

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Engineering data exchange format for use in industrial automation systems  
engineering – Automation markup language –  
Part 2: Semantics libraries**

**Format d'échange de données technique pour une utilisation dans l'ingénierie  
des systèmes d'automatisation industrielle – Automation markup language –  
Partie 2: Bibliothèques de sémantique**



**THIS PUBLICATION IS COPYRIGHT PROTECTED**  
**Copyright © 2022 IEC, Geneva, Switzerland**

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 IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Secretariat  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

#### **About the IEC**

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

#### **About IEC publications**

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

#### **IEC publications search - [webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)**

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, ...). It also gives information on projects, replaced and withdrawn publications.

#### **IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

#### **IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [sales@iec.ch](mailto:sales@iec.ch).

#### **IEC Products & Services Portal - [products.iec.ch](http://products.iec.ch)**

Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

#### **Electropedia - [www.electropedia.org](http://www.electropedia.org)**

The world's leading online dictionary on electrotechnology, containing more than 22 300 terminological entries in English and French, with equivalent terms in 19 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

---

#### **A propos de l'IEC**

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

#### **A propos des publications IEC**

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

#### **Recherche de publications IEC -**

#### **[webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)**

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études, ...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

#### **IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

#### **Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [sales@iec.ch](mailto:sales@iec.ch).

#### **IEC Products & Services Portal - [products.iec.ch](http://products.iec.ch)**

Découvrez notre puissant moteur de recherche et consultez gratuitement tous les aperçus des publications. Avec un abonnement, vous aurez toujours accès à un contenu à jour adapté à vos besoins.

#### **Electropedia - [www.electropedia.org](http://www.electropedia.org)**

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 300 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 19 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



---

**Engineering data exchange format for use in industrial automation systems  
engineering – Automation markup language –  
Part 2: Semantics libraries**

**Format d'échange de données technique pour une utilisation dans l'ingénierie  
des systèmes d'automatisation industrielle – Automation markup language –  
Partie 2: Bibliothèques de sémantique**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

---

ICS 25.040.40; 35.060; 35.240.50

ISBN 978-2-8322-5934-4

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD.....	7
INTRODUCTION.....	9
1 Scope.....	11
2 Normative references .....	11
3 Terms, definitions and abbreviated terms .....	11
3.1 Terms and definitions.....	11
3.2 Abbreviated terms.....	12
4 Conformity.....	13
5 AML role classes .....	13
5.1 Location and inheritance relationship of role classes in role class libraries .....	13
5.2 AML role class libraries.....	13
5.3 AML role class library for discrete manufacturing industry – AutomationMLDMIRoleClassLib .....	15
5.3.1 General .....	15
5.3.2 RoleClass DiscManufacturingEquipment.....	16
5.3.3 RoleClass Transport .....	16
5.3.4 RoleClass Storage.....	17
5.3.5 RoleClass Fixture .....	17
5.3.6 RoleClass Gate .....	17
5.3.7 RoleClass Robot.....	18
5.3.8 RoleClass Tool .....	18
5.3.9 RoleClass Carrier .....	18
5.3.10 RoleClass Machine.....	19
5.3.11 RoleClass StaticObject.....	19
5.4 AML role class library for continuous manufacturing industry – AutomationMLCMIRoleClassLib .....	19
5.4.1 General .....	19
5.4.2 RoleClass ContManufacturingEquipment .....	20
5.5 AML role class library for batch manufacturing industry – AutomationMLBMIRoleClassLib .....	20
5.5.1 General .....	20
5.5.2 RoleClass BatchManufacturingEquipment.....	21
5.6 AML role class library for control systems – AutomationMLCSRoleClassLib.....	21
5.6.1 General .....	21
5.6.2 RoleClass ControlEquipment .....	23
5.6.3 RoleClass Communication .....	23
5.6.4 RoleClass ControlHardware.....	23
5.6.5 RoleClass PC .....	23
5.6.6 RoleClass IPC .....	24
5.6.7 RoleClass Handheld .....	24
5.6.8 RoleClass EmbeddedDevice.....	24
5.6.9 RoleClass Sensor .....	25
5.6.10 RoleClass Actuator .....	25
5.6.11 RoleClass Controller.....	25
5.6.12 RoleClass PLC .....	25
5.6.13 RoleClass NC.....	26
5.6.14 RoleClass RC .....	26

