

**Source:** Vishwas H.C. on BACnet-L (5-Aug-2008)

Question: *There are three mechanism provided in BACnet for managing events:*

- 1. Change of value reporting*
- 2. Intrinsic reporting*
- 3. Algorithmic change reporting*

*For my application I have to implement alarm and event services, which mechanism I can use. Basically I want to know the advantages and disadvantages using one over the other.*

**Answer:** David Fisher

Actually, confirmed and unconfirmed Text Messages were another alternative that had some following initially, but inexplicably Event Notification has become the most popular method.

Change of Value is not really for alarms, but for managing and reducing network traffic through an event-driven reporting mechanism. There was a time many years ago when a small number of vendors limited their vision of "alarm reporting" to changes of value. Not to put too fine a point on it, but this is not a modern view. COV is useful, but not for alarming.

Intrinsic and algorithmic reporting use the same mechanism for reporting alarms. So neither one is "superior" from a reporting or acknowledgement perspective. They are different in the sense that each one has a different object model for how the alarm detection parameters are configured and made BACnet visible. The current standard has some regrettable flaws that limit the scope of application and there is an ongoing effort to address this through fundamental changes in the alarm mechanism. The details of those changes have not yet been agreed upon.

In the meantime, the choice of which method to support is somewhat arbitrary and really depends on what fits your internal model for how objects are structured and interact.

The short comparison:

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|-------------|---|
| Intrinsic   | organizes event detection parameters logically with the object causing the event. This makes it easier to configure and manage. But, the language of the current standard limits the type of algorithm so for example AV object MUST use OutOfRange (not ChangeofState).                                  |
| Algorithmic | makes it possible to associate multiple events with the same base object. More flexibility in choosing the algorithm. No need for creating "proxy" BV or BI type objects to represent logical events. But, you have to have separate object (EE) to manage alarming so it is harder to set up and manage. |