

**INTERPRETATION IC 135-2004-24 OF
ANSI/ASHRAE STANDARD 135-2004 BACnet -
A Data Communication Protocol for Building
Automation and Control Networks**

Approval Date: 6/21/2008

Request from: Bernhard Isler (bernhard.isler@siemens.com), Siemens Switzerland Ltd., Building Technologies Group, Zug, Switzerland CH-6301.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2004, Sections 19.2, 21 and 23.3, and Addendum “f” to ANSI/ASHRAE Standard 135-2004 regarding ENUMERATED values in BACnetPriorityValue.

Background: Section 23.2 requires that for proprietary commandable properties additional properties shall be provided that fulfill the role of the standard Priority_Array and Relinquish_Default properties.

Section 19.2 implicitly defines that the Priority_Array property contains 16 values which are either NULL or of the same data type as the commandable property and the Relinquish_Default property. The Priority_Array property is of the type BACnetPriorityArray, which is a BACnetArray [16] of BACnetPriorityValue.

BACnetPriorityValue is defined in Section 21, and offers four application type options and a context tagged option for constructed values (“constructedValue” option).

The ENUMERATED application type in the BACnetPriorityValue construct is written such that it appears to be restricted for use only with BACnetBinaryPV enumerations, although if other application tagged ENUMERATED types were allowed, they would be indistinguishable from the BACnetBinaryPV case.

With the addition of the Access Door object to the standard (Addendum “f”), there is a need for another type of enumeration in the BACnetPriorityValue construct, BACnetDoorValue. The BACnetPriorityValue construct was not changed to include an alternate ENUMERATED entry for this enumeration.

In addition, the current definition of BACnetPriorityValue does not appear to allow for proprietary object types that have an ENUMERATED Present_Value to be commandable, and does not appear to allow for proprietary properties of an ENUMERATED data type to be commandable.

Interpretation: A simple ENUMERATED value is encoded into a BACnetPriorityValue using the ENUMERATED application tag. The “binary” option is to be interpreted as an abstract ENUMERATED option, to be used for any ENUMERATED value. The real enumeration is sufficiently determined by the context of the “Priority_Array” property, namely the type of the associated commandable property and “Relinquish_Default” property.

Question: Is this interpretation correct?

Answer: Yes