

### Clarification Request

**References:** BTL Test Plan 12.0.final, 135.1-2011 test 7.3.2.4.1 and 7.3.2.4.2

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

#### Background:

##### 135.1-2011 test 7.3.2.4.1 Reinitializing the Samples

1. VERIFY Minimum\_Value = (a value x:  $-\text{INF} < x < \text{INF}$ ),
2. VERIFY Average\_Value = (a value  $\neq \text{NaN}$ ),
3. VERIFY Maximum\_Value = (a value x:  $\text{Minimum\_Value} \leq x < \text{INF}$ ),
4. VERIFY Attempted\_Samples = (a value  $x > 0$ ),
5. VERIFY Valid\_Samples = (a value  $x > 0$ ),
6. WRITE Attempted\_Samples = 0,
- 6a. IF ( Samples are taken immediately) THEN {
  7. VERIFY Attempted\_Samples = 1,
  8. VERIFY Minimum\_Value = Average\_Value,
  9. VERIFY Maximum\_Value = Average\_Value,
  10. ~~VERIFY Average\_Value = NaN,~~
  11. VERIFY Valid\_Samples = 1,
- }
   
ELSE {
  7. VERIFY Attempted\_Samples = 0,
  8. VERIFY Minimum\_Value = INF,
  9. VERIFY Maximum\_Value = -INF,
  10. VERIFY Average\_Value = NaN,
  11. VERIFY Valid\_Samples = 0,
- }
   
12. WAIT (at least two sample times),
   
13. VERIFY Minimum\_Value = (a value x:  $-\text{INF} < x < \text{INF}$ ),
   
14. VERIFY Average\_Value = (a value  $\neq \text{NaN}$ ),
   
15. VERIFY Maximum\_Value = (a value x:  $\text{Minimum\_Value} \leq x < \text{INF}$ ),
   
16. VERIFY Attempted\_Samples = (a value  $x \geq 2$ ),
   
17. VERIFY Valid\_Samples = (a value  $x \geq 2$ ),
   
18. WRITE Window\_Interval = (any new value that will result in an appropriate sample time),
   
18a. IF ( Samples are taken immediately) THEN {
  19. VERIFY Attempted\_Samples = 1,
  20. VERIFY Minimum\_Value = Average\_Value,
  21. VERIFY Maximum\_Value = Average\_Value,
  22. ~~VERIFY Average\_Value = NaN,~~
  23. VERIFY Valid\_Samples = 1,
- }
   
ELSE {
  19. VERIFY Attempted\_Samples = 0,
  20. VERIFY Minimum\_Value = INF,
  21. VERIFY Maximum\_Value = -INF,
  22. VERIFY Average\_Value = NaN,
  23. VERIFY Valid\_Samples = 0,
- }
   
24. WAIT (at least two sample times),
   
25. VERIFY Minimum\_Value = (a value x:  $-\text{INF} < x < \text{INF}$ ),
   
26. VERIFY Average\_Value = (a value  $\neq \text{NaN}$ ),
   
27. VERIFY Maximum\_Value = (a value x:  $\text{Minimum\_Value} \leq x < \text{INF}$ ),

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28. VERIFY Attempted_Samples = (a value  $x \geq 2$ ),
29. VERIFY Valid_Samples = (a value  $x \geq 2$ ),
30. WRITE Window_Samples = (any new value that will result in an appropriate sample time),
30a. IF ( Samples_are_taken_immediately ) THEN {
    31. VERIFY Attempted_Samples = 1,
    32. VERIFY Minimum_Value = Average_Value,
    33. VERIFY Maximum_Value = Average_Value,
    34. VERIFY Average_Value = NaN,
    35. VERIFY Valid_Samples = 0,
}
ELSE {
    31. VERIFY Attempted_Samples = 0,
    32. VERIFY Minimum_Value = INF,
    33. VERIFY Maximum_Value = -INF,
    34. VERIFY Average_Value = NaN,
    35. VERIFY Valid_Samples = 0,
}
}
36. IF (Object_Property_Reference is writable) THEN {
    WAIT (at least two sample times),
    VERIFY Minimum_Value = (a value  $x$ :  $-\text{INF} < x < \text{INF}$ ),
    VERIFY Average_Value = (a value  $\neq \text{NaN}$ ),
    VERIFY Maximum_Value = (a value  $x$ :  $\text{Minimum\_Value} \leq x < \text{INF}$ ),
    VERIFY Attempted_Samples = (a value  $x \geq 2$ ),
    VERIFY Valid_Samples = (a value  $x \geq 2$ ),
    WRITE Object_Property_Reference = (any new value),
    36a. IF ( Samples_are_taken_immediately ) THEN {
        VERIFY Attempted_Samples = 1,
        VERIFY Minimum_Value = Average_Value,,
        VERIFY Maximum_Value = Average_Value,
        VERIFY Average_Value = NaN,
        VERIFY Valid_Samples = 1
    }
    ELSE {
        VERIFY Attempted_Samples = 0,
        VERIFY Minimum_Value = INF,
        VERIFY Maximum_Value = -INF,
        VERIFY Average_Value = NaN,
        VERIFY Valid_Samples = 0
    }
}
}

```

**135.1-2011 test 7.3.2.4.2 Managing the Sample Window**

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1. WRITE Attempted_Samples = 0,
1a. IF ( Samples_are_taken_immediately) THEN {
    2. VERIFY Attempted_Samples = 1,
    3. VERIFY Minimum_Value = Average_Value,
    4. VERIFY Maximum_Value = Average_Value,
    6. VERIFY Valid_Samples = 1,
    6a. SET Y = 2
}
ELSE {
    2. VERIFY Attempted_Samples = 0,
    3. VERIFY Minimum_Value = INF,
    4. VERIFY Maximum_Value = -INF,
    5. VERIFY Average_Value = NaN,
    6. VERIFY Valid_Samples = 0,
    6a. SET Y = 1
}

7. REPEAT X = (Y to Window_Samples + 5) DO {
WAIT (Window_Interval / Window_Samples)
IF (X ≤ Window_Samples) THEN
VERIFY Attempted_Samples = X
ELSE
VERIFY Attempted_Samples = Window_Samples,
VERIFY Minimum_Value = (the minimum of the monitored values so far),
VERIFY Maximum_Value = (the maximum of the monitored values so far),
VERIFY Average_Value = (the average of the monitored values so far),
IF (X ≤ Window_Samples) THEN
VERIFY Valid_Samples = X
ELSE
VERIFY Valid_Samples = Window_Samples,
}

```

**Question:**

It's not written in the BACnet Specification 135-2010 that a implementation has to wait a sample time, until the first sample is taken.

I believe that we have to change the test, to take care of this.

Are the above changes correct?

**Response:** The BTL-WG agrees that standard 135 does not mandate when the first sample is taken. While the above changes would be an acceptable change, it is not the approach that BTL-WG would like to make. The tests will be adjusted in a future test plan.