IEC 61850-6

Edition 2.0 2018-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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AMENDMENT 1
AMENDEMENT 1

Communication networks and systems for power utility automation – Part 6: Configuration description language for communication in electrical substations related to IEDs

Réseaux et systèmes de communication pour l'automatisation des systèmes électriques – Partie 6: Langage pour la description de configuration pour la communication dans les postes électriques, entre les dispositifs électroniques intelligents (IED)

IEC 61850-6:2009-12/AMD1:2018-06(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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FOREWORD

This amendment has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This bilingual version (2019-01) corresponds to the monolingual English version, published in 2018-06.

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

FDIS	Report on voting
57/1918/FDIS	57/1940/RVD

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

The French version of this amendment has not been voted upon.

This IEC standard includes Code Components, i.e. components that are intended to be directly processed by a computer. Such content is any text found between the markers <CODE BEGINS> and <CODE ENDS>, or otherwise is clearly labeled in this standard as a Code Component.

The purchase of this IEC standard carries a copyright license for the purchaser to sell software containing Code Components from this standard directly to end users and to end users via distributors, subject to IEC software licensing conditions, which can be found at: http://www.iec.ch/CCv1.

If any updates are required to the published code component that needs to apply immediately and can not wait for an amendment (i.e. fixing a major problem), a new release of the Code Component will be issued and distributed through the IEC WebSite. Any new release of the Code Component related to this part will supersede any previously published Code Component including the one published within the current document.

The Code Component(s) included in this IEC standard are a set of .xsd. This Code Component is published through the IEC WebSite; for details see 1.3 of the present IEC standard.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication 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

This Amendment 1 aims to amend the original content of IEC 61850-6:2009 and to correct its content in order ensure a better interoperability of the components implementing it.

This Amendment 1 brings two distinct sets of changes

1) Resolved Interop Issues (covered by Clause 3 of this Amendment 1) which have already followed the technical issues (Tissues) process as described in IEC 61850-1 and have reached the green “status”.
2) Resolved Editorial Tissues (Technical Issues) (covered by Clause 4 of this Amendment 1) which may have lead to interoperability issues.

The resolutions of these issues which lead to these changes are described in greater detail in the Tissue database hosted at http://tissue.iec61850.com.

The only new features compared to the original IEC 61850-6:2009 are the inclusion of the Process and Line elements supporting other application areas than substations, and necessary enhancements to fully support the amended communication related parts. Apart from this this Amendment 1 strictly respects the scope of the original edition.

Because some of the corrected issues may have a widespread impact on many pages of the original standard, a complete consolidation of these changes into IEC 61850-6:2009 is circulated through the reference 57/xxxx/INF, which reflects the content of IEC 61850-6:2009 as amended by this Amendment 1.

Technical issues summary

N°, Subject, Cat, Clause and Paragraph are as they appear on the Tissue database hosted at http://tissue.iec61850.com where all technical issues have been stored from the origin of IEC 61850.

“Subject” defines very briefly the topic under focus.

“Cat” defines whether this has been considered as an Interoperability Issue (IntOp2) or just a need for amending IEC 61850-6:2009.

The Tissues which have been considered in this Amendment 1 are:

N°	Subject	Cat	Clause	Paragraph
658	Tracking related features	IntOp2	Annex A	
660	XML encoding header repeat	Ed2	Annex A.4	
663	FCDA element cannot be a "functionally constrained logical node"	IntOp2	9.3.7	Table 22
668	Modeling of autotransformer	IntOp2	9.2.4	
678, 699	DO type description table	Ed2		Table 43
687	ResvTms attribute at the SGCB	Ed2	9.3.12	
719	ConfDataSet maxAttributes defineds FCDA elements in data set	IntOp2	9.3.2	Table 11
721	Log element name	IntOp2	9.3.5	
731	SCL example inconsistent	Ed2	9.3.4§	
752	Input section naming	Ed2	9.3.13	
768	bType VisString65 is missing	IntOp2	Annex A	
779	Relative object references	IntOp2	9.5.4.1	