Annex A (informative) AML extended role class library.....	27
A.1 General.....	27
A.2 RoleClass PLCFacet.....	28
A.3 RoleClass HMIFacet.....	29
A.4 RoleClass Enterprise.....	29
A.5 RoleClass Site.....	30
A.6 RoleClass Area.....	31
A.7 RoleClass ProductionLine.....	31
A.8 RoleClass WorkCell.....	31
A.9 RoleClass ProcessCell.....	32
A.10 RoleClass Unit.....	32
A.11 RoleClass WorkCenter.....	33
A.12 RoleClass WorkUnit.....	33
A.13 RoleClass ProductionUnit.....	33
A.14 RoleClass StorageZone.....	34
A.15 RoleClass StorageUnit.....	34
A.16 RoleClass ConnectedWorld.....	34
A.17 RoleClass Equipment.....	35
A.18 RoleClass Station.....	35
A.19 RoleClass EquipmentModule.....	35
A.20 RoleClass ControlModule.....	36
A.21 RoleClass ControlDevice.....	36
A.22 RoleClass FieldDevice.....	36
A.23 RoleClass Turntable.....	37
A.24 RoleClass Conveyor.....	37
A.25 RoleClass BeltConveyor.....	37
A.26 RoleClass RollConveyor.....	38
A.27 RoleClass ChainConveyor.....	38
A.28 RoleClass PalletConveyor.....	38
A.29 RoleClass OverheadConveyor.....	38
A.30 RoleClass LiftingTable.....	39
A.31 RoleClass AGV.....	39
A.32 RoleClass Transposer.....	39
A.33 RoleClass CarrierHandlingSystem.....	40
A.34 RoleClass BodyStore.....	40
A.35 RoleClass Lift.....	40
A.36 RoleClass Rollerbed.....	40
A.37 RoleClass StationaryTool.....	41
A.38 RoleClass MovableTool.....	41
A.39 RoleClass ControlCabinet.....	41
A.40 RoleClass IODevice.....	42
A.41 RoleClass HMI.....	42
A.42 RoleClass WarningEquipment.....	42
A.43 RoleClass ActuatingDrive.....	42
A.44 RoleClass MotionController.....	43
A.45 RoleClass HMIPanel.....	43
A.46 RoleClass MeasuringEquipment.....	43
A.47 RoleClass Clamp.....	44
A.48 RoleClass ProcessController.....	44

A.49	RoleClass Loader .....	44
A.50	RoleClass Unloader .....	45
Annex B (informative)	Examples of usage of RoleClasses .....	46
B.1	General.....	46
B.2	Example plant unit .....	46
Annex C (informative)	User-defined RoleClass libraries .....	51
C.1	General.....	51
C.2	External semantics of attributes .....	52
Annex D (informative)	XML representation of AML libraries .....	53
D.1	AutomationMLDMIRoleClassLib .....	53
D.2	AutomationMLCMIRoleClassLib .....	53
D.3	AutomationMLBMIRoleClassLib .....	54
D.4	AutomationMLCSRoleClassLib.....	54
D.5	AutomationMLExtendedRoleClassLib.....	55
Bibliography	.....	58
Figure 1	– Overview of the engineering data exchange format (AML).....	9
Figure 2	– Example addressing of role class "Robot" in AML object "RB1" .....	13
Figure 3	– Example inheritance relationship.....	13
Figure 4	– AutomationMLBaseRoleClassLib defined in IEC 62714-1:2018 .....	14
Figure 5	– AutomationMLDMIRoleClassLib .....	15
Figure 6	– XML grid of the AutomationMLDMIRoleClassLib.....	16
Figure 7	– XML text of the AutomationMLDMIRoleClassLib.....	16
Figure 8	– AutomationMLCMIRoleClassLib .....	19
Figure 9	– XML grid of the AutomationMLCMIRoleClassLib.....	20
Figure 10	– XML text of the AutomationMLCMIRoleClassLib .....	20
Figure 11	– AutomationMLBMIRoleClassLib .....	20
Figure 12	– XML grid of the AutomationMLBMIRoleClassLib .....	21
Figure 13	– XML text of the AutomationMLBMIRoleClassLib .....	21
Figure 14	– AutomationMLCSRoleClassLib .....	22
Figure 15	– XML grid of the AutomationMLCSRoleClassLib .....	22
Figure 16	– XML text of the AutomationMLCSRoleClassLib .....	22
Figure A.1	– AutomationMLExtendedRoleClassLib.....	28
Figure A.2	– Resource structure [SOURCE: IEC PAS 63088:2017, adapted].....	30
Figure B.1	– Usage of roles in the mapping process .....	46
Figure B.2	– Example for usage of roles .....	47
Figure B.3	– Example AML model .....	47
Figure B.4	– Example InstanceHierarchy for usage of roles .....	48
Figure B.5	– XML grid of the example InstanceHierarchy for usage of roles .....	48
Figure B.6	– XML text of the example InstanceHierarchy for usage of roles .....	48
Figure B.7	– External RoleClassLib reference .....	49
Figure B.8	– Usage of external role class in example .....	49
Figure B.9	– Example SystemUnitClass library for usage of roles .....	50
Figure B.10	– XML grid of the example SystemUnitClass library for usage of roles .....	50

