INTERPRETATION IC 135-2012-19 OF
ANSI/ASHRAE STANDARD 135-2012 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks

Approval Date: November 4, 2015

Request from: Carl Nelson, Delta Controls, 17850 56th Ave., Surrey, BC V3S 1C7.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2012, Clauses 12.12.8, 15.3.1.3.1, 15.9.1.3.1 and 15.10.1.3.1, regarding error returned to a CreateObject service.

Background: The language in property descriptions for properties of type BACnetDeviceObjectPropertyReference indicate a specific error to return if the device portion of the reference is not supported (if the device does not support referencing values in other devices). Specifically, the property descriptions mandate the use of error-class PROPERTY and error-code OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED.

An example of this language is found in Clause 12.12.8:

> This property may be restricted to only support references to objects inside of the device containing the Life Safety Point object. If the property is writable and is restricted to referencing objects within the containing device, an attempt to write a reference to an object outside the containing device into this property shall cause a Result(-) to be returned with an error class of PROPERTY and an error code of OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED.

The language is clear when the value is being written via the write services (WriteProperty, WritePropertyMultiple) but it is not necessarily clear in the case where the value is being set by the CreateObject service. The phrase in question is "...an attempt to write a reference..."

Note that none of the 3 services (WP, WPM, CreateObject) include coverage of this error in their error situation tables. As such the 3 services treat this special case in the same way.

Interpretation: The aforementioned phrase 'an attempt to write a reference' refer to not only the WriteProperty and WritePropertyMultiple services, but also the CreateObject service (vis-à-vis the List of Initial Values parameter).

Question: Is this Interpretation correct?

Answer: Yes.

Comments: The committee agrees that the best response by the device to this situation should be an OPTIONAL_FUNCTIONIONALITY_NOT_SUPPORTED error. Therefore, the standard will be modified to make this clear. However, the impact of responding with a different error code is not a significant interoperability problem.