Infotech—Real Broadband Delivers Real Value

Infotech expects 300 percent revenue growth over three years from high-speed IP services made possible by Cisco metro Ethernet Solutions.

"Cisco provides high levels of capability on its mid-range equipment, which has reduced our set-up costs by a factor of 10, making entry into true broadband IP services provision a viable proposition."

Hans Kuehberger
Managing Director
Infotech

Background

Ried is a small city in Austria, 50km north of Salzburg and much like any other—until recently, that is. Thanks to Infotech, a local IT systems integrator, the city's communications infrastructure has recently been revolutionised. The company now offers real broadband connectivity using a Cisco metro Ethernet solution running over Infotech's newly installed optical fibre ring network.

Challenge

Infotech, a privately owned company, has a broad vision for how real broadband communications could make a genuine difference to the city where it is based. When Infotech administrators decided to expand into IP-based services provisioning, their agenda was much broader than that of many other service providers, particularly those from a pure telecommunications background. Rather than settling for a modest margin on standard asymmetric digital subscriber line (ADSL) connection services, Infotech has ambitions to make new, increasingly valuable applications possible.

Solution

Cisco Systems® offers a range of high-performance and cost-effective metro Ethernet switches, which enabled Infotech to make the business case to develop its own fibre-based metropolitan-area network. Despite needing to equip up to 10 points of connection, the company calculated that this would be less expensive than to continue leasing lines from the local PTT for a further five years.

Results

Infotech now expects its IP service provider-based revenues to soar more than 300 percent, from around ¤600,000 to ¤2 million within three years. This growth will primarily result from offering business customers both higher-connection speeds and new, valuable content-based services at highly competitive prices. Property developers are among those keen to sign up for the new services, which will enable them

to add value to their own business activities by including superior communications and entertainment packages, such as timeshift TV and video-on-demand (VOD), with new properties.

Demonstrating that size and geographic scope are not essential ingredients for success in the service provider market, Infotech is rapidly making a name for itself as an innovator in the Austrian city of Ried.

Having learnt from its IT integration activities the commercial value of providing services above and beyond straightforward commodity products, Infotech has extended the same approach to the service provider market in order to maintain differentiation and to increase customer satisfaction.

The range of metro Ethernet switching solutions offered by Cisco® has made it possible for Infotech to lay its own fibre-based metropolitan area network (MAN), bringing real broadband—and a variety of other valuable business opportunities—to the local community. As a result, the company has earned new levels of popularity and respect.

Simple Mathematics

The only local service provider in its region, Infotech made a turnover of over ¤4 million in 2002, mainly from its primary activities as an IT systems integrator and value-added reseller. Although Infotech has provided IP connection services to the local business community for some six years, the company's revenue from this side of the business amounted to no more than ¤600,000 per year—a satisfactory contribution for a company focused on delivering a full service portfolio.

However, as a result of the new MAN, Infotech expects its service provider-based revenues to soar to ¤2 million within three years, representing growth of more than 300 percent. Managing Director, Hans Kuehberger, explains the business case:

"When we started the ISP business, we were leasing lines for our clients at a cost of between ¤100 and ¤300 per month for each line," he says. "We had 80 leased line customers in the city of Ried, and the economics just weren't making sense any more."

Kuehberger did some calculations and realised that it would be less expensive for Infotech to lay its own fibre network, and benefit from the revenue of delivering new services, than to continue leasing lines for the next five years.

Not only would this strategy result in potentially substantial cost savings for both Infotech and its customers over time, it would also create a wealth of possibilities for new, advanced services and applications made possible by Infotech's ability to guarantee true broadband speeds right into customers' premises, and at an affordable price.

After discussions with the local mayor, Kuehberger gained permission to lay a 15-kilometre optical fibre ring, which would provide the transport mechanism for a range of innovative new IP connectivity services.

The Right Partner for the Project

With permission and a solid business case in place, Infotech did a full survey of the market options, considering solutions from Alcatel, Extreme and HP, in addition to Cisco.

