



Customer Case Study

## Network Operator in China, Hangzhou CNC, Expands Its Offerings

## Hangzhou CNC Inforport has launched new services for its high-end industry customers.

Hangzhou CNC Inforport (Hangzhou CNC) is a broadband network operator jointly founded on May 16, 2001 by Hangzhou Information Network Company, China Netcom, and Zhejiang Economic Development Investment Company. It provides broadband Internet access, data and leased-line services, and many value-added services for residential, commercial, and government users.

### Executive Summary

#### Customer Name

Hangzhou CNC Inforport

#### Industry

Telecommunications Industry

#### Business Challenge

- Need to focus on user needs, network security, and service continuity
- Need to develop new business to be profitable and competitive

#### Network Solution

- Established MSPP to reduce cost and generate new services
- Adopted advanced IP/Ethernet over TDM networking technology

#### Business Results

- Managed SDH, MPLS VPN, and other MSPP services more effectively
- Met the demands of different customers in the leased-line market

As a relatively new operator, Hangzhou CNC looked for the most updated technology when it started to build its network infrastructure. In 2003, Cisco Systems® ONS 15454 Multiservice Provisioning Platform (MSPP) technology had drawn the attention of Hangzhou CNC.

An advanced multiservice transport network element, the MSPP technology provides flexible optical transport that integrates SDH, Ethernet, Multiprotocol Label Switching (MPLS)-VPN, IP, and broadband service to offer various data services in an economical and efficient way. It smoothly combines optical transport networking and data networking with time division multiplexing (TDM) services.

### Network Solution

The MSPP (which is also known as “MSTP” in China) features provide low-cost broadband access and Ethernet direct access in a single network element with an operating system that allows for flexible bandwidth provisioning and allocation. Cisco System’s MSPP technology provides Hangzhou CNC a platform to offer new Ethernet leased-line services, such as Ether Relay service, leased-line service, multipeer service, maintenance service, and management service on the company’s existing SDH network, further enhancing its competitiveness for the Ethernet leased-line service offering.

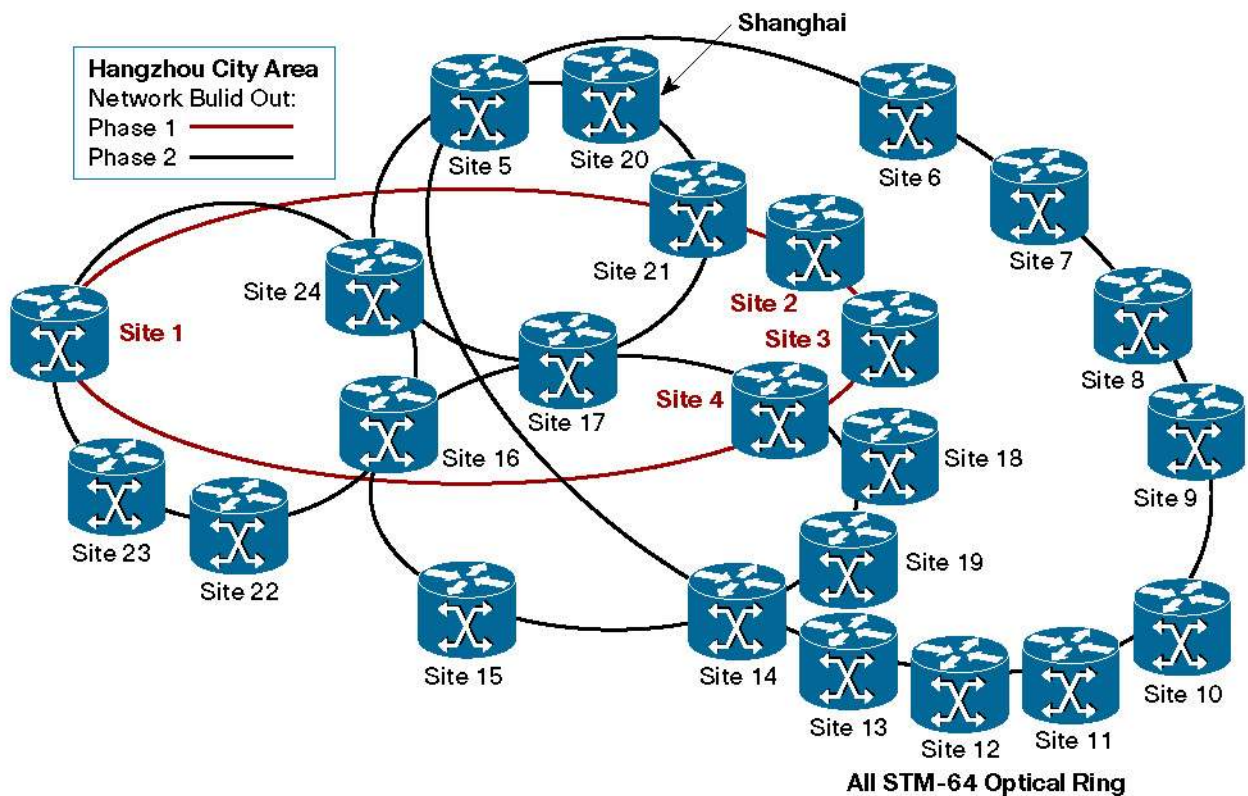
For a telecom operator, MSPP is a comprehensive platform, containing traditional phone line service and next-generation business data services. Transport facilities can be reduced by half as a result of incorporating several technologies into the platform, including TDM, Spatial Reuse, and Statistical Multiplexing. The platform helps ensure quality of service (QoS) with increased network efficiency. Its flexibility and oversubscription capability can significantly improve a network operator’s abilities to compete in its marketplace. The Cisco MSPP technology also enables Hangzhou CNC to expand their SLA offerings to include larger, more reliable bandwidth services that are configurable to their exacting needs, all at a lower expense to their customers, fully satisfying their business needs.

