

## **Telestone's Road to Infrastructure Upgrades**

—Telestone Chairman and CEO Daqing Han Interviewed by the *Economic Observer*

Driving 40 kilometers south from Beijing along the Jingkai Highway brings you to Gu'an County in Hebei Province. Mr. Daqing Han, Chairman and Chief Executive Officer of Telestone Technologies Corporation (NASDAQ:TSTC), cannot recall how many times he has traveled this route since the beginning of 2011. Rather than merely staying rooted in the bustling metropolis, Telestone has opened up a new world of research and development with ongoing construction in the Gu'an Development Area, which, Mr. Han believes, solidly prepares the company for a jumpstart to future growth.

Telestone, founded in October 1997, was previously headquartered in the Zhongguancun high-tech district of Beijing. The high-tech telecommunications equipment company leverages its technology R&D, product development and manufacturing expertise to provide integrated engineering services, focusing on providing the best solutions for “Intelligent Premises Systems” to its clients in recent years.

Most technology companies tend to have low public visibility, but they can have a tremendous impact on our daily life. While the fact is little known, the last-mile telecommunications access networks in many residential communities and office buildings are enabled by Telestone. In 2004, Telestone went public in the U.S., the first Chinese company listed in the U.S., at that time focusing on cellular signal coverage as its core business.

However, the success of an overseas listing turned out not to be “the last mile” for Mr. Han, nor a guarantee of a carefree future. His conception of business and prospects coincides with the great infrastructure upgrade in China. Not resting on the glories of the past, Mr. Han revived his entrepreneurship. And this time, he chose to set off to the Gu'an Development Area, in a remote, developing county, lacking the skyscrapers of Beijing.

### **From 2G to 3G**

At the time of its founding in 1997, Telestone was fully engaged in the research and development of the 2G outdoor wireless signal technology and provided quality solutions for outdoor wireless signal coverage. Benefiting from its technological advantage in this area,

Telestone enjoyed rapid growth for the next few years.

The breakthrough on 2G technologies created a solid foundation for Telestone's success in Phase One of the Company's development. Unlike its peers, who mostly focused on the large 2G market, Telestone did not stop with 2G, a market that was maturing but also losing its great potential, though the Company also benefited from it. Rather, Telestone started to develop 3G technologies, in line with the direction of global communications technologies.

In cooperation with the telecom carriers, the R&D team led by Mr. Han developed a lot of expertise and developed forward-looking technologies to prepare the company for the upcoming 3G network construction in China. "We made it clear back in 2005 that we were set to develop our own technologies," commented Mr. Han.

Following intensive R&D in 2005 and 2006 and benefiting from interactions with overseas industry experts, Telestone successfully rolled out its own 3G wireless signal coverage system, which became popular with carriers following its launch due to its reliable backup of 3G network coverage.

This unique technology that Telestone independently developed in just two years also won much attention from telecommunication industry experts and academics. Its 3G wireless signal coverage system, with unique advantages over the traditional wireless coverage technologies, was considered by some professionals as "leading the revolution of indoor coverage technologies in the 3G era."

Mr. Han explained the various advantages of the 3G-based technology in more detail. "First, it provides the maximum coverage at minimal upgrade cost; second, it's very flexible in allowing the separate adjustment of source power, transmission, and capacity; third, can be used to upgrade existing wireless network coverage; fourth, it has few requirements for source matching; fifth, it has a wide transmission distribution range, high capacity and strong data-sharing features; sixth, it's highly adaptable to different coverage scenarios; and seventh, it effectively reduces the correlation between capacity and coverage."

"Carriers want high-quality indoor wireless access networks with minimal cost, while seeking to guarantee the performance of wireless networks. By adopting an advanced system design concept, Telestone's 3G wireless signal coverage technology has achieved strong recognition within the industry," added Mr. Han.