Figure B.11 – XML text of the example SystemUnitClass library for usage of roles .....	50
Figure C.1 – AML user-defined RoleClassLib ISA106.....	51
Figure C.2 – Example for external attribute semantics .....	52
Table 1 – Abbreviated terms .....	12
Table 2 – Structure of AML role class libraries .....	14
Table 3 – RoleClass DiscManufacturingEquipment .....	16
Table 4 – RoleClass Transport.....	17
Table 5 – RoleClass Storage .....	17
Table 6 – RoleClass Fixture.....	17
Table 7 – RoleClass Gate .....	18
Table 8 – RoleClass Robot .....	18
Table 9 – RoleClass Tool.....	18
Table 10 – RoleClass Carrier .....	18
Table 11 – RoleClass Machine.....	19
Table 12 – RoleClass StaticObject.....	19
Table 13 – RoleClass ContManufacturingEquipment.....	20
Table 14 – RoleClass BatchManufacturingEquipment .....	21
Table 15 – RoleClass ControlEquipment .....	23
Table 16 – RoleClass Communication.....	23
Table 17 – RoleClass ControlHardware .....	23
Table 18 – RoleClass PC .....	24
Table 19 – RoleClass IPC.....	24
Table 20 – RoleClass Handheld.....	24
Table 21 – RoleClass EmbeddedDevice .....	24
Table 22 – RoleClass Sensor.....	25
Table 23 – RoleClass Actuator.....	25
Table 24 – RoleClass Controller .....	25
Table 25 – RoleClass PLC .....	25
Table 26 – RoleClass NC.....	26
Table 27 – RoleClass RC.....	26
Table A.1 – RoleClass PLCFacet.....	29
Table A.2 – RoleClass HMIFacet .....	29
Table A.3 – RoleClass Enterprise .....	29
Table A.4 – RoleClass Site .....	30
Table A.5 – RoleClass Area .....	31
Table A.6 – RoleClass ProductionLine .....	31
Table A.7 – RoleClass WorkCell .....	32
Table A.8 – RoleClass ProcessCell.....	32
Table A.9 – RoleClass Unit.....	32
Table A.10 – RoleClass WorkCenter .....	33
Table A.11 – RoleClass WorkUnit .....	33
Table A.12 – RoleClass ProductionUnit.....	33

