Smart Substation Control and Protection

SSC600

TISSUES Implementation Conformance Statement for the IEC61850 interface in SSC600

ABB

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1 Introduction

This document provides the Tiger platform Technical Issues Conformance Statement (TICS). According to the UCA IUG QAP the tissue conformance statement is required to perform a conformance test and is referenced on the certificate. For more details to technical issues check following official web page: http://www.tissues.iec61850.com.

During the October 2006 meeting IEC TC57 working group 10 decided that:

- green Tissues with the category “IntOp” are mandatory for IEC 61850 edition 1
- Tissues with the category “Ed.2” Tissues should not be implemented.

Tables in this document give an overview of the IntOp Tissues and testing status.

1.1 Document information

Revision History

Revision	Date	Note
A	28 Dec 2018	SSC600 v1.0

Applicability

This document is applicable to all SSC600 Smart Substation Control and Protection device versions mentioned in document Revision History above or newer versions if document update is not required.

2 IEC 61850 part 6 Tissues

Tissue Nr	Description	M/O/-	Implemented
#1	SCL Syntax	M	Y
#3	Check the ENUMs and complete the appendix: AutoRecSt, FltLoop, PmpCtl; The ICD/SCD files should include these ENUMS when used	O	Y
#5	tExtensionAttributeNameEnum is restricted	M	Y
#6	the "segmentation" attribute in the *ReportControl/OptFields* section of SCL should be deleted.	O	Y
#8	Use name **Watts** for code 62 instead of W	M	Y
#10	Add the bType *Check* to the schema, to be used for the Check attribute.	M	Y
#15	the " bufOvfl " attribute in the* ReportControl/OptFields* section of SCL should be deleted.	O	Y
#17	DAI/SDI elements syntax	M	Y
#169	Ordering of enum differs from 7-3	M	Y
#245	Empty RptId	O	Y
#529	Sev	O	Y

3 IEC 61850 part 7-2 Tissues

Tissue Nr	Description	M/O/-	Implemented
#30	Control parameter T	M	Y
#31	Typo	M	Y
#32	Typo in syntax	M	Y
#35	Change T attribute type from “EntryTime” to “TimeStamp”.	M	Y
#36	Syntax parameter Dset-Ref missing	M	Y
#37	Change T attribute type from “EntryTime” to “TimeStamp”.	M	Y
#38	Change GoCB attribute name from “AppID” to “GoID”.	M	Y
#39	Add Attribute “DstAddress” after the Attribute “NdsCom” “15.2.1.8 DstAddress The attribute DstAddress shall be the SCSM specific addressing information like media access address, priority, and other information.”	M	Y
#40	GOOSE message syntax. Change Attribute name from “AppID” to “GoID”.	M	Y
#41	GsCB class definition. Change Attribute name from “AppID” to “GsID”.	M	Y
#42	Sampled value format. Change Attribute type from “EntryTime” to “TimeStamp”.	M	Y
#43	Change “The parameter T shall be the time when the client sends the control requests. Add NOTE: “Control requests can be Select, Operate, or Cancel.”	M	Y
#44	Add new AddCause value: Object-not-selected 18	M	Y
#45	Missing AddCauses	M	NA
#46	Synchro check - Cancelling a command as long as no Oper_resp+ has been received, compare new state diagram	M	NA
#47	“.” In LD name	M	Y
#49	BRCB TimeOfEntry	M	Y
#50	LNName start with number	M	Y
#51	ARRAY [0..num] missing	M	NA
#52	Ambiquity GOOSE SgNum	M	Y
#53	Add DstAddr to GsCB,SV	M	NA
#151	Name constraint for control blocks etc.	M	Y
#166	DataRef attribute in Log	M	NA
#185	Logging – Integrity Period	M	NA
#189	SV Format	M	NA
#190	BRCB: EntryID and TimeOfEntry	M	Y
#191	BRCB: Integrity and buffering reports	M	Y
#234	New type CtxInt	M	Y
#275	Confusing statement on GI usage	M	Y
#278	EntryId not valid for server	M	Y
#297	Sequence Number	O	Y
#298	Type of SgNum	O	N
#300	Attribute Resv in BRCB	O	N
#305	Reporting with BufTim=0	O	N
#322	Write Configuration Attributes of BRCB	O	N
#329	Reporting and BufOvl	O	N
#332	Ambiquity in use of trigger options	O	N
#333	Enabling of an incomplete GoCB	O	N
#335	Clearing of BufOvl	O	N
#348	URCB class and report	O	N
#349	BRCB TimeOfEntry has two definitions	O	N
#453	Reporting and Logging model revision	O	N