## **Upgrading along with “Integration”**

Not resting on its laurels from its "3G wireless signal coverage technology", Telestone also anticipated China's desire to accelerate the “integration of telecommunications, TV, and radio broadcasting and Internet access into one unified network” for the ultimate end of information sharing. The company soon took action.

Based on its rich experience in technology R&D and 2G and 3G network engineering, Mr. Han realized that the existing communication network was full of redundancy, with China Mobile, China Unicom, China Telecom, and the State Administration of Radio, Film and Television (SARFT) each building their own independent networks without coordination, which would become a prominent issue with the rapid development of the 3G technology. In response, he developed a new concept, which would essentially transform the communication technology used in the past to establish an “Intelligent Premises System” that can host various communication types on one unified network.

To that end, Mr. Han himself led the R&D team to focus on the effort. Two years later, the Telestone Intelligent Premises System (“TIPS”), which is based on the Telestone Premises Neuron Network (TPNN), emerged. This is a brand-new concept that reflects Mr. Han's understanding and command of the related technology and market, as well as a breakthrough in meeting the challenges that the Company had met during the development phase. After that, Telestone embarked the road of infrastructure upgrades at the forefront of the telecommunications industry.

The TPNN-based TIPS platform uses an optical fiber as the transmission medium, and it is the only unified network around the globe that can host information transmission for fixed-line telecom networks, mobile networks such as 2G/3G/WLAN/4G, Internet, cable TV and the Internet of Things. This platform creates a multiple-business service integration model within a network of full coverage. TIPS is a leading-edge technology that fully compatibility with all mainstream information communication networks, intelligent control management, and also offers energy savings and environmentally friendly features. Since it is closely connected to the integration of telecommunications, TV and radio broadcasting, and Internet access onto one unified network, TIPS has become a backbone technology for the implementation of the “Smart City” initiative and the Internet of Things.

Mr. Han is proud of the social implications that TIPS has created. “Information networks

using TIPS in the premises can replace the five LANs that every company office uses, in addition to all types of cables used in fixed and mobile access networks,” he commented. “This has realized the ideal of fiber to the home, fiber to the desktop and even fiber to any communications and sensor terminal. In addition, TIPS is environmentally friendly and cost efficient. The technology can significantly reduce electromagnetic wave intensity, reduce the use of copper and aluminum metal, improve urban landscapes by eliminating numerous telephone poles and communication towers, wires and cables, while cutting cost and improving profitability for operators and landlords.”

“Opportunities always favor those who are well prepared,” said Mr. Han. In 2010, when China started to integrate telecommunications, TV and radio broadcasting, and Internet access onto one unified network, TIPS also ushered in this market. Presently, the platform has been applied to a number of domestic and international projects, including: Wuxi Software Park (Jiangsu Province); the Beijing-Shanghai High-speed Railway ;the Beijing Academy of Forestry; the Material Evidence Identification Center under the Ministry of Public Security; China Ruida Plaza (where Telestone is headquartered), as well as the Hermann Memorial Hospital in Houston, Texas in the U.S. Across China, TIPS has established a presence in major provinces, including: Beijing, Hebei, Gansu, Liaoning, Sichuan, Henan, Shandong, Fujian, Hunan, Guangdong, Guizhou, Shaanxi, Inner Mongolia, and Shanxi, and others.

### **Place of Dreams**

2011 is the fourteenth year since Telestone’s founding. Mr. Han and his company have materialized the dreams of the first two stages of corporate development. The marketing boom that the TIPS technology has created has positioned Mr. Han to further enhance the company’s status in the telecommunications industry and provides a foundation for him to continue his dream at the Gu’an Development Area.

In June, Telestone broke ground on the TIPS Industrial Park in the Gu’an Development Area (located in Gu’an County, Hebei province). This facility is expected to upgrade the Company’s R&D and manufacturing capabilities. Construction of the new facility is presently in full swing. The project is divided into three phases and will occupy approximately a total of 160,000 square meters, creating separate centers for research and development, manufacturing, general testing, and training. The Company has completed the main structure

as part of Phase I. The facility is expected to be completed in March 2012 and enter trial production in May 2012. Phase II occupies approximately 42,000 square meters and is expected to be completed by the end of 2012. Phase III occupies approximately 76,000 square meters and is expect to be completed by the end of 2013. Total investment in the new facility is estimated at RMB 1 billion (approximately \$158 million).

