

Supporting Innovation

MapUK

CASE STUDY

Overview

Three final year students in BSc Remote Sensing & GIS – Colin Bertram, Natalie Robbins and Matthew Thompson, supported by their tutor Alexander Koh – won innovation funding in 2006 to develop an aerial survey navigation system and standardised image database of the United Kingdom, which they called MapUK.



MapUK Team

About the Project

The use of remote sensing imagery and awareness of its applications has increased significantly in recent years, with the launch of Google Earth and Microsoft Live Local giving global coverage. In turn, this has generated an expansion in the national and international market for primary airborne data acquisition.

Current aerial remote sensing images are captured using a block procedure. Each block is planned, uploaded into the aircraft navigation systems and flown separately. This procedure has evolved from the analogue acquisition programmes of the 1960s. The result is, in terms of spatial coverage and image resolution, a random patchwork pattern of delivery. This makes it difficult and cost ineffective for applications such as change analysis, planning and/or boundary disputes, land cover and utilisation mapping and corridor monitoring.

The innovation award funding was used to achieve the project objectives of:

- Streamlining airborne working practices
- Reducing planning for aerial surveys
- Reducing in-flight wastage
- Enabling effective change analysis
- Producing records for photographic change

Benefits

The team was required to submit all plans and findings to two demanding Business Review Panels. Panel members included former executives from Sun Microsystems and Microsoft, who probed for detail and were able to give constructive advice to help the development of the project. The Business Review Panels were highly successful at driving commercial thinking, challenging findings and motivating team members.

Fast Facts

- **The idea:** seamless survey flight planning and navigation system
- **The market opportunity:** expansion in the national and international market for primary airborne data acquisition; difficult for companies to meet their planned image acquisition remits
- **Potential for commercial application:** the system to deliver such a database to be sold to the geomatics industry, or the database generated and sold as a service to cover the specific area of interest to the client
- **Competitive advantage:** Unique as it facilitates on-the-fly reconfiguration of aircraft routings and survey flight times and allows the survey platform to take advantage of any suitable weather and navigation window rather than be constrained by the planned block/air traffic/weather

Outcomes

The project was completed in four months and consisted of four key milestone stages:

Activity	Project Timeline
Research	01 January – 07 February
Development	07 February – 21 March
Data Management	21 March – 21 April
Trial Flight	21 April – 07 May

An executive summary of potential applications was produced and distributed to communications companies and venture capital organisations, to assess interest in the product. The results of the project also highlighted where further investigation would be required into potential intellectual property rights such as copyright and patents.

As the first Bath Spa Innovation Award project, the MapUK initiative was exemplary.



MapUK Prototype

Perspective

“The topics brought up in relation to marketing and commercially producing our product really helped us to think about how we could develop our proof of concept further. We were made aware of contacts we are going to pursue in order to develop our product and we have gained valuable experience in giving presentations in a business environment.”

Colin Bertram

Innovation Award Winner 2006, MapUK



MapUK keyboard control

“A professionally executed proof of concept project, producing credible results and providing a framework for the development of a business plan and a detailed assessment of commercial potential.”

Simon Bond

Director of Innovation Centre Bath and Chair of Business Review Panel