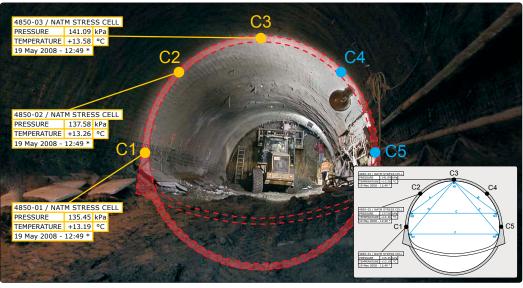
# **Data Visualization Software**

### **Key Features**

- Data access via the Internet
- Built-in update monitor
- Programmable alarm limits
- Functions to output max, min, sum, average and rolling average
- Custom graphing capability including x-y, dual y-axis, and displacement (IPI) plots
- Data validation function
- Automatic reports
- Creation of virtual variables
- Presents the project as a series of maps or photographs with icons indicating instrument locations with live updates
- Information pages provide project details
- Direct Login for multiple user access



VDV screen shot showing sensor locations and data on a site photo (inset shows the same information using an engineering drawing).

# **Program Function**

The Vista Data Vision (VDV) software package contains powerful tools to organize and display data collected from Geokon's Micro-1000, Micro-10, Micro-800 and LC-2 Series Dataloggers. The software comprises 2 products which, when combined, provide a complete data management package for data storage, data browsing and reporting and for publishing data to the Internet.

# **Data Storage**

Once data has been collected from the datalogger and saved in the host PC (using MultiLogger¹ or Loggernet²) it is automatically imported into the db.robot.c database where it is available for rapid calculation and formatting for display and analysis.

**db.robot.c** is based on the powerful MySQL database and issues SQL queries automatically to build tables and populate the database.

A built-in data update monitor will indicate if there are any problems with the data collection interval. It also provides the ability to edit data, import older data (from .dat files) and to change the file structure.

Engineering units can be associated with each variable for information purposes and to control the results of any reports that may be generated for that variable.

An alarm tool kit allows the user to add features such as alarms (including LL, L, H, and HH limits) for each sensor and for such alarms to be sent via email or SMS. A validation tool kit includes a useful data validation function where rogue data values can be replaced based on preset user conditions (such modifications to data are automatically logged and recorded).

### **Data Browsing & Reporting**

Once in the database, data can be accessed using the **db.data.browser**, which allows users to view and display data from multiple sensors in graphical format. Functions are included to manipulate and convert data and to provide automated reports.

One of the most powerful features in the db.data. browser is the ability to create custom graphs with a few mouse-clicks. Up to 6 graphs can be displayed per page. Each graph can have up to 6 variables and each can be toggled to view in a larger format. The number of pages that can be created is unlimited. The number of data files that are included depends upon which version of VDV is used: Standard allows 50 data files and Pro allows 100. For example, Pro will serve up to 100 data loggers (if each has a single data file). Additional data files are available for either version of VDV, should the need arise.



# **Data Browsing & Reporting** (Continued)

Using virtual variables the user can calculate new variables based on one or more measurements from the datalogger. For example, with knowledge of the modulus and cross sectional area, strain measurements can be easily converted into units of load or stress.

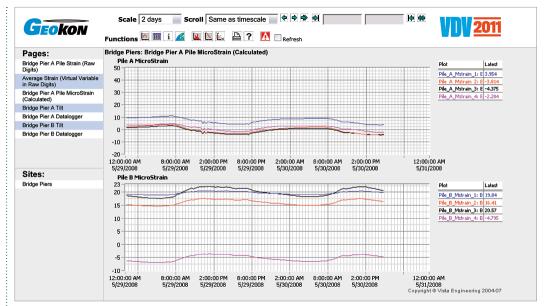
The db.data.browser includes many automated reports, which make it possible to identify sum, max, min and average (including rolling averages for smoothing effects) for any period of time. Data can be viewed as a table and downloaded into a .txt file. Graphical options include x-y, dual y-axis, histogram, sort by size and displacement plots (for In-place Inclinometer profiles).

The db.data.browser can be installed on any PC in the network allowing data manipulation and report generation from other PCs in the same network.

### **Publishing to the Internet**

The **db.web.browser** is a database web browser which, when used with a customer supplied web server (IIS recommended), allows the user to publish most of the work, under-taken in db.data.browser, to the Internet. It includes everything needed to start Web Service, create Web Maps and allows service providers to customize control over data access.

The db.web.browser Web Map tool provides the user of a system comprising one or more dataloggers with an overview of all the data on a single web page. It can be configured with a map or a photograph showing data boxes with latest values (including alarms).



Vista Data Vision db.data.browser screen shot.

Simple configuration tools allow users to customize the sign-in page with corporate logos and text. Similarly, logos can be placed on all subsequent web pages. Information pages can be assigned to any site (datalogger), which can include text and/or photographs, maps, etc., to provide valuable information and site-related details to all users.

db.web.browser also makes it possible for service providers to establish a data server business. Individual customers can be given password-controlled access to automatically download or manually collect data, view tables and graphs, set alarm thresholds and display their corporate identity.

### **Web Hosting Requirements**

**Server/Dedicated PC:** It is recommended that Vista Data Vision (and MultiLogger Software, used for data collection) be installed on a secure, customer-supplied, Windows®-based Server or dedicated Windows® PC.

IT Support: To publish data to the Internet, the customer will need to create a web site and implement any firewall configuration changes that may be required for web connectivity. Microsoft® IIS Web Server is supported; Apache Web Server on a Windows®- or Linux-based PC is an option (with VDV running on a Windows® PC).

Third Party Data Hosting: For customers who would prefer to use a third party hosting provider, please contact info@geokon.com. (Pricing will depend upon the scope of the project, number of sensors, frequency of readings, graphical and alarm requirements etc.

#### **Versions**

VDV software is available in 2 versions; Standard and Professional (for advanced users and service providers). Both are supported by an extensive, on-screen Help Menu.

## **System Requirements**

Operating Systems	Windows® 7, Vista, XP Professional, Server 2003/2008, 2000 Professional
Processor Requirements	1.5 GHz (minimum), 2.2 GHz or faster (recommended)
Memory Requirements	1 GB or more (minimum). More RAM will improve application performance.
Hard Disk Requirements <sup>1</sup>	190 MB (minimum for installation)
Internet Data Publishing <sup>2</sup>	Customer supplied web server (Microsoft® IIS recommended)

<sup>1</sup>An additional 4 MB per year is required for each .dat file imported into the database (based on 10 data columns and 15 minutes sample time).

<sup>2</sup>Vista Data Vision will run on any Web Server that supports PHP.



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