



inBLOCK



inBLOCK – new-generation bundle block adjustment software with optimal combination of theory and user-friendliness.



inBLOCK is inpho's successor of the widely used PAT program family. The outstanding flexibility of input data and parametrization, as well as the very detailed graphical error and reliability analysis functions make this adjustment program's greatest benefit.

Block adjustment with a new level of reliability.

inBLOCK is a new-generation bundle block adjustment software from inpho. It is based on a new design, combining advanced mathematical modeling and adjustment techniques, the landmarks of INPHO, with user-friendliness and excellent interactive graphical analyzing capabilities.

The advanced adjustment engine of **inBLOCK** offers high processing speed, full GPS and IMU support, self-calibration with additional parameter sets and effective multi-phase blunder detection. Excellent graphical tools make the monitoring of the block adjustment results easy. Complete statistical information including variance components, precision, reliability and sensitivity, among others, is available for thorough analyzing of the block.

inBLOCK is suited for adjusting aerial blocks of any shape and overlap, ranging from small projects to the most demanding ones.

Image Capture

Aerial Triangulation

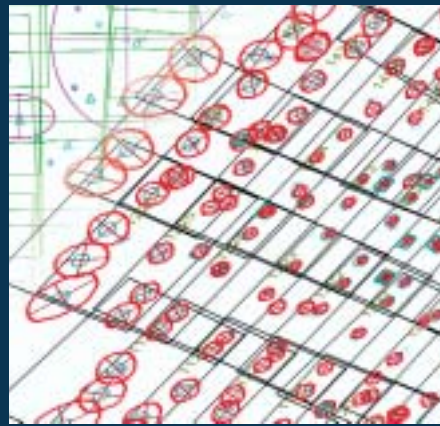
Data Capture

Terrain Modeling

Orthophoto Processing



***inBLOCK** is designed to take best benefit from state-of-the-art and future input data such as GPS and IMU observations.*



Features

- Multi-sensor concept supporting film cameras, digital frame cameras, GPS and IMU.
- Robust computation of initial values for fully automatic block set-up; no need for any schematic block information.
- Powerful adjustment engine:
 - Free block adjustment available
 - Flexible weighting schemes
 - Sparse matrix technology
 - Bandwidth minimization
 - Reduced normal equations
- Multi-camera support in one block and camera-specific self-calibration:
 - Three optional parameter sets (physical (5), Brown (16) or Ebner (12))
 - Optional focal length & principle point calibration
- Advanced methods for gross error detection:
 - Effective blunder elimination prior to the adjustment
 - Robust estimation (automatic)
 - Data snooping (interactive)
- GPS data handling:
 - Drift and shift compensation (global or strip-wise)
 - Optional antenna eccentricity calibration
- IMU data handling:
 - Preprocessed GPS/IMU data from POS AV/POSEO by Applanix and AEROControl by IGI
 - Attitude data are used as constraints
 - Drift and shift compensation (global or strip-wise)
 - Boresight misalignment calibration
- Comprehensive statistical information available:
 - Traditional values like residuals, RMS and standard deviations
 - Variance components
 - Internal and external reliability values for all observations and unknowns
 - Sensitivity analysis for undetectable gross errors, and their possible influence onto the block
- Sophisticated graphical block analysis:
 - Visualization of all results and statistical information
 - Interactive editing of observations (renaming, deactivating, reactivating, deleting, change of weighting)
 - Zooming, panning and rotation of data in 3D
 - Data classification and color-coding

Benefits

- Processes blocks of any shape and overlap.
- Easy to use intuitive graphical user interface.
- State-of-the-art computation algorithms.
- Full statistical information available.
- Sophisticated block visualization.
- High precision & high reliability.
- Easy integration into any third-party workflow.

"What is the influence of an undetectable gross error of this observation?"
inBLOCK's outstanding feature is the highly sophisticated and thorough data analysis. Actual residual vectors as well as standardized residual vectors among error ellipses for standard deviations are graphically displayed. Internal and external reliability measures help to analyze the block stability. Traditional views (vectors, ellipses ...) as well as new visualizations (e. g. traffic lights) are used for a blindingly easy inspection of the data. Rotate the graphics in 3D to look into every detail.

Recommendations

- High-end PC workstation
- 2 Gbyte RAM
- Windows XP/2000

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