System Studies Incorporated

PressureMAP

Keeping a Tight Control of Your Cable Pressurization System

As the telco industry's most powerful and widely used cable pressurization software, PressureMAP™ offers a unique range of capabilities for building and monitoring an optimum air pressure system. A common database serves maintenance, management and engineering personnel with equal convenience. Its menu-based system allows easy access to data—even from remote locations—and simplifies the selection of features. A single PressureMAP system can monitor up to 250 offices.

Early Morning Functions

Each morning PressureMAP calls pressurization monitors in each of the offices programmed into its database. From the information obtained it updates device histories, analyzes alarm conditions, creates dispatch reports, evaluates system quality, and distributes reports.

- **Updating Device Histories.** At midnight device histories are adjusted to reflect the change of date; the daily device readings are shifted by a day and the current reading is used to establish a settled reading. Settled readings are taken in the early hours when cable pressures and manifold flows have recovered from the previous day's construction activity, and no new activities are likely to be underway.
- **Creating Daily Dispatches.** After today's readings are settled, PressureMAP creates the Device Dispatch Report, which consists of a list of the top five dispatches in an office and associated task information to help in leak locating.
- **Generating System Quality Indexes.** PressureMAP provides a rating of system quality based on a complex indexing formula. It uses both air pressure and air flow readings per sheath mile of cable to compute air pressure quality ratings, both by office and by route. This information is critical in setting maintenance priorities and identifying where engineering improvements may be necessary.

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- **Reports Sent to the Report Centers.** Once the daily Dispatch Priorities and Indexes have been created, Dispatch Reports for each of the offices are sent via modem or LAN to designated field maintenance offices or other specified locations. These reports are sent in the early hours before maintenance personnel arrive for work.

Daily Activities

PressureMAP's data acquisition, analysis and distribution functions do not end with the morning rush hour traffic. These functions take place continually. In a typical two hour cycle, PressureMAP will call each office, receive alerts from office monitoring equipment, analyze device data, and send alarm reports to the designated centers.

- **Accessing Device Data.** PressureMAP uses a two hour calling cycle to obtain device readings from all of the offices in a system. If an office cannot be reached during the normal calling sequence, an attempt is made to recall the office during the cycle after the remaining offices on the list have been called.
- **Analyzing Data.** After contacting each office, the alarm monitoring module of PressureMAP analyzes the data from all of the offices to determine if there are any alarm conditions. It processes alarms—not only for the office just updated, but for other offices in the system. In this way, it is able to detect if any major alarms have come in from a monitor while another one is being called.
- **Cross-referencing Alarm Conditions with Field Activity.** If a device goes into alarm, PressureMAP searches its database to see if any associated cable splicing activity may have caused the alarm. If it has, the Dispatch Alarm Report indicates that there is field activity associated with the alarm.

Report Distribution Module

One of PressureMAP's most important functions is compiling and distributing timely alarm and dispatching information. With busy schedules and increasing responsibilities monopolizing the work day, it's important to know that your air pressure information will be automatically delivered. That frees up more of your time, while assuring that critical system alarm information is never neglected.

- **Morning Dispatch Report.** PressureMAP sends early morning dispatches and associated tasks to designated field maintenance offices or other specified locations called Report Centers. The top five dispatches for all or any office may be sent to any of 72 predesignated Report Centers. The reports can be sent via modem to printers, computer terminals, fax machines and over a local or wide area network via e-mail.
- **Flexible Alarm Reporting.** Alarm Centers differ from Report Centers in that they are established to receive notification of only system-threatening conditions. PressureMAP provides maximum flexibility in structuring Alarm Center information and calling schedules. As many as 72 Alarm Centers may be created during a calling period. Once an alarm has been acknowledged and confirmed, a report with pertinent device data is delivered. A message reporting that the alarm has cleared will be distributed to Alarm Centers once the condition has been corrected.
- **Alarm and Dispatch Report Fax Support.** PressureMAP includes the option of having both alarms and dispatch reports sent directly to a center's fax machine.
- **Alphanumeric Pager Support for Alarms.** Special entries in the Alarm Center data fields will allow an Alphanumeric Pager to become an Alarm Center.

Alarm Monitoring Module

This module of PressureMAP scans the system for low pressure or high flow conditions and filters out everything but the top priority, system-threatening conditions. PressureMAP will then notify the appropriate Alarm Centers and provide information to help in leak locating.

- **Alarm Dispatch Histories.** All alarm dispatch information can be sorted, making it possible to review a record of activity related to a particular dispatch. A chronological list of all the events related to either a particular task number, or a particular device number can be created, which is useful for confirming exactly which Alarm Centers received alarms.
- **Alarms Based on Ranges.** PressureMAP alarms on flow increases that are proportional to the range of the device being read. An alarm will be generated for a 3 SCFH increase if the range is less than 47.5 SCFH and for a 5 SCFH increase if the range is between 47.5 SCFH and 95.0 SCFH.
- **High Priority Devices.** Any device can be designated a high priority device by setting individual alarming parameters. PressureMAP will then alarm for less extreme pressure and flow changes.
- **Alarm Catastrophes.** Sometimes an office can generate a large number of alarms (if a dryer goes down, for example). In the event of a malfunction of this nature, PressureMAP will filter out the related alarms, sending only those alarms that are the source of the catastrophe.

Field Activity Monitoring Module

This PressureMAP module flags the alarms or dispatches that are caused by maintenance or construction work. The program will keep track of all cable openings and relate them to changes in flow or pressure in the adjacent pneumatic sections. Field Activity Monitoring information is sorted into nine different Cable Opening Reports as well as being reflected in reports produced by PressureMAP.

- **Multiple Activity Types.** A total of four activity types are available in the Field Activity Monitoring module. These categories are used for tracking construction, maintenance, cable repair, and miscellaneous activities.
- **Location Cross Reference.** This database provides cross referencing of physical locations and related or adjacent location codes.
- **Quick Field Access.** A special login and password can be used to start up Field Activity Monitoring Data Entry directly at the Cable Activity screen, bypassing some of the initial Data Entry selections.

CPAMS Compatibility

PressureMAP offers full support for most of the pressurization monitors available, including the System Studies Dial-a-Ducer, uM260 Micro Monitor, and the 289H and 289H-M Loop Surveillance Systems. Most of the monitors manufactured by Chatlos and Sparton are supported, as well as the E2A Remote Terminal (Line Access Relay Panel), TMACS 1000 monitors, Lancier 101 and 1005 monitors, Nicotra MINIDAS, and the Telsec 1500 and 2000 monitors.

Hardware Platform

The PressureMAP software has been developed to operate on the MAP Engine V (Pentium IV®) computer system and certified communications equipment. This hardware system was configured by System Studies Incorporated and thoroughly tested in-house for optimal PressureMAP system performance. Upgrades to the hardware platform are typically made only when key components become unavailable and/or when system improvements become possible.

Ordering Information

If you're interested in ordering our PressureMAP software or learning more about how it can improve your air pressure operation, please contact our Sales Department at (800) 247-8255 or (831) 475-5777. You can also send your order via email to