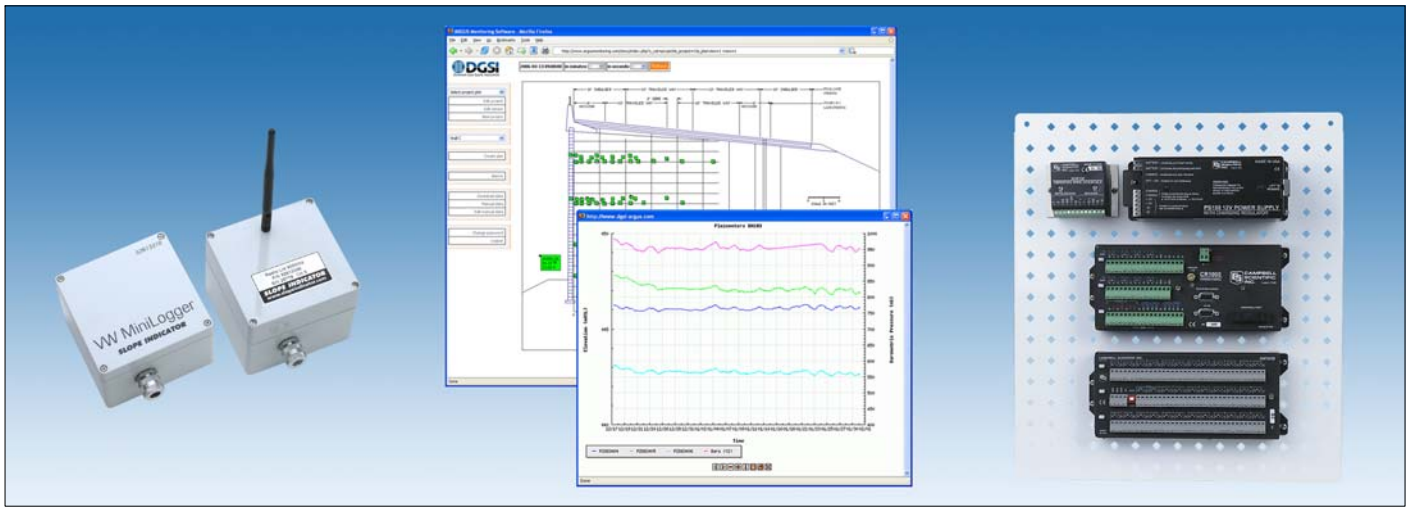
Atlas Web-Based Monitoring



Application

Atlas web-based monitoring solves the two main problems of data acquisition: timely processing of data and timely distribution of the results.

Operation Overview

Atlas runs on a web server and looks like a web site. The service is hosted at a data center with excellent connectivity and security. Alternatively, it can be hosted on a company's own server.

Users work with Atlas via their web browsers and click on links to access graphs and data.

Certain users have rights to set up Atlas projects, graphs, reports, and alarms. Once a project is set up, Atlas is ready for data.

In most cases, a PC retrieves readings from the loggers at the site and forwards the data to Atlas. Atlas also accepts data entered manually via web browsers.

Atlas scans incoming data for alarm conditions, sends out notifications as required, and then stores the data in a dedicated project database.

In a matter of seconds, Atlas has processed the data and made the results immediately available via the web. When users log on, graphs and reports are just a few clicks away.

Data Presentation

Plan Views show a site drawing or photograph overlaid with small boxes representing sensors. The sensor boxes show current readings and change color to indicate alarms.

Trend Plots show readings against time. The plots are preconfigured and when selected, use the most current data. Clicking on a plot displays a table of the data values.

Profile Plots show displacement data from in-place inclinometers, beam sensors, and similar sensors.

Image Plots are graphs generated by other programs, such as Excel or DigiPro inclinometer software.

Correlation Plots show one series of data values plotted against another series of data values.

Alarm Notifications are sent by email, which can be forwarded to cell phones.

Logbook shows commentary and site photographs entered by users.

Reports compile selected plots, data, alarm records, and logbook entries into a PDF file that is emailed to selected users, daily, weekly, or monthly. Reports can also be generated on demand to allow inclusion of extended commentary and analysis.

Advantages

Atlas never sleeps: Atlas works day and night. It scans for alarm conditions, processes data, and always presents up to date information.

Atlas is web-enabled: Data and graphs are available anywhere there is a connection to the web: at home, at the client's office, or half-way around the world.

Atlas is efficient: Atlas automates and standardizes data processing and presentation, so results are fast, reliable, and immediately available.

Atlas is familiar: Most users need no training at all, since they already know how to use web browsers.

Atlas provides continuity: Atlas keeps sensor calibrations, processing routines, and data in a secure, central location. Services that depend on Atlas are not affected by workplace events such as computer crashes or changes in personnel.

Atlas is affordable: Atlas is a web service with monthly plans sized to match your projects. Atlas is also available in an enterprise edition.