For Mr. Han, the new facility will not only significantly boost Telestone's revenues, it will also provide a critical boost to the company's future development. He believes that Telestone will enter a fast-growing stage in the company's third "Seven Years."

This development stage coincides with China's infrastructure upgrades in terms of its content and characteristics. As is widely known, China has worked to develop its economy, and one key component is to possess self-created intellectual property to enhance the position of "Made in China" within the global supply chain. This generally coincides with Mr. Han's vision for the Company.

For Mr. Han, the unique TIPS platform is the golden key to Telestone's future. He selected Gu'an as the site for the new facility for the following reasons.

In recent years, under the pressure of infrastructure transformation and upgrades in China, several mature industrial parks have encountered difficulties and challenges. It took Mr. Han quite some time to choose a place that is right for the company. Ultimately, the Gu'an Development Area stood out. Mr. Han believes that Gu'an has four advantages, i.e.: geographical proximity, local government support for electronics and information industries, one-stop worry-free steward-like services, and preferential land policy. These advantages enabled Telestone to make a quick decision and to center the Company's next stage of development in Gu'an. Following 14 years of ups and downs in business, Telestone, which is founded on integrity, is venturing out on its way for prosperity from a newer and higher starting point, commented Mr. Han.

For the next seven years, Mr. Han and Telestone will develop the site in the Gu'an Development Area. Holding a high-tech key to the future and riding on the wave of China's infrastructure upgrades, he has begun a new journey.

(This interview was published in the *Economic Observer* on October 31, 2011.)

## **Safe Harbor Statement**

This release contains certain “forward-looking statements” relating to the business of Telestone Technologies Corporation and its subsidiary companies. Forward-looking statements can be identified by the use of forward-looking terminology such as “believes, expects” or similar expressions. Such forward looking statements involve known and unknown risks and uncertainties, including all business uncertainties relating to product development, marketing, concentration in a single customer, raw material costs, market acceptance, future capital requirements, competition in general and other factors that may cause actual results to be materially different from those described herein as anticipated, believed, estimated or expected. Certain of these risks and uncertainties are or will be described in greater detail in our filings with the Securities and Exchange Commission. Telestone Technologies is under no obligation to (and expressly disclaims any such obligation to) update or alter its forward-looking statements whether as a result of new information, future events or otherwise. This press release shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such state or jurisdiction.

# 东方信联的产业升级之路



东方信联智能驻地系统产业园效果图

凉的企业不同,并未止步于已经臻于成熟却丧失了巨大前景的 2G,而是开始了 3G 技术的开发与建设。

通过与运营商的合作,以韩大庆为中心的开发团队总结了丰富的经验,提出了前瞻性的技术理解,为中国的 3G 建设做了充分的准备,“05 年我们就明确要开发自己的技术”韩大庆说。

经过 2005 年和 2006 两年东方信联研发团队的潜心研究,在大量理论基础和与国外专业人士进行经验交流的基础上,第三代无线信号覆盖系统终于诞生了。这套系统自诞生之日就受到运营商的广泛青睐,为 3G 网络覆盖提供了可靠的保障。

东方信联历时两年自主研发的独特覆盖技术引起了通信业内专家学者的普遍关注,第三代无线信号覆盖系统与传统无线信号覆盖技术相比具有独特的优势,业内有些专家称之为“引发了室内覆盖技术在 3G 时代的革命”。

对于它的优势,韩大庆也做了详细的介绍:“一是具有最大的覆盖区域和最小的扩容升级成本;二是信源功率、传输、容量独立调整能力强;三是适合现有无线网络覆盖改造;四是对信源匹配要求低;五是传输分布范围大,容量高及共享能力强;六是对分布覆盖场景适应能力强;七是有效降低了容量与覆盖的相关性。”

