

Photogrammetric services

CASE STUDY

Small firm specializes in large triangulation projects, deriving competitive advantage from experienced staff and investment in software

Customer: The Mapping Place

Industry: Mapping and surveying

The challenge

The Mapping Place in Stroud, UK processes 25,000 images a year. The firm of photogrammetry and mapping professionals is committed to producing top quality work while remaining a small, efficient operation. Therefore they need a solution that allows them to handle a steady stream of large volume projects with ease, without sacrificing quality.

The opportunity

When David Child started The Mapping Place in September 1999, his strategy was to secure five large clients who periodically find themselves with more projects than they could handle. Although this goal has diversified, he clearly enjoys a consistent workload from large companies. The Mapping Place's specialty is producing very large, highly accurate, aerial triangulation projects and being able to process multiple projects simultaneously. Additional services include: image processing; photogrammetric scanning; aerial triangulation; orthophoto and digital terrain model production; photogrammetric design for production flow programming; production training and product enhancement.

Quality control and customer satisfaction are key objectives. The small, yet highly specialized staff is knowledgeable in everything from traditional cartography to modern digital photogrammetry. David believes that the scanning services he offers are superior. With a keen eye for detail, photogrammetric scanning is treated as an art. This attention to detail will ultimately set The Mapping Place apart from other companies with less experience. The challenge is to procure the best tools to facilitate production, determine the limitations of those tools, and augment the scientific results with hands-on attention to produce the best precision mapping products available.

The evaluation

The bulk of work produced at The Mapping Place is large triangulation projects. David strives to be very efficient so that he can offer triangulation at an attractive price for all types of sensor data. This price is low enough to compete internationally.

To accommodate this work, the office includes two BAE Systems SOCET SET® seats. Modules include Core, Stereo, APM, ATE, ITE, Ortho and BINGO, i.e., a full system for triangulation, generation of digital terrain models (DTMs) and creation of orthorectified mosaics. BINGO is used as a dependable production tool, which optimizes the company's capabilities to check and document triangulation results.



“Technological advances in the industry mean that we must work with imagery from new sensors to maintain diversity. SOCET SET and especially BINGO have helped us do just that. Our mantra is ‘We only produce it once!’ Careful quality control and planning combined with reliable software help us to that goal. One has to enjoy production to achieve the best results—using the software has to be rewarding and show success to encourage us to keep striving for improvement.”

David Child
Owner, The Mapping Place

David's typical deliverable consists of photo coordinates in PATB format and exterior orientation in a simple csv file, accompanied by documentation of the block. Using BINGO, delivering output to other systems, for example in PATB ORI format, is quite convenient, and he is impressed with BINGO's tools for analyzing blocks. The easy output of deliverables is also a factor. For example, customers can take his work and run a quality check using their own bundle adjustment solution.

The solution

One of the reasons David uses the SOCET SET/BINGO solution is that he wants a product with no frills. He finds that BINGO is easy to run, and is a powerful tool for sorting out blunders. In a small company, it's critical that equipment is efficient and dependable, and there is a solid system for regularly backing up work.

To supplement these measures for quality control, the Mapping Place tests the software and equipment, and offers valuable input that is used to refine the products. Furthermore, David buys maintenance agreements and has his scanner calibrated regularly to ensure the most precise results.

Conclusion

After many years in the industry, the staff at the Mapping Place has the hands-on knowledge and expertise to offer professional services to a growing industry that demands accurate results and short turnaround times. David has successfully completed sizable projects with varied specifications for companies in Europe and the United States. His clients are happy and he is comfortable with his ability to offer the same services as larger companies, but with tighter control over quality and customer service. This success would not be possible without the robust tools he has chosen to improve productivity.

The profitability of The Mapping Place exemplifies the viability of photogrammetry service companies located in relatively high-cost areas such as southwest England, yet competing in the world market. The combination of SOCET SET and BINGO has been invaluable in guaranteeing smooth, effective throughput of very large triangulation jobs. By providing this reliable, specialist service, The Mapping Place enables larger companies to outsource their production bottlenecks with confidence. BAE Systems plays its role by giving all input from The Mapping Place the most serious consideration and building it into development plans. The enhancements in BINGO v5.2, released in July 2005, and the new functionality of SOCET SET v5.3, scheduled for release in 2006, including tighter integration with BINGO, will break new ground and continue to offer an efficient tool to this loyal customer.

