ONYXWorks Fire Alarm Graphical User Interface Specification

Contents

Scope of Work

The works shall include the supply, installation, and connection of a PC based graphical Fire Detection and Alarm monitoring system including application software and hardware complete and ready for operation. The system shall include, but not be limited to, optional touch screen or LCD wide screen monitor, one or more PC based graphical workstations, all input/output devices, network communications media, control equipment, auxiliary control devices, and power supplies as shown on the drawings and specified herein.

Functional Description

Using standard RS-232 ports the system shall connect to and interpret status change data transmitted from the ports and provide graphic annunciation, control, history logging and reporting as specified herein.

A supervised interface to NOTIFIER fire alarm control panels shall be made available.

The system shall include a device that allows remote viewing of the GUI (Graphical User Interface) system via the Internet or an intranet.

The system shall provide E-Mail functions capability to send system information via an email server to an email account.

The system shall support a maximum of 50 GUI workstations per system.

The system shall be electrically supervised and monitor the integrity of all conductors.

Workstation Performance

GUI - Graphical User Interface

The network will interface and report the individually monitored system's status via a user-friendly Graphical User Interface (GUI) based software workstation.

The software shall operate under Microsoft® Windows® 7 as manufactured by Microsoft Corporation.

The GUI based software must be capable of graphically representing each facility being monitored with floor plans and icons depicting the actual locations of the various systems; and / or sensors' locations as well as view the system events in text mode.

The software shall use a GUI display capable of showing a large primary floor plan display, a key map representative of a larger view of the primary display and its relationship to the facility being monitored, the current operator, number of fire, supervisory, pre-alarms, and faults within the network as well as outstanding events and acknowledged events.

The software shall have the capacity of at least 1,000 screens / floor plans or as dictated by hard drive space and installed VIDEO and RAM memory for efficient operation.

The workstation shall have the ability to support graphic printing of all data including graphical floor plans, system activity, history, and guidance text. A Windows® compatible printer shall be supported for the graphics and report printer options.

The workstation software shall permit automatic navigation to the screen containing an icon that represents the system or sensor in the event of an off-normal condition.

The system/sensor icon shall indicate the type of off-normal condition, flash, and change to the color associated with the off-normal condition (e.g., RED for ALARM and YELLOW for FAULT).

The software shall allow the attachment of text (TXT) files, sound (WAV) files, image (BMP) files, and video (AVI) files to each system or sensor icon allowing additional information to be provided to the system operator for responding to the off-normal condition. The software must have the ability for an attachment for each major event type per device.

The software shall allow the importation of externally developed floor plans in Windows Metafile (WMF), JPEG (JPG), Graphics Interchange Format (GIF) and Bitmap (BMP) format.

The software shall provide automatic navigation to the screen containing the icon of any system or sensor when an event is initially annunciated. In addition, operator navigation to screens containing outstanding events shall be accomplished by "clicking on" the event from either the acknowledged or unacknowledged event.

History Manager

The software shall contain a History Manager, which shall record all system events with a time and date stamp as well as the current system operator's name.

The system shall provide the ability to store all off-normal events experienced by the various sub-systems that are monitored by the system.

All events shall be recorded with a time and date stamp and the system operator shall be provided with the ability to log a pre-defined response or a custom comment for each off-normal event and have that comment stored in the history file with the time, date and operator name.

Provide for the ability to conduct searches and generate subsequent reports, based on all events for a single system / device address, a specific node, a specific type of off-normal condition and date range (mm/dd/yy to mm/dd/yy) or combinations of these search parameters. The number of entries in the history file that match the determined search criteria will be displayed.

The History Manager shall signal a need to back-up the history file at 100,000 events and then remind the operator at intervals of 100 events thereafter.

It shall be possible to pre-select data fields for reporting and then saving the report as a template. It shall also be possible to schedule the pre-defined report to print at a designated time.

The History Manager shall provide the operator the ability to select the number of days to back-up history.

Alarm Monitoring

Alarm notification shall appear on all workstations and may be silenced at each local workstation.

The system shall provide for continuous monitoring of all off-normal conditions regardless of the current activity displayed on the screen.

If an operator is viewing the history of a sub-system and an alarm condition should occur, the system shall automatically navigate to the graphic screen showing the area where the off-normal event is occurring.

The system shall prioritize all off-normal events into the following categories: fire alarms, faults, supervisory alarms, and pre-alarms.