韩大庆表示:“运营商应遵循在保证无线网络性能的前提下,以最小的成本投入,最大限度地获得高性能的室内无线接入网。东方信联第三代无线信号覆盖技术采用了最先进的系统设计理念,得到了业界的充分肯定。”

## 与“三网融合”同步升级

不甘于沉浸于“第三代无线信号覆盖技术”带来的成就感,东方信联又前瞻性地预见到了中国必将快步走向“三网融合”、共建共享之路,并开始未雨绸缪,提前行动。

基于公司在 2G 和 3G 技术研发和工程实践方面的丰富经验,韩大庆

认识到,现有通信网络存在大量的重复建设问题,移动、联通、电信、广电各自为政,自行铺设独立网络,而随着 3G 技术的飞速发展,该问题变得愈发突出。因此,他提出了一种新的设想:对以往的通信技术进行一次大胆的变革,建立一套统一承载各种通信需求“智能驻地系统”。

于是,韩大庆亲自率领研发小组进行潜心研究。终于在两年之后,基于“TPNN 信联驻地神经网络”(Telestone Premises Neuron Network)的“信联智能驻地系统”(TIPS, Telestone Intelligence Premises System)应运而生。这是一个全新的概念,是韩大庆基于他对技术和市场的理解与把握,对于通信产业在发展中遇到挑战的一次突破。东方信联也走上了始终伫立于通信发展前沿的产业升级之路。

基于 TPNN 技术的“TIPS 信联智能驻地系统”采用光纤材料作为传输介质,是全球唯一可以在用户驻地区域内使用一张网络,即将电信固网、移动通信网 2G/3G/WLAN/4G、

互联网、有线电视网、物联网完全统一承载传输,从而形成一网全覆盖的多业务整合服务模式。TIPS 在全世界拥有领先的技术水平,以其全面的网络融合能力、智能的操控管理、优异的节能环保特性与国家“三网融合”事业紧密结合,是打造“智慧城市”、构筑物联网的支撑技术。

对于 TIPS 技术带来的社会意义,韩大庆甚是自豪。他表示,“在用户驻地区域内采用该技术建设的信息网络,不仅可以彻底取代电信、广电运营商当前各自重复建设的各种无线接入网络,而且还可以完全替代当前每个单位办公所正在使用的五类线局域网,可以真正实现光纤到户、光纤到桌面甚至光纤到任何通信和传感器终端的理想。此外,该技术高度环保、成本低廉,不仅可以大幅度地降低空间电磁波强度、节约铜铝金属,改善城市形象、消除城市杆塔林立、线缆密布的景象,还可以大大节约运营商、业主等客户的成本,提升利润。”

“机会总是留给有准备的人。”2010 年,当全国开始全面部署三网

融合建设的时候,TIPS 也迎来了它的市场春天。当前已经在无锡软件园、京沪高铁、中国瑞达大厦、北京林业科学研究院、公安部物证鉴定中心、美国休斯敦医院等国内外多个项目中得到应用。国内主要应用省份涉及北京、河北、甘肃、辽宁、四川、河南、山东、福建、湖南、广东、贵州、陕西、内蒙、山西等地。

## 造梦空间

今年是东方信联成立的第十四个年头,韩大庆和他的公司初步实现了企业发展前二个阶段的梦想。TIPS 技术带来的营销推广热潮,让韩大庆有了将公司在产业中位置进一步提升的底气,也有了他在固安工业园区继续造梦的基础。

6 月,承载着东方信联发展使命的“信联智能驻地系统产业园”在固安工业园区开工建设,这正是推动公司研发和制造升级的造梦空间。目前,新基地正在如火如荼的建设中,这个建筑面积达 16 万平方米的基地分三期建设,包含研发中心、生产中

