INTERPRETATION IC 135-2024-8 OF ANSI/ASHRAE STANDARD 135-2024 BACnet® - A Data Communication Protocol for Building Automation and Control Networks

Approval Date: October 29, 2025

Request from: Michael Osborne, BTB Consulting, 408 - 9864 Fourth St, Sidney, BC, V8L 2Z4.

Reference: This request for interpretation refers to ANSI/ASHRAE Standard 135-2024 and pertains to a device, registered as a foreign device, initiating and/or executing Original-Broadcast-NPDUs on its local network.

Background:

J.2.10 Distribute-Broadcast-To-Network: Purpose

This message provides a mechanism for a foreign device to request to BBMD to distribute a Forwarded-NPDU BVLC to the local IP subnet, to all BBMD's configured in the BBMD's BDT, and to all foreign devices in the BBMD's FDT except the originating node.

J.2.12 Original-Broadcast-NPDU: Purpose

This message is used by B/IP devices and routers which are not foreign devices to broadcast NPDUs on a B/IP network.

U.2.3 Original-Broadcast-NPDU: Purpose

This message is used by B/IPv6 nodes which are not foreign devices to broadcast NPDUs on a B/IPv6 network.

U.2.13 Distribute-Broadcast-To-Network: Purpose

This message provides a mechanism whereby a foreign device shall cause a BBMD to distribute a Forwarded-NPDU BVLC to the local multicast domain, to all BBMD's configured in the BBMD's BDT, and to all foreign devices in the BBMD's FDT except the originating node.

Rational:

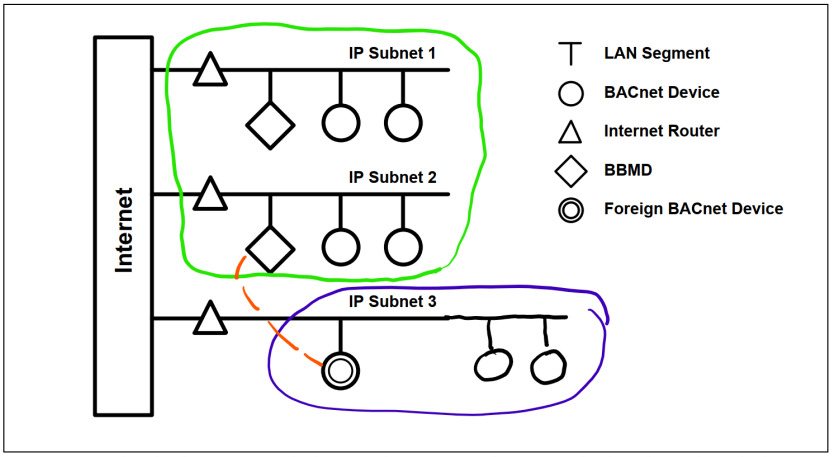

Figure J-3. The "foreign" BACnet device on Subnet 3 can register to receive broadcasts from devices on Subnets 1 and 2 by sending a BVLL Register-Foreign-Device message to a BBMD that supports foreign device registration.

The foreign device is registered with the BBMD on IP Subnet 2 so it is part of the B/IP network wrapped in green. The foreign device resides on IP Subnet 3 which is part of a separate B/IP network wrapped in purple.

Clauses J.2.10 and U.2.13 define how a device, registered as a foreign device, distributes broadcast messages to the BACnet network that the device is registered with. Neither of these clauses forbid a device from also executing or initiating broadcast messages on the device's local network as specified in Clauses J.2.12 and U.2.3.

Problem:

A device is presently under test at a lab. While registered as a foreign device, this device initiates an I-Am request on its local network when it receives a Who-Is request from that network. No BTL test Package tests check this functionality. The issue was noticed while the lab was testing other functionality.

Interpretation: It is a local matter if a BACnet device, registered as a foreign device, initiates or executes Original-Broadcast-NPDUs on its local network.

Question: Is this Interpretation correct?

Answer: No

Comment: A BACnet device, when configured to operate in FOREIGN mode, shall neither execute nor initiate Original-Broadcast-NPDU BVLCs on its local IP subnet per Clauses J.2.12 and U.2.3.