

Clarification Request

References: 135.1-2013 - 8.4.1 and similar

Date of BTL-WG Response: January 7, 2016

☒ All actions necessitated have been completed

Background:

135.1-2013 - 8.4.1 and lots of similar tests (8.4.x, 8.5.x, 7.3.1.x)

8.4.1 CHANGE_OF_BITSTRING Tests

Dependencies: ReadProperty Service Execution Tests, 9.18; WriteProperty Service Execution Tests, 9.22.

BACnet Reference Clauses: 12.12.5, 12.12.7, 13.3.1, and 13.8.

ANSI/ASHRAE Standard 135.1-2013

Purpose: To verify the correct operation of the Change of Bitstring event algorithm.

Test Concept: The object begins the test in a NORMAL state. The referenced property is changed to a value that is one of the values designated in List_Of_Bitstring_Values. After the time delay expires the object should enter the OFFNORMAL state and transmit an event notification message. The referenced property is then changed to a value corresponding to a NORMAL state. After the time delay the object should enter the NORMAL state and transmit an event notification message.

Configuration Requirements: The IUT shall be configured such that the Event_Enable property has a value of TRUE for the TO-OFFNORMAL and TO-NORMAL transitions. The Issue_Confirmed_Notifications property shall have a value of TRUE. The event-generating objects shall be in a NORMAL state at the start of the test.

Test Steps:

1. VERIFY Event_State = NORMAL
2. IF (the referenced property is writable) THEN
 - WRITE (referenced property) = (a value x: x = one of the List_Of_Bitstring_Values after the bitmask is applied)
 - ELSE
 - MAKE (the referenced property have a value x: x = one of the List_Of_Bitstring_Values after the bitmask is applied)
3. WAIT (Time Delay)
4. BEFORE Notification Fail Time
 - RECEIVE ConfirmedEventNotification-Request,
 - 'Process Identifier' = (any valid process ID),
 - 'Initiating Device Identifier' = IUT,
 - 'Event Object Identifier' = (the object being tested),
 - 'Time Stamp' = (the current local time),
 - 'Notification Class' = (the configured notification class),
 - 'Priority' = (the value configured to correspond to a TO-OFFNORMAL transition),
 - 'Event Type' =

```

CHANGE_OF_BITSTRING,
'Notify Type' =
EVENT | ALARM,
'AckRequired' =
TRUE | FALSE,
'From State' =
NORMAL,
'To State' =
OFFNORMAL,
'Event Values' =
referenced-bitstring, Status_Flags
5. TRANSMIT BACnet-SimpleACK-PDU
6. IF (the object being tested is not an Event Enrollment object) THEN
    VERIFY Status_Flags = (TRUE, FALSE, ?, ?)
7. VERIFY Event_State = OFFNORMAL
8. IF (Protocol_Revision is present and Protocol_Revision  $\square$  1) THEN
    VERIFY Event_Time_Stamps = (the timestamp in step 4, *, *)
9. IF (Present_Value is writable) THEN
    WRITE (referenced property) = (a value x: x corresponds to a NORMAL state)
    ELSE
    MAKE (the referenced property have a value x: x corresponds to a NORMAL state)
10. WAIT (Time Delay)
11. BEFORE Notification Fail Time
    RECEIVE ConfirmedEventNotification-Request,
'Process Identifier' =
    (any valid process ID),
'Initiating Device Identifier' = IUT,
'Event Object Identifier' =
    (the object being tested),
'Time Stamp' =
    (the current local time),
'Notification Class' =
    (the configured notification class),
'Priority' =
    (the value configured to correspond to a TO-NORMAL transition),
'Event Type' =
CHANGE_OF_BITSTRING,
'Notify Type' =
EVENT | ALARM,
'AckRequired' =
TRUE | FALSE,
'From State' =
OFFNORMAL,
'To State' =
NORMAL,
'Event Values' =
referenced-bitstring, Status_Flags
12. TRANSMIT BACnet-SimpleACK-PDU
13. IF (the object being tested is not an Event Enrollment object) THEN
    VERIFY Status_Flags = (FALSE, FALSE, ?, ?)
14. VERIFY Event_State = NORMAL
15. IF (Protocol_Revision is present and Protocol_Revision  $\square$  1) THEN
    VERIFY Event_Time_Stamps = (the timestamp in step 4, *, the timestamp in step 11)

```

Notes to Tester: The 'Message Text' parameter is omitted in the test description because it is optional. The IUT may include this parameter in the notification messages. The time stamps indicated by "*" in steps 8 and 15 can have a value that indicates an unspecified time or a time that precedes the timestamp in step 4.

Problem:

The new optional property "TimeDelayNormal" is not covered by the test specification. In step 10 e.g. the WAIT should be TimeDelayNormal instead of TimeDelay if that new property exists.

One customer specifically configured TimeDelay and TimeDelayNormal to be different in their IUT on purpose specifically in order to test if they implemented that new functionality correctly. As a result the correctly implemented device fails these tests as specified.

Proposal:

At the top of these tests define two variables TIMEDELAY and TIMEDELAYNORMAL. In case the property TimeDelayNormal does not exist the value of TIMEDELAYNORMAL will be the same as TIMEDELAY. In the teststeps use the appropriate variable in the wait statements e.g.:

```
...  
3 . WAIT (TIMEDELAY)  
...  
10. WAIT (TIMEDELAYNORMAL)  
...
```

Question:

Should all the alarming tests be changed in the proposed way?

Response:

Yes, the tests will be revised to use two variables TIMEDELAY and TIMEDELAYNORMAL.