Alarm Hysteresis Option

Analog alarm scan

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The alarm scanning logic used in the Classic front ends has always included a hysteresis for analog channels. For a channel that is currently in the Bad state, meaning that its reading had earlier been found to be more than one tolerance away from its nominal value, then it must be found within half a tolerance from its nominal before it can enter the Good state. This is done to prevent a flurry of alarms that might result from the reading being near the edge of the tolerance window. This hysteresis was always (25 years?) part of the alarm scan of channels for which nominal/tolerance checking is done. It does not apply for channels that use upper/lower limit checking.

In February 2011, a user requested that the hysteresis logic be removed, and it was then removed. But it was soon realized that this was not satisfactory for all users. There were actual cases of flurries of alarm messages being produced as a result. So the logic needed to be optional.

A recent (May 17, 2011) change was made to make this hysteresis logic optional in a front end for all analog channels that use the nominal/tolerance type of alarm checking. The hysteresis logic is enabled if Bit `0x00A4` is set in that front end. It is disabled if Bit `0x00A4` is zero. The planned descriptive text for this Bit is "`ALARMS ANLG-HYST`."