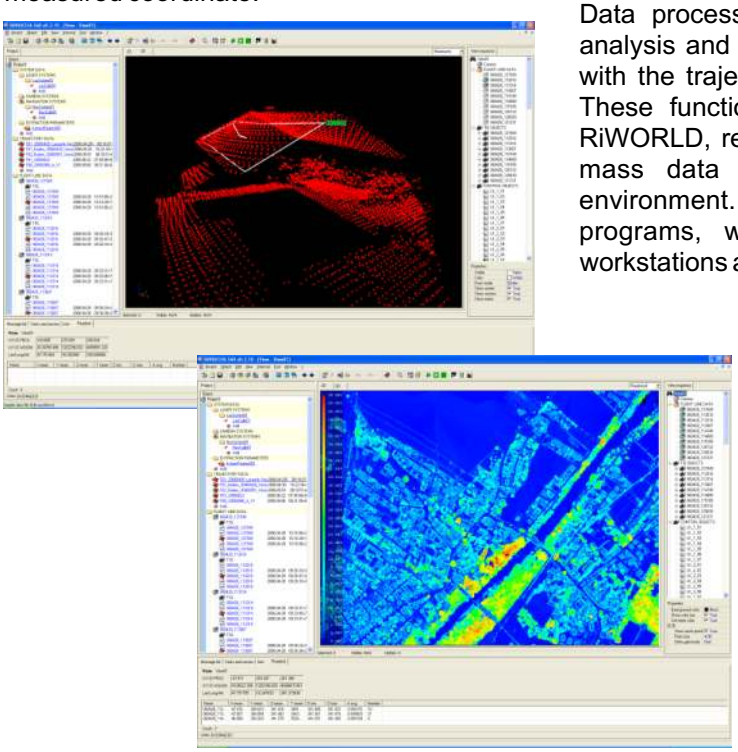
RiPROCESS

PROJECT-ORIENTED TOOL FOR MANAGING, PROCESSING, AND VISUALIZING ALS and MLS DATA

RiPROCESS is designed for managing, processing, analyzing, and visualizing data acquired with airborne laser scanning systems (ALS systems) and mobile laser scanning systems (MLS systems) based on *RIEGL* Laser Scanners.

RiPROCESS is project-oriented and enables the user to manage all data acquired and processed within a single project. This data includes project data, scanning system information data such as mounting information and calibration data, laser raw data, e.g., the digitized echo signals from the *RIEGL* LMS-Q560 laser scanner, position and orientation data from the IMU/GPS, intermediate data files, search tree files for fast data access, and georeferenced point cloud data with additional descriptors for every measured coordinate.



Data processing tasks include, e.g., full waveform analysis and georeferencing laser data by merging it with the trajectory data derived from IMU/GPS data. These functions are provided by RiANALYZE and RiWORLD, respectively. RiPROCESS is intended for mass data production in a multiple-workstation environment. RiPROCESS makes use of these programs, which may be installed on different workstations and are accessed via RiSERVER.

RiPROCESS distributes the computational load to the available server-enabled processing tools in the form of individual tasks thus optimizing data throughput.