心、综合调试中心以及培训中心等,一期工程主体结构已经于近期顺利封顶,预计明年 3 月完工,5 月投产。二期工程建筑面积 42000 平方米,预计明年年底竣工;三期工程建筑面积 76000 平方米,预计 2013 年年底竣工。该基地总投资达到 10 亿元。

对韩大庆而言,这个基地的建设不仅仅意味着公司产值的大幅度提升,更是决定公司未来发展走向的关键飞跃。在他看来,已经开始企业发展建设第三个七年的东方信联也将进入一个快速发展期。

而这个发展期,在内涵与特质上几乎与中国的产业升级同步。众所周知,目前在国内轰轰烈烈开展的产业升级,除了将东部的部分产能转移到西部之外,最核心的便在于掌握自有技术知识产权,以实现中国制造在全球产业链分工位置上的提升。这一点,几乎与韩大庆的构想不谋而合。

对于韩大庆来说,独创的“TIPS 信联智能驻地系统”是他开启未来大门的金钥匙,而当初他之所以选择在固安落地来打造这把金钥匙,他也有他的考虑。

近年来,随着国内产业转移和升级的压力,以往不少成熟的工业园区都面临了巨大的困难与挑战。如何选择一适于自己孵化金钥匙的地方,也着实费了韩大庆一番功夫。最后,固安工业园区脱颖而出,自有其本身的特点与优势。在韩大庆看来,固安有四大优势,分别是地理优势、政府对电子信息产业的支持,全程无忧管家式服务以及土地上的优惠政策。这些优势让东方信联一锤定音,将产业的再度升级与固安工业园区这块宝地紧紧联系起来。韩大庆说,经过十四年的摸爬滚打,“以信立业”的东方信联“正从一个更新、更高的起点踏上‘图强之路’”。

下一个七年,对于韩大庆和东方信联来说,都将在固安工业园区起步,他手握打开未来大门的高科技钥匙,又乘着国内产业升级的东风,新的梦想已经开始启程。

## 从 2G 到 3G

驾车从北京大兴往南,沿着京开高速大约 40 公里,便能来到地处河北的固安县。从 2011 年年初开始,东方信联董事长韩大庆,在这段路程上已不知奔波了多少次。固安工业园区的兴建,使得东方信联不再只是植根于繁华都市,而是在产业研发方面开辟了新的天地,在韩大庆看来,这正是东方信联未来跨越式发展的基石。

北京东方信联科技有限公司成立于 1997 年 10 月,总部设于北京中关村园区,是一家专业从事技术研究、产品开发生产和工程集成服务的高科技通信公司,近年来一直以为客户提供最佳的“智能驻地系统解决方案”为发展重点。

多数技术公司总是隐藏在公众视野的背后,却对公众的生活产生着巨大的影响。正如这个事实并不为大多数人所知,国内很多小区、商业楼宇中最后一公里的网络,都是由东方信联铺设完成的。2004 年,东方信联在美国上市,成为国内率先以信号覆盖为主业在美国成功上市的公司。

但成功在海外上市,对于韩大庆来说,似乎并不意味着成功的最后一公里,也不意味着从此可以高枕无忧。他对公司业务和前途的构想,与中国现在正在进行的产业大升级不谋而合。在创造了过往的成就之后,韩大庆开始了他所说的“第二次”创业过程。而第二次创业的地点,已经不再是处处高楼大厦的北京,而是更加偏僻,但也更加广阔的固安工业园区。

东方信联于 1997 年建立之初就全力投入到 2G 室内外无线信号的研究开发,对于室内外无线信号的覆盖问题提出了优质的解决方案,基于这种技术的优势,东方信联在随后发展的几年中取得了长足的进步。

在 2G 技术上的突破与发展,奠定了东方信联第一个阶段的成功基础。与全球通信业的技术发展路径相一致,东方信联在 2G 领域的发展中尝到了甜头之后,与其他国内认为背靠大树好乘