ATLAS OVERVIEW

Atlas web-based monitoring software is specially designed to process and distribute data collected from geotechnical sensors. Atlas runs on a web server, and users access Atlas with their web browsers.

DATA INPUT

Automatic Import: Atlas automatically imports data files that are sent to its input folder. In a typical scenario, a PC automatically retrieves readings from data loggers at the site and forwards them to Atlas via the internet. Data files can also be copied to the input folder when Atlas is operating on a local area network or a standalone computer.

Atlas supports the Atlas format, Campbell Scientific's CR10 and CR1000 formats, a geodetic format for total station data. Other input formats are in development. Custom input filters can be programmed on request.

Manual Entries: Atlas allows users to enter data manually using their web browsers. This is useful for values that are not normally logged, such as fill height or standpipe water levels.

Graphic Uploads: Atlas can store and display graphics generated by other programs, such as DigiPro inclinometer software or Excel.

Logbook Entries: Atlas provides a logbook in which users can enter observations and photographs of site activities and incidents. Each entry is time stamped and can be included with the automated reports.

DATA PROCESSING

Processing Overview: Atlas always stores raw (unprocessed) readings in the project database. When it receives a request for data, Atlas processes readings on the fly. This ensures that any corrections to calibration factors, processing methods, or data values are always included in the results that Atlas presents.

Atlas performs the same on-the-fly calculations when it first imports the readings. This allows Atlas to scan for alarm conditions.

Conversions and Calculations: Atlas converts raw readings to data in engineering units as specified in an equation stored for each channel of each sensor. Equations can reference datum readings and also readings from other sensors. This allows Atlas to calculate changes, perform corrections for temperature or atmospheric pressure. It also allows for cumulative calculations required for beam sensors or in-place inclinometers.

Exports: Atlas can export ASCII data formatted appropriately for spreadsheets.

DATA PRESENTATION

Atlas organizes data presentation by project. A project can have its own logo and front page, and any number of plan views, trend plots, and reports. All data presentation features can be configured by users. No high-level administration is required.

Plan Views: Plan views show a background image with an overlay of small boxes or symbols representing sensors. Boxes show the current reading for each sensor. If boxes would overlap, the user can choose to display sensors as various symbols. When the cursor runs over a symbol, the current reading is displayed. Both boxes and symbols are displayed in green, yellow, or red to indicated alarm status. Clicking on a measurement value displays a trend plot, allowing the user to quickly evaluate whether the alarm condition is the result of a trend or just a one-time event.

Plots: Four types of trend plots are available: trend plots, profile plots, correlation plots, and image plots. Plots are generated as graphic files, so they can be saved and attached to emails or used in documents. Clicking on a plot will display the data values used in the plot.

PDF Reports: Atlas can generate PDF reports on daily, weekly, or monthly schedule and automatically email the reports to selected users. Reports can also be generated on demand, if automation is not needed.

Reports start with a cover page with the normal text, a graphic ,and date. Optional commentary pages are next. Following those pages, are pages for plots (the same plots that Atlas displays on screen). Plots can be added in any order and later sorted or toggled on or off. A paragraph of text is allowed before and after each plot and after each plot. If tabular data are needed, a data table, which holds all the plotted values, can be toggled on to appear after the plot. Optional sections following the plots include a summary of alarms and selected logbook entries.

ALARMS AND NOTIFICATIONS

Alarm Detection: Atlas scans incoming readings for alarms conditions. Alarm thresholds can be based on fixed values or the results of a calculation and may be set for any channel of any sensor. Watchdog alarms can be set to warn if no readings are received.

Alarm Warnings: When Atlas detects an alarm condition, it generates on-screen warnings, registers the alarm in an alarm table, and puts the alarm in a notification queue.

Alarm Notifications: Atlas sends out alarm notifications by email to selected users, who can receive the email on their cell phones. To avoid flooding email boxes with alarms, Atlas sends out just one notification per alarm condition. In addition, Atlas provides a variety of filters that can be used to consolidate notifications or to suppress them until certain conditions have been met.

ADMINISTRATION

User Levels: Atlas supports three user levels. Administrators can set up projects, sensors, graphs, and other users. Users can view data, download data, enter data, edit data, and set up one-time graphs. Guests can only view data.

Passwords: Atlas emails passwords to each user that administrators enter. Users can modify their passwords as required.

Email Groups: Administrators assign users to an email groups and then assign email groups to receive PDF reports and alarm notifications.

Backup & Archives: Administrators can create backups and archives from data in the database.

ATLAS PLANS

Atlas Monthly Web Service 58851050
Atlas Prepaid Web Service 58851090
Atlas Activation Fee 58851000

Atlas is offered as a web service with monthly or prepaid plans. The service includes an unlimited number of projects, graphs, reports, and users, and includes 50 sensors. More sensors can be added for an additional fee. Accounts for large scale monitoring are also available.

The web service is not only easy to use, but also cost effective. Data are stored at a secure data center that provides automatic backups and multiple connections to the internet. Users need only their web browsers, so there is no software to install and maintain. Finally, the service does not require a long-term commitment.