Untangling China's Broadband Explosion

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The broadband revolution in the world's most populous nation presents an attractive market: China's broadband infrastructure market is expected to double in each of the next two years, and the broadband user base is estimated to grow at an annual rate of 135 percent from 2000 to 2005.

A world leader in building optical fiber infrastructure

Most of the planned fiber optic broadband backbone has been laid down. China already has one of the world's largest optic transmitting networks, with a trunk line reaching 1.2 million kilometers in total length. By 2005, the total length of optical cable in China will reach 2.5 million kilometers, enough to cover a large part of the major cities and counties around the country.

China has kept up with Western advancements in fiber optic communications. The domestic industry is comprehensive, covering fiber and communication equipment. It is also among the few countries in the world capable of designing fiber optic networks based on homegrown technologies. The leading communication equipment producers, such as Shanghai Bell Co., Datang Telcom, and Huawei Technology, supply 80 percent of optic communication products used domestically.

Fierce competition among regulators who are also operators

In tandem with the construction of the fiber optic infrastructure, a number of major fiber optic networks and urban networks have been built by ISPs, such as China Telecom, China Unicom and other cable operators to deliver high-speed telecommunication access to consumers and businesses. The availability of broadband access to businesses and individual consumers has increased the adoption of such services across the country, especially in metropolitan areas.

Similar to the race to market dominance observed in other broadband markets around the world, the big fight in China is between DSL and cable services. The unique Chinese twist to the story is that fierce competition not only takes place among businesses, but has also intensified rivalries among government agencies in charge of the respective technologies.

The Ministry of Information Industry (MII) is responsible for issuing regulations for the telecom industry. At the same time, it is also the largest shareholder of China Telecom, the dominant fixed-line company that provides DSL service. On the other hand, the State Administration of Radio, Film and TV (SARFT) has jurisdiction over the vast cable TV market and is itself the owner of local cable TV operations across the country.

To protect their own interests and expand the market reach of their respective broadband solutions, these two agencies have issued rulings that make it difficult for the other camp to offer competing services. The MII issued rulings against cable TV companies offering Internet and telecommunications services without a telecom license. In retaliation, the SARFT ruled that no telecom could offer video content without its approval.

A tough market for foreign companies, though some find preliminary success

Foreign companies are currently banned from making direct investment in telecoms or cable operations in China. However, China's entry into the World Trade Organization (WTO) is likely to ease the restrictions. In the meantime, many foreign companies have sought to enter the market through skillful strategies and forging trusting relationships with suitable Chinese partners.

Among the major telecom operators in China, rising newcomer China Netcom is considered a desirable partner with deep political capital and ambitious business plans. The company is thought to be insulated from regulatory risk, because Jiang Mianheng, the eldest son of president Jiang Zemin, is one of its directors. Its recent purchase of broadband cable operations from local cable companies is seen as signaling its desire to expand to services beyond standard telecom offerings. News Corp., the international media group that has tried to break into China's broadcast market for more than a decade, invested in a China Netcom entity registered in Hong Kong. Such an investment puts News Corp. one step closer to offering its news content in China, possibly over broadband telecom services, while at the same time circumventing the ban on foreign investment in mainland telecom companies.

Alcatel, on the other hand, has focused on creating joint ventures with Chinese partners and customers with a long-term commitment toward developing China's telecommunications infrastructure. One of these agreements was with China Telecom to jointly deploy DSL technology across the country. In all its ventures, Alcatel has consistently applied a strategy of technology transfer by setting up research and development centers. These R&D centers will eventually provide tailor-made solutions and services to customers not only in China but also to other parts of the world as well.

As China pushes forward with creating a national cable broadband infrastructure, other deals between Chinese cable operators and foreign technical partners have been signed as well. California's Juniper Networks has been selected by China Cable Network Company to supply Internet backbone routers for its national cable infrastructure. Juniper will supply routers for more than 50 cities and urban centers, including Beijing, Shanghai, Guangzhou and Wuhan, encompassing 30 provinces. China Cable will construct a state-sanctioned national cable infrastructure to link the regional networks and enable centralized control of cable content.

Another foreign company trying to gain a foothold in China's broadband market is EnReach Technology. Seeking to build brand recognition after helping to develop the Video CD standard in China, EnReach sealed a deal with Great Wall Broadband to provide middleware and application software to subscribers in 20 cities.

Alternative solutions offer fast-speed connection to the remote regions

Although much of the activity is centered around the delivery of high-speed services through the underground fiber optic infrastructure, the traditional telecommunications providers will face increasing competition from satellite and wireless broadband technologies.

Satellite broadband services have not received much publicity or attention in the past. This might change in the near future, as there is good reason to believe that satellite and wireless technology could take off faster in China than in most developed countries. The vast remote areas in China lack an established wired infrastructure, which means that alternative technological solutions can be explored and adopted more readily. These remote areas also tend to have rough terrain that creates huge difficulties for laying down wires. Thus, it may be cheaper and faster to deploy a few communications satellites or install a few thousand wireless towers to bring broadband services to these areas. Presently, ChinaSat, Jitong, China Telecom, and China Orient are the main operators in the satellite and wireless broadband businesses. More telecoms will enter this market once the major urban markets become saturated.

What comes next?

As China becomes a member of the WTO, the strict regulations on the broadband market will eventually be relaxed and foreign operators will be let in. This prospect brings huge pressure to Chinese telecoms and cable operators to improve their competency. There is already discussion about breaking up the MII-owned China Telecom to allow greater competition in the telecom industry. The SARFT has also ordered consolidation among broadcast stations, including cable TV operators, to streamline programming capabilities and raise the content quality. Furthermore, there is indication that MII and SARFT may be replaced by one self-governing agency that regulates the communications industry, thereby providing greater clarity and consistency in rules and regulations.

One thing is certain, market opportunities in the broadband area are plentiful for interested foreign companies. The challenge for these businesses is to figure out how to achieve success in a market that is already crowded with competent domestic companies.