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Engineering Data Exchange format for use in industrial automation systems engineering - Automation Markup Language - Part 2: Role class libraries (IEC 62714-2:2015)

Datenaustauschformat für Planungsdaten industrieller Automatisierungssysteme - Automation markup language – Teil 2: Rollenbibliotheken (IEC 62714-2:2015)

Format d'échange de données techniques pour une utilisation dans l'ingénierie des systèmes d'automatisation industrielle - Automation markup language - Partie 2: Bibliothèques de classes de rôles (IEC 62714-2:2015)

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Bibliothèques de classes de rôles
(IEC 62714-2:2015)

Datenaustauschformat für Planungsdaten industrieller
Automatisierungssysteme - Automation markup language -
Teil 2: Rollenbibliotheken
(IEC 62714-2:2015)

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Foreword

The text of document 65E/300/CDV, future edition 1 of IEC 62714-2, prepared by SC 65E "Devices and integration in enterprise systems", of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62714-2:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-02-04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-05-04

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61512-1	NOTE	Harmonized as EN 61512-1.
IEC 62264-1:2013	NOTE	Harmonized as EN 62264-1:2013 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61360-4	-	Standard data element types with associated classification scheme for electric components - Part 4: IEC reference collection of standard data element types and component classes	EN 61360-4	-
IEC 62424	2008	Representation of process control engineering - Requests in P&I diagrams and data exchange between P&ID tools and PCE-CAE tools	EN 62424	2009
IEC 62714-1	2014	Engineering data exchange format for use in industrial automation systems engineering - Automation markup language - Part 1: Architecture and general requirements	EN 62714-1	2014

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engineering – Automation markup language –
Part 2: Role class libraries**

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

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

FOREWORD

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International Standard 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.

The text of this standard is based on the following documents:

CDV	Report on voting
65E/300/CDV	65E/390/RVC

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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 publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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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 “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.

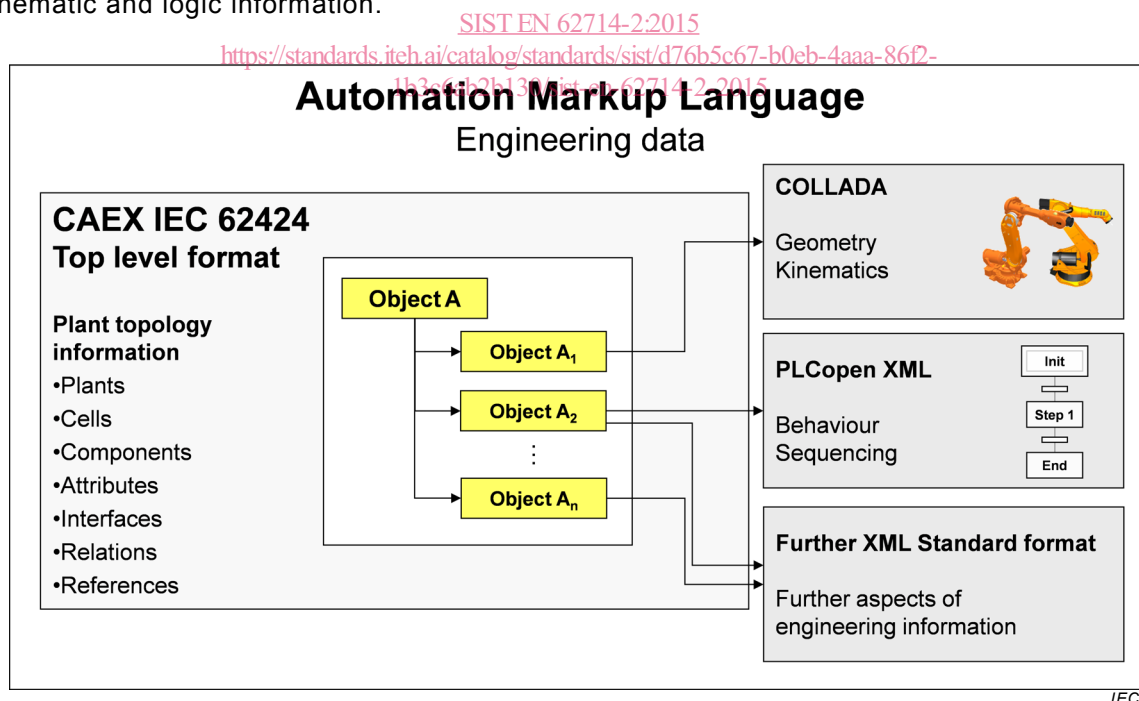


Figure 1 – Overview of the engineering data exchange format (AML)

Due to the different aspects of AML, IEC 62714 consists of different parts focussing on different aspects.

- IEC 62714-1: Architecture and general requirements