Clarification Request

Reference: "BTL Specified Tests 3.0.final.doc"

Problem:

The BTL tests 7.3.2.22.X2.3.8 Revision 4 Event Priority Test and 7.3.2.22.X2.3.12 Revision 4 Lower Event Priority Change Test do not clearly explain that there should only be one exception schedule per priority level and that the time value pairs listed for each priority should exist in the same exception schedule.

Proposed Solution:

Add some text to the Configuration Requirements section of each test emphasizing that there should be only one exception schedule per priority.

Changes to BTL Specified Tests: (reference BTL Specified Tests 3.0.final)

[Change 7.3.2.22.X2.3.8 Revision 4 Event Priority Test, p 40]

7.3.2.22.X2.3.8 Revision 4Event Priority Test

Reason for Change: No tests existed for revision 4 functionality. This test is not in any SSPC proposal.

Dependencies: ReadProperty Service Execution Tests, 9.18; TimeSynchronization Service Execution Tests, 9.30.

BACnet Reference Clause: 12.24.8.

Purpose: To verify that a BACnetSpecialEvent of a higher priority takes precedence over one of lower priority when both are active at the same time, and that it relinquishes to the lower priority.

Configuration Requirements: The IUT shall be configured with a Schedule object containing two or more BACnetSpecialEvents, all active on the same date, with different eventPriority values (if possible, all 16 priority levels should be represented), and with overlapping BACnetTimeValue entries distributed thus: the entry with the lowest priority shall have the earliest time-value pair (D_1) with a non-NULL value, and the last time-value pair (D_N) with a NULL value; the next higher priority shall have a time-value pair D_2 occurring after D_1 with a different non-NULL value, and a time-value pair D_{N-1} with a NULL value and occurring before D_N; and so on. The result is that the time-value pairs shall be ordered chronologically thus: D_1, D_2, D_3, ..., D_{N-1}, D_N. An example of such a configuration testing five priority levels is shown in Table 7-11.

Table 7-11. Example of event and value prioritization

Event Priority:	Time:								
	D_1	D_2	D_3	D_4	D_5	D_6	D_7	D_8	D_9
1	-	-	-	-	V_5	NULL	-	-	-
2	-	-	-	V_4	-	-	NULL	-	-
3	-	-	V_3	-	-	-	-	NULL	-
4	-	V_2	-	-	-	-	-	-	NULL

5	V_1	-	-	-	-	-	-	-	-
Present_Value:	V_1	V_2	V_3	V_4	V_5	V_4	V_3	V_2	V_1

Note: Each event priority in the table above represents 1 BACnetSpecialEvent. The BACnetSpecialEvent should contain the time value pairs listed in the table (Dx, Vx). There should be only 1 BACnetSpecialEvent per priority for this test.

Test Steps:

1. REPEAT D = (the times in the configured time-value pairs with non-NULL values) DO
2. (TRANSMIT TimeSynchronization-Request, 'Time' = D) | MAKE (the local date and time = D)
3. WAIT Schedule Evaluation Fail Time
4. VERIFY Present_Value = (the value corresponding to the time D)
5. REPEAT D = (the times in the configured time-value pairs with NULL values, except the final DN) DO
6. (TRANSMIT TimeSynchronization-Request, 'Time' = D) | MAKE (the local date and time = D)
7. WAIT Schedule Evaluation Fail Time
8. VERIFY Present_Value = (the non-NULL value corresponding to the priority lower than that associated with D)

[Change 7.3.2.22.X2.3.12 Revision 4 Lower Event Priority Change test, p 42]

7.3.2.22.X2.3.12 Revision 4 Lower Event Priority Change Test

Reason for Change: No tests existed for revision 4 functionality. This test is not in any SSPC proposal.

Dependencies: ReadProperty Service Execution Tests, 9.18; TimeSynchronization Service Execution Tests, 9.30.

BACnet Reference Clause: 12.24.8.

Purpose: To verify that when a BACnetSpecialEvent of a higher priority takes precedence over one of lower priority, that a change in the lower priority level is not observed in Present_Value until control is relinquished to it.

Configuration Requirements: A Schedule object is configured with two BACnetSpecial Events, thus: the first event is at lower priority than the second and contains two time-value pairs: the first, D_1, has a non-NULL value V_1 and the second, D_3, has a different non-NULL value V_3. The second event contains three time-value pairs: the first, D_2, occurs after D_1 and before D_3, and has a non-NULL value V_2 different from the value associated with D_1; the second, D_4, occurs after D_3 and has a non-NULL value V_4 different from the value associated with D_3; the third, D_5 occurs after D_4 and has a NULL value. (This arrangement of events facilitates testing Schedule objects that schedule only BOOLEAN or two-state enumerations.) Table 7-12 illustrates the time and value pairs in this test.

Table 7-12. Event and value prioritization test times and value

	Time:				
Event Priority:	D_1	D_2	D_3	D_4	D_5
Higher	-	V_2	V_3	-	NULL
Lower	V_1	-	-	V_4	-
Present_Value:	V_1	V_2	V_3	V_3	V_4

Note: Each event priority in the table above represents 1 BACnetSpecialEvent. The BACnetSpecialEvent should contain the time value pairs listed in the table (Dx, Vx). There should be only 1 BACnetSpecialEvent per priority for this test.

1. (TRANSMIT TimeSynchronization-Request, 'Time' = D_1) | MAKE (the local date and time = D_1)
2. VERIFY Present_Value = V_1
3. (TRANSMIT TimeSynchronization-Request, 'Time' = D_2) | MAKE (the local date and time = D_2)
4. VERIFY Present_Value = V_2
5. (TRANSMIT TimeSynchronization-Request, 'Time' = D_3) | MAKE (the local date and time = D_3)
6. VERIFY Present_Value = V_3
7. (TRANSMIT TimeSynchronization-Request, 'Time' = D_4) | MAKE (the local date and time = D_4)
8. VERIFY Present_Value = V_3 (not V_4)
9. (TRANSMIT TimeSynchronization-Request, 'Time' = D_5) | MAKE (the local date and time = D_5)
10. VERIFY Present_Value = V_4

Response:

BTL working group agrees with the changes specified above.