The system shall display a running count of all events by type in an alarm summary window. The alarm summary window shall include at least five counters, including Alarm, Pre-Alarm, Fault, Disable and Test.

The system shall show a running list of all unacknowledged events and acknowledged events and allow the system operator to acknowledge an event by "double-clicking" on that event in the Unacknowledged Events box. The Unacknowledged and Acknowledged Events boxes shall contain an abbreviated description of the off-normal condition.

The details of the condition may be viewed by selecting event in the unacknowledged events box.

The system shall allow the attachment of user-definable text files, image files, video files, and sound files to each device / system monitored (for every event state) in order to facilitate the operators and response personnel's response to the off-normal condition.

The system shall record all events to the system's hard drive. A minimum of 100,000 events may be stored.

Reports & Logs

The system shall provide for the ability to generate reports based on system history.

The system shall allow the system operator to enter custom comments up to 255 characters for each event and have those comments recorded in the system's history file.

Control Aspects of System Software

The system shall provide an Embedded Gateway interface for remote connections of the Notifier Network containing the following panels via Ethernet (TCP/IP infrastructure): ID3000 fire panel.

The IP gateway (NION):

a. Serves as a bridge between a GUI Workstation and a Notifier ID3000 network.
b. Translates an ID3000 system and device data into data that can be interpreted by the GUI Workstation software application

The workstation shall provide configuration utilities for monitoring and control profiles. These profiles shall be user definable for distribution of monitoring and control allowances for operators per workstation. user access has configurable levels of authority and functional access.

Under no condition shall any sub-system be required to rely on the network for any data processing required to perform its particular function. Each individual sub-system shall be in effect "stand-alone" as to insure its continued operation should a disruption in communication with the system be experienced.

The software shall be password protected and provide for the definition of security profiles for levels of authority and functional access.

The software shall support sending real-time off-normal event notifications to designated email addresses.

The PC based graphical facilities monitoring system shall include a Configuration Tool that provides the following features:

1. Allows operators the ability to create and edit graphics
2. Set up Gateway Connections and define their nodes
3. Add and edit objects on screens
4. Configure colors and sounds for the status classes

Workstation Hardware

The system shall operate on no less than an IBM compatible Windows 7 Ultimate 64BIT PC with 3rd Gen Intel Core Processor (Quad core, 3.20 GHz Turbo, 6MB, w/ HD2500 Graphics) with 4GB memory (2 x 2GB), 1GB Graphics and 500GB Hard Drive. A CD-R/W for system backup, a 104 key keyboard and a mouse type pointing device with a center wheel shall also be included.

The workstation shall support an SVGA monitor or an optional touch screen monitor.

The computer shall be capable of networking to additional computers and these computers shall be capable of operating as workstations and/or gateways for local area or wide area networks.

Printer

Support one or more Windows® compatible printers to be located and connected each workstation for graphics and report printing.

Integration Network

IP Gateways (NIONs) shall act as a translator from the panel communications protocol to the integration network protocol

IP Gateways (NIONs) shall be available in configurations that will allow transparent communications via RS-232 serial data ports with intelligent fire alarm control panels.

IP Gateways (NIONs) shall operate at 24 VDC and obtain their power from the monitored control panel or an EN54 battery backed auxiliary power supply.

Remote Access System Network

The GUI Web Server shall be a web-based device that allows remote viewing of the GUI system via the Internet or intranet.

The interface will allow users to view the history of FACP, event status, device properties, and other information based on access permission defined by the system administrator.

The Web Server will utilize an IP-based wire Ethernet connection when interfacing to the Internet/intranet.

The GUI Web Server shall provide the following features:

a. Support 10 simultaneous users
b. Employ standard IP over an Ethernet connection
c. Support up to 128 user accounts with configurable levels of authority and functional access
d. Provide built-in password security and user access records
e. Send up to 50 e-mails in response to any system event

Execution

System Setup & Configuration

Provide the services of a factory trained and authorized technician to perform all system software modifications, upgrades or changes.

The factory trained technician shall install initial data and artwork at each workstation including:

Distribution of monitoring, control and security profiles as requested by owner.

Area diagrams, floor plans, key maps and screen titles.

Auto-navigation criteria.

Guidance text as provided by owner.

Final Inspection

At the final inspection a factory trained representative of the manufacturer of the major equipment shall demonstrate that the system functions properly in every respect.

Instruction / Training

Provide instruction as required for operating the system. Hands on demonstrations of the operation of all system components and the entire system including user-level program changes and functions shall be provided. A factory trained and certified representative shall provide instruction.