



MADE-TO-MEASURE

HI-TARGET SURVEYING INSTRUMENT CO LTD HAS ESTABLISHED ITSELF AS ONE OF THE MOST SUCCESSFUL SURVEYING INSTRUMENT BRANDS IN CHINA, BUT ITS SIGHTS ARE NOW SET ON WIDER HORIZONS AS GEOCONNEXION FOUND OUT TALKING TO ITS VICE PRESIDENT, DAVID HU, AND CEO, STEVEN XU

GEO: The company, based in Guangzhou, Guangdong, China (www.hi-target.com.cn) is approaching the 17th anniversary of its founding. What has been its guiding principle through these years?

Hi-Target: As a professional, high-precision geographic instrument and solutions provider, our course has been influenced by one thought. This can be summed-up as 'Surveying the world, mapping the future.' The phrase both reflects our emphasis on providing superior products and services that satisfy today's surveying and mapping requirements and our substantial investment in R&D for future solutions. In many ways, it shapes our perception of the industry as a whole.

GEO: You have been quoted as aiming Hi-Target to be the number one brand in the domestic market. How close are you to achieving this ambition?

Hi-Target: Others will have to judge, but our unit RTK product sales in the Chinese market have grown to 200,000 – the biggest market share for five consecutive years - while our GIS sales now exceed 300,000 units. It mirrors our progress over the past five years and where, by focusing on our core business in surveying and mapping, we were the first such company to be listed on the domestic stock exchange. Over the same period, we established 13 subsidiaries (just two before going public); grew our workforce from 600 to more than 1600, and tripled pre-tax revenues from ¥288 million (€39 million euros) to more than ¥800 million (€108 million euros). Our market value has grown fivefold over this timescale to its present record level of ¥15 billion (2 billion euros).

GEO: How has the company's product portfolio evolved over this period?

Hi-Target: It has expanded from traditional GNSS products to include miniaturised Total Stations, high-end marine equipment, 3D laser systems, indoor navigation systems, etc. Indeed, Hi-Target has spawned a group of companies engaged in an equipment manufacturing, system integration, plus data and application services.

GEO: Having established an impressive track record at home, what

are your ambitions abroad?

Hi-Target: That's easy. To be the world-leading brand! We now have a global network of 60 distributors that are busy delivering highly competitive products and back-up services and forging enduring relationships with customers.

GEO: Hi-Target has clearly benefited from China's strong economic growth over recent years, not least in the construction sector. How is the company adapting and responding to today's more challenging economic climate, both at home and abroad?

Hi-Target: There is still much economic uncertainty in both the international and domestic markets. Generally speaking, we see a slowing in demand for traditional surveying instruments but a bright future for more recent developments such as 3D Laser scanners and UAVs. With this in mind, we are increasing our R&D spend on high-end products of this nature and launching stable products such as the Terrestrial Laser scanner and Mobile Mapping System onto the international market. Similarly, in marine surveying our focus is shifting to high-end products such as multi-beam echo sounders, ADCPs, and Long & Ultra Short Baseline Underwater Acoustic Positioning Systems. High-precision indoor positioning is another area where we see considerable promise.

GEO: What percentage of products is currently manufactured for export, and which export markets are growing in importance for the company?

Hi-Target: The percentage of goods earmarked for export currently stands at 10% but is growing rapidly as we ramp-up our manufacturing capability, secure our IP rights, and establish the brand more widely. This is already bearing fruit as we focus on developing countries elsewhere in Asia, as well as in Africa and the Middle East.

GEO: What are your target markets in terms of end user applications?

Hi-Target: They encompass almost every activity, from digital cultural heritage and 3D city modelling to topographic mapping



Steven Xu (left) and David Hu



The iScan-V mobile surveying system geared to the Southeast Asian market needs



The iScan-C mobile surveying system will be launched to international markets in 2017

and deformation monitoring. Other terrestrial applications range from digital factories to tunnel engineering and from construction BIM to street map services and precision agriculture. In the marine environment, applications span hydrographic measurements, E&P exploration, subsea archaeological surveys, and underwater target tracking, to mention just a few.

GEO: How is your global distribution network organised? And are you actively seeking partners/distributors?

