



# High**PROTEC**

IEC 61850 | TICS

**MRA4**

Software-Version: 2.2.c

IEC 61850 TICS

Tissue Implementation Conformance Statement (TICS)

UCA International Users Group Testing Sub Committee

English

## Introduction

This document provides a template for the tissues conformance statement. According to the UCA IUG QAP the tissue conformance statement is required to perform a conformance test and is referenced on the certificate.

This document is applicable for MRA4 Version 2.2.c (Firmware-Build 19706).

## Mandatory Intop Tissues

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.

Below table gives an overview of the implemented IntOp Tissues.

| Part                       | Tissue Description<br>Implemented<br>Nr                | Y/na |
|----------------------------|--|------|
| 8-1                        | 116 GetNameList with empty response?                   | Y    |
|                            | 165 Improper Error Response for GetDataSetValues       | Y    |
|                            | 183 GetNameList error handling                         | Y    |
| 7-4                        | None   |      |
| 7-3                        | 28 Definition of APC                                   | na   |
|                            | 54 Point def xVal, not cVal                            | na   |
|                            | 55 Ineut = Ires ?                                      | Y    |
|                            | 60 Services missing in tables                          | na   |
|                            | 63 mag in CDC CMV                                      | Y    |
|                            | 65 Deadband calculation of a Vector and trigger option | na   |
|                            | 219 operTm in ACT                                      | na   |
| 270 WYE and DEL rms values | na   |      |
| 7-2                        | 30 control parameter T                                 | Y    |
|                            | 31 Typo  | Y    |
|                            | 32 Typo in syntax                                      | Y    |
|                            | 35 Typo Syntax Control time                            | Y    |
|                            | 36 Syntax parameter DSet-Ref missing                   | Y    |
|                            | 37 Syntax GOOSE "T" type                               | Y    |
|                            | 39 Add DstAddr to GoCB                                 | Y    |
|                            | 40 GOOSE Message "AppID" to "GoID"                     | Y    |
|                            | 41 GsCB "AppID" to "GsID"                              | Y    |
|                            | 42 SV timestamp: "EntryTime" to "TimeStamp"            | na   |
|                            | 43 Control "T" semantic                                | Y    |
|                            | 44 AddCause - Object not sel                           | Y    |
|                            | 45 Missing AddCauses (neg range)                       | na   |
|                            | 46 Synchro check cancel                                | na   |
|                            | 47 "." in LD Name?                                     | Y    |
|                            | 49 BRCB TimeOfEntry (part of #453)                     | Y    |
|                            | 50 LNName start with number?                           | Y    |
|                            | 51 ARRAY [0..num] missing                              | na   |
|                            | 52 Ambiguity GOOSE SqNum                               | Y    |
|                            | 53 Add DstAddr to GsCB, SV                             | Y    |

| Part   | Tissue Description Implemented | Nr   | Y/na |
|--------|--------------------------------|--|------|
|        | 151                            | Name constraint for control blocks etc.              | Y    |
|        | 166                            | DataRef attribute in Log                             | na   |
|        | 185                            | Logging - Integrity periode                          | na   |
|        | 189                            | SV Format  | na   |
|        | 190                            | BRCB: EntryId and TimeOfEntry (part of #453)         | Y    |
|        | 191                            | BRCB: Integrity and buffering reports (part of #453) | Y    |
|        | 234                            | New type CtxInt (Enums are mapped to 8 bit integer)  | Y    |
|        | 275                            | Confusing statement on GI usage (part of #453)       | Y    |
|        | 278                            | EntryId not valid for a server (part of #453)        | Y    |
| Part 6 | 1                              | Syntax   | Y    |
|        | 5                              | tExtensionAttributeNameEnum is restricted            | Y    |
|        | 8                              | SIUnit enumeration for W                             | Y    |
|        | 10                             | Base type for bitstring usage                        | na   |
|        | 17                             | DAI/SDI elements syntax                              | Y    |
|        | 169                            | Ordering of enum differs from 7-3                    | na   |

NOTE: Tissue 49, 190, 191, 275 and 278 are part of the optional tissue #453, all other technical tissues in the table are mandatory if applicable.

NOTE: Editorial tissues are marked as "na".

NOTE: Final proposal on tissue 45 is not defined yet

## Optional IntOp Tissues

After the approval of the server conformance test procedures version 2.2 the following IntOp tissues were added or changed. It is optional to implement these tissues.

| Part | Tissue Nr | Description   | Implemented Y/N/na |
|------|-----------|---|--------------------|
| 8-1  | 235       | Extension of Name length                            | Y                  |
| 8-1  | 246       | Control negative response (SBOs) with LastApplError | na                 |
| 8-1  | 545       | Skip file directories with no files                 | na                 |
| 7-2  | 333       | Enabling of an incomplete GoCB                      | na                 |
| 7-2  | 453       | Combination of all reporting and logging tissues    | Y                  |
| 6    | 245       | Attribute RptId in SCL                              | N                  |
| 6    | 529       | Replace sev - Unknown by unknown                    | na                 |

## Revision history

| Revision | Remarks                |
|----------|------------------------|
| 1.0      | First version          |
| 1.1      | Added corporate design |