

**INTERPRETATION IC 135-2012-16 OF
ANSI/ASHRAE STANDARD 135-2012 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks**

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2012, Clause 13.7, regarding UnconfirmedCOVNotification Service, K1-11 BIBB DS-COV-A.

Background: The service procedure for the UnconfirmedCOVNotification Service seems to not clearly state whether a subscribed COV has to send as a unicast or whether the server is allowed to send the request as a local, remote or global broadcast. There are some hints though:

13.7 UnconfirmedCOVNotification Service

The UnconfirmedCOVNotification Service is used to notify subscribers about changes that may have occurred to the properties of a particular object, or to distribute object properties of wide interest (such as outside air conditions) to many devices simultaneously without a subscription

The distinction in the language between “notifying subscribers” for subscribed COV contrary to “distribute... to many devices” sending unsubscribed COV seems to indicate, that a unicast has to be used for the first case while broadcast is used for the latter. There is no way, the server could not know the correct unicast address as it has to maintain that address for the ActiveCOVSubscriptions property so there is no advantage to allowing broadcast COV.

There are a number of reasons why allowing broadcast subscribed COV can be considered a bad idea:

- if several clients have subscribed to the same object (with the same process id) and the server would broadcast the Unconfirmed COV the clients would receive UnconfirmedCOV requests with the wrong TimeRemaining.

13.7.1.1.4 Time Remaining

This parameter, of type Unsigned, shall convey the remaining lifetime of the subscription in seconds. A value of zero shall indicate an indefinite lifetime, without automatic cancellation, or an unsubscribed notification.

- experience has shown, that extensive broadcasts scale badly with increasing size of BACnet networks. Devices, that send uncontrollable broadcasts are not suitable for bigger BACnet installations.
- if different clients have issued SubscribeCOVProperty to analog Properties with different COV_Increment values they would receive COV indications not matching their COV_Increment processing expectations..

The issue has been discussed in the BTL-WG with no clear consensus. One suggestion had been to require COV clients to execute broadcast COV because in the past servers have been seen to issue such broadcasts. Another suggestion was to explicitly disallow servers to send subscribed COV as broadcast.

Interpretation: A server sending subscribed UnconfirmedCOV notifications has to send them as unicast to the address of the subscriber(s). A device claiming support for execution of the UnconfirmedCOV service and claiming the BIBB DS-COV-A but not DS-COVU-A is not required to execute an Unconfirmed COV request that is sent as any form of broadcast.

Question: Is this Interpretation correct?

Answer: Yes

Comments: Note that this does not disallow the use of MAC level broadcasts for router discovery when sending UnconfirmedCOVNotifications as described in Clause 6.5.3.