Convinced by all these technological advantages, Hangzhou CNC began to build its own MSPP network in 2003.

Utilizing the advanced Ethernet over SDH networking technology, Hangzhou CNC created a broadband metropolitan-area network that spans the Hangzhou area with a backbone bandwidth of 5 Gbps that connects with China Netcom's high-speed Internet of 40 Gbps. In addition to the Broadband access implementation – including 1 Gbps bandwidth per private residential community, 100 Mbps per office building, and 10 Mbps per home –higher security, scalability, and availability was also realized.

Hangzhou CNC's MSPP network was completed in the second half of 2004 (Figure 1). Once the investment and deployment was complete, business development became the main priority. However, there was no previous experience to use as a model. Hangzhou CNC needed to take its own initiatives in service offering, pricing, and creating operational and maintenance models.

**Figure 1**  
Hangzhou CNC MSPP Deployment in Hangzhou City



Hangzhou CNC realized that merely telling the end users of the advantages of its new technology, infrastructure and services would not be sufficient to close deals; instead, the end users needed to know that these new offerings would be compatible with their usage habits and existing technical structures. Hangzhou CNC then met with many customers, industry experts, and Cisco® technicians and developed a more strategic marketing plan: new services should focus on user needs as well as network security and service continuity.

A strategic partner of Hangzhou CNC for many years, Cisco not only provided the company with equipment and technical solutions, but also assisted in its market development, cost estimation, market pricing, and service bundling. With these suggestions, Hangzhou CNC decided to offer E-DDN (Ethernet-Digital Data Network), Ether Frame Relay (FR), virtual LAN switch, and broadband MPLS-VPN services to its market as a competitive differentiator.

Qin Hanqiang, Manager of Hangzhou CNC's product management department, says, "Support from Cisco enabled Hangzhou CNC to better manage SDH, MPLS-VPN and a host of MSPP services, allowing us to meet the demands of different customers in leased-line markets."

Cisco Systems, Inc.

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## Business Results

In early 2005, three years after Hangzhou CNC had begun MPLS VPN service, the company launched new services such as Ether Leased Line and Ether FR based on the Cisco ONS 15454 MSPP technology.

The new services were well received by high-end industry customers in finance, government, and education. Since then, hundreds of contracts have been signed with Hangzhou CNC, and that has stimulated similar service offerings by other operators. Cisco MSPP technology has become broadly adopted in Hangzhou and its surrounding areas, where the success of Hangzhou CNC has gained traction and demonstrated its value to customers.

Through its partnership with Cisco Systems, Hangzhou CNC's competitive MSPP services has grown in popularity and has captured a significant and growing portion of their total addressable markets.

To date, individual subscribers of Hangzhou CNC have reached 200,000, nearly matching the same volume of subscribers for Hangzhou Telecom, also a market leader. Data solutions have always been the leading source of Hangzhou CNC's business, representing 80 percent of Hangzhou's MPLS-VPN market share.

Hangzhou's leased-line services include FR, Digital Data Network (DDN), SDH leased line, and MPLS-VPN. The addition of DDN and FR to Hangzhou CNC's service portfolio, combined with its ONS 15454-enabled high-quality leased-line services, has accelerated Hangzhou CNC into a competitive position among the service provider leaders in their region's large and growing market.

Zhong Ling, manager of major account department, says, "Compared with traditional leased-line services, the ONS 15454-based MSPP service has three main advantages: first, bandwidth of an Ether Leased Line is flexible, one can choose from a range of 2 Mbps to 100 Mbps without the need to update the end equipment when bandwidth is increased; second, it helps ensure greater security than VPN service solely based on the Internet; third, it offers a high level of flexibility in terms of network construction."

The new service offering from Hangzhou CNC has been very well received by its customers. For instance, several hundred customers from the financial industry have subscribed to the new service. The scale of Hangzhou CNC MSPP deployment is the largest of its kind nationwide. Hangzhou CNC's experience showed that even with the most pioneering technology, its new services must align and integrate with the infrastructure and usage habits of its customers' networks. Working closely with their customers and aligning each application to the respective needs of each partner proved to be Hangzhou CNC's key to success.

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