



COMPILATION OF COMMENTS ON COMMITTEE DRAFT

Project number: IEC 61850-7-3 A1 Ed. 1.0	Reference number of the CD <b>57/779/CD</b>
IEC/TC or SC TC 57	Date of circulation 2006-08-25

Title of the TC or SC:  
Power systems management and associated information exchange

**Title of the committee draft:**  
Communication networks and systems in substations – Part 7-3: Basic communication structure for substation and feeder equipment - Common data classes - Amd.1: Clarifications and Corrections, and Extensions for Power Quality and Representation of Historical and Statistical Information

The above-mentioned document was distributed to National Committees with a request that comments be submitted

**Comments received** – see annex <sup>1)</sup>

**DECISION OF THE CHAIRMAN** (in cooperation with the secretariat)

a  A revised committee draft will be distributed as a committee draft for vote (CDV) by (date) 2006-12

b  A revised committee draft will be distributed for comment by (date) .....

c  The committee draft and comments will be discussed at the next meeting (date) .....

NOTE In the case of a proposal a or b made by the chairman, P-members objecting to such a proposal shall inform the Central Office with copy to the secretary in writing within 2 months of the circulation of this compilation (see ISO/IEC Directives, Part 1, 2.5.3).

Name or signature of the Secretary  Germany, Dr. Andreas Huber (2006-08-21)	Name or signature of the Chairman  France, Thierry Lefebvre (2006-08-21)
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Comments of CZ on 57/779

The Czech NC Agrees with the document without comments.

Comments of FR on 57/779

The french NC has no comment on this document.

Comments of IT on 57/779

No comments on behalf of the Italian National Committee.

Comments of NO on 57/779

The Norwegian NC supports the draft with no comments

Comments of PL on 57/779

The Polish NC accepts the document without comments.

Comments of PT on 57/779

"the Portuguese NC approves 57/779/CD"

Comments of SK on 57/779

No comments

Date 2005-11-22	Document 57/779/CD
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National Committee	Clause/Subclause	Paragraph Figure/Table	Type of comment (General/Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
AT 01	6.10		Technical	<b>Vector – Argument (nag) units</b> Allow also radians as unit.	Add "angunits" (optional) in CDCs where Vector is used. State that "units" is for mag (would be "magunits" in new CDCs).	Rejected – always Siunits are used, which is degrees for phasors
AT 02	6.10		Technical	<b>Cartesian Coordinates for Vector</b> The Vector type is defined with polar coordinates only. There are just as many use cases for specifying a vector (phasor) in cartesian coordinates.	Extend Vector model to include cartesian coordinates (re, im). Settings can be specified in Cartesian and/or polar coordinates. An enumerator shall indicate the "originating coordinate system" when both representations are present and one is calculated from the other. See AT_Attachment.1	Rejected – Cartesian coordinates can be easily calculated from polar coordinates
AT 03	6		Technical	<b>Tolerances for Setting Values</b> To assess the validity of status values, not only the setting value, but also its tolerance needs to be known.	Introduce common data attribute type "Tolerance". See attachment. Side effect on 7-4: Instances of this Tolerance type should also be used on higher levels of the object hierarchy (LN, LD/LLN0) to provide general defaults if no specific tolerances are given at a lower level.	Problem is not understood – more explanation is needed
AT 04	7.8		Technical	<b>Tolerances for Setting Values</b> Use Tolerance in CDCs for analogue settings.	Add attribute "Tol" in the configuration section of all CDCs for analogue settings in 7.8 (ASG, CURVE, Complex Setting Value, see below).	Problem is not understood – more explanation is needed
AT 05	7.8		Technical	<b>Complex Settings</b> There is a CMV (7.4.3, but no use was made of the Vector type!), but no matching counterpart on the settings side. Also, looking into e.g. LN RFLO, settings are done with explicit Cartesian coordinates (X and R) instead with an adequate complex type (see Vector with Cartesian coordinates).	Introduce Complex Setting Value (CSV). See AT_Attachment.1	For the current model there is no need for a complex setting – might be considered later, if the need arises.

## AT Attachment1

Examples of how the new / changed modelling could be implemented:

### Tolerance Type

Tolerance Definition			
Attribute Name	Attribute Type	Value / Value Range	M/O/C
absPs	AnalogueValue	absolute positive tolerance	O/M
absNg	AnalogueValue	absolute negative tolerance	O/M
relPs	FLOAT32	relative positive tolerance (in %)	O/M
relNg	FLOAT32	relative negative tolerance (in %)	O/M

If positive and negative tolerances of a kind (abs, rel) are the same, only the positive value needs to be present.

### Extend the Vector Type to Include Cartesian Coordinates

Vector Type Definition			
Attribute Name	Attribute Type	Value / Value Range	M/O/C
mag	AnalogueValue	magnitude	M
ang	AnalogueValue	argument	O
re	AnalogueValue	real part	O
im	AnalogueValue	imaginary part	O
valOrig	ENUMERATED	polar   Cartesian	O/M

### Complex Setting Value (CSV)

CSV class					
Attribute Name	Attribute Type	FC	TrgOp	Value / Value Range	M/O
DataName	Inherited from Data Class (see IEC 61850-7-2)				
DataAttribute					
<i>setpoint and measured values</i>					
setVal	Vector	SP, MX	dchg		M
origin	Originator	SP, MX			O
operTim	TimeStamp	SP			O
q	Quality	MX	qchg		M
t	TimeStamp	MX			M
<i>configuration, description and extension</i>					
ctlModel	ENUMERATED	CF		direct-with-normal-security	M
magunits	ENUMERATED	CF		see Annex A	O
angunits	ENUMERATED	CF		see Annex A	O
magSVC	ScaledValueConfig	CF			AC_SCAV
angSVC	ScaledValueConfig	CF			AC_SCAV
minVal	Vector	CF			O
maxVal	Vector	CF			O
tol	Tolerance	CF			O
d	VISIBLE STRING255	DC		Text	O
dU	UNICODE STRING255	DC			O
cdcNS	VISIBLE STRING255	EX			AC_DLND_A_M
cdcName	VISIBLE STRING255	EX			AC_DLND_A_M
dataNS	VISIBLE STRING255	EX			AC_DLN_M
Services					
...					

Date	Document
2005-11-07	57/779e/CD_61850-7-3 Amd.1 Ed.1

National Committee	Clause/Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
CAN-1-PM	6.5	Table	Editorial	The row should be added to table 4 instead of table 6	Replace Table 6 by Table 4	accepted
CAN-2-PM	7.5.7	Editor Note	Technical	We recommend to add substitution capabilities.	We recommend to add substitution capabilities.	accepted
JP1	General		General	SendxyzMessage of GSE model and Sample Value model was added as service of all CDC this time. It seems rudimentary editorial mistake. To avoid these mistakes, it is necessary to check and list up the relations of all of communication service and logical node and common data class, and add their relationship table as Annex.	Accepted and to be fixed	not accepted The change has been made based on TISSUE #60. The GSE model and the sampled value model are designed such that it is possible to use attributes from all datasets. It is unclear why to create an additional list of relations between communication services and logical nodes and CDCs. That is exactly the purpose of the existing tables.
JP2	6.5		Editorial	Table 6 should be corrected to Table 4.		accepted
JP3	7.7.4		Editorial	The number of "Table 1" should be changed to the number that can be uniquely identified in IEC61850-7-3.		accepted