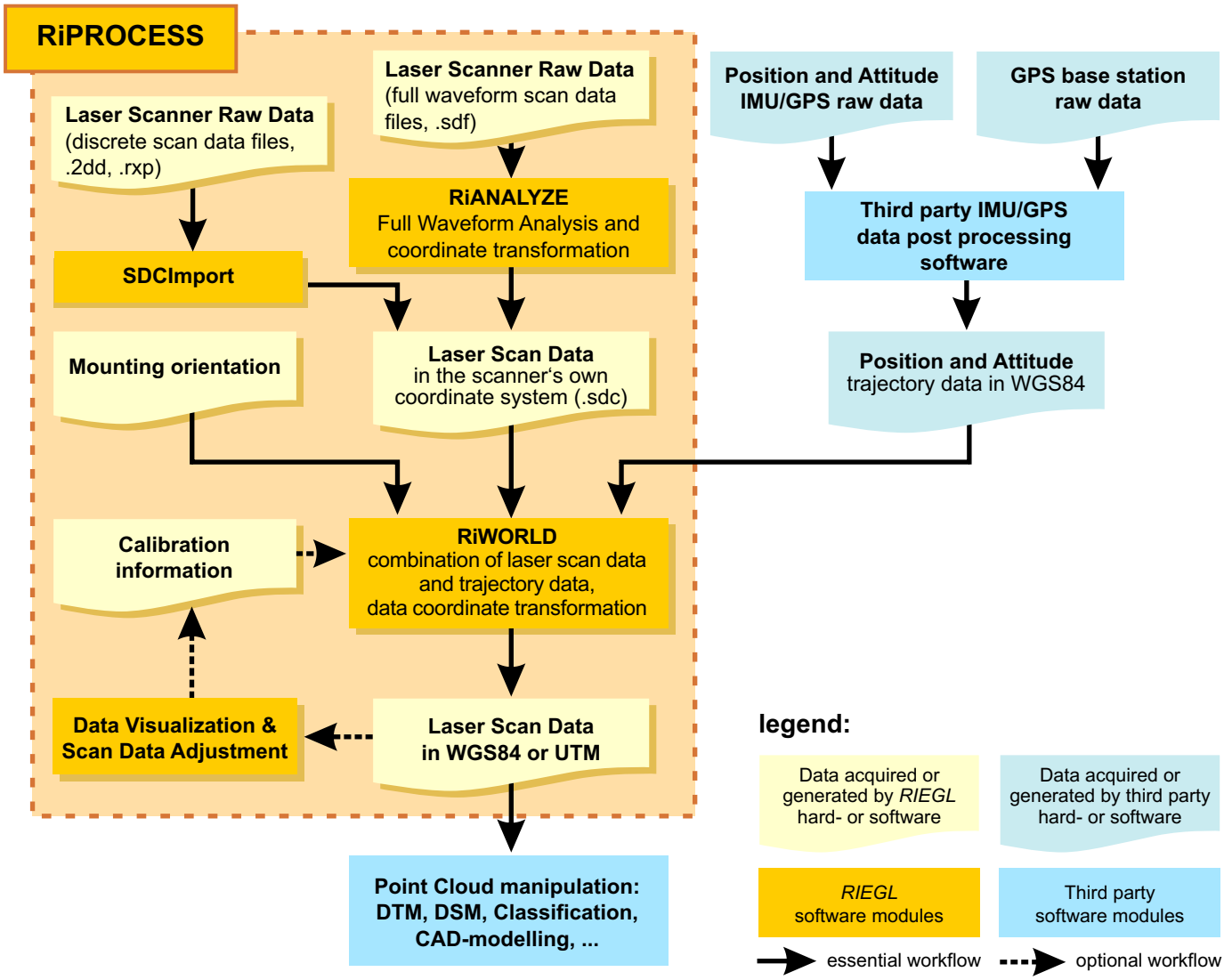
For data and data quality analysis laser data can be visualized in 2D and 3D in various ways, e.g., in data density, in color-encoded height, height differences within raster cells and many more. Even huge amounts of data can be quickly accessed for display in 3D. Quality of scan data matching can be assessed in different ways, by visual inspection or by statistical analysis.

In order to improve data quality, RiPROCESS offers an integrated scan data adjustment feature based on matching data acquired on planar objects, e.g., roofs of buildings. Data acquired on planar objects is automatically detected within the scan data and displayed for inspection in 2D and 3D. Parameters optimized within the scan data adjustment include system calibration information, and up to 6 offsets (angular and translational) for each single scan. Terrestrially surveyed planar control objects can also be used to additionally improve absolute georeferencing of the data set.

RiPROCESS allows data export in the widely-used LAS format to execute common tasks such as classification, triangulation and decimation by third-party software packages. An interface to RiSCAN PRO, the accompanying software for *RIEGL*'s terrestrial 3D scanners, allows utilizing further visualization and processing tools.

visit our webpage
www.riegl.com

RIEGL
LASER MEASUREMENT SYSTEMS



Key Features:

- Project-oriented managing tool for processing of *RIEGL* airborne- and mobile laser scanner data from raw data to point-cloud-based data in WGS84 or projection (e.g. UTM) utilizing RiANALYZE and RiWORLD in remote control mode
- Fast access to data for visual inspection in a large variety of visualization formats, ranging from color-coded raster data to digitized echo data for every laser measurement (depending on used laser scanner)
- System calibration and scan data adjustment based on matching data acquired on flat objects
- Statistical analysis of matching quality of scan data; comparison of laser data to surveyed reference objects
- Interface to further post-processing tools via LAS, Terrasolid, and ASCII data exchange
- Operation in a multiple-workstation environment enhancing data post-processing throughput by parallel computing

Data sheet, RiPROCESS, 20/08/2009

RIEGL
LASER MEASUREMENT SYSTEMS
www.riegl.com

RIEGL Laser Measurement Systems GmbH, A-3580 Horn, Austria
Tel.: +43-2982-4211, Fax: +43-2982-4210, E-mail: office@riegl.co.at
RIEGL USA Inc., Orlando, Florida 32819, USA
Tel.: +1-407-248-9927, Fax: +1-407-248-2636, E-mail: info@rieglusa.com
RIEGL Japan Ltd., Tokyo 1640013, Japan
Tel.: +81-3-3382-7340, Fax: +81-3-3382-5843, E-mail: info@riegl-japan.co.jp