

## **Geotechnical Instrumentation – Geo-DMS Database Management Software**

**Geo-DMS software** for Windows® is a comprehensive geotechnical instrumentation data management system designed for performance monitoring of MRT subway, NATM tunnels, Dams and other civil infrastructure. Geo-DMS for Windows® provides you with powerful tools to assess the performance of your critical civil structure efficiently and effectively. You can automate routine instrumentation data reduction tasks such as: data entry, analysis reports and graphs which can be taken for both short term and long term performance monitoring purposes.

**Geo-DMS software** for Windows® virtually automates the task of collecting data from a variety of sources manually, electrically and automatically, minimizing input errors, and performs all necessary calculations for each individual sensor to store data in a user-friendly form. In addition to storing scaled and converted data, **Geo-DMS software** can also configure to save raw data, thereby minimize future concerns over incorrect, lost, or missing data.

**Geo-DMS software** can be purchased and installed for a stand-alone computer. Other versions are available for use on a network as either a non-concurrent version or as a concurrent version; so multiple users can track multiple projects simultaneously. Each project is user-defined and a single copy of Geo-DMS can track as many projects as desired.

**The Geo-DMS software** Plotting and Reporting module has a complete list of reports and reporting methods. Naturally there are standard reports of Instrument Definitions and all of the various set-up parameters. Then there are the exceptional reports for any instruments whose data fall outside of a limit. Some of the normal graphs are time-history plots (both single- and dual-Y axis), position plots, correlation plots, and phreatic surface plots. Geo-DMS software links automatically to Microsoft Excel® (must be supplied separately) as the main tool for plotting. There you can create a user-defined plot including cross sections, overlays, CAD drawings, etc. Furthermore, you can group any number of plots together for batch plotting. The power of Geo-DMS software allows automated batch operations so that large reports and full plots can be prepared automatically at night and over the weekend.

### Features of the Geo-DMS software :

- System Based on Win95/Win98/Win NT/Win 2000V®
- Real-time numeric and graphic data display
- Database management
- Recording of raw and calculated data
- General, numerical and graphical reports
- Multiple plotting options for individual sensors and groups of sensors
- Alarm definition and control
- Handles data from automated monitoring systems as well as from hand-entered data, and data from data loggers
- Remote access – the operation of the system can be controlled via common modem.
- View the monitoring layout and sensor configurations
- Database secure protection function

- **Output Format sample:**

- Taiwan High Speed Rail Contract C220 GeoAuto and NATM Database Management System (NDMS) Services (Provided and installed Geo-DMS)
- Veitnam Hai-Van Tunnel GeoAuto and NATM Database Management System (NDMS) Services (Provided and installed Geo-DMS)
- Kaohsiung Metropolitan Mass Rapid Transit System Geotechnical Instrumentation Database Management System Services (Provided and installed Geo-DMS)

