

# HiOS / Classic Software IEC61850 Protocol Implementation Conformance Statement

## Content

<b>1. History</b> .....	<b>2</b>
<b>2. Scope</b> .....	<b>2</b>
<b>3. ACSI conformance statements</b> .....	<b>2</b>
3.1. Basic conformance statement.....	2
3.2. Models conformance statement.....	3
3.3. Service conformance statement .....	4
<b>4. Review</b> .....	<b>6</b>
<b>5. References / Standards</b> .....	<b>6</b>

## 1. History

Version	Date	Status	Author	Changes
0v1	15.06.2015		Dragos Ionut GALALAE	Document created Added tables with initial values
0v2	22.06.2015		Bernhard Wiegel	Document Review
0v3	18.08.2015		Dragos Ionut GALALAE	Incorporated document review by Bernhard Wiegel
1v0	28.08.2015	Final	Bernhard Wiegel	Review and finalize document
1v1	25.09.2015	Final	Bernhard Wiegel	Adapted to ClassicSW

## 2. Scope

The following ACSI conformance statements are used to provide an overview and details about IEC61850 implementation in HiOS:

- ACSI basic conformance statement,
- ACSI models conformance statement,
- ACSI service conformance statement

The statements specify the communication features mapped to IEC 61850-8-1.

## 3. ACSI conformance statements

### 3.1. Basic conformance statement

		Client/ Subscriber	Server/ Publisher	Value/ Comments
<b>Client-Server roles</b>				
B11	<b>Server</b> side (of TWO-PARTY-APPLICATION-ASSOCIATION)	-	Y	
B12	<b>Client</b> side (of TWO-PARTY-APPLICATION-ASSOCIATION)		-	
<b>SCSMs supported</b>				
B21	<b>SCSM:</b> IEC 61850-8-1 used		Y	
B22	<b>SCSM:</b> IEC 61850-9-1 used			
B23	<b>SCSM:</b> IEC 61850-9-2 used			
B24	<b>SCSM:</b> other			
<b>Generic substation event model (GSE)</b>				
B31	<b>Publisher</b> side	-	Y	
B32	<b>Subscriber</b> side	Y	-	
<b>Transmission of sampled value model (SVC)</b>				
B41	<b>Publisher</b> side	-		
B42	<b>Subscriber</b> side		-	
- Y = supported N or empty = not supported				

### 3.2. Models conformance statement

	Client/ Subscriber	Server/ Publisher	Value/ Comments
If <b>Server or Client</b> side (B11/12) supported			
M1	<b>Logical device</b>	Y	
M2	<b>Logical node</b>	Y	
M3	<b>Data</b>	Y	
M4	<b>Data set</b>	Y	
M5	<b>Substitution</b>	N	
M6	<b>Setting group control</b>	N	
	<b>Reporting</b>		
M7	<b>Buffered report control</b>	Y	
M7-1	sequence-number	Y	
M7-2	report-time-stamp	Y	
M7-3	reason-for-inclusion	Y	
M7-4	data-set-name	Y	
M7-5	data-reference	Y	
M7-6	buffer-overflow	Y	
M7-7	entryID	Y	
M7-8	BufTim	Y	
M7-9	IntgPd	Y	
M7-10	GI	Y	
M7-11	conf-revision	Y	
M8	<b>Unbuffered report control</b>	N	
M8-1	sequence-number	N	
M8-2	report-time-stamp	N	
M8-3	reason-for-inclusion	N	
M8-4	data-set-name	N	
M8-5	data-reference	N	
M8-6	BufTim	N	
M8-7	IntgPd	N	
M8-8	GI	N	
M8-9	conf-revision	N	
	<b>Logging</b>		
M9	<b>Log control</b>	N	
M9-1	IntgPd	N	
M10	<b>Log</b>	N	
M11	<b>Control</b>	N	
If <b>GSE</b> (B31/32) is supported			
M12	<b>GOOSE</b>	N	
M13	<b>GSSE</b>	N	
If <b>SVC</b> (B41/42) is supported			
M14	<b>Multicast SVC</b>	N	
M15	<b>Unicast SVC</b>	N	

	Client/ Subscriber	Server/ Publisher	Value/ Comments
If <b>Server or client</b> side (B41/42) is supported			
M16	<b>Time</b>	Y	
M17	<b>File Transfer</b>	N	
Y = supported N or empty = not supported			

