mmVu™ LabTime

## GNSS Deformation Monitoring Post-processing Software

mmVu™ LabTime is a powerful GNSS deformation monitoring post-processing software. It adopts a unique, efficient GNSS data processing strategy that enables customers to reproduce the real-time GNSS environments where the GNSS stations' data was collected. Customized processing modules are available for customers' unique applications.

Applied Technologies

The mmVu™ LabTime standardizes various GNSS data files and streams the standardized data to processing engines through the Ethernet TCP/IP and UDP communications. A unique data file wrapper application, which replicates mmVu™ Server operations and multicasts the data to each GNSS baseline, provides simulated scenarios identical to the real-time environments.

Features

The mmVu™ LabTime is equipped with a unique dual-processor engine that fits various applications. The mmVu™ LabTime provides customers with various graphical tools for easier analysis and interpretation of the processed results. It features:
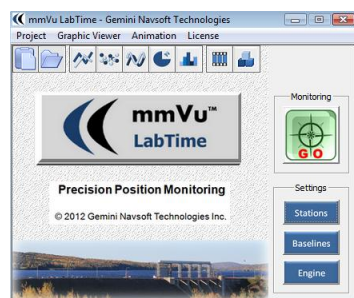
- TDD and DDC solutions,
- Adjustable and selectable filters,
- Archive observations, solutions, and server activity,
- Structure specific coordinate system,
- Input in industry standard formats,
- 2D graphic solution viewer,
- Movie production, and
- 3D visualization.

Application

The mmVu™ LabTime is available for almost every post-processing of GNSS data collected from applications such as civil structures, localized natural features and industrial applications. The mmVu™ LabTime is particularly useful when customers need to reproduce the actual GNSS environments where real-time deformation monitoring was carried out.

Civil Structures	Bridges, Dams, Weirs, Dykes, Buildings, Towers, Breakwaters, Wind turbines
Natural Features	Volcanoes, Glaciers, Avalanches, Landslides, Ground subsidence
Industrial Applications	Construction sites, Railways, Roads, Mines, Offshore oil platforms, Tailings ponds

Performance

The mmVu™ LabTime adopts the same data processing Engines as the mmVu™ Server utilizes. It delivers mm-level accuracy, identical to that of the mmVu™ Server, even in situations where other software packages may compromise their performance due to challenging GNSS environments. Sub-mm level accuracy is also achievable under certain conditions.

GEMINI
Navsoft Technologies Inc.

mmVu™ LabTime
Precision Position Monitoring
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mmVu™ LabTime Products

GNT offers three different types of mmVu™ LabTime products that allows customers to choose the right one that fits ideally for their monitoring needs.

mmVu™ LabTime Basic	an economical solution for small scale projects
mmVu™ LabTime Plus	an optimal solution for complex projects
mmVu™ LabTime Premium	for extreme GNSS environments with special requirements

mmVu™ LabTime Basic

- Economical: suitable for all budgets
- Generic Applications: fits most of the deformation monitoring applications
- Simple Configuration: fits small scale projects
- Easy site implementation, maintenance and operation

mmVu™ LabTime Plus

- Optimal: suitable for medium budgets
- Oriented Applications: fits complex monitoring applications
- Medium Configuration: longer baselines and higher data rate
- Easy site implementation, maintenance and operation
- Movie production and 3D visualization

mmVu™ LabTime Premium

Available for kinematic, dynamic and vibration monitoring with more than 10 Hz data rate, longer than 30km baseline applications and more than 20 baselines simultaneous processing in challenging GNSS environments.

Capabilities

License Options	mmVu™ LabTime Basic	mmVu™ LabTime Plus
Filter Type	TDD, DDC	TDD, DDC
Monitoring Application	Real-time, Static	Real-time, Static
Data Rate	Up to 1 Hz	Up to 10 Hz
Baseline Length	Up to 10km	Up to 30km
No. of Baseline	Up to 5 baselines per processing	Up to 20 baselines per processing
GNSS Environmental Challenge	Lower	Medium

Note: mmVu™ LabTime Premium is available for customers who have to customize the license options for their special needs.
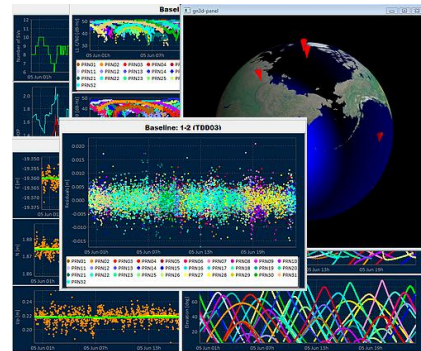
Data Processing Computer

Customers are recommended to refer to the PS100 (Local server computer) Hardware Specifications to satisfy minimum performance requirements for their computers.