

Wild Ride

PSM visits historic Swiss headquarters.

By Professional Surveyor Magazine Staff

On a recent trip to Heerbrugg, Switzerland, Jim Fleming, a contributor to *Professional Surveyor Magazine*, had the privilege of visiting Leica Geosystems' headquarters. With an opportunity to get a rare glimpse into the Swiss company's inner workings, Fleming returned home impressed with the company's methodology in designing and producing its equipment. Beyond that, he was impressed with the history and how the company's roots continue to affect today's world for the professional surveyor.

In what has largely become an automated, assembly-line production world, Fleming was surprised when he was presented with a different reality at the Swiss facility. "With the exception of some sub-assemblies," he explains, "each instrument is built by a single person rather than on an assembly line."

Regarding a country best known for precision watch making, Fleming explains the company's manufacturing



Leica Geosystems executive vice president Eugen A. Voit poses with a Wild T4 micrometer theodolite. Originally manufactured in the 1950s, it is the largest of the Wild theodolites.

philosophy: "By having one individual responsible for the assembly of a particular instrument, Leica Geosystems believes a sense of ownership is engendered that results in higher quality products."

That same attention to detail extends to the quality-control process. "Rather than test random instruments pulled off the assembly line for conformance with specification—such as the temper-

ature range the instrument is expected to work properly within—every instrument is tested to confirm it meets all the published performance specifications," Fleming notes.

Even though the visit to the facility highlighted the company's attention to detail and their business practices, Fleming says that was only part of what left a lasting impression on him. The company history truly fascinated him, leaving him reflecting on its historical connections to the modern surveyor. In particular, what caught his attention was Leica Geosystems' connection to the legacy of Swiss surveyor and inventor Heinrich Wild, the man who set the foundation for the Leica Geosystems of today.

Born in Mitlödi Switzerland on November 15, 1877, Wild entered the industry as a teenager and, at the age of 43, founded Heinrich Wild, Werkstätte für Feinmechanik und Optik. The company's name changed in 1954 to the now more well known Wild Heerbrugg AG, the company that eventually became Leica Geosystems after the 1990 merger of Wild Leitz Holding AG with the Cambridge Instrument Company Plc. The merger originally created the new Leica Holding B.V. group, which paved the way for the company as it is structured today. It is now a wholly owned division of the Swedish corporation Hexagon.

Fleming elaborates on the man who made all this possible: "At the age of 15 he entered an apprenticeship with a hydraulic engineer and began his first experiments with a theodolite making measurements of the Linth River. In 1899 he started his career with the Swiss Federal Office of Topography as an intern. By 1902 he had been promoted to



Eugen Voit shows Jim Fleming a variety of Leica Geosystems-produced surveying equipment, both old and new, during Fleming's recent visit to the Heerbrugg facility.

On the production floor Leica Geosystems employees provide individual attention to the construction of each item.

A small, one building facility when founded by Heinrich Wild 90-years ago, Leica now occupies this large facility in Heerbrugg—courtesy Leica Geosystems AG.

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Engineer First Class and had, in addition, been put in charge of the management of their survey instruments.”

Wild had bad experiences working on high-mountain triangulation with the conventionally designed theodolite, and in 1905 he reworked the design. For the high-altitude work, he created a new theodolite with rotatable circle and coincidence circle-readings.

Two years later he moved to Jena, Germany to join the lens company Carl Zeiss and build a new department producing geodetic instruments. He started with leveling instruments and then created yet another new version of the theodolite. Wild became aware of the company during a stretch when he was working with the military, and his tenure with Carl Zeiss was an influential one. “While working on the military rangefinders, Wild became familiar with the German lens manufacturing firm Carl Zeiss, and in 1909 he approached them looking for a manufacturer to produce his inventions,” explains Fleming. “Zeiss created a new division, Geo Carl Zeiss, devoted to the development and production of geodetic instruments with

Wild at the helm.

“His work at Zeiss was interrupted by his service in the Swiss artillery during World War I,” he continues. “After the war’s end, he returned to Zeiss, and in 1920 they released his Zeiss TH1 theodolite, the precursor to the Wild T2. Due to the post-war economic conditions in Germany, Wild returned to Switzerland and, with two partners, founded the firm of Heinrich Wild in April 1921. During the Great Depression, Wild grew tired of the day-to-day operation of the firm he founded and quit the company late in 1932.”

Even though Wild left the company after little more than a decade at the helm, he didn’t leave the industry, as he continued working on a variety of projects. Fleming says, “Wild moved to Zurich and began a new career as a freelance designer and inventor. In 1935 he received a contract from the Swiss manufacturer Kern to design a new theodolite. The result was first the DK2 and then the DKM3. Wild was associated with Kern until his death in 1951. The three leading manufacturers of precision surveying instruments in the 20th century—Zeiss,

Wild Heerbrugg, and Kern—all owe their success [in the surveying industry] to this one Swiss surveyor-turned-inventor.”

Over the years, Wild’s contributions included the Wild T2, Wild T3, and the stereo autograph Wild A1, a tool for aerial photo interpretation. These tools, products of Wild’s Swiss facility, have had a broad-reaching impact on the surveying industry that is still felt today.

While none of the original building erected in 1921 still exists, Wild’s legacy certainly lives on. “It’s a stretch to say that the T2 is the cornerstone on which modern surveying hardware is built,” explains Fleming. “It was, however, the surveying instrument that was in con-



Leica executive vice president Eugen Voit (left), product manager of airborne imaging sensors Rüdiger Wagner (center) and director of marketing and communications Alesandra Doëll (right) pictured in front of the Heerbrugg facility.

stant production the longest, from 1923 until 1996. What made the T2 stand out is that it was both incredibly accurate and durable for its size. And it was that combination that made it truly universal and suitable for use for everything from third-order triangulations and astronomical observations to stake out and engineering surveys. Plus, there is no denying it’s simply an elegant surveying instrument.” ↓

In this photograph of a ceremony celebrating the 75th anniversary of the Swiss technical university on November 7th, 1930 Heinrich Wild (rear right) received an honorary doctorate along with Albert Einstein (bottom left), and Othmar Amman (bottom row, 3rd from right), the construction engineer of the George Washington Bridge—courtesy *ETH Bibliothek Zürich, Bildarchiv*.

