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INTERPRETATION IC 135-2010-6 OF
ANSI/ASHRAE STANDARD 135-2010 BACnet® -
A Data Communication Protocol for Building
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Request from: Carl Neilson (cneilson@deltacontrols.com), Delta Controls, 17850 56th Ave., Surrey, BC V3S 1C7.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE 135-2010, Clause 15.7.2, relating to the special property OPTIONAL.

Background: This interpretation request originated from the BTL-WG.

The standard does not explicitly state what to do when executing a ReadPropertyMultple request for the special property OPTIONAL when the referenced object contains no optional properties.

In Standard135, in Clause 15.7.2, the ReadPropertyMultiple service procedure states:
If the 'List of Property References' portion of the 'List of Read Access Specifications' parameter contains the property identifier ALL, REQUIRED, or OPTIONAL, then the 'List of Read Access Results' shall be constructed as if each property being returned had been explicitly referenced (see 15.7.3.1.2).

In Standard 135, in Clause 15.7.3.1.2, the ReadPropertyMultple service procedure states:
The property identifier OPTIONAL means that only those standard properties present in the object that have a conformance code "O" shall be returned.

In Standard135, in Clause 15.7.2, with respect to errors, the ReadPropertyMultipel service procedure states:
If none of the specified objects is found or if none of the specified properties of the specified objects can be accessed, either a 'Result(-)' primitive or a Result(+) primitive that returns error codes for all properties shall be issued. If any of the specified properties of the specified objects can be accessed, then a 'Result(+)' primitive shall be issued, which returns all accessed values and error codes for all properties that could not be accessed.

In Standard 135.1-2009, in Clause 9.20.1.8, it states:
Notes to Tester: If no optional properties are supported then an empty 'List of Results' shall be returned for the specified property.

Based on the description in 15.7.2 the list of properties to return would be of length 0.

In Standard 135, Clause 15.7.3.1.2, it states about the List of Property References:
This parameter shall be a list of one or more BACnetPropertyReferences...

Given this, there would never be a case where no properties were requested for an object and thus in the response there would be no other case where the List Of Results would be empty. This could lead to one assuming that for the OPTIONAL property, in the case where no optional

properties are supported, that an error entry would be required (so that a non-empty List-Of-Results would be generated).

To contrast this, in Standard 135.1-2009, in Clause 9.20.1.8, it states:
Notes to Tester: If no optional properties are supported then an empty 'List of Results' shall be returned for the specified property.

Interpretation: If no optional properties are supported by the referenced object type then reading the OPTIONAL property shall result in an empty 'List of Results' (in the presence of no other errors).

Question: Is this interpretation correct?

Answer: Yes