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Ten Per Cent Turnover to Research and Development

*GIM International Interviews Hans Hess, Managing Director and CEO, Leica Geosystems
By Mathias Lemmens, editor, GIM International*

Leica Geosystems, created out of the Leica Group in 1997, focuses on developing complete geomatics workflow solutions. This strategy has resulted in successful acquisitions and integration of leading and innovative companies with complementary skills and products. In addition, spending nothing less than ten per cent of turnover on research and development has led to the development of many new products, a number of which have been recently released, others coming soon. Hans Hess emphasises in this respect the importance of close co-operation with academia.

You have an educational background in engineering (ETH Zurich) as well as business (University of Southern California). Which of these two backgrounds do you consider the most important for running Leica Geosystems? Is a background in technology a necessity at all?

I believe both are relevant in the work of a senior manager. As Leica Geosystems is a company with leading technologies, one that has pioneered many technological changes and is constantly innovating, my technical background enables me to manage these technologies. In addition, many of our customers and partners have a technical business and my background makes it easier for me to understand their needs and have meaningful discussions with them on how to resolve them.

On the other hand, a business education is helpful in all non-technical areas such as marketing, controlling or finance. When discussing issues with investors or banks or making decisions on where to invest, these aspects are very important. But even more important than education is what we continuously learn in our daily jobs. This is where we can apply and test academic concepts in real life.

In 2001 you were awarded an Honorary Doctorate Degree in Business and Industry from Ferris State University in Michigan. What is your relationship (in business and/or technologically) with the academic world?

I am very proud of this Honorary Doctorate and it emphasises the importance of combining industry and business. The year after I was awarded this Honorary Doctorate, Leica Geosystems received the 'Merger & Strategy Marketing Engineering Award' from Frost & Sullivan in recognition of successfully integrating science, technology and business. Contacts with universities play an important role in my daily life as CEO of Leica Geosystems, but also in the operations of our company. Our relationship with academia begins at board level and goes all the way to the engineering level. One of the board members of Leica Geosystems, Dieter Fritsch, is Rector of Stuttgart University, Chairman of the Board of University Rectors of Baden-Württemberg and Full



Hans Hess, Managing Director and CEO, Leica Geosystems.

Biographical Notes

Hans Hess (1955) joined the Leica Group in 1989 as General Manager of the Business Unit Medical and Stereo Microscopy. From 1993 to 1996 he served as President of the Leica Geosystem Optronics Group. Since 1996 he has been CEO of Leica Geosystems, responsible for carving out the company from the former Leica Group in 1997. He also supported and supervised the company 'going public' on the Swiss Stock Exchange (SWX) in 2000. Since 1999 he has been the only executive member of the Board of Leica Geosystems. Prior to joining the Leica Group, Mr Hess served as a Research and Development Engineer and later as a Production Manager and Business Unit Manager with other Swiss technology companies. He holds a Masters degree in Material Science and Engineering from the Swiss Federal Institute of Technology in Zurich (Dipl. Werkstoff Ing. ETH Zurich), and a Masters degree in Business Administration (MBA) from the University of Southern California. He was awarded an Honorary Doctorate in Business & Industry from the Ferris State University in Michigan in May 2001.

Professor and Director of the Institute for Photogrammetry of the University of Stuttgart. Before Dieter Fritsch, Professor Klaas Beek, former rector of the ITC in The Netherlands, represented the academic world on our Board of Directors.

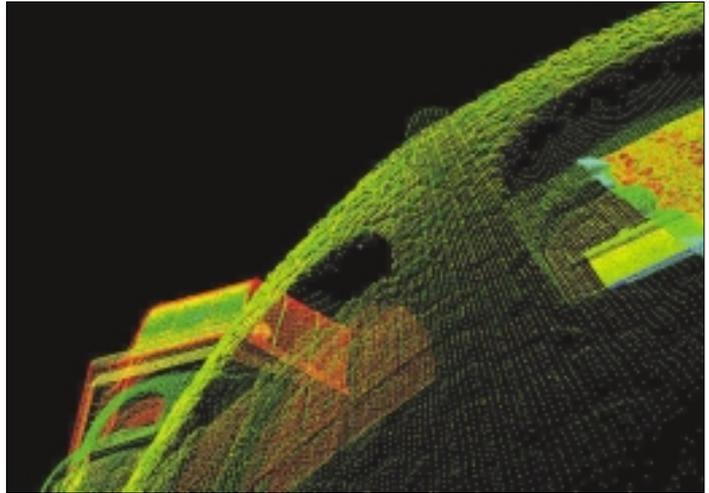
Leica Geosystems also works closely with many leading universities in geomatics around the globe, sponsors several chairs at various universities and awards several prizes for excellence in research; from time to time I am even invited to lecture on certain topics. Some of our former employees have become very well known researchers and/or teachers. Many of our highly qualified employees are asked on a regular basis to present papers about our applied research work. Last but not least, academia forms a key part of Leica Geosystems' customer base and it is very important to maintain strong relationships and have regular exchanges. I am personally involved in many of these activities and this contact always provides new insight into how we can develop our industry in the future.

What is your view on the changing surveying and geomatics world in view of the shifting needs of society, and what is your entrepreneurial philosophy in anticipating these changes?