### 3.3. Service conformance statement

	AA: TP/MC	Client (C)	Server (S)	Comments
<b>Server</b>				
S1	ServerDirectory	TP	Y	
<b>Application association</b>				
S2	Associate		Y	
S3	Abort		Y	
S4	Release		Y	
<b>Logical device</b>				
S5	LogicalDeviceDirectory	TP	Y	
<b>Logical node</b>				
S6	LogicalNodeDirectory	TP	Y	
S7	GetAllDataValues	TP	Y	
<b>Data</b>				
S8	GetDataValues	TP	Y	Limited to a MMS read request (GetDataValues) containing a list of max 20 entries
S9	SetDataValues	TP	Y	
S10	GetDataDirectory	TP	Y	
S11	GetDataDefinition	TP	Y	
<b>Data set</b>				
S12	GetDataSetValues	TP	Y	
S13	SetDataSetValues	TP	N	
S14	CreateDataSet	TP	N	
S15	DeleteDataSet	TP	N	
S16	GetDataSetDirectory	TP	Y	
<b>Substitution</b>				
S17	SetDataValues	TP	Y	
<b>Setting group control</b>				
S18	SelectActiveSG	TP	Y	
S19	SelectEditSG	TP	N	
S20	SetSGValues	TP	N	
S21	ConfirmEditSGValues	TP	N	

		AA: TP/MC	Client (C)	Server (S)	Comments
S22	GetSGValues	TP		N	
S23	GetSGCBValues	TP		Y	
<b>Reporting</b>					
Buffered report control block (BRCB)					
S24	Report	TP		Y	
S24-1	data-change (dchg)			Y	
S24-2	qchg-change (qchg)			Y	
S24-3	data-update (dupd)			Y	
S25	GetBRCBValues	TP		Y	
S26	SetBRCBValues	TP		Y	Partly, see Reporting Model in PIXIT for details
Unbuffered report control block (URCB)					
S27	Report	TP		N	
S27-1	data-change (dchg)			N	
S27-2	qchg-change (qchg)			N	
S27-3	data-update (dupd)			N	
S28	GetURCBValues	TP		N	
S29	SetURCBValues	TP		N	
<b>Logging</b>					
Logging control block (BRCB)					
S30	GetLCBValues	TP		N	
S31	SetLCBValues	TP		N	
Log					
S32	QueryLogByTime	TP		N	
S33	QueryLogByEntry	TP		N	
S34	GetLogStatusValues	TP		N	
<b>Generic substation event model (GSE)</b>					
GOOSE-CONTROL-BLOCK					
S35	SendGOOSEMessage	MC		N	
S36	GetReference	TP		N	
S37	GetGOOSEElementNumber	TP		N	
S38	GetGoCBValues	TP		N	
S39	SetGoCBValues	TP		N	
GSSE-CONTROL-BLOCK					
S40	SendGSSEMessage	MC		N	
S41	GetReference	TP		N	
S42	GetGSSEElementNumber	TP		N	
S43	GetGsCBValues	TP		N	
S44	SetGsCBValues	TP		N	

	AA: TP/MC	Client (C)	Server (S)	Comments
<b>Transmission of sampled value model (SVC)</b>				
Multicast SVC				
S45	SendMSVMessage	MC	N	
S46	GetMSVCBValues	TP	N	
S47	SetMSVCBValues	TP	N	
Unicast SVC				
S48	SendUSVMessage	TP	N	
S49	GetUSVCBValues	TP	N	
S50	SetUSVCBValues	TP	N	
<b>Control</b>				
S51	Select	TP	N	
S52	SelectWithValue	TP	N	
S53	Cancel	TP	N	
S54	Operate	TP	N	
S55	Command-Termination	TP	N	
S56	TimeActivated-Operate	TP	N	
<b>File transfer</b>				
S57	GetFile	TP	N	
S58	SetFile	TP	N	
S59	DeleteFile	TP	N	
S60	GetFileAttributeValues	TP	N	
<b>Time</b>				
T1	Time resolution of internal clock	TP	30	nearest negative power of 2 in seconds
T2	Time accuracy of internal clock			T0
			Y	T1
				T2
				T3
				T4
				T5
T3	Supported TimeStamp resolution		8	nearest negative power of 2 in seconds

#### 4. Review

Version	Date	Reviewed by	Remarks
	dd.mm.yyyy	Lead Engineer / Specialist	
0v2	03.08.2015	Bernhard Wiegel	
1v0	28.08.2015	Bernhard Wiegel	

#### 5. References / Standards

See IEC 61850-8-1 for more info.