The striking difference, according to Kuehberger, was that Cisco offered superior network intelligence right across its product range. This meant that Infotech did not have to buy expensive, top-of-the-range equipment to gain access to value-added MAN management features such as the ability to perform traffic shaping, and extended VLAN capabilities.

By integrating intelligence throughout the network, the overall cost of investment in hardware was reduced by a factor of 10, he adds—around ¤5,000 per distribution point compared with as much as ¤50,000. Given that Infotech needed to roll out equipment to as many as 10 distribution points, the savings afforded by a Cisco metro Ethernet solution added up to hundreds of thousands of euros.

As it is, Infotech has invested just ¤2 million to establish its own citywide optical fibre ring—an investment that is expected to pay lucrative dividends for many years to come.

Infotech has created its end-to-end backbone and access infrastructure using Cisco Catalyst 3550 switches and Cisco Catalyst 4006 switches with layer 2-through-4 capabilities, through which it has achieved a ring speed of 1Gbit/s. Access speed for customers is typically 10 or 100Mbit/s.

The Cisco Catalyst 3550 switch is optimised for providing metro access to enterprise and small- and medium-sized business (SMB) customers. Featuring 802.1Q tunnelling, high-performance IP routing, and sub-second Spanning-Tree Protocol (STP) convergence, these switches enable a variety of metro services, such as transparent LAN services and business-class Internet access.

The Cisco Catalyst 4000 Series switches with layer 2-4 capabilities are designed specifically for both aggregation of business services, and subscriber access in metropolitan-area networks (MANs) that take advantage of the simplicity and flexibility of optical Ethernet in the first mile. These switches provide mechanisms for per-subscriber traffic management, security, performance and quality of service (QoS), which network operators need to deliver revenue-generating data, voice and video services.

Importantly, QoS ensures that critical applications receive the bandwidth they need by differentiating and prioritising traffic, so time-sensitive packets such as voice and video can be handled accordingly. These features will be important as Infotech and its customers seek to exploit multicast, videoconferencing and VoD content. All of these require large amounts of bandwidth, and it is necessary to ensure that these do not interfere with other important data or voice content.

15-Month Rollout

It took Infotech just 15 months to roll out the new network. While the company already had a relationship with Cisco—as a reseller of the manufacturer's equipment—the decision to become a metro Ethernet customer led to a direct relationship being established with Cisco's carrier group.

"They supported us very well from an early stage," Kuehberger recalls. "For example, when we decided on the switches we were going to use, Cisco sent us two specialist engineers to see us through the installation, and when we rolled out public access ports—so we could provide broadband services at conference centres and other public locations—Cisco again sent an engineer to help us get this service up and running."

Adding Value for Infotech's Customers

Part of the appeal of the new network is that the available bandwidth is not only highly affordable, but also highly scalable. At the click of a mouse, business customers can add even higher network speeds as they explore the full potential of broadband.

For example, one of Infotech's larger customers is an exhibition company, which will exploit the ability to offer public broadband connections to organisations exhibiting at its fairground. This will allow visiting delegates to connect to their company networks from wired and wireless access points around the exhibition facilities, accessing company resources and communications with the same performance and levels of security they would get on their own LAN.

Local property developers are also expressing an interest in the services—a means of differentiating themselves from their rivals by adding exciting, modern features to new property developments. Fellner Bauunternehmung GmbH & Co is the first to have signed a contract: the deal will allow Fellner to offer an integrated high-speed Internet and TV communications package with new properties, all included in the sale price.

Diversifying into Content Provision

If licences can be secured and content, advertising and sponsorship agreements established, Kuehberger foresees a substantial opportunity for Infotech to provide content as well as just connections for residential customers. Later this year, the company hopes to begin targeting the consumer market with multimedia services such as timeshift TV and VOD. When it does, Kuehberger has every confidence that Infotech will win significant local market share away from more established communications operