

Healthcare Technology from, and for, China

Intellectual Property a Hot Topic at CMEF Spring

Shenzhen again hosted the spring edition of CMEF. Reed Sinopharm, organizers of the semestral China International Medical Equipment Fair, brought more than 2,100 exhibitors to the metropolis bordering on Hongkong, with pre-registered participants in excess of 12,000. Apart from Chinese manufacturers offering their products to buyers from Europe, the Middle East, and further regions, and international vendors aiming to sell to China and neighbouring countries, this event also offered an opportunity to research institutes and university hospitals eager to put their intellectual property to use in this market with its huge potential.

Healthcare is on the move in the country, and money is being spent despite the reduced overall growth rate of the economy. The "rural cooperative medical insurance system" provides a key stimulus; it had been launched in 2003 to offer basic healthcare to residents in the countryside, benefiting 370 mn Chinese by the end of last year's third quarter. According to the Ministry of Health end of September last year, 814 mn – 91.5% – of the rural population had joined the system. Annual cost of the scheme currently is 100 yuan (approx. €11) per person, with 20 yuan paid by the participant; more than 71 bn had been pooled by the time of the announcement, of which more than 24.6 bn came from the central government, 34 bn from local governments, 11.8 bn from individuals, and the rest from interest and other channels. Almost 43 bn yuan had been spent as subsidies for rural residents visiting physicians, receiving hospital treatment, or giving birth in the first three quarters of 2008.

Access to Healthcare

In March, the Chinese government had pledged to increase spending on social programs, including medical reform, in 2009 despite pressure from the international financial crisis. "The more difficulties we face, the greater attention we should pay to ensuring people's well-being and promoting social harmony and stability," Premier Wen Jiabao said in a government work report to the annual session of the parliament. The central government plans to spend 293 bn yuan on the social safety net this year, up 17.6% over 2008. "Local governments will also increase funding in this area," the Premier continued. An additional 850 bn yuan will be allocated within three years from 2009, including 331.8 bn yuan from the central government, to ensure smooth progress in the reform of its medical and health care system. The policy, economists comment, aims at ensuring social stability, reducing the imbalance between urban and rural areas, and enhancing domestic demand from people who tend to save money for, e.g., unexpected disease.



Workshop on intellectual property: the China IPR SME Helpdesk provides free advice to European companies (Photographs: MR)

Technology Penetration in the Domestic Market

While other sectors of the Chinese economy are suffering from a decrease in global demand, healthcare provides a stable, if not outperforming, market due to these policies. Carestream Health is among the international players who benefit, e.g., from the rural health initiative. Active in the country for many years, the vendor operates a large engineering centre in Shanghai and sports co-operations at university level; "robust, value-priced, and easy to operate" are the characteristics which make for viable products in this market, according to CEO Kevin Hobert. Carestream offers solutions for top-tier urban as well as rural caregivers. Future-oriented approaches which include tele diagnosis and teleradiology as well as on-site facilities with basic imaging capabilities are promising options in this country; the infrastructure – in particular broadband technology – is available there, explained the executive. In general, today's trends in caregiving are similar to Europe and the US; they include accountability, commitment, and patient empowerment.

Intellectual Property – from Europe for China?

Know-how about regulations affecting intellectual property (IP) is paramount for any player looking into working with China. A CMEF workshop by the China IPR SME Helpdesk, which is funded by the European Union, gave an introduction to the protection of patents, utility models, copyright (for software), and trademarks. Protection for all these has to be filed for in the country. "China IPR SME Helpdesk experts agree that there is increasing confidence in the IPR system in China, and that the misconception of China as a place where nothing can be done

to protect IP is diminishing", stated Simon Mair, Project Officer, Development Solutions (China). "One reason for this is the increasing confidence and expertise of the Chinese IPR courts – in fact IPR judges receive more training than any other branch of the Chinese commercial bench. This means that licensing agreements, confidentiality clauses, and non-disclosure agreements that are provided for in Chinese law can be treated as fully enforceable, as with licensing to other countries."

Prof. Peter Macfarlane from the Electrocardiology Unit, Royal Infirmary, University of Glasgow came to this still challenging IP environment together with Brian McGeough, Business Developer for the University. In Shenzhen, they looked for manufacturers interested in taking out licences for their software for ECG analysis. Their ECG interpretation program is already in use by vendors worldwide, and integrates, e.g., age and gender information for reporting ST elevation myocardial infarction. The Scotsmen suggest that, for European university hospitals, China may well present "a viable opportunity to take IP from idea to product. We are pleased to be in China [and Hongkong], looking into how we can work with this high-growth economy".

IT will also play an increasing role in the portfolio of the Spanish pavilion at the next show, suggested César Rubio, Federación Española de Empresas de Tecnología Sanitaria. It appears "bartering" (European) IP for Chinese products may become an interesting option.

