

Leica FPES Flight Planning & Evaluation Software

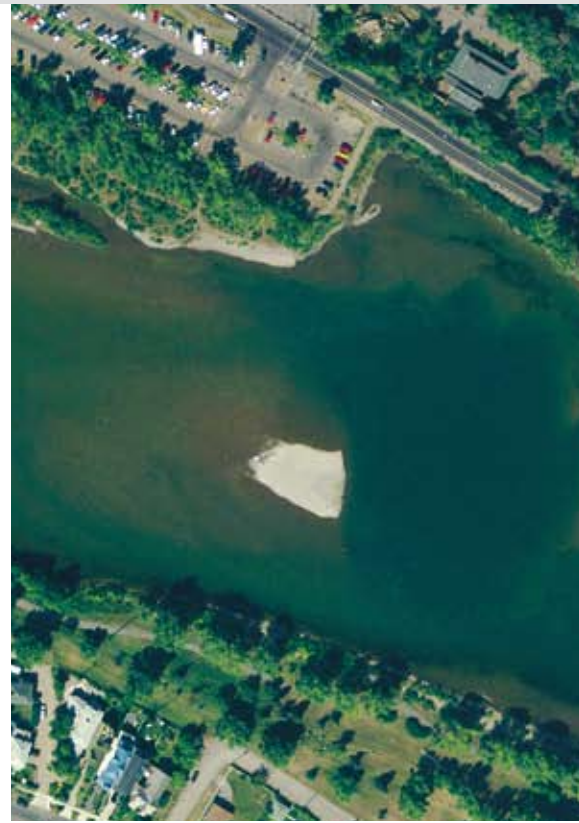
Best plans
Any area
Any sensor



- when it has to be **right**

Leica
Geosystems

The Leica Flight Planning & Evaluation Software for Airborne Sensors



Flight Planning and Evaluation – The first steps in powering geospatial imaging

Geospatial imaging starts with flight planning and ends with the deliverable. An optimized flight plan is the key for cost effective airborne image acquisition. Flight evaluation enables quality control at an early stage in the workflow, and project management considerably increases productivity and cost effectiveness. Leica Flight Planning & Evaluation Software (FPES) covers all tasks in this step in the geospatial imaging chain. Leica FPES fits perfectly into Leica Geosystems' seamless workflow.

Key benefits

- Cost savings and reduced time for: flight planning, proposals, flight reporting and invoicing
- Seamless data flow from flight planning to photogrammetry
- Simplified handling of large projects
- Upgrade path from Aerial Survey Control Tool (Leica ASCOT) – enabling import of existing plans

Key features – Flight Planning module

- Efficient flight planning for all types of sensors including the Leica RC30 Aerial Camera System, Leica ADS80 Airborne Digital Sensor, Leica ALS60 Airborne Laser Sensor, Leica RCD100 and other frame, line or ON/OFF sensors
- Flight planning on all common types of geographic and grid systems



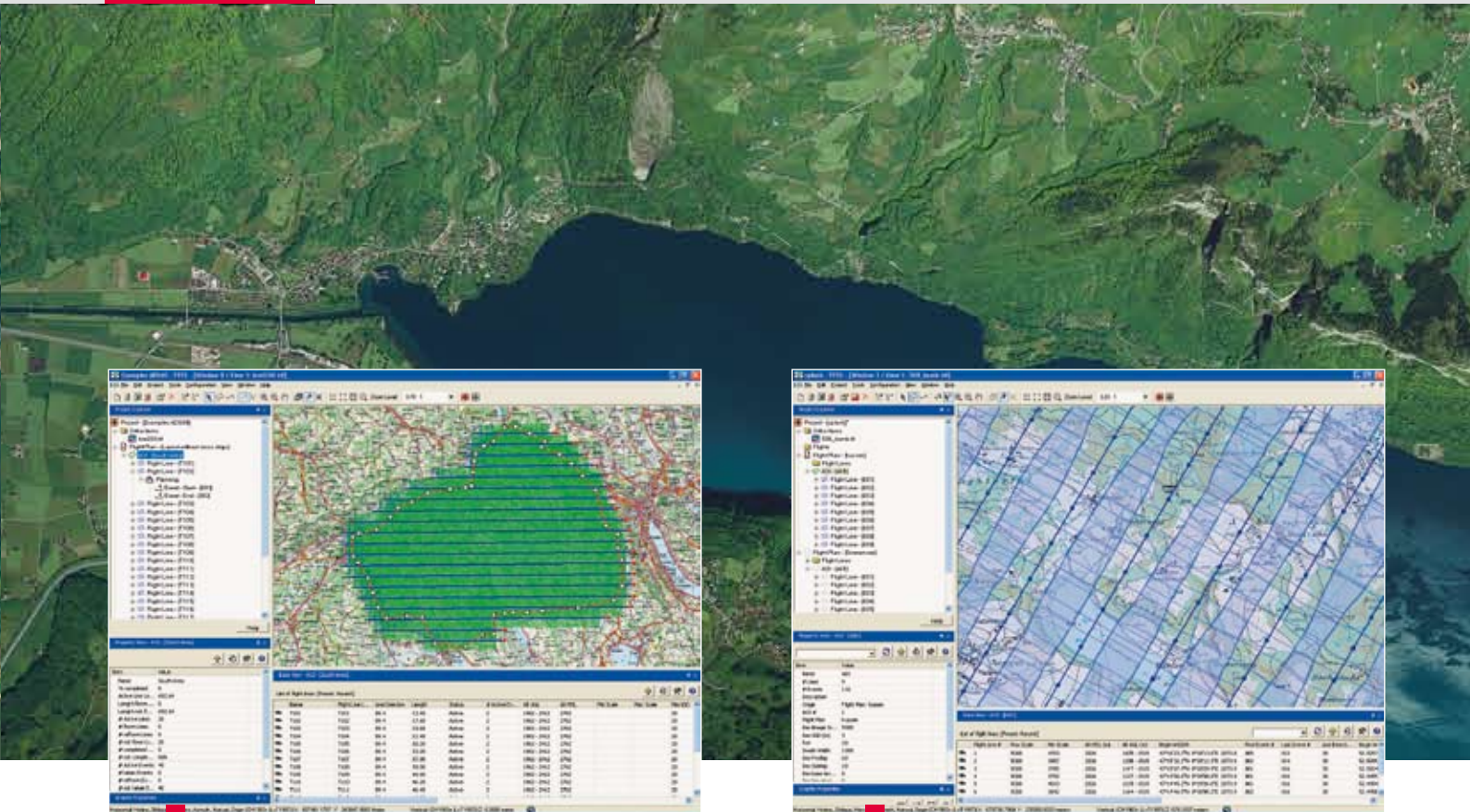
This image of the Calgary Zoo, Alberta, Canada, was taken with the Leica ADS40 Airborne Digital Sensor.

