

Clarification Request

References: BTL Specified test 9.21.1.X1

Date of BTL-WG Response: _04/18/2017_

Background:

BTL - 9.21.1.X1 ReadRange Support for All List Properties

Reason for change: Need a ReadRange test for non-Log_Buffer list properties.

Purpose: To verify that all list properties of all objects can be read using the 3 by position forms of the ReadRange service.

Test Steps:

1. REPEAT X = (all objects in the IUT's database) DO {
 - REPEAT Y = (all list properties in object X) DO {
 - TRANSMIT ReadRange-Request
 - 'Object Identifier' = X,
 - 'Property Identifier' = Y,
 - RECEIVE ReadRange-ACK
 - 'Object Identifier' = X,
 - 'Property Identifier' = Y,
 - 'Result Flags' = (? , ? , ?),
 - 'Item Count' = (C: up to number of items in Y)
 - 'Item Data' = (the first C elements of Y)
 - TRANSMIT ReadRange-Request
 - 'Object Identifier' = X,
 - 'Property Identifier' = Y,
 - 'Reference Index' = 1,
 - 'Count' = (C: any valid positive value)
 - RECEIVE ReadRange-ACK
 - 'Object Identifier' = X,
 - 'Property Identifier' = Y,
 - 'Result Flags' = (TRUE , ? , ?),
 - 'Item Count' = (C2: up to C)
 - 'Item Data' = (the first C2 elements of Y)
 - TRANSMIT ReadRange-Request
 - 'Object Identifier' = X,
 - 'Property Identifier' = Y,
 - 'Reference Index' = (the number of elements in Y),
 - 'Count' = (C: any valid negative value)
 - RECEIVE ReadRange-ACK
 - 'Object Identifier' = X,
 - 'Property Identifier' = Y,
 - 'Result Flags' = (?, TRUE , ?),
 - 'Item Count' = (C2: up to abs(C))
 - 'Item Data' = (the last C2 elements of Y)

```

    }
}

```

Problem:

In the case where a tested list contains zero elements, and a ReadRange-Request is sent with reference index 0 and a negative count. The test spec expects a ReadRange-Ack as a response. In that response a LAST_ITEM flag TRUE is expected.

As a position 0 does not exist in a list, one could argue that a Result(-) might be allowed or even required when the reference index is 0.

Thinking about it a couple more questions on corner cases come up:

- Is a ByPosition Reference Index higher than the number of items in the list allowed?
- If a Reference Index outside the list is allowed where does the "count" start?
e.g. 10 elements in list, Reference Index 12, count -4:
should 2 elements be returned (backcounting 4 from 12) or should 4 items be returned (backcounting 4 from 10)?

Questions:

Is an error allowed or required when Reference Index is 0?

What are the expected "Result Flags" when the list (and therefore the answer) is empty?

Response: "We don't test for ByPosition 'Reference Index' of 0 in a request because this is always invalid. Test 9.21.1.X1 will be modified to eliminate the inadvertent language which would TRANSMIT a ByPosition 'Reference Index' of 0.

For a request with a valid ByPosition 'Reference Index', Result(+) shall be returned with an 'Item Count' of 0 and 'Result Flags' shall contain {FALSE,FALSE,FALSE} and the 'Item Data' is empty."