Company Profile

A company with interdisciplinary experience

IGI mbH was founded in 1978. The primary goal of the company was to manage airborne sensor systems for flight guidance, sensor control using GNSS (Global Navigation Satellite System) and INS (Inertial Navigation System). Today the portfolio includes additional sensor systems using LiDAR, digital camera systems and thermal camera systems.
IGI covers a wide variety of expertise in optics, electronics, mechanics, software development, and analytics through a team of highly qualified scientists, engineers and technicians. With over 30 years of experience, IGI offers not only integration of various sensors but also complete sensor systems for airborne and terrestrial survey missions.

IGIplan

Mission Planning & Documentation

The advanced mission planning software *IGIplan* extends the well-known mission planning software *WinMP*. Featuring worldwide coordinate system support, advanced sensor support for analog and digital aerial cameras, LiDAR and online scanners, *IGIplan* is the state-of-the-art mission planning software. Combined with *CCNS*, flights can be planned and flown in one workflow. The intuitive user interface and real-time calculation of flightlines supports the user in his daily work. Exporting the mission plan to Google Earth™, results can be presented to end-cutomers very quickly.

Flight Management Systems

The Computer Controlled Navigation System - *CCNS* - today is one of the leading systems for aircraft guidance. The 4th generation of *CCNS* systems is in production since 1991 and is worldwide over 300 times in use. The system supports all common airborne digital & analog camera systems as well as other sensor systems such as LiDAR, hyperspectral etc.

GNSS/IMU Positioning Systems

In 1996 *AEROcontrol* was introduced, a GNSS/IMU system for precise determination of position and attitude of various sensors. To date, IGI has improved the positional accuracy to 0.05m RMS, attitude accuracy to 0.003° and more than 150 systems are in operation worldwide.

www.igi-systems.com

Company Profile

Modular Aerial Camera Systems

DigiCAM is a Modular Aerial Camera System for professional, but affordable digital aerial photography. The product range varies from a medium format camera with 60 megapixels up to a large format camera with 235 megapixels. Because of the modular design, camera systems for oblique images are possible, too. Both color images (RGB) and color-infrared (CIR) images are available.
Complementing the *DigiCAM* family is a system for professional airborne thermography named *DigiTHERM*, featuring a pixel resolution of 640x480 or even 1240x480 in the *Dual DigiTHERM* setup.

LiDAR Systems (Light Detection And Ranging)

LiDAR is an optical remote sensing technology for distance measurement. Like the similar radar technology - which uses radio waves - the range to an object is determined by measuring the time delay between the transmission of a light pulse and the detection of its reflected signal. IGI uses Riegl scanners for their *LiteMapper* systems. These laser scanners measure multiple pulses in one laser beam. Coupled with IGI's position and attitude determination system *AEROcontrol*, *LiteMapper* scans the Earth's surface from the air. During post-processing, millions of points evolve to a landscape 3D model that is used in many applications.

To obtain accurate 3D models for building facades and looking into road conditions, IGI and the British firm 3D Laser Mapping joined forces to build a mobile LiDAR system, *StreetMapper*. *StreetMapper* links laser and camera technology with a high-precision positioning system, *TERRAcontrol*.

UAV - Unmanned Aerial Vehicle

Together with the Dutch firm Geocopter B.V., IGI offers their *DigiCAM*, *DigiTHERM* and *LiteMapper* systems in an unmanned helicopter. The system offers very high mobility, since it can be transported in a standard car. Through the complete remote control from takeoff to landing, the system provides comfort on highest level.

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