Hi-Target: As mentioned earlier, we operate through a global network of distributors who are appointed on an exclusive or non-exclusive basis. The emphasis is on building strong relationships and we have been fortunate in this respect, not least in our focus areas of Asia and Europe. And while we currently have more than 100 dealers in 70 countries, we are always seeking suitable partners and dealers.

GEO: To be fit-for-purpose, surveying instruments must be fine-tuned and tested at every stage of manufacture. What Quality Control procedure is employed at Hi-Target? And do these meet international standards?

Hi-Target: Quality control is fundamental to the business and Hi-Target is accredited to numerous standards including ISO9001, the GJB 9001 military standard and, from April of this year, CMMI3 certification. Moreover, all products from Hi-Target will be tested and certified to international standards, including CE and FCC, by a third party, thereby meeting the most demanding customer requirements.

It is worth mentioning at this point that Hi-Target set up a 200 sq. m. environment

reliability laboratory two years ago at a cost of some ¥3 million (€400,000). This houses three sub-laboratories for environmental, mechanical and reliability testing respectively. Again, Hi-Target took the lead in China in setting up a comprehensive reliability assurance system for geoinformation technology.

GEO: Can you say something about your R&D activities, both internally and with academic partners? And what future-looking projects excite you most?

Hi-Target: As a business that relies on technological innovation for long term growth, Hi-Target has been making a substantial investment in R&D. In fact, the annual spend in this area is more than 11% of total revenues and almost a third of our workforce is engaged in R&D, with one in ten having a doctoral or professorial background. In recent years we have established several research institutes and even an overseas R&D centre to spearhead research, establish subsidiaries and surmount technical challenges in areas such as satellite navigation, high-end marine and 3D laser scanning. The result can be seen in our launch of more high-end products such as multi beam echo sounders, 3D laser scanners, mobile mapping systems, and so on. In addition, we have collaborative partnerships with a number of academic institutions in China, e.g., our Zhejiang office partnered with a team led by professor Zhu Qinq at Southwest Jiaotong University to develop a technology platform for 3D pipeline development. It forms part of a long-term research into a 3D geographic information systems and virtual geographic environments.

Last year, Hi-Target announced a

partnership that will see a joint Geomatics research laboratory and special scholarship inaugurated at Newcastle University. As part of this move, both parties will enjoy a deeper cooperation in researching slope monitoring, 3D laser scanning and GNSS data processing.

GEO: The Hi-Target 3D laser scanner iScan-V (pictured) is currently in great demand. How does it improve on existing solutions, and how do you see such systems evolving in future?

Hi-Target: The iScan-V is a mobile surveying system geared to the Southeast Asian market need and is characterised by easy portability. Other attractive features of this product are its highly integrated sensors, high efficiency, full factory-calibration and easy vehicle mounting. It lends itself to large data collection tasks: utility industry asset surveys, highway surveys, and so on. It is currently the star product of its type in Asian market while, for the domestic market, we have launched the mobile surveying system iScan-C (see image) with a proprietary 3D laser. Our intention is to release this product internationally in 2017.

GEO: The use of UAVs for surveying has increased enormously in the past few years, with a number of survey instrument manufacturers developing and/or acquiring platforms and sensors for this purpose. Does Hi-Target have plans to do the same?

Hi-Target: Our subsidiary TENGUNZHANG has a core R&D group working on UAVs with the emphasis on surveying and other applications that call for integrated solutions.

GEO: Can you say what new or improved functionality is being added to the next release of Hi-Target Geomatics Office (HGO) to support the company's GNSS receivers?

Hi-Target: As a free, high-precision post-processing software, HGO is popular among surveyors for its user-friendly design and easy operation. As part of its continued evolution, the next release will focus not only on boosting its functionality for GNSS raw data post-processing, but also extending its support for RTK field data. The latter will give users even greater scope for RTK/ PPK/ Static data processing and management.

GEO: Can you give readers a 'taster' of what to expect from Hi-Target at this year's INTERGEO in Hamburg?

Hi-Target: This trade fair is one of the most important in the surveying industry calendar and one we have supported for several years. In the past, our presence was very much as a surveying instrument manufacturer, but this year we plan to present ourselves as a solutions provider with self-owned core technology. With the current industry focus on 3D laser scanners and solutions, we will certainly be showcasing our developments in this field, as well as self-developed board and antenna technology, a UAV RTK system, and brand new photogrammetry products.