N°	Subject	Cat	Clause	Paragraph
787	SICS I45 inconsistency	Ed2	Annex G	
788	SICS S56 from optional to mandatory	IntOp2	Annex G	
789 (822)	ConfLdName for services applies to client and server	IntOp2	9.3.2	Table 11
804	valKind and IED versus system configurator	IntOp2	9.5.4.1	
806	Max length of log name incosnsten to part 7-2	Ed2	Annex A	SCL_BaseSimpleTypes
807	Indicate if 'owner' is present in RCB	Ed2	9.3.2	Table 11
823	valKind for structured data attributes	IntOp2	9.5.4.1	
824	Short addresses at structured data attributes	IntOp2	9.3.6, 9.5.4.1	
825	Floating point values	IntOp2	9.5.4.1	Table 45
845	SGCB ResvTms	IntOp2	9.3.2	Table 11
853	SBO and ProtNs	IntOp2	9.5.5	
855	recursive SubFunction	Ed2	9.2.7	
856	Voltage level frequency and phases	Ed2	9.2.2	
857	Function/SubFunction for primary equipment	Ed2	9.2.4	
873	Examples for "curvpts"	Ed2	9.3.6	end of paragraph
886	Missing 8-1 P-Types	Ed2	Annex A	
901	tServices at Ap and at IED	Ed2	9.3.2	below Table 12
936	SupSubscription parameter usage is difficult	IntOp2	9.3.2	Table 11
948	Enumeration (string) value format	IntOp2	9.5.6	
949	type of LN inst is ambiguous	Ed2	9.3.5	Table 17
1118	RptEnabled definition	Ed2	9.3.8	
1147	Filehandling service capability	Ed2	9.3.2	Table 11
1195	Typographical error	Ed2	9.3.2	
1208	IP V6 address format	IntOp2	Annex A.5	
1284	SCSM mapping may require a communication section in an ICD file	Ed2	7	
1298	How to differentiate preconfigured Report data sets from those generated by the system tool	Ed2	9.3.2	Table 11
1304	Error in SCL object model	Ed2		Figure 6
1318	SSD will not validate against XSD	Ed2	9.2.6	Note 2
1328	Limitation of the size of identifiers	IntOp2	9.5.2, 9.5.3, 9.5.6	
1354	Changes to SICS	Ed2	Annex G	
1359	Replace "c37_238" with "61850-9-3"	Ed2	9.3.2	
1365	Need to tighten up the XSD in regards to IED name usage	IntOp2	9.2.6	3
1395	Client LN attributes	IntOp2	9.3.8	
1396	The use and configuration flow of LGOS and LSVS is Unclear	Ed2	9.3.2	Table 11
1397	Subscription limitation visible in IxD file	Ed2	Annex G	
1398	originalSclVersion management in SCT	Ed2	9.3.2	
1402	Extref during engineering	Ed2	9.3.13, Annex H(new)	

N°	Subject	Cat	Clause	Paragraph
1415	SICS-S110 IID import mandatory	Ed2	Annex G	Table G.2
1419	Support of IdName on other IEDs	Ed2	Annex G	Table G.1
1434	Add capability to change nofASDU is missing	Ed2	9.3.2	Table 11
1444	Need to support fixed and SCT controlled data sets	Ed2		
1445	ConfReportControl and a fixed reportSettings	Ed2	9.3.2	Table 11
1447	Restriction on EnumTypes in SCL	Ed2		
1448	Not possible to determine the restriction on number of BRCBs if rptMod=both	Ed2		
1450	originalSclXxx computation rules	IntOp2	9.3.2	
1457	Multiple DOI nodes with the same name	Ed2		
1458	New ExtRef attributes for later binding	Ed2		

INTRODUCTION

Add, after the first paragraph of the Introduction, the following new paragraph:

While this part describes the language to describe the configuration of IEC 61850 systems, other parts of the standard describe how to configure the system and possible restrictions. Therefore implementations claiming conformance to this standard shall take into account constraints from the other normative references. Some references to the other parts have been included for the purpose of clarification but these references are not all inclusive.

1 Scope

Replace the existing text of the Scope with the following new text:

1.1 General

This part of IEC 61850 specifies a file format for describing communication-related IED (Intelligent Electronic Device) configurations and IED parameters, communication system configurations, switch yard (function) structures, and the relations between them. The main purpose of this format is to exchange IED capability descriptions, and SA system descriptions between IED engineering tools and the system engineering tool(s) of different manufacturers in a compatible way.

The defined language is called System Configuration description Language (SCL). The IED and communication system model in SCL is according to IEC 61850-5 and IEC 61850-7-x. SCSM specific extensions or usage rules may be required in the appropriate parts.

