONTENTS

Foreword	4
Introduction	4
Background	4
The Framework for Enterprise Modelling, ENV 40003	4
The vision for enterprise modelling.....	5
How the constructs support this vision	5
Benefits of using the constructs.....	6
1 Scope	7
2 Normative References	7
3 Definitions and Abbreviations	8
3.1 Terms and Definitions	8
3.2 Abbreviations	11
4 Requirements for constructs	12
4.1 General requirements from the Framework for Enterprise Modelling	12
4.2 Requirements for Representations of Enterprise Aspects	12
4.2.1 Function	12
4.2.2 Information	12
4.2.3 Resource	12
4.2.4 Organisation	13
4.3 Requirements arising from Enterprise Model Execution and Integration Services	13
5 General concepts	14
5.1 Construct.....	14
5.2 Life cycle.....	14
5.3 Domain	15
5.4 Conformant Domain	15
5.5 Aspects and Enterprise Views	15
5.6 Abstraction	15
5.7 Classification and Exemplification	16
5.8 Generalisation and Specialisation.....	16
5.9 Aggregation and Decomposition.....	17
5.10 Relationship	17
5.11 Role	17
5.12 Level of detail.....	18
5.13 The Interflow of Real World and Executed Models	18
6 Representation	19
6.1 Representation of attributes.....	19
6.2 Representation of constructs	20
6.2.1 Structure of construct description.....	20
6.2.2 Specialising a Construct description to particular needs	21

7	The constructs	22
7.1	Enterprise Object	23
7.2	Object View	24
7.3	Object State	24
7.4	Product	25
7.5	Order.....	26
7.6	Organisational Unit.....	27
7.7	Resource.....	27
7.8	Enterprise Activity	28
7.9	Business Process	29
7.10	Relation.....	33
7.11	Capability Set.....	34
7.12	Event	35
8	Compliance Principles.....	37
	ANNEX A (informative) Bibliography	38

Foreword

This European Prestandard has been prepared by the Technical Committee CEN TC 310 "Advanced Manufacturing Technology" of which the secretariat is held by BSI.

The document was submitted to the formal vote and was approved by CEN TC 310 as ENV 12204 on 1995-12-24.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Background

European Standardization in the field of AMT is undertaken by CEN TC310, Advanced Manufacturing Technology. In turn, its working group CEN TC 310 WG1, "Systems Architecture", hereafter referred to as TC310 WG1, is concerned with standardization work in the field of CIM Systems Architecture. This work is to be a precursor and a contribution to the development of CEN and ISO standards in this area.

In 1990 CEN/CENELEC WG-ARC (the predecessor to TC310 WG1) completed the European Prestandard ENV 40 003, CIM Systems Architecture, Framework for Enterprise Modelling, which set out a basis for identifying and co-ordinating the common conceptual constructs necessary for computer-based modelling of enterprises, focusing on Discrete Parts Manufacturing.

In 1992 WG-ARC completed an Evaluation of Constructs for Function View as defined in ENV 40 003 – that evaluation has been published by CEN/CENELEC as Technical Report R-IT-06. The evaluation showed that no one initiative contained all the methods, constructs, semantics and representation that were needed, and that additional input was required from projects active on this area. Since that time, major new input has been received (References¹ 1, 2 and 3). This ENV incorporates that input but the base for the work and the terminology used continues to be ENV 40 003.

CEN TC 310 WG1 recognises that the discipline of enterprise modelling is under continuous development, e.g. in its extension from application in one commercial company to the extended, virtual enterprise requiring that all process and objects dealt with in the enterprise are modelled as information. For this reason, new concepts and associated constructs are likely to emerge incrementally and replacing or modifying those described herein, which should therefore be regarded as a view of today's state of the art.

The Framework for Enterprise Modelling, ENV 40003

ENV 40 003 sets out a number of modelling concepts for CIM requirements and for the various perceptions of the needs of the enterprise. The concepts have been accepted as being sufficiently general to describe a wide range of types of manufacturing and the various concerns of the suppliers of products, systems and services, and of those who need to deploy these in moving to achieve the goals of CIM.

From all possible dimensions of modelling, the Framework selected three for their ability to represent the concepts that are required:

¹ Bibliographic references are contained in Annex A

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