- DTM taken into account to compute area coverage
- Interactive graphical flight planning using digital raster and vector maps
- Interactive flight planning using coordinates
- Parallel flight lines computed automatically to ensure stereoscopic coverage of areas of any shape
- Corridor mapping feature that splits a polyline automatically for coverage with a minimum number of flight lines or generates a winding flight line for helicopter flights
- Comfortable editing and modifying of flight plans
- Easy optimization of flight plans by comparison of various area coverage possibilities
- User definable free line labeling
- Output of calculated and summarized data for flight preparation, proposals and invoicing

- Flexible data import and export including existing Leica ASCOT flight plans, ASCII, Google Earth, Shape- and DGN files
- Flight plan database enabling easy and efficient data handling of large projects
- Flight plan output for flight execution with Leica FCMS and Leica ASCOT

Key features – Flight Evaluation module

- Graphical presentation of the flight joined with the planning
- Evaluation of multiple flights
- Calculated and summarized data for easy flight reporting and invoicing
- Flexible data export for further use of all flight data
- Perfect data flow to next processing steps
- Project management



Leica FPES gives you complete flight-planning information.

Planning on DTM: zoom in on the complete flight plan to show details of the stereoscopically covered area.

Optimal interface with Leica workflow

Leica FPES is tightly integrated in the entire Leica workflow. Leica FPES flight planning has a perfect interface to Leica FCMS and Leica ASCOT for flight execution. After the survey flight, the data is transferred to Leica FPES for flight evaluation. The Leica FPES seamless interface increases productivity and cuts cost. Leica FPES makes managing large projects an easy task.