The configuration language is based on the Extensible Markup Language (XML) version 1.0 (see XML references in Clause 2).

This standard does not specify individual implementations or products using the language, nor does it constrain the implementation of entities and interfaces within a computer system. This part of the standard does not specify the download format of configuration data to an IED, although it could be used for part of the configuration data.

1.2 Namespace name and version

This new section is mandatory for any IEC 61850 namespace (as defined by IEC 61850-7-1:2011).

The parameters which are identifying this new release of the SCL namespace `xmlns:scl="http://www.iec.ch/61850/2003/SCL"` are:

- Namespace Version: 2007
- Namespace Revision: B
- Namespace Release: 4
- Namespace release date: 2018/01/22

The table below provides an overview of all published versions of this namespace.

Edition	Publication date	Webstore	Namespace
Edition 1.0	2004-03	IEC 61850-6:2004	IEC 61850-6:2003
Edition 2.0	2009-12	IEC 61850-6:2009	IEC 61850-6:2007B
Amendment 1 of Edition 2.0	2018	IEC 61850-6:2009/AMD1:2018	IEC 61850-6:2007B4
Edition 2.1	2018	IEC 61850-6:2009+AMD1:2018 CSV	IEC 61850-6:2007B4

1.3 Code Component distribution

The Code Components included in this IEC standard are also available as electronic machine readable file at:
http://www.iec.ch/tc57/supportdocuments/IEC_61850-6.2018.SCL.2007B4.full.zip

The Code Component(s) included in this IEC standard are potentially subject to maintenance works and user shall select the latest release in the repository located at:
http://www.iec.ch/tc57/supportdocuments

The latest version/release of the document will be found by selecting the file IEC_61850-6.2018.SCL.{VersionStateInfo}.full.zip with the filed VersionStateInfo of the highest value.

Each Code Component is a ZIP package containing the electronic representation of the Code Component itself, with a file describing the content of the package (IECManifest.xml).

The IECManifest contains different sections giving information on:

- The copyright notice
- The identification of the code component
- The publication related to the code component
- The list of the electronic files which compose the code component
- An optional list of history files to track changes during the evolution process of the code component

The IECManifest related to this publication is:

```
<IECManifest xmlns="http://www.iec.ch/CC/2017/IECManifest" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.iec.ch/CC/2017/IECManifest IECManifest.xsd">
        <Copyright>
                <Notice>
                        COPYRIGHT (c) IEC, 2017. This version of this XSD is part of IEC 61850-6:2009/AMD1:2018; see the IEC 61850-6:2009/AMD1:2018 for full legal notices. In case of any differences between the here-below code and the IEC published content, the here-below defintion supersedes the IEC publication; it may contain updates. See history files. The whole document has to be taken into account to have a full description of this code component.
                        See www.iec.ch/CCv1 for copyright details.
                </Notice>
                <License uri="www.iec.ch/CCv1">IEC License</License>
        </Copyright>
        <CodeComponent id="IEC_61850-6.2007B4.SCL.XSD" name="IEC 61850-6 SCL schema V2007B4" content="full" date="2018-01-22">
                <Publication name="IEC_61850-6.2018_ed2.1" comment="Configuration description language for communication in power utility automation systems related to IEDs"/>
                <File name="SCL.xsd" category="normative" content="full"/>
                <File name="SCL_Substation.xsd" category="normative" content="full"/>
                <File name="SCL_Communication.xsd" category="normative" content="full"/>
                <File name="SCL_IED.xsd" category="normative" content="full"/>
                <File name="SCL_DataTypeTemplates.xsd" category="normative" content="full"/>
                <File name="SCL_BaseTypes.xsd" category="normative" content="full"/>
```

```
                <File name="SCL_BaseSimpleTypes.xsd" category="normative" content="full"/>
                <File name="SCL_Enums.xsd" category="normative" content="full"/>
                <File name="SCL.Doc.HTML.zip" category="normative" content="full" comment="Zip archive
containing the HTML documentation of the SCL. Contains the 'SCL.html' file and all related pictures"/>
                <HistoryFile name="history.2007B4.txt" startingDate="2014-06-11" endingDate="2017-07-05"
startingVersion="SCL.XSD.v2007B" endingVersion="SCL.XSD.v2007B4"/>
        </CodeComponent>
</IECManifest>
```

The package is identified using the following naming rule:
{RefStandard}.{CodeComponentName}.{VersionRevision}.{LightFull}{PublicationStage}.zip
For current publication, the Code Component package name is:
IEC_61850-6.2018.SCL.2007B4.full.zip

The life cycle of a code component is not restricted to the life cycle of the related publication. The publication life cycle goes through two stages, Version (corresponding to an edition) and Revision (corresponding to an amendment). A third publication stage (Release) allow publication of Code Component without need to publish an amendment.

This is useful when InterOp Tissues need to be fixed. Then a new release of the Code Component will be released, which supersedes the previous release, and distributed through the IEC TC57 web site.

2 Normative references

Add the following two new references:

IEC 61850-4, *Communication networks and systems for power utility automation – Part 4: System and project management*

IEC IEEE 61850-9-3, *Communication networks and systems for power utility automation – Part 9-3: Precision time protocol profile for power utility automation*

Replace the existing reference to IEC 61850-7-1 with the following new reference:

IEC 61850-7-1:2011, *Communication networks and systems for power utility automation – Part 7-1: Basic communication structure – Principles and models*

5 Intended engineering process with SCL

5.3 Use of SCL in the engineering process

Add, after the first sentence of the second paragraph of 5.3, the following new sentence:

Clause 10 provides more details about the engineering rights of the tool roles.

6 The SCL object model

6.1 General

Replace the existing text of the first numbered point in the fifth paragraph by the following:

1) Substation / Line / Process: this part describes the primary process related functions and devices like switch yard, respectively any primary process in the functional view according to IEC 81346-1, electrical connections on single line level (topology), and the designation of equipment and functions;

Replace existing Figure 6 with the following new Figure 6:

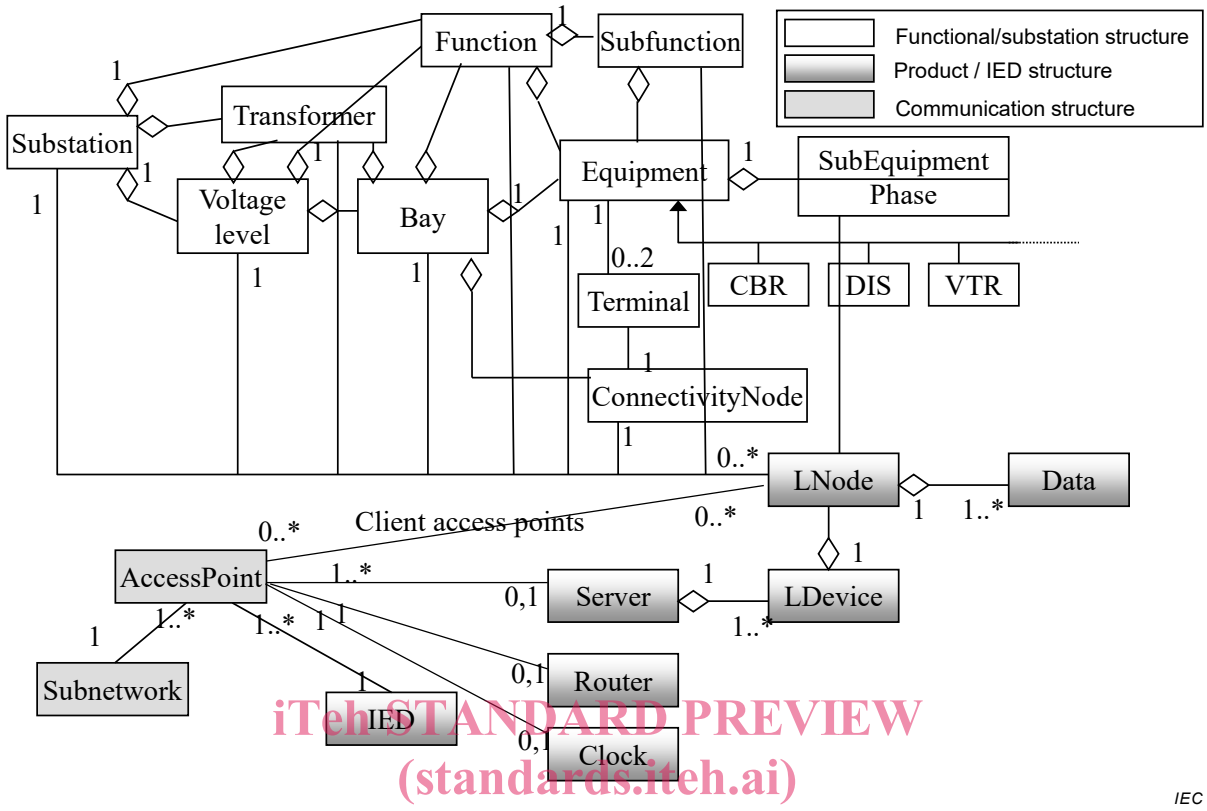


Figure 6 – SCL Substation object model

6.2 The substation model

Replace the existing title and text of Subclause 6.2 with the following new title and text:

6.2 The process model

The process model (upper part of Figure 6 for substations) is an object hierarchy based on the functional structure of the primary process. A special primary process is the Substation, which has its own SCL element. Another is the Line, which connects electrically bays of substations. The generic *Process* element shall be used to model any additionally needed structuring levels of a power grid above the substation and for all other primary processes. Although each object is self-contained, its reference designation is derived from its place in the hierarchy. Because LNs perform functions within the complete context of the Process / Substation respective Line hierarchy, they can be attached as functional objects at each function level. Typically, a switch controller LN is attached to a switching device, while a measuring LN is attached to the bay, which delivers the measurands, and transformer-related LNs are attached to the appropriate transformer.

NOTE 1 In the CIM model measurands are allocated to primary device terminals. This is a topological allocation, while the allocation in SCL in first line serves functional naming. However, if the single line topology is modelled completely, by means of the transformers (VTR, CTR) and their data acquisition nodes (TVTR, TCTR) also some primary device terminal in the topology can be found to which the measurands belong according to the CIM model.

The purpose of the process model is

- to relate a logical node and its function to a function of or at the primary process (process part or substation part or line part or equipment or subequipment);
- to derive a functional designation for the logical node from the process structure.

The following objects of the functional structure (in hierarchical order) are used in the SCL model, for power networks analogue to the CIM model for energy management systems. More background information on these terms can be found in IEC 61850-2:

Process	the whole or part of the primary process handled by the automation system, which is no substation. Can be parts of the power grid containing several substations, or complete other primary processes like power plants.
Line	a line connecting several substations.
Substation	the object identifying a whole substation.
VoltageLevel	an identifiable, electrically connected substation part having an identical voltage level.
Bay	an identifiable part or subfunction of the switch yard (substation) within one voltage level.
Equipment	an apparatus within the switch yard, for example circuit breaker, disconnector, voltage transformer, power transformer winding etc. The single line diagram of a switch yard shows the electrical connections between these primary devices. Connectivity node objects model these connections. Therefore, each primary device can contain at its terminals references to the connectivity nodes to which it is connected. At single line level, one or two terminals (connections) per equipment are normally sufficient.
SubEquipment	a part of an Equipment, which might especially be one phase of a three-phase equipment.
ConnectivityNode	the (electrical) connectivity node object connecting different primary devices. Typical connectivity node examples are: connecting nodes within a bay, bus bars connecting several bays in the same voltage level, lines connecting bays in different substations. See also Equipment above.
Terminal	an electrical connection point of a primary apparatus at single line level. A terminal can be connected to a ConnectivityNode. Within SCL terminals can be explicitly named, or exist implicitly.
Function	allows additional functions at substation, voltage level or bay level, either independent from the basic switch yard functionality like fire fighting or building supervision, or as part of the switch yard like main 1 protection and main 2 protection.
SubFunction	a hierarchical subpart of a Function or SubFunction, e.g. earth fault protection as subpart of the main 1 function.
EqFunction	allows additional functions at or below Equipment level, e.g. redundant functions on the same equipment.
EqSubFunction	a hierarchical subpart of an EqFunction or EqSubFunction.

The *PowerTransformer* is a special equipment, which can hierarchically be located below Substation, VoltageLevel or Bay. It contains Transformer windings as equipment, which might again have a relation to a tap changer.

NOTE 2 Observe that the hierarchical structure is used for functional designations. If substructures of bays are needed, this can be introduced by appropriate structured bay names. If, for example, a bay B1 is structured into sub-bays SB1 and SB2, this would in the SCL model lead to two bays named B1.SB1 and B1.SB2. If logical nodes are also attached to the B1 structure level, then B1 can be introduced as a third bay.

NOTE 3 In the CIM model the bay level is optional, while in SCL it is mandatory. However, if the bay level structuring is not needed, a whole voltage level can be considered to be one bay. The only restriction here is that the SCL syntax demands at least one character as name on each level, so that in this case the voltage level name needs at least 2 characters, from which within the SCL substation structure the first character is taken as the voltage level name, and the last character is taken as the name for the one bay element.

7 SCL description file types

Add the following new text at the end of the first paragraph of the first bullet (ICD file):

A specific SCSM might make this mandatory for some address parts.

8 SCL language

8.1 Specification method

Replace the existing paragraph following Table 1 by the following new paragraph:

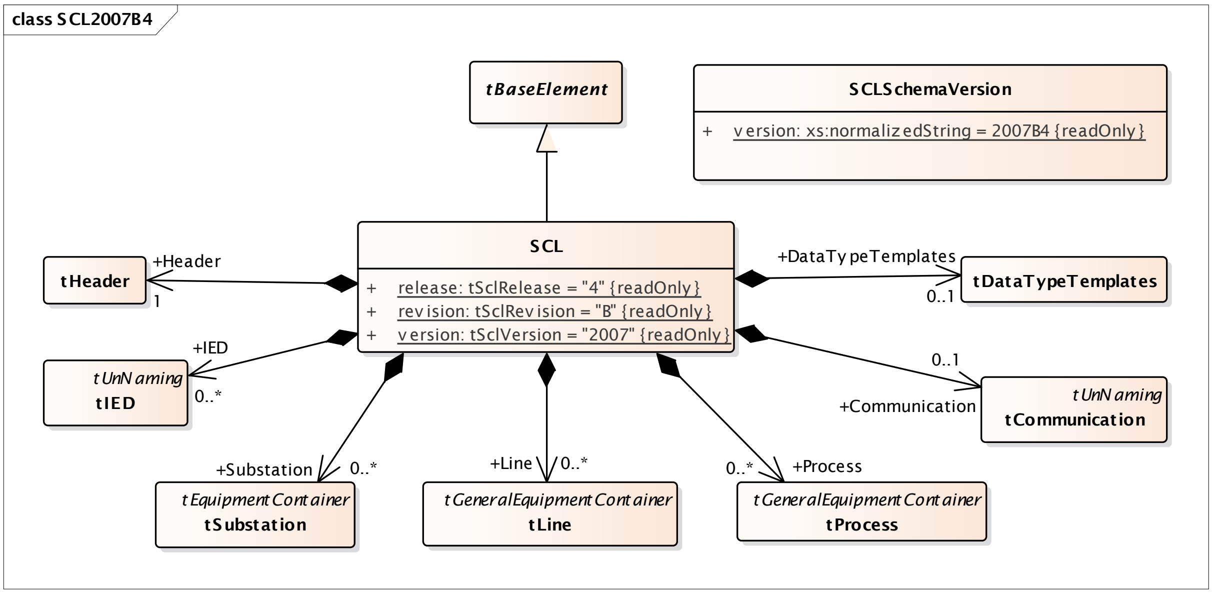
In the following schema definition clauses it is assumed that the SCL schema definition file starts as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema targetNamespace="http://www.iec.ch/61850/2003/SCL"
  xmlns:scl="http://www.iec.ch/61850/2003/SCL"
  xmlns="http://www.iec.ch/61850/2003/SCL"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
    elementFormDefault="qualified" attributeFormDefault="unqualified"
    finalDefault="extension" version="9999A9">
```

where version 9999A9 is the year, index letter and release number stating the SCL schema version, which is 2007B4 for this document. The schema then ends with

```
</xs:schema>
```


Replace existing Figure 9 by the following new Figure 9:



IEC

Add, after the fourth sentence of the last paragraph of 8.1, the following new text:

SCL may use values to identify another element of the XML file. When doing this, the referenced element shall exist in the file, otherwise the structure is invalid. For example (full definition of this example is given later) in element GSE, a specific attribute called cbName indicates the element GSEControl and attribute ldInst indicates the Ldevice containing this

GSEControl, for which the GSE has been created, and if this GSEControl is not present, the GSE shall not exist.

8.2.1 MustUnderstand rules

Replace the existing first paragraph of 8.2.1 with the following new text:

The MustUndestand / MayIgnore rules have to be followed when reading an SCL file. When producing SCL output, this should conform to the claimed supported SCL version/revision/release.

Elements, which a tool or an IED must understand to produce interoperable results, shall be declared as *mustUnderstand* and marked with the *mustUnderstand* attribute with value *true*, so that the tool processing the instance knows if it can ignore the element or not. All elements which the tool does not understand and which do not have the *mustUnderstand* property, can safely be ignored. The 'may ignore all' strategy for elements (tags) is taken, i.e. ignore the element and all its contained contents.If a known element contains directly below it an element with mustUnderstand property which a tool does not understand, then it must also ignore the known containing element.

For attributes just the attribute not understood is ignored. This means especially, that there is no 'mustUnderstand' possibility for attributes, only for elements. Therefore adding of attributes to the language is done only as optional attributes with a defined default value in the newer version, which is backward compatible to 'not knowing this attribute'. For later compatibility it is good practice to use these default values from the schema by not explicitly writing them into the SCL instance. This is possible because once released default values are not changed in the schema, as long as the attribute itself is needed.

Add, at the end of 8.2.1, the following new text:

The following example illustrates the use of the *mustUnderstand* feature.

An IED defines a GOOSE control block as follows:

```
<GSEControl name="GoCB02" appID="GoCB02" datSet="MyDatSet">
        <IEDName>AA1_D1_Q11A1</IEDName>
        <IEDName>AA1_D1_Q10A1</IEDName>
        <IEDName>AA1_D1_Q07A1</IEDName>
        <Protocol mustUnderstand="true">R-GOOSE</Protocol>
</GSEControl>
```

If the tool importing this does not understand the *Protocol* element, then it is also not allowed to use (e.g. add IED names) the *GSEControl* element containing it, although *GSEControl* is known to it.

8.2.3 Incompatibilities to earlier versions

Replace the existing text of the fifth bullet point with the following new text:

- The introduction of the *mustUnderstand* attribute; it is currently used for the *Protocol* element contained in GOOSE and SV control block definitions.

Add the following new text after the eighth bullet point:

- The newly introduced LDevice attribute ldName leads to incompatibilities with edition 1 (2003A) tools, as ignoring this attribute leads to wrong communication level configuration
- The attribute ReportControl.rptId shall no longer have the empty string value
- It is clarified that the meaning of the *maxAttributes* attribute of the *ConfDataSet* element denotes FCDAs and not basic attributes.

- The *max* attribute of the *SupSubscription* element has been replaced by two special attributes for GOOSE and SV supervision.
- The modeling of the transformer neutral point has been corrected.
- The length of *DataTypeTemplate* identifiers is restricted to 255 characters
- *EqFunction* and *EqSubFunction* are used below Equipment elements instead of Function / SubFunction

8.3.5 XML name spaces

Replace the existing first paragraph with the following new text:

For all tag elements inheriting from tBaseElement, private or standardized extensions may be added by means of (sub-)tags and attributes. These added parts shall belong to a defined XML name space with defined semantics for all these elements. It is recommended to define the used name spaces at the main tag (SCL), although standard XML allows to add it also below at elements from this name space. Observe that standard XML rules allow to replace this definition.

This namespace shall not be the same as the target namespace of the SCL schema (see below). For private name spaces, the used internal name space abbreviation should start with the character **e**. IED configurator tools shall be aware that the used name space abbreviation might be changed by the system configurator, if its relation to the referenced URI is not unique across all used ICD/IID files. An example of a standard extension for single line or communication diagram layouts is given in Annex C. The name space URI of this version of the SCL, which shall be used as default name space in all SCL files, is:


```
xmlns:scl="http://www.iec.ch/61850/2003/SCL"
```


8.4 General Structure

Replace the existing first paragraph with the following new text:

An SCL – XML document starts with the XML *prolog,* and then continues with elements as defined later. The *prolog* shall contain the identification of the XML version and the character coding used. UTF-8 coding is the preferred coding and shall be supported if standard conformance is claimed. The XML encoding attribute shall be processed in a case-insensitive way. SCL generators shall always use upper case encoding.

The whole SCL definition part is contained in the SCL element:

9 The SCL syntax elements

9.1 Header

Add the following new text after the Note after Table 3:

The revision history is optional. It describes the modification history of the containing file. This means e.g. that in principle the history of an SCD file is independent from that of IID and ICD files it is based on, although the SCD file history might contain the inclusion of a specific IID file version and revision into a project as comment.