

WEHRLI & ASSOCIATES INC.

Small, Virtual but Big in Digital Photogrammetry

Wehrli & Associates Inc., headquartered in Valhalla, New York was incorporated in 1991 with the aim of developing, manufacturing and selling photogrammetric instruments worldwide. It is a small, virtual company communicating worldwide via internet and phone and comprises two key persons, Gregory and Hans Wehrli, plus a host of highly qualified, stable, independent contractors.

The first photogrammetric system developed and sold worldwide under the Wehrli & Associates Inc. brand name was the DOS-based precision photoscanner RM-1. Over the years, that system evolved into the Windows 2000 RM-2 Cut Sheet photoscanner. In 2000, Wehrli & Associates agreed with SSPE Geosystems, located in Ukraine, to work together in order to integrate western technology and market knowledge with low-cost manufacturing. The two companies now jointly offer both a manual and an automatic film-roll photoscanner. For the past two years efforts have been concentrated on the latest trend: digital aerial cameras. In response, the 3-DAS-1 push-broom digital aerial camera and the stabilised platform ASP-1 have been developed. This camera and platform were introduced at the 2004 ISPRS Congress in Istanbul, Turkey.

Alliance to Reduce Costs

Because of its complexity, conventional photogrammetric equipment has always been capital-intensive. In contrast, today's digital photogrammetric equipment is not only relatively low in cost, but also offers the photogrammetric practitioner the opportunity to enter new markets such as agriculture, forestry, environmental and security surveys; in short, what is today called "geomatics". This means that photogrammetry as a whole is growing, while it becomes absorbed by the geomatics industry. Our main business is concentrated on the large-scale photogrammetric mapping industry mostly made up of 'mom & pop shops' - small companies of less than fifty persons, maximising the capital investment benefits brought on by digital photogrammetry and passing these on to their customers. According to Wehrli & Associates, the foundation of their success and business philosophy comes from senior member, Hans Wehrli, who has a long history in the photogrammetric equipment industry and years of experience in system design, as well as an extensive knowledge base in computer imaging and system integration. A "virtual" company structure allows overhead costs to be kept to a bare minimum. Along with Geosystem colleagues, the company is able to develop complex photogrammetric instruments that answer customers' real needs. Our key influential members are able to focus on western technological advancements or Commercial-Off-The-Shelf products (COTS) and how these may apply to future photogrammetric equipment, as well as the viability of these products for the market.

One Worldwide Market

Part of the company's mission is to target the large-scale photogrammetric market. Although sales are greatly affected by local and global economics, there is always one region of the world with favourable economic conditions and a first indication of such is how much mapping is required by that region.

We look at the world as one marketplace. Because of today's 'instant' communication "e-mail, digital pictures and telephone" sales and support on a worldwide basis is a non-issue. Engineers are ready to be dispatched from various locations throughout the world. With the emergence of digital aerial photogrammetry the principle obstacle is the difficulty of exporting GPS/IMU systems. This is a tedious process, yet the company believes that with increased usage of digital aerial photogrammetry this obstacle will soon be overcome.

DP the Answer

We believe the trend towards completely digital photogrammetry is of benefit to all. When considering the usefulness of photogrammetric end products, end users as well as practitioners must take into account the following issues.

- Can new equipment be amortised and generate a decent profit before it is made obsolete by today's rapidly changing technology?
- Is the geographic data acquired worthwhile? Too often, and at great effort and expense, data acquired is outdated long before it is put to use.
- Is large-scale mapping affordable? Time and again the desire to have such data exists despite prohibitive cost, access to valid ground information and political influence, especially in underdeveloped countries.

Digital photogrammetry is the answer to these issues. Airborne sensors and the data and images produced will be in ever-increasing demand. As technology improves, product quality will increase and production costs decline. Turnaround time from data acquisition to data implementation will continue to shrink, making the notion of geographic data acquisition well worthwhile. In addition, large-scale mapping will be affordable and acquired in a timely manner, making such mapping scales practical too for developing countries. All in all, the demand for digital photogrammetric equipment will grow. In response, the company's R&D efforts require that solutions be reached

quickly, economically and efficiently.

Business Outlook

With increased use of high-resolution airborne sensors and very accurate stabilised platforms, users will demand higher automation and more flexibility. This will force new instruments onto the market, including highly accurate yet inexpensive IMUs (Inertial Measurement Units) and more precise airborne position-determination systems. The benefit of replacing our present-day equipment with reasonably priced digital options is already leading to increased efficiency by automatically obtaining exterior orientation elements for stereo compilation and geo-referenced position data. One day, perhaps, Unmanned Very Low-Altitude (UVLA) photogrammetric systems may become viable.

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