

Clarification Request

References: BTL Implementation Guidelines V 0.34

Date of BTL-WG Response: January 10, 2013

Background:

The Implementations Guide contains two paragraphs dealing with autobaud behaviour of devices:

4.2 Support auto-bauding

- All non-routing MS/TP devices should implement auto-bauding, to facilitate changing an MS/TP LAN's baud rate.

4.3 Some device types may watch the LAN to determine factors such as baud rate

- Devices that route to MS/TP, or that will spontaneously initiate service requests other than I-Am (excluding devices that might initiate COV notifications but which have no subscribers), are permitted to delay start-up for a time in order to observe traffic on the LAN to determine factors such as baud rate. They are prohibited (by the BTL) from observing indefinitely; this guarantees that the MS/TP LAN will start up.
- Devices that do not route to MS/TP, and that will not spontaneously initiate service requests other than I-Am when they do start up, are permitted to observe traffic until they have sufficient information to complete their initialization and start.

Problem:

The term “auto-bauding” is not mentioned in the norm 135-2010 at all. So there are no normative rules how exactly an “auto-bauding” device is supposed to behave. It seems there are no rules at any place if one does not count the paragraph 4.3 as such a rule.

As there are no rules obviously there are also no tests for proper auto-bauding.

The normal interpretation with the BACnet norm would be, that if some kind of communication is not explicitly allowed in the norm it is forbidden!

As an example for possible problems with auto-bauding at one installation we observed a device, that implemented some kind of auto-bauding. It would first monitor the bus to pick the baud-rate but after some (short) time it would startup with some factory baudrate if it did not see communication. This would be kind of inline with paragraph 4.3 above. Other devices on the bus with a common configured fixed baudrate (different from the factory default of the auto-bauding device) would occasionally be powered up a time after the “auto-baud” device. These devices would then never communicate on the bus because the bad “auto-bauding” device would continue sending frames with the wrong baud-rate thus destroying any BACnet communication on the MS/TP bus.

Questions:

Should the recommendation of “auto-bauding” be removed from the Implementation Guidelines until “auto-bauding” with proper rules is defined inside the ASHRAE 135 norm?

Response:

No. But BTL will change BTL Implementation Guideline 4.2 from 'should implement' to 'are permitted to implement'.