

**INTERPRETATION IC 135-2016-2 OF
ANSI/ASHRAE STANDARD 135-2016 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks**

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Request from: Christoph Zeller, Fr. Sauter AG, Im Surinam 55 CH 4016 Basel Switzerland.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2016, Clause 13.3.6, regarding the direct transitions.

Background: There seem to be different interpretations as which transition should be taken when the optional direct transitions are implemented.

In Clause 13.3.6 the conditions for transition are defined. Specifically:

...

(d) Optional: If pCurrentState is HIGH_LIMIT, and the LowLimitEnable flag of pLimitEnable is TRUE, and pMonitoredValue is less than pLowLimit for pTimeDelay, then indicate a transition to the LOW_LIMIT event state

(e) If pCurrentState is HIGH_LIMIT, and pMonitoredValue is less than (pHighLimit – pDeadband) for pTimeDelayNormal, then indicate a transition to the NORMAL event state.

...

My Interpretation of the language is:

- 1) If the condition for exactly one transition is satisfied, the transition will happen immediately and independently of another transition of other (pending) transitions (e.g. due to timeouts)
- 2) If more than one condition is satisfied, the condition appearing first in the list of conditions will apply and a respective transition being indicated, due to its higher priority.

Interpretation: Assuming pTimeDelayNormal is smaller than pTimeDelay, the current event state is HIGH_LIMIT, and pMonitoredValue is staying below both pLowLimit and (pHighLimit – pDeadband) so that both conditions (d) and (e) will be satisfied once the respective time delays are elapsing. Because the condition (e) is satisfied before condition (d), due to pTimeDelayNormal is smaller, a transition to NORMAL will be seen eventually followed up by a transition to LOW_LIMIT at a later time.

Question: Is this Interpretation correct?

Answer: Yes