INTERPRETATION IC 135-2004-14 OF
ANSI/ASHRAE STANDARD 135-2004 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks

Approval Date: 9/28/2005

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2004, Section 6.3.2, relating to Network Layer routing.

Background: When using a BACnet router between BACnet/IP and ARCNET behind a Belkin Firewall/Router, the Belkin router would re-broadcast packets that were sent as broadcast on the IP network. The BACnet router, following the wording in Section 6.3.2, would simply route those messages to all the networks except the network of origin (the IP network). The broadcast messages originated from the ARCNET network, but would then be re-broadcast on the ARCNET network by the router after being received from the Belkin IP router. The SNET in the message then reflects a remote network number for local device addresses on the ARCNET network, and dynamic binding fails.

Interpretation: The "network of origin" in Section 6.3.2, Broadcast Messages, from the sentence "the router shall broadcast the message on all directly connected networks except the network of origin", includes not only the physical network where the message originated, but the network specified by the SNET of the message as well.

Question: Is this interpretation correct?

Answer: No.

Comments: However, the standard will be changed to require the inspection of broadcast packets before transmission to avoid situations such as this.