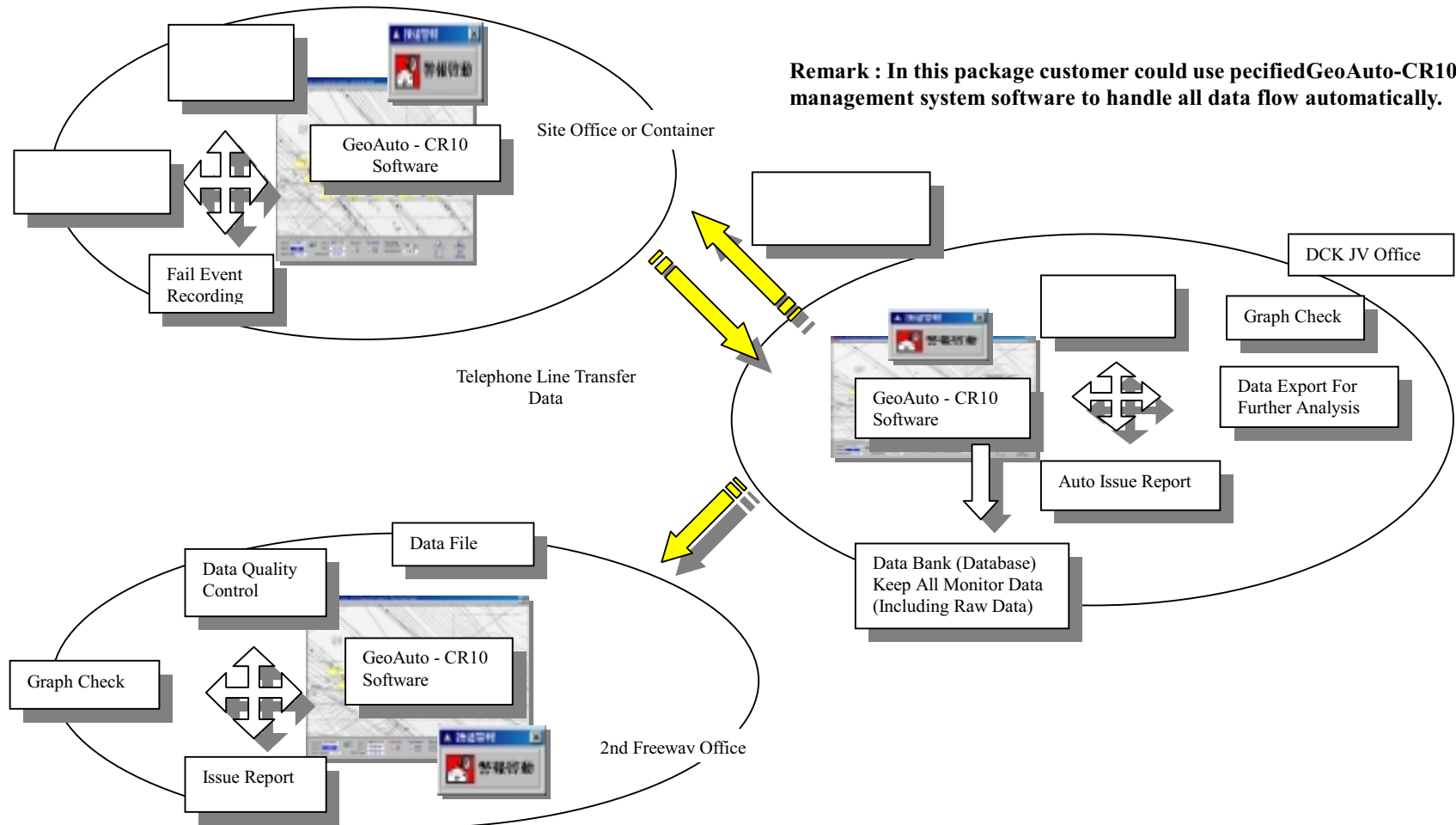
## **Geo-DMS Software**

The Geo-DMS instrumentation database management software provides an easy-use, simple user interface for measuring and analyzing time-based data. The primary goals of Geo-DMS instrumentation database management software are simple:

- Fast and flexible data graphing with multiple plot types for huge data files (up to 512 parameters and gigabyte files).
- Different authorization levels or passwords could be set up to control data-taking operation or modification of any information in DMS.
- Sets up Data-retrieving time and programming the alert and alarm limits comprehensively.
- Structured under the WINDOWS allow you to view all the detail information by multi-level zooming.
- True multitasking operation system.
- Provides quality report annotated hardcopy plots and capabilities for inserting plots into other Windows® applications.
- Provides data manipulation of instruments numbers, parameters, derivatives, alarm value, reading frequency, automatic printing time and store in the database while executing.
- On same screen shows graphs with maximum and minimum readings and alarm limits.
- Comprehensive data export facilities.
- Supports quick and flexible creation of following tabular and graphic presentations in accordance with recognized geotechnical evaluation procedures.
- All raw data stored for further checking, unit of physical value defined by user.
- Sends data via email.
- Deflection of inclinometers present in vertical time history graphs at 6 measurements limitation and time history graphs at each certain depth (Selection quantity of depths is not limited) selected by user.



## Integration of Geotechnical Instrumentation – Database Management Software (Geo-DMS)





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Company Technical Services