Solution to redmine #668 for both Ed2 and Ed2.1

Remove the mirrorblocked related addCauses/commandtermination;

focus on the FC=OR attributes, the sequence is less strict

May 21, 2021

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| **sCtl28 DOns** | **Verify the FC=OR attributes opOk, OpRcvd, tOpOk** | [ ]  Passed[ ]  Failed[ ]  Inconclusive |
| IEC 61850-7-2 Subclause 20.2 and 20.3IEC 61850-7-3 Subclause 8 “opRcvd”IEC 61850-7-4 Annex AIEC 61850-8-1 Subclause 20TISSUE #1676 (multiple figures for control) |
| Expected result1), 3), 5) and 7) * Operate is accepted, DUT sends reports/GOOSE with OpRcvd=T, OpRcvd=F, opOk=T and opOk=F

2), 4), 6) and 8)* DUT returns Operate response- and sends reports/GOOSE with OpRcvd=T and then OpRcvd=F
 |
| Test descriptionConfigure a dataset with the opOk, OpRcvd, tOpOk with FC=OR and enable a GOOSE control block (when supported) or a report control block with this dataset and trigger data-change. Equipment simulator does not change the position. Beh = on 1. Client sends correct Operate with test=false
2. Client sends correct Operate with test=true

Change Beh = test when supported1. Client sends correct Operate with test=true
2. Client sends correct Operate with test=false

Change Beh = test/blocked when supported1. Client sends correct Operate with test=true
2. Client sends correct Operate with test=false

Change Beh = blocked when supported1. Client sends correct Operate with test=false
2. Client sends correct Operate with test=true
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| Comment |

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| **sCtl28 SBOns** | **Verify FC=OR attributes opOk, OpRcvd, tOpOk** | [ ]  Passed[ ]  Failed[ ]  Inconclusive |
| IEC 61850-7-2 Subclause 20.2 and 20.3IEC 61850-7-4 Annex AIEC 61850-8-1 Subclause 20TISSUE #1676 (multiple figures for control) |
| Expected result1), 3), 5) and 7) * Select is accepted
* Operate is accepted, DUT sends reports/GOOSE with OpRcvd=T, OpRcvd=F, opOk=T and opOk=F

2), 4), 6) and 8)* Select is accepted
* DUT returns Operate response- and sends reports/GOOSE with OpRcvd=T and then OpRcvd=F
 |
| Test descriptionConfigure a dataset with the opOk, OpRcvd, tOpOk with FC=OR and enable a GOOSE control block (when supported) or a report control block with this dataset and trigger data-change. Equipment simulator does not change the position. Beh = on 1. Client sends correct Select and Operate with test=false
2. Client sends correct Select and Operate with test=true

Change Beh = test when supported1. Client sends correct Select and Operate with test=true
2. Client sends correct Select and Operate with test=false

Change Beh = test/blocked when supported1. Client sends correct Select and Operate with test=true
2. Client sends correct Select and Operate with test=false

Change Beh = blocked when supported1. Client sends correct Select and Operate with test=false
2. Client sends correct Select and Operate with test=true
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| Comment |

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| **sCtl28 DOes** | **Verify FC=OR attributes opOk, OpRcvd, tOpOk** | [ ]  Passed[ ]  Failed[ ]  Inconclusive |
| IEC 61850-7-2 Subclause 20.2 and 20.3IEC 61850-7-4 Annex AIEC 61850-8-1 Subclause 20TISSUE #1676 (multiple figures for control) |
| Expected result1), 3), 5) and 7) * Operate is accepted, DUT sends reports/GOOSE with OpRcvd=T , OpRcvd=F, opOk=T and opOk=F

2), 4), 6) and 8)* DUT returns Operate response- and sends reports/GOOSE with OpRcvd=T and then OpRcvd=F
 |
| Test descriptionConfigure a dataset with the opOk, OpRcvd, tOpOk with FC=OR and enable a GOOSE control block (when supported) or a report control block with this dataset and trigger data-change. Equipment simulator does not change the position. Beh = on 1. Client sends correct Operate with test=false
2. Client sends correct Operate with test=true

Change Beh = test when supported1. Client sends correct Operate with test=true
2. Client sends correct Operate with test=false

Change Beh = test/blocked when supported1. Client sends correct Operate with test=true
2. Client sends correct Operate with test=false

Change Beh = blocked when supported1. Client sends correct Operate with test=false
2. Client sends correct Operate with test=true
 |
| Comment |

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| **sCtl28 SBOes** | **Verify FC=OR attributes opOk, OpRcvd, tOpOk** | [ ]  Passed[ ]  Failed[ ]  Inconclusive |
| IEC 61850-7-2 Subclause 20.2 and 20.3IEC 61850-7-4 Annex AIEC 61850-8-1 Subclause 20TISSUE #1676 (multiple figures for control) |
| Expected result1), 3), 5) and 7) * SelectWithValue is accepted
* Operate is accepted, DUT sends reports/GOOSE with OpRcvd=T, OpRcvd=F, opOk=T and opOk=F

2), 4), 6) and 8)* When the DUT returns SelectWithValue response- it will send no report/GOOSE.
* When SelectWithValue is accepted continue
* DUT returns Operate response- and sends reports/GOOSE with OpRcvd=T and then OpRcvd=F
 |
| Test descriptionConfigure a dataset with the opOk, OpRcvd, tOpOk with FC=OR and enable a GOOSE control block (when supported) or a report control block with this dataset and trigger data-change. Equipment simulator does not change the position. Beh = on 1. Client sends correct SelectWithValue and Operate with test=false
2. Client sends correct SelectWithValue and when accepted Operate with test=true

Change Beh = test when supported1. Client sends correct SelectWithValue and Operate with test=true
2. Client sends correct SelectWithValue and when accepted Operate with test=false

Change Beh = test/blocked when supported1. Client sends correct SelectWithValue and Operate with test=true
2. Client sends correct SelectWithValue and when accepted Operate with test=false

Change Beh = blocked when supported1. Client sends correct SelectWithValue and Operate with test=false
2. Client sends correct SelectWithValue and when accepted Operate with test=true
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| CommentFor SBOes it’s not mandatory to perform all checks during the SelectWithValue (PIXIT Ct18) |

| 12: Control general | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25 | SCL-Writable control model: sCtl2PICS-TimOper: sCtl3SCL-stSeld: sCtl4SCL-multiple SBO: sCtl6SCL-CILO: sCtl7SCL-DO object has SBO/SBOw data attributes: sCtl13SCL-Operate time reasonably large: sCtl14PIXIT-Sr5 Behaviour=off: sCtl15SCL-Loc: sCtl16SCL-LocSta: sCtl17SCL-CmdBlk: sCtl18PIXIT-Ct9 AddCause:* Parameter-change-in-execution: sCtl20
* Step-limit: sCtl21
* Ended-with-overshoot: sCtl23
* Abortion-due-to-deviation: sCtl24
* Command-already-in-execution and operate time: sCtl26

SCL-SBO and SBOw: sCtl27SCL-FC=OR: sCtl28 |
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No impact on certificate