Table A.13 – RoleClass StorageZone .....	34
Table A.14 – RoleClass StorageUnit .....	34
Table A.15 – RoleClass ConnectedWorld .....	35
Table A.16 – RoleClass Equipment .....	35
Table A.17 – RoleClass Station .....	35
Table A.18 – RoleClass EquipmentModule .....	36
Table A.19 – RoleClass ControlModule .....	36
Table A.20 – RoleClass ControlDevice .....	36
Table A.21 – RoleClass FieldDevice .....	37
Table A.22 – RoleClass Turntable .....	37
Table A.23 – RoleClass Conveyor .....	37
Table A.24 – RoleClass BeltConveyor .....	37
Table A.25 – RoleClass RollConveyor .....	38
Table A.26 – RoleClass ChainConveyor .....	38
Table A.27 – RoleClass PalletConveyor .....	38
Table A.28 – RoleClass OverheadConveyor .....	39
Table A.29 – RoleClass LiftingTable .....	39
Table A.30 – RoleClass AGV .....	39
Table A.31 – RoleClass Transposer .....	39
Table A.32 – RoleClass CarrierHandlingSystem .....	40
Table A.33 – RoleClass BodyStore .....	40
Table A.34 – RoleClass Lift .....	40
Table A.35 – RoleClass Rollerbed .....	41
Table A.36 – RoleClass StationaryTool .....	41
Table A.37 – RoleClass MovableTool .....	41
Table A.38 – RoleClass ControlCabinet .....	41
Table A.39 – RoleClass IODevice .....	42
Table A.40 – RoleClass HMI .....	42
Table A.41 – RoleClass WarningEquipment .....	42
Table A.42 – RoleClass ActuatingDrive .....	43
Table A.43 – RoleClass MotionController .....	43
Table A.44 – RoleClass HMIPanel .....	43
Table A.45 – RoleClass MeasuringEquipment .....	44
Table A.46 – RoleClass Clamp .....	44
Table A.47 – RoleClass ProcessController .....	44
Table A.48 – RoleClass Loader .....	45
Table A.49 – RoleClass Unloader .....	45
Table C.1 – ISA-TR106.00.01-2013 mapping to ANSI/ISA-88.01-1995 .....	51



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

**ENGINEERING DATA EXCHANGE FORMAT FOR USE  
IN INDUSTRIAL AUTOMATION SYSTEMS ENGINEERING –  
AUTOMATION MARKUP LANGUAGE –****Part 2: Semantics libraries****FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 62714-2 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This second edition cancels and replaces the first edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) additional explanation about usage of external semantics in AML Attributes;
- b) adaption to CAEX V3.0;
- c) additional new RoleClasses e.g. for Industrie 4.0.

The text of this International Standard is based on the following documents:

Draft	Report on voting
65E/871/FDIS	65E/889/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts in the IEC 62714 series, published under the general title *Engineering data exchange format for use in industrial automation systems engineering – Automation Markup Language*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

**IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

## INTRODUCTION

The data exchange format defined in IEC 62714 (Automation Markup Language, AML) is an XML schema based data format and has been developed in order to support the data exchange between engineering tools in a heterogeneous engineering tool landscape. IEC 62714-1 gives an overview about the format.

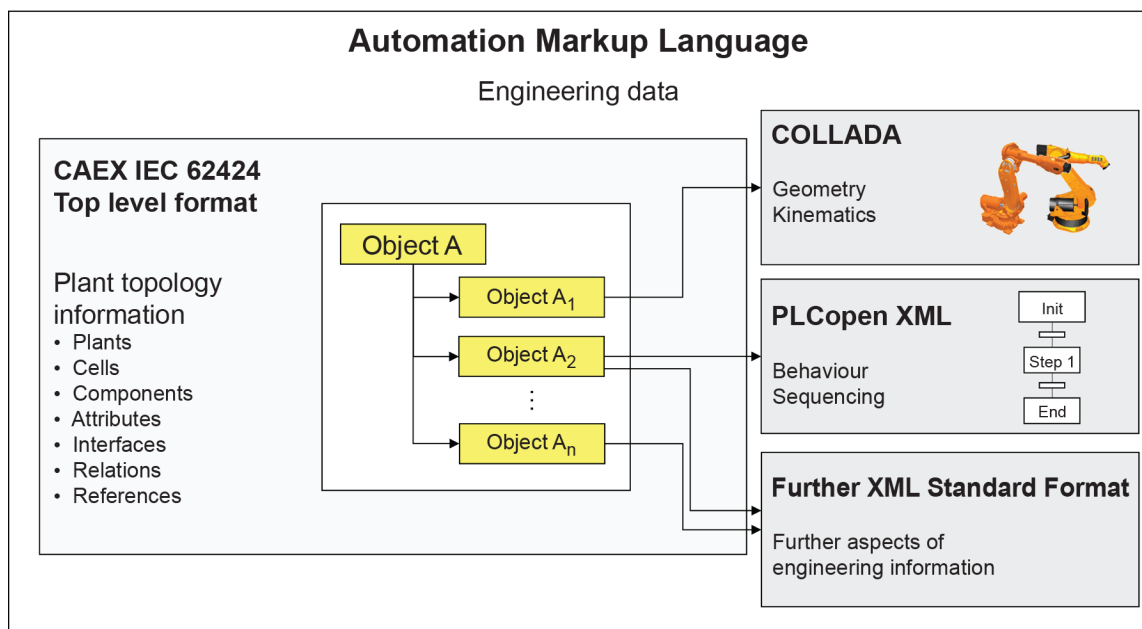
The goal of AML is to interconnect engineering tools from the existing heterogeneous tool landscape in their different disciplines, e.g. mechanical plant engineering, electrical design, process engineering, process control engineering, HMI development, PLC programming, robot programming, etc.

