INTERPRETATION IC 135-2016-29 OF
ANSI/ASHRAE STANDARD 135-2016 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks

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Request from: Deborah Barrett, Hubbell Lighting, 701 Millennium Blvd., Greenville, SC 29607.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2016, Clauses 12.24.8 and K.3, regarding BACnetTimeValue in a Schedule object's Exception_Schedule, via Scheduling BIBBs.

Background: The BTL-WG was asked whether it is acceptable for a BACnet device to apply truncation/rounding of the time portion of an Exception_Schedule's TimeValue pair based on an internal time resolution. The net effect of this behavior is that after writing the Exception_Schedule, the value read back would be different.

This truncation/rounding behavior is generally accepted for basic datatypes, like REAL values due to internal device limitations. But in most other cases there are no obvious side-effects.

But with the Schedule object, rounding of individual time-value pairs can have important side effects. During a write operation, the rounding behavior can make otherwise distinct times identical. Given that duplicate times are not allowed in lists of time-value pairs in Schedule objects, values that should be accepted by a Schedule become unacceptable by Schedule objects which round time values.

Interpretation: BACnet devices are required to save the time values in Schedule objects exactly as they are sent to the device without any truncation/rounding, regardless of the device's internal clock resolution.

Question: Is this Interpretation correct?

Answer: No

Comments: In Clause 12.1.4, the standard allows slightly different values to be stored internally. Note, this allowance does not remove the requirement of unique time values in schedule entries.