4 IEC 61850 Part 7-3 Tissues

Tissue Nr	Description	M/O/-	Implemented
#28	APC: change the fc of setMag to CO, like for all controllable CDCs (naturally also for origin and operTm). Add the attribute ctlNum(fc=CO)like for other controllable CDCs. Add the attribute mag with fc=MX for the back indication from the process.	M	NA
#54	Point def xVal, not cval	M	NA
#55	neut = Ires?	M	NA
#60	Services missing in tables	M	NA
#63	mag in CDC CMV	O	Y
#65	Deadband calculation of a Vector and trigger option	M	NA
#219	operTm in ACT	M	NA
#270	WYE and DEL rms values	M	NA,
#469	operTimeout attribute (FC = CF, AC_CO_O), dataType INT32U will be added to SPC, DPC, INC, BSC, ISC, APC	O	Y

5 IEC 61850 Part 7-4 Tissues

Tissue Nr	Description	M/O/-	Implemented
#69	FltDis**km** as is (compare 7-4 Am 1 CD) , Change LinLen**Km** to Linlen**km**	O	NA
#72	Introduction of a new LN MMTN like MMXN for single phase metering. In the new LN MMTN there should be new data for the single phase metering quantity, i.e. PhWh, PhVArh, PhAh. For each phase the user has to create an instance.	O	NA
#73	In case additional measuring points are necessary, don't use numbered extension of data but use a different instance of the LN SIMG (SIML) (Should be solved via new process monitoring approach)	O	
#75	Str and Op in GAPC shall be optional.	O	NA
#76	Put it into optional. In Retrofit situation the information may not be available for the SAS.	O	Y
#79	Add new AutoRecSt status value 4 – unsuccessfull Use the optional data "OpCnt" for LN RREC to indicate the reclosing cycle in progress. This counter will set to 0 if the AutoRecSt is in status ready **OR** a new DO for the counter may be required since OpCnt already has a semantic definition.	O	N
#80	Change TCTR and TVTR Amp / Vol from Mandatory to Conditional	O	NA
#82	Create a new logical node MCXL class as it is shown in the Figure 1. In that figure one can be can seen the LN performance as well as related attributes	O	NA
#83	Add new attributes to CSWI logical node as show in the Figure 2. The data attribute type should be ACI (new CDC)or ACT with the adding of the origin attribute	O	NA
#252	AlmThm attribute should be of CDC class SPS	O	Y

Tissue Nr	Description	M/O/-	Implemented
#343	ParOp will be used only for switching between the independent and parallel operation of the ATCC and, therefore, shall be of CDC SPC.	O	Y

6 IEC 61850 Part 8-1 Tissues

Tissue Nr	Description	M/O/-	Implemented
#116	A MMS GetNameList request with a non-existing domain shall be responded by “Confirmed Error-PDU”	M	Y
#118	When the last character of FileName is the file seperator it's a directory. E.g. "LD\KEMA" is a file and "LD\KEMA\" is a directory	O	Y
#119	MMS GetCapabilityList required	O	M
#121	GOOSE Subscribing	O	M
#165	GetDataSetValues request with a non-existent DataSet should result in an MMS ErrorResponse of Class= ACCESS and Error Code= OBJECT-NON-EXISTENT	M	Y
#177	The server ignores the buffer-overflow and entryID bits in a write request of the (U)RCB-OptFlds and the value is always 0 when reading these bits	O	NA
#183	When the client request a MMS getNamelist with an unknown domain object reference, the server replies with an MMS ServiceError with errorClass access object-non-existent. Update table 17	M	Y
#196	The ctlVal and Oper data attribute should be configured in SCL as follows: <DA name="ctlVal" fc="CO" bType="<BOOLEAN>" /> <DA name="Oper" fc="CO" bType="Struct" type="<myOper>"	O	Y
#198	If the IEC 61850-6 RCB attribute "index" is TRUE, the RCB (URCB or BRCB) instance numbering shall start with 01 and progress through 99. Two digits of instance numbering is mandatory. If the IEC 61850-6 RCB attribute "index" is FALSE, the RCB (URCB or BRCB) instance shall be with **instance number of 01."**	O	N
#235	Extension of Name length	O	Y
#246	Control Negative Responses	O	NA
#545	File Directories	O	Y

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