## Standard Alarm Notification Software for Automatic E-Mail and SMS

## A. General Features

The System shall consist of Microsoft Windows based software capable of accomplishing the following tasks:

- 1) Upon alarm events: facilitate the display, sorting, and filtering (e.g. by date and time range) of alarm information to the screen of a Windows based computer system.
- 2) Upon alarm events: facilitate the compilation and transmission of alarm information via SMTP as HTML or plain text email. TLS/SSL is supported.
- 3) Upon alarm events: facilitate the compilation and transmission of alarm information to mobile devices as SMS via SMTP (carrier gateway required).
- 4) Upon alarm events: facilitate the compilation and transmission of alarm information to mobile devices as SMS/EMS/MMS (CDMA/GSM/HSPA/LTE cellular modem required).
- 5) Following notification: provides for acknowledgement of alarms via Windows GUI Application. Such acknowledgements shall pass identifying information regarding the actor to the SCADA where possible, including the actor's ack comments where possible.
- 6) The notification software allows for software licensing
- 7) The notification software communicates natively with Wonderware InTouch, Wonderware System Platform, GE iFIX, GE CIMPLICITY, and Rockwell Automation FactoryTalk View A&E Servers or in a generic manner via OPC DA Classic 2.0 to other applications.
- 8) The notification software supports filter-based subscriptions to alarms from Wonderware InTouch, Wonderware System Platform, GE iFIX, GE CIMPLICITY, and Rockwell Automation FactoryTalk View A&E, eliminating the need for tag imports and resulting maintenance of redundant configuration.
- 9) The notification software may be used in Hot Backup or Redundant SCADA applications. The SCADA software can put the notification software in "Standby" or "Active" mode through script.
- 10) The notification software supports the creation of "Watchdog Alarms" for monitoring the status of SCADA/HMI connectivity.

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- 11) The notification software shall support connection schedules, including schedules with arbitrary recurrence e.g. "6 days on, 4 days off".
- 12) The notification software shall allow for monitored alarmable objects to be grouped, including non-hierarchical groupings.
- 13) The notification software shall associate each monitored alarmable object with a notification strategy allowing for:
  - The notification of individual connections
  - · Arbitrary delays for escalation.
- 14) The notification software shall allow the actions of a notification strategy to be executed a configurable number of times and/or with a configurable frequency.
- 15) The notification software shall allow for the assignment of a "Do Not Notify" strategy during maintenance downtime thus eliminating unnecessary or undesired notification attempts.
- 16) The notification software shall log alarm state changes and strategy actions, including notification attempts, notification results, acknowledgement attempts, and acknowledgement results.
- 17) The notification software shall provide a browser based configuration utility accessible across the network and supporting multiple languages and cultures including Chinese, English, French, German, Hebrew, Italian, and Spanish.

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