Your publication has recorded and presented many of the changes in the surveying and geomatics world. The history of Leica Geo-systems also reflects many of these key changes. In particular, the technological changes from angle measurement to a combined electronic distance measurement, GNSS-based measurements and, more recently, high definition surveying based on laser scanning and digital imaging.

The need to improve the productivity and workflow processes of our customers has led to the development of many innovative products from Leica Geosystems. The next few months represents a highly innovative phase for Leica Geosystems, in which we will offer our customers an unprecedented range of new products.

More and more, geo-spatial information will become the essential infrastructure in managing our world and our businesses, not only for professionals and specialists but for many individuals and companies requiring accurate and up-to-date spatial information in their daily work. As an example, land administration is a fundamental development concern for many countries around the world. As Hernando de Soto emphasises in his research, land administration, property rights and registration are linked to economic development and prosperity. With this in mind, our entrepreneurial philosophy leads us to continuously develop and provide innovative solutions to capture, model, edit, analyse and present 3-dimensional spatial information.



A HDS High-Defintion Surveying point cloud of Market Hall Altenrhein, Switzerland, of Friedensreich Hundertwasser. Leica Geosystems' software makes it possible to show the object model directly in 3D on the screen, to extract data and to document it "as build".

The space navigation and satellite systems positioning sector is still a monopoly of the USA. How will the situation be in about ten years from now?

Since the GPS Navstar satellites were first launched the USA has provided free access for the use of these signals, creating economic value for many countries. This infrastructure and technology has led to many advantages, not only in the geomatics industry but also in many other areas, such as car navigation. This has created completely new businesses having a strong influence on the economy in many countries. With the current efforts to improve the Glonass systems and the future launch of the Galileo system, GNSS and augmented services will provide further access to greater sources of data and information and form new services.

In the future, GPS devices and technology will become an integrated part of people's lives. The availability of GNSS-based information from the USA, Europe and Russia will reduce strategic dependence on Navstar and provide an even denser system that improves the availability and accuracy of data and information.

From a business perspective, the last ten years may be characterised as the decade of take-overs. Leica Geosystems was also eager to join this trend; for example, you recently acquired Tritronics, a producer of machine automation solutions for the mining industry. Greed in take-overs broke up some large cap companies. What has been your philosophy here, how are you doing in the wake of expansion and what is your feeling about growing organically?

Before creating Leica Geosystems out of the Leica Group in 1997 we conducted extensive research into the industry and developed future strategies. At that time it was

clear that the needs of our customers were changing. Our future success depended on our ability to adapt to the changes of both the industry and our customers. We wanted to develop complete workflow solutions and so we assessed the attractiveness and advantages of the latest technologies and collated our customer requirements for creating end-to-end solutions. This meant that in addition to providing solutions based on our existing technologies we needed to be able to aggregate the competency of our companies to provide additional leading-edge technology and solutions.

We identified a number of companies that were leaders and innovators in their fields, such as Erdas, Cyra and LH Systems, and companies that had complementary skills and products such as Laser Alignment and Tritronics. Through the successful acquisition and integration of these companies we now offer our customers a very comprehensive workflow value-chain in the industry. Today we provide access for all these new technologies worldwide and offer integrated solutions and support for a very large customer base; this would not have been possible if not for the smaller companies who have joined Leica Geosystems. In addition, our organic growth has been very successful and is exemplified by the turnover of our Surveying & Engineering division, which has nearly doubled in sales since 1997. A good combination of internal and external growth has been necessary to best fulfil market requirements and customer needs. Their needs and expectations, together with the globalisation of information and solutions, are the drivers of change.

In 2003 you reduced the operating costs of your company by € 26.47 million, that is 11 per cent. How did you manage to achieve such a reduction?

The reduction in operating costs was in response to the slow economic conditions, as well as the process of eliminating any unnecessary duplication resulting from integration of the newly acquired companies. Some of our positions were thus downsized during 2002/03 and working hours in several departments was reduced. Equally important was the execution of our rationalisation programme, 'Fit – together', which aimed also to reduce net-debt through outsourcing some of our production of parts. We also developed a process where we designed and engineered specific production and automation procedures for new products and instruments. This led to greater productivity and efficiency gains.

We were also able to maintain our expenditure of over ten per cent of our turnover on research and development during this period, which led to the development of many new products. Many of these have been brought to the market in the last few months, including high-definition surveying with the HDS3000 system, the Leica Photogrammetry Suite, the Spider GPS network solution and many new products for the construction industry. A revolutionary new GPS/TPS concept is currently being prepared for release.



GPS and TPS stations working together for the first time in history. The new Leica Geosystems Universal System 1200 GPS and TPS survey stations offer standardised operation through identical user interfaces with graphic display and consistent data management.

Could you tell us a little more about this new concept?

With this currently launched product we are again turning a dream of many surveyors into reality. That is, quick setting up of a GPS receiver, rapid defining of current position within the national coordinate network and then the continuation of the job with a Total Station using data generated with GPS. With the Leica System 1200, the first universal survey system, such a working procedure now becomes reality. Leica System 1200 has been developed from the ground up to allow the combined use of both terrestrial and satellite-based sensors, with consistent operation and data management and the possibility of graphic display directly in the field. Working together, it guarantees seamless data transfer between GPS and TPS instruments and enables these to be operated with uniform software, identical controls and a common database, in addition to common hardware features such as identical power supply. This TPS/GPS universality and unique consistency of data enables higher accuracy, major time-saving and a considerable increase in productivity.

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