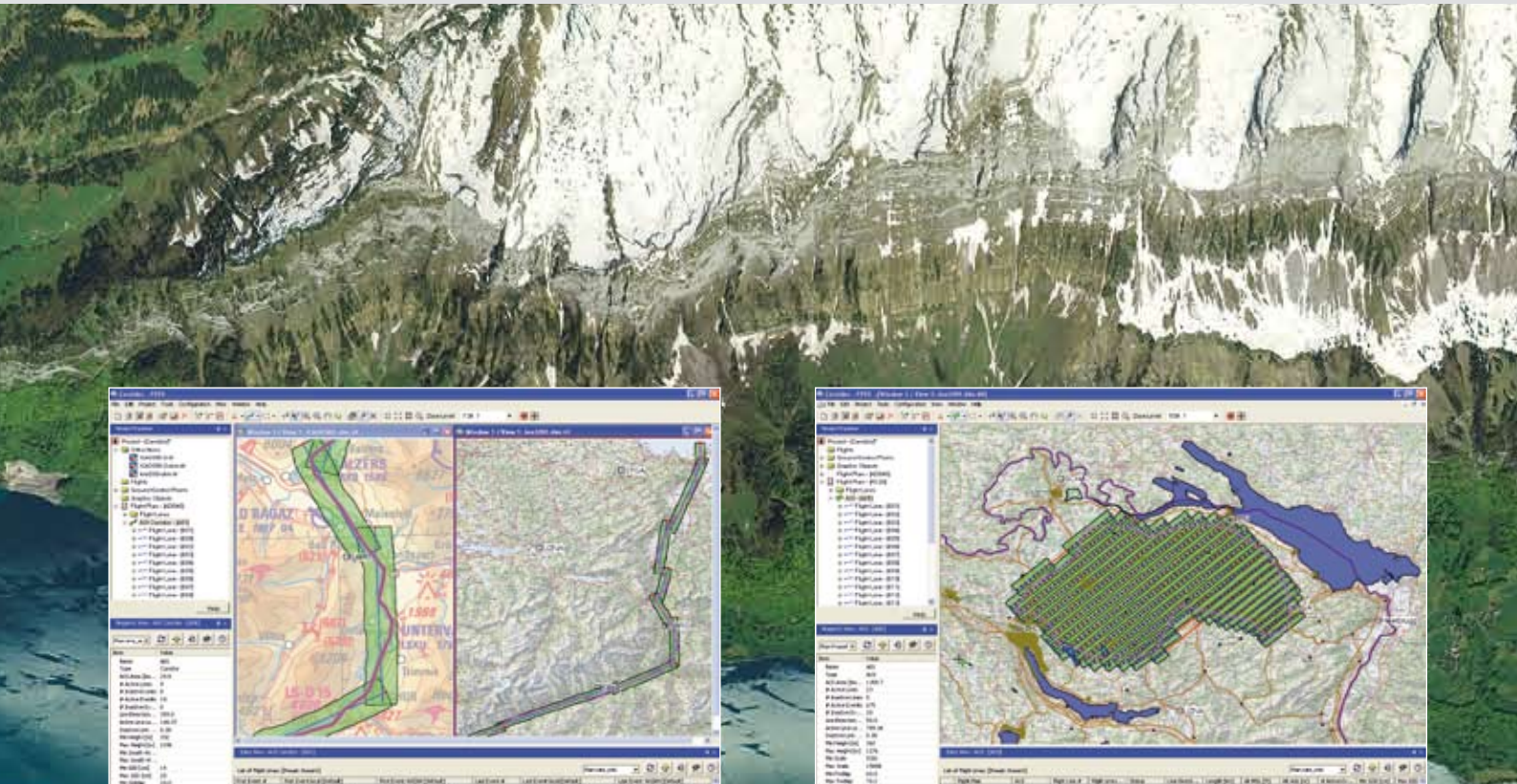
Leica FPES user interface

The graphical user interface is easy to learn, which allows easy use of Leica FPES. The workspace below the menu and icons is split into the Main Graphic Window, the Project Explorer and several highly customizable panels. The main graphic window shows various data including geo-referenced digital maps, borders of areas of interest (AOIs), flight lines, photo center, footprints and line numbering. All data is organized in layers. The user can show or hide each layer individually and freely define viewing properties such as colors and line

formats. The Project Explorer is located on the upper left side and shows the project in a tree-like directory. Users can expand or collapse the tree to show or hide information. The property and data panels display summarized or detailed data including the planning date, date of last change, total AOIs, total number and length of lines, total number of photos, forward and side overlap, photo scale for film imagery and ground sampling distance (GSD) of digital imagery.

Powerful database yields convenient project management

The heart of Leica FPES is a relational database. The SQL database server is included with the Leica FPES software. This powerful database ensures central data storage in a logical structure. Fast access and secure and flexible data management are the key features of the database. Flight plans, projects, or the entire content of the database can be transferred to other computers, simplifying data handling and project management. The status of a project is easy to monitor because all



The flight plan can be displayed with any backdrop map. The example shows a corridor mapping flight plan displayed on a topographic map and on an air traffic control map as backdrop at different zoom levels.

The example shows a raster map, vector data and ground control points as backdrop for flight planning.

relevant information is managed and centrally stored in the database. Automated queries give a quick overview of the progress of a project.

Integrated utilities

Several utilities are integrated in Leica FPES:

- Sun angle tool to determine in advance the flight window and the expected integration Time for data collection with the Leica ADS80 and the Leica ADS40.
- AeroPlan for the Leica ALS60 and Leica ALS50-II to determine the operational setting needed by the ALS for a given LiDAR acquisition mission
- Geo-reference tool for digital maps or images.

Leica FPES runs on standard PCs

Leica FPES only requires standard PC hardware with an Intel Pentium IV or higher processor or compatible processor. Other requirements are 3 GB disk space, 4 GB virtual memory, 1 GB memory and Microsoft Windows XP and Vista, 32 bit and 64 bit. Recommended screen resolution 1280 x 1024. No external CAD software is required.

Whether you want to capture airborne data of an agricultural area or of a city, record the challenges in a disaster area or the expanse of a high tension line, you need reliable measurements and solutions for your entire workflow to build image-based maps. Leica Geosystems' broad array of airborne sensors and integrated software solutions capture data efficiently, reference imagery accurately, measure easily, analyze and present spatial information in 3D.

Those who use Leica Geosystems products every day trust them for their precision, their seamless integration and their superior customer support. When data really counts, Leica Geosystems delivers geospatial imaging solutions with precision, integration and service.

When it has to be right.

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Leica ADS80
Product brochure



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