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The World of Chinese

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It is evening in one of the last cheap electronics malls in Zhongguancun, just north of Beijing's Fourth Ring Road. Teng, a young office worker, has brought in a malfunctioning hard drive. She hopes that the shopkeeper, who has served her so well in the past, can retrieve some files.

The storekeeper easily extracts the files as he discusses the future of the mall. "It will be gone within a few years. It's because of online platforms," he said, listing several names. Now he has also started selling via JD.com, and malls are becoming unnecessary.

Outside, a brightly lit Microsoft sign tops a giant office block; tech giants Lenovo, Sohu and Sina all have offices in the district. A few blocks away, Baidu occupies a giant facility. Its international competitor Google, despite an acrimonious exit from China in 2010, recently announced it would be establishing an artificial intelligence development center in Beijing. The smart money suggests that this, too, is likely to be located in Zhongguancun.

These gargantuan companies, along with smaller startups, represent key aspects of the future of Zhongguancun, just as the abandoned electronics malls represent part of its past.

It is easy to assume this development was a linear path forward. But, in truth, a bizarre array of lucky breaks and unlikely coincidences had to come together to create the first district to earn the moniker "China's Silicon Valley".

Ning Ken is an unlikely tech historian and scholar. His buzzcut and demeanor give him the appearance of a blue-collar worker, and he grew up among Beijing's scrappy alleyways.

But he recently spent two years writing a book on Beijing's tech industry, and said it was a piece of news in 2004 that really inspired him to write *Zhongguancun Notes*. "Lenovo purchased IBM," he said. "IBM was a big international company. I had always thought of Zhongguancun as just cheap electronics markets. That's mostly what it was throughout the 1990s, when it was known as 'Scammer Street'."

When he heard the news about Lenovo, "I knew there was much more going on in the area. I knew about the Beijing *hutong* (traditional alleyways), but then I felt I needed to research Zhongguancun. This was another key aspect of Beijing."

The stories he has to tell involve modern-day startups and multinationals, as well as several key pioneers of the tech industry. Two men in particular put the area on the path toward where it is today: Chen Chunxian and Liu Chuanzhi.

Chen is often credited as the founder of Zhongguancun. Chen was a nuclear physicist who sat on a national advisory committee at the Chinese Academy of Sciences (CAS), and was among those who created



Electronics shopping malls, from Hailong, Dinghao and Taipingyang to E World, dotted Zhongguancun South Avenue in 2009. Today, all are either closed or have been transformed into office buildings. PROVIDED TO CHINA DAILY

How a Beijing electronics market became the cradle of China's tech revolution

中关村

Zhōngguāncūn, Zhongguancun

China's first tokamak nuclear reactor, which went into operation in 1995.

In contrast to the common model of top-down government policies creating economic zones from nothing, it was actually Chen's shrewd evasion of bureaucratic fetters that first breathed life into Zhongguancun and arguably China's entire private sector.

In 1979, Chen visited California's Silicon Valley and saw "dozens of people were running a company that would require hundreds of people in China", Ning said. "He also discovered that a professor could be a 'boss' — in China, professors had to be professors, and bosses had to be bosses."

Chen came back to China and in 1980 tried to set up his own company, but was immediately slapped down by his *danwei* (State work unit). Even though China had already entered the reform era, the bureaucracy was still hostile to the idea of government employees — academics, at that — running companies for profit.

So Chen tried another approach, arranging for a subcommittee, the Advanced Technology Service Association, or the ATSA, to be formed under an existing advisory committee.

On paper it was similar to a non-governmental organization, or NGO,

but in reality Chen had created a startup in disguise. The service it offered was simple: When something complicated was broken, its scientists would fix it. At the time, for expensive or complex technology it was difficult to track down someone who could fix the problem. Chen and six "employees" simplified the process.

It was not long before the team had amassed 30,000 yuan (\$4,730) — a small fortune back then. This was more than the salary of the head of the academy, and he wanted it: The ATSA was disbanded and its cash seized. But a member of his *danwei*'s advisory committee, Zhao Qiqiu, was on Chen's side. She vented to her husband, a Xinhua deputy bureau chief, about the injustice that had occurred at work. He wrote and submitted an "internal reference" that reached senior figures, including then general secretary Hu Yaobang. Hu issued a document condemning the seizure; Chen first heard news of his vindication over the radio.

Despite this modest victory, Chen never had much success of his own at business and he died, poor and sick, in 2004. But many aspiring entrepreneurs heard the same radio broadcast and dreamed of getting rich from their own ideas — including others within the CAS. By 1984, the academy was keen to have its

own "company" using Chen's model. "Government bodies were now rushing to set up their own profit-making organizations. The CAS was at the heart of this, partly because the salaries of its engineers were tiny.

One such engineer was Liu Chuanzhi. He and his superior at a CAS sub-department, which would become today's Institute of Computing Technology — ICT — raised 200,000 yuan to start a company along with nine other collaborators.

The company he started was called Lianxiang. There were a lot of difficulties. Computers did not have a huge market in China yet. So Lianxiang's first, unsuccessful strategy was to deal in televisions, while making detours into areas like digital watches.

While this was occurring, electronics markets were coming of age. One street in Zhongguancun, named after the CAS, is now home to the academy's ICT. The department has had various name changes since it was established in 1956, but for a long time it was a focal point of computer development. The ICT spun off multiple related departments, so when computers began to become commercially available in the late 80s and 90s, staff at the precursors of the ICT were among the first customers.

As Liu and his Lianxiang colleagues hustled to sell TVs, others

Word box

硅谷 guī gǔ Silicon Valley
单位 dān wèi State work unit
人才 rén cái talent
海归 hǎi guī
Chinese educated abroad before returning to China

began hawking computing gear to local researchers and China's first tech adopters. Lianxiang had its first taste of real success when it started to focus on spot checks for computers. In 1988, Liu moved to Hong Kong, and by 1990, the company was making and selling computers under the English name Legend. By 1994, it listed in Hong Kong as Lenovo. It would later become one of the world's biggest computer companies, and one of the key players in Zhongguancun.

Considering what, fundamentally, separates Zhongguancun from other tech clusters in China, Ning points to the prestigious universities of Haidian district.

"Talent," he said. Tsinghua and Peking universities would be entwined with the rise of Zhongguancun, just as Silicon Valley's history was bound to Stanford. The key to the district's success was its proximity to facilities like the CAS and the universities that produced their researchers.

Even so, there was insufficient talent to provide the intellectual rocket fuel that Zhongguancun needed in the 90s and early 2000s. China was far behind the United States in terms of computing know-how, and had a dire shortage of talent. Many of its best and brightest had gone overseas to study, and there was a huge gap to close. One approach was to lure back *haigui* (having the same pronunciation as "sea turtles" in Mandarin) — a punny name for Chinese educated abroad before returning to China. Beijing's Overseas Chinese Office, which is tightly linked with Zhongguancun, offered homes, loans and tax breaks to *haigui*.

Locals, too, could receive government help. In 1988, a series of key measures was rolled out. With the establishment of the Zhongguancun Science Park, Zhongguancun was formally designated a tech center in which businesses could enjoy perks and certain advantages provided by the government. There were direct funds available and "innovation clusters" whose results can be seen in the more than 50 science parks around the country. The Zhongguancun Science Park now has offices abroad, including in Silicon Valley.

Starting in 1999, it also handed out cash to prospective startups, in a process remarkably similar to venture capital funding.

By 2015, there reportedly were 20,000 enterprises that had sprung up within several Zhongguancun Science Parks, with an estimated 1.5 million employees.

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