

## Clarification Request

**References:** BTL Test Plan 12 specified test 135.1-2009i-14 - 9.21.1.6.X1 (which became 135.1-2011 - 9.21.1.7) and test 135.1-2009i-14 - 9.21.1.6.X2 (which became 135.1-2011 - 9.21.1.8)

**Date of BTL-WG Response:** March 21, 2013

### Background:

Note: test 9.21.1.6 using the anachronistic 'Beginning Time' and 'Ending Time' is not referenced in BTL Test Plan.

### 135.1-2011 - 9.21.1.6 Reading a Range of Items that do not Exist

Purpose: To verify that the IUT correctly responds to a ReadRange service request when there are no items within the specified range.

Test Concept: A ReadRange request is transmitted by the TD requesting a range of items known not to be in the Log\_Buffer. The IUT shall respond by returning an empty list.

Test Steps:

1. TRANSMIT ReadRange-Request,
  - 'Object Identifier' = (the Trend Log object configured for this test),
  - 'Property Identifier' = Log\_Buffer,
  - 'Beginning Time' = (any value that will result in a time interval for which there are no items present),
  - 'Ending Time' = (any value that will result in a time interval for which there are no items present)
2. RECEIVE Read-Range-ACK,
  - 'Object Identifier' = (the Trend Log object configured for this test),
  - 'Property Identifier' = Log\_Buffer,
  - 'Result flags' = {TRUE, TRUE, FALSE},
  - 'Item Count' = 0,
  - 'Item Data' = (an empty list)

### 135.1-2009i-14 - 9.21.1.6.X1 aka 135.1-2011 - 9.21.1.7 Reading a Range of Items that do not Exist (Using by Sequence)

Purpose: To verify that the IUT correctly responds to a ReadRange service request when there are no items within the specified criteria.

Test Concept: A ReadRange request is transmitted by the TD requesting a specified sequence number and count of items known not to be in the Log\_Buffer. The IUT shall respond by returning an empty list.

Test Steps:

1. TRANSMIT ReadRange-Request,
  - 'Object Identifier' = (the log object configured for this test),
  - 'Property Identifier' = Log\_Buffer,
  - 'Reference Sequence Number' = (any value that will result in no items being present )
  - 'Count' = (any non-zero number)
2. RECEIVE ReadRange-ACK,
  - 'Object Identifier' = (the log object configured for this test),
  - 'Property Identifier' = Log\_Buffer,
  - 'Result flags' = {FALSE, FALSE, FALSE},
  - 'Item Count' = 0,

'Item Data' = (an empty list)  
 'First Sequence Number' = (should be absent)

Test Example (using sample buffer at beginning of section):

1. TRANSMIT ReadRange-Request,
  - 'Object Identifier' = (Trend Log, Instance 1),
  - 'Property Identifier' = Log\_Buffer,
  - 'Reference Sequence Number' = 34
  - 'Count' = 4
2. RECEIVE ReadRange-ACK,
  - 'Object Identifier' = (Trend Log, Instance 1),
  - 'Property Identifier' = Log\_Buffer,
  - 'Result flags' = {FALSE, FALSE, FALSE},
  - 'Item Count' = 0,
  - 'Item Data' = (an empty list)

### **135.1-2009i-14 - 9.21.1.6.X2 aka 135.1-2011 - 9.21.1.8 Reading a Range of Items that do Not Exist (Using by Time)**

Purpose: To verify that the IUT correctly responds to a ReadRange service request when there are no items within the specified criteria.

Test Concept: A ReadRange request is transmitted by the TD requesting a specified reference time and count of items known not to be in the Log\_Buffer. The IUT shall respond by returning an empty list.

Test Steps:

1. TRANSMIT ReadRange-Request,
  - 'Object Identifier' = (the log object configured for this test),
  - 'Property Identifier' = Log\_Buffer,
  - 'Reference Time' = (any value that will result in no items being present)
  - 'Count' = (any non-zero number)
2. RECEIVE ReadRange-ACK,
  - 'Object Identifier' = (the log object configured for this test),
  - 'Property Identifier' = Log\_Buffer,
  - 'Result flags' = {FALSE, FALSE, FALSE},
  - 'Item Count' = 0,
  - 'Item Data' = (an empty list)
  - 'First Sequence Number' = (should be absent)

Test Example (using sample buffer at beginning of section):

1. TRANSMIT ReadRange-Request,
  - 'Object Identifier' = (Trend Log, Instance 1),
  - 'Property Identifier' = Log\_Buffer,
  - 'Reference Time' = 12:00:00.00
  - 'Count' = -10
2. RECEIVE ReadRange-ACK,
  - 'Object Identifier' = (Trend Log, Instance 1),
  - 'Property Identifier' = Log\_Buffer,
  - 'Result flags' = {FALSE, FALSE, FALSE},
  - 'Item Count' = 0,
  - 'Item Data' = (an empty list)

### **Excerpt from clause 15.8.2. Service Procedure**

If items are read that match the request parameters but cannot be returned in the response, the 'Result Flags' parameter shall contain the MORE\_ITEMS flag set to TRUE, otherwise it shall be FALSE. Remaining items may be obtained with subsequent requests specifying appropriately chosen parameters.

The returned response shall convey the number of items read and returned using the 'Item Count' parameter. The actual items shall be returned in the 'Item Data' parameter. If the returned response includes the first positional index and a 'By Position' request had been made, or the oldest sequence number and a 'By Sequence Number' or 'By Time' request had been made, then the 'Result Flags' parameter shall contain the FIRST\_ITEM flag set to TRUE; otherwise it shall be FALSE.

If the returned response includes the last positional index and a 'By Position' request had been made, or the newest sequence number and a 'By Sequence Number' or 'By Time' request had been made, then the 'Result Flags' shall contain the LAST\_ITEM flag set to TRUE; otherwise it shall be FALSE.

If there are no items in the list that match the 'Range' parameter criteria, then a Result(+) shall be returned with an 'Item Count' of 0 and no 'First Sequence Number' parameter.

#### **Questions:**

What are the expected "Result Flags" when the 'Item Data' is empty but the list in the 'Property Identifier' value is not empty? Is the expected "Result Flags" different when both the 'Item Data' and the list are empty?

#### **Response:**

**For a valid request with an empty result because no data matched the request, Result(+) shall be returned with an 'Item Count' of 0 and 'Result Flags' shall contain FALSE,FALSE,FALSE and the 'Item Data' is empty. It makes no difference whether the list is empty or only the response is empty."**