Release Note #76

Topic: Bad Alarm Analysis

General Information:

Prior to PressureMAP Version 25.01, when PressureMAP scanned the monitoring devices in a Chatlos 640 L3 CPAMS, it would read only the *Curr* or *Rdg* column of the Chatlos to obtain its readings. However, when running in L3 mode, the Chatlos 640-L3 has an intentional, designed behavior which causes the *Curr* value for certain device classes to hold the last good reading rather than posting the actual current value when that value is verbose. This problem only exists when PressureMAP and the Chatlos CPAMS communicate in L3 mode. The problem does not exist when reading Chatlos CPAMS in L2 or PM modes.

Specifics:

The condition described above pertains to only to the following three device classes:

- ST (Pressure/Flow Transducers)
- DT (Pressure/Flow Transducers)
- MC (Trunk/Toll Contactors)

All device types programmed with these classifications will hold the last good reading in the *Curr* column if the actual reading value become a verbose reading, i.e., OPEN or SHRT. By saying, "all device types," that means Chatlos types U, D, M, X, Y, Z, etc. The result is the same for all three classes listed above; however, the problem "seems" worse when a Dryer is programmed as a contactor (resistive contactor using 540K ohms as OK and 270K ohms as N.G.) only because of the importance of Air Dryer monitoring. Class MA is not involved at all.

Possible Scenarios:

Example 1: When a Dryer value changes from O.K. to OPEN, the L3 will call the PressureMAP Alarm Receiver (if programmed to do so) and deliver an alarm similar to the one shown below:

```
640L3-P26  ANYTOWN                14:05 07/04/05 DAY C 213-555-1907    ALARM
CALL DUTY SUPERVISOR

Sensor    TP Circt PR Alrm  Esc  Day2 Day1 Curr Status     Address
--------- -- ----- -- ---- ----- ---- ---- ---- ---------- --------------------
ST-0012    D DRYER1 1 N.G.  0/20 O.K. O.K. O.K.  OPEN   1M DRYER 1 FAIL


640L3-P26  ANYTOWN              14:05 07/04/05 DAY C 213-555-1907    LOGOFF
CALL DUTY SUPERVISOR

+++
```

Notice that the *Curr* column shows O.K., but the *Status* column reads OPEN. Since PressureMAP, prior to V25.01, reads only the *Curr* column of the Chatlos CPAMS, AlarmMAP will not recognize the alarm condition and will assume that the reading is O.K. Even if AlarmMAP performs a validation, the condition will be seen as O.K.

Example 2: The example below shows what the PressureMAP Alarm Receiver will get for a manifold flow transducer when the condition changes to OPEN:

```
640L3-P26  ANYTOWN        01:38 06/26/05 NGT A 213-555-1528    ALARM
CALL DUTY SUPERVISOR

Sensor    TP Circt PR Alrm  Esc  Day2 Day1 Curr Status     Address
--------- -- ----- -- ---- ----- ---- ---- ---- ---------- --------------------
ST-0045    X N1RRMF 1 15.0  0/20  7.0  7.0  6.0 OPEN  16M  MH 6600 FIRST ST.

640L3-P26  ANYTOWN         01:38 06/26/05 NGT A 213-555-1528    LOGOFF
CALL DUTY SUPERVISOR

+++
```

Notice, here, that the *Curr* value is showing 6.0 SCFH and had been 7.0 SCFH, but the current status of the device indicates that it has gone OPEN. PressureMAP/AlarmMAP will only see the 1.0 SCFH decrease, virtually ignoring the condition.

Correction and Workaround:

PressureMAP V25.01 compensates for the Chatlos deficiency in this issue by looking in the *Status* column and taking note of OPEN, SHRT or ALARM, then posting these verbose readings into the PressureMAP *Curr* column.

The positive workaround for all other PressureMAP versions is to read the Chatlos L3 CPAMS only in L2 or PM modes. When operating on the L2 or PM modes, the Chatlos L3 does not exhibit this behavior. Drawbacks to running in these modes include a reduced *Circuit ID* field in Chatlos (4 characters instead of 6 or 8) and reduced information about any alarm condition posting in the *Status* column (no 16M for 16 minutes, 16D for 16 days, etc.).

Questions regarding this behavior in Chatlos L3 CPAMS can be directed to John Cote at System Studies Incorporated.

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