AML stores engineering information following the object oriented paradigm and allows modelling of physical and logical plant components as data objects encapsulating different aspects. An object may consist of other sub-objects and may itself be part of a larger composition or aggregation. Typical objects in plant automation comprise information on topology, geometry, kinematics and logic, whereas logic comprises sequencing, behaviour and control.

AML combines existing industry data formats that are designed for the storage and exchange of different aspects of engineering information. These data formats are used on an "as-is" basis within their own specifications and are not branched for AML needs.

The core of AML is the top-level data format CAEX that connects the different data formats. Therefore, AML has an inherent distributed document architecture.

Figure 1 illustrates the basic AML architecture and the distribution of topology, geometry, kinematic and logic information.



IEC

**Figure 1 – Overview of the engineering data exchange format (AML)**

Due to the different aspects of AML, IEC 62714 (all parts) consists of different parts focusing on different aspects.

- IEC 62714-1: Architecture and general requirements  
This part specifies the general AML architecture, the modelling of engineering data, classes, instances, relations, references, hierarchies, basic AML libraries and extended AML concepts.
- IEC 62714-2: Semantics libraries  
This part specifies AML role class libraries and the usage of AML attributes to represent semantics.
- IEC 62714-3: Geometry and kinematics  
This part specifies the modelling of geometry and kinematics information.
- IEC 62714-4: Logic  
This part specifies the modelling and referencing of logic information.

Further parts may be added in the future in order to interconnect further data standards to AML.

Clause 5 describes normative role class libraries within AML.

Annex A describes the informative AML extended role class library.

Annex B gives an informative example for the usage of AML role classes.

Annex C shows some user-defined role class libraries of different origins.

Annex D gives an informative XML representation of the libraries defined in this part of IEC 62714.

# ENGINEERING DATA EXCHANGE FORMAT FOR USE IN INDUSTRIAL AUTOMATION SYSTEMS ENGINEERING – AUTOMATION MARKUP LANGUAGE –

## Part 2: Semantics libraries

### 1 Scope

IEC 62714 (all parts) specifies an engineering data exchange format for use in industrial automation systems.

This part of IEC 62714 specifies normative as well as informative AML libraries for the modelling of engineering information for the exchange between engineering tools in the plant automation area by means of AML. Moreover, it presents additional user-defined libraries as an example. Its provisions apply to the export/import applications of related tools.

This part of IEC 62714 specifies AML role class libraries and the usage of AML attributes to represent semantics. Role classes provide semantics to AML objects, attribute types provide semantics to AML attributes. The association of role classes to AML objects or attribute types to AML attributes represent the possibility to add (also external) semantic information to it. By associating a role class to an AML object or an attribute type to an AML attribute, it gets semantic information. This part of IEC 62714 does not define details of the data exchange procedure or implementation requirements for the import/export tools.

NOTE In the future, it is possible to include AML attribute type libraries in this part of IEC 62714.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62714-1:2018, *Engineering data exchange format for use in industrial automation systems engineering – Automation Markup Language – Part 1: Architecture and general requirements*

IEC 61360, *IEC Common Data Dictionary* (available at <https://cdd.iec.ch/>)

IEC 62424:2016 *Representation of process control engineering – Requests in P&I diagrams and data exchange between P&ID tools and PCE-CAE tools*

Extensible Markup Language (XML) 1.0:2008, *W3C Recommendation* (available at <http://www.w3.org/TR/2008/REC-xml-20081126/>)

### 3 Terms, definitions and abbreviated terms

#### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62714-1:2018 and the following apply.