Another representative from Europe described the challenges his company is facing in trying to enter the Chinese market: "We are participating in CMEF for the third time", said Yann Cotton from Medecom, headquartered in France. The manufacturer of products for CR, DR, and digital mammography is having difficulties in identifying a distributor in China. "It is hard to find people know-

ledgeable in DR/CR imaging who have, at the same time, expertise in the Chinese market. Key success factors here are quality and the right feature set for products, and access in a 'people's business'", the sales manager and co-founder summarized.

And Chinese manufacturers may feel an urge to co-operate more closely with hospitals in Europe, explained Jürgen Mehring, RA/QA Manager, regulatory consultancy MDSS: "For the verification of usability as required by the Medical Device Directive Annex I for non-active [non-electric] medical devices, manufacturers will need to co-operate with clinicians in Europe for clinical evaluation, in particular regarding safety and ease of use."

R&D Enhances Products – Snapshots from Chinese Vendors

Beijing Wandong WDM: The major focus of this company, which is listed on the stock exchange, is in radiology imaging. The portfolio includes MRI, DR, and cardiovascular flat-panel solutions. The digitization of hospitals in China is a step-by-step process, explained Yao Wen with a tone of patience in his voice. WDM's biggest growth markets abroad – 10% of total sales – include the Middle East, with Eastern Europe and Russia keeping pace. Acceptance for Chinese products is growing significantly overall. The economic downturn, according to the Assistant Manager of the International Department, is affecting high-tech sales to countries such as the Ukraine only to some minor extent.

Jiangsu Yuyue: The annual growth rate of exports – currently 17% of sales – is around 50%, said Jian Chen. Sales of medical devices at a global scale, underlined the Director of Investment, is generally stable despite the crisis, and even growing in China thanks to the stimuli. The company, listed at the domestic stock exchange, may modify its appearance, including its logo that shows a fish jumping through the mythological dragon gate, in order to build its brand internationally ... despite the fact that, years from now, China itself will be second, if not first, market in the world, according to Chen. Yuyue is very active today in, e.g., Eastern Europe, and is eyeing the central and western European markets.

Landwind: "The major categories of our portfolio are ultrasound, radio, IVD, healthcare IT, and haemodialysis", described CEO Walter Zhang. R&D investments – a tenth of revenue – go into system design, soft-

ware, and imaging technique; among new products and components presented at the company's booth was a new detector for ultrasound devices. Key non-Chinese markets for Landwind are Eastern Europe and Arab countries; many of the adaptations for those regions are triggered by users and channelled through distributors.

Mindray: This vendor's main research and development activities take place in Shenzhen, said VP Ting Yang. There is also a European team in Stockholm active in R&D, for which 10% of revenue is put aside across the company. The overseas market, explained the manager, will be key for this global player – listed in the US – in the long term; however, the government budgets for improved access to healthcare provide a major domestic stimulus to health tech vendors. Mindray, active in Europe with its own sales force, approaches the crisis in very much a Chinese way: the Mandarin word consists of the elements "danger" and "opportunity" ... optimists will focus on the latter element.

Pelrong: "Low price and low dose" are the challenges which Chinese companies active in X-ray based medical imaging are facing, according to company President Liu Jinhui. Investments in R&D to meet such requirements are at 10% of revenue. Only 10% of their products are currently sold abroad.

Shinwa: "Our brand is well known in China", said Zhang Jiron. Back in 1942, the company was the first manufacturer of medical products in the country; today, the portfolio sports nine categories including sterilization and surgical instruments. The company makes significant investments in R&D, and operates a state-level technical centre; according to the International Trade Department Director, the goal is to further expand exports and build the brand internationally, also in Europe and the US.

Technology "a Barrier to any Copying Threats"

This vendor can serve to illustrate viable options for European medical products in this market: Medical and support stockings are in great demand in China, explained Katja Hempel, Ofa Bamberg/Germany. Health issues are similar there compared to populations in, e.g., Europe, and compression therapy helps prevent severe vein conditions. The vendor offers "highly modern materials and fabrics, a great selection of colours, and further fashion elements" – and comes to China with no fear of IP issues: "there are significant know-how and production technology barriers to copying these stockings". "Made in Germany", said the representative at the booth in the Bavarian pavilion, is another asset which will help them achieve significant sales in the country – whenever they have identified the right distributor.

The Autumn edition of CMEF is scheduled for 28–31 October in Chengdu, Sichuan Province – <http://en.cmf.com.cn>. It will integrate CEME, a show dedicated to emergency medical rescue, including mobile hospital and first-aid equipment, earthquake relief equipment, post-disaster reconstruction, and early warning – www.ceme365.com.

Michael Reiter



Prof. Peter Macfarlane (right) and Brian McGeough, University of Glasgow: looking to license intellectual property to Chinese manufacturers