Bath Spa University

Working in Partnership

New Product Development for Getmapping

CASE STUDY

Overview

Getmapping is providing an all in one service to capture, process and supply imagery and software. Developed over the last two years in close collaboration with Bath Spa University, the Azicam takes a radical approach to oblique image capture.

About the Project

Oblique aerial photography is fast becoming the new 'must have' image product to complement vertical aerial photography, which is now regarded by many as an essential information asset. Vertical photography, however. is only a 2D dataset. Oblique aerial photography, on the other hand, when captured in a systematic way and combined with sophisticated viewing and measurement software tools, provides an easy route into the 3rd Dimension.

Getmapping is the UK's leading supplier of aerial photography, mapping products and data hosting solutions. In collaboration with Bath Spa University's geotechnologies academic experts, Getmapping developed the 'AZICAM' oblique camera system. The system is used to capture sharp full colour oblique digital images of towns and cities.

Alexander Koh, Principal Lecturer in Remote Sensing, Photogrammetry & GIS at Bath Spa University proposed the original concept for the Azicam camera, developed its design and built the prototype. The prototype was tested in an experimental context first and then on a live project. Satisfied with the result, Getmapping then built the full production model.

Bath Spa University's involvement continued with the next stage of implementation, addressing issues related to how Azicam would work in practice. Such issues included how the Azicam camera would be controlled, how to navigate the aircraft, methodologies for capturing the data and data management.

Benefits

Instead of a normal four camera array used to take North, South, East and West (90°) orientations, the Azicam is a single medium format digital camera mounted on a rotating plate or 'spinner' driven by a precise friction motor to orient the camera for each shot. Navigational and recording GPS ensures accurate geo-location.

Fast Facts

- Developed over the last two years in close collaboration with Bath Spa University, the Azicam takes a radical approach to oblique image capture.
- The new produce is easy to maintain and delivers superior imagery at less cost
- Collaborative working with Getmapping on the Azicam project has significantly enhanced the employability of Bath Spa University graduates.

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The Azicam system has several advantages. Using a single higher resolution camera delivers a wider area of coverage, better image quality and costs less to calibrate and maintain. The whole system will fit in an aircraft already configured for a single vertical camera installation.

When combined with traditional vertical imagery and desktop software, users have a rich multidimensional viewing environment that can be explored, measured and even exported for use in presentations or as building blocks for full 3D modelling.

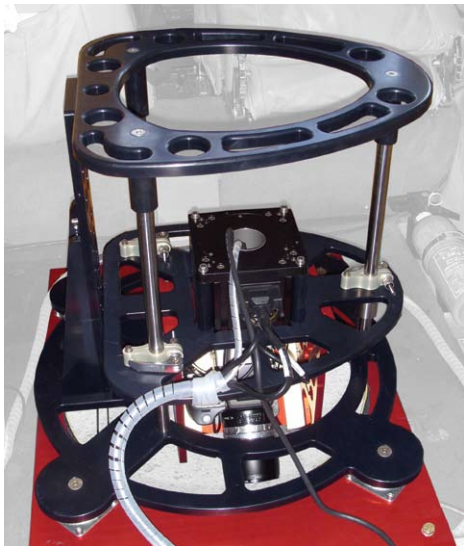
Collaborative working with Getmapping on the Azicam project has significantly enhanced the employability of Bath Spa University graduates. As the Azicam product was developed on-site at the University, students have seen how it operates and gained a better understanding of applying knowledge to real scenarios. Additionally, Getmapping has subsequently employed graduates to help with data management.

Outcomes

Combined with existing vertical imagery and using Getmapping's MultiVision software, Getmapping's customers can view any feature such as a building from 5 different angles simultaneously. The built in tools make it possible to ascertain building heights, calculate elevation areas and the distance between features.

Oblique imagery captured using the Azicam oblique image camera is becoming popular, particularly with Local Authorities. The imagery has multiple uses for Local Authorities, including planning site visits, looking to see how many floors buildings have for rate calculations, understanding street/industrial estate geography for street naming and numbering, measuring areas of land for enforcement purposes, measuring building heights for 3D modelling, etc.

From the University's perspective, inclusion of the Azicam case study and data enriches the teaching programmes, particularly as the prototyping equipment is available for teaching demonstration purposes. Also, representatives from Getmapping have given presentations to students on how the 3D GIS side has evolved and a one-day seminar on 3D GIS was held to disseminate the new approach to Local Authorities, security and utility companies and other public and private sector organisations.



Perspective

"The Azicam system which we have co-developed makes the best use of available aircraft, is easy to maintain and delivers superior imagery at less cost. It also allows us to offer a complete oblique imagery service at a price that won't break the bank. The system is completely proven and we already have customers who are delighted with the results."

Tristram Cary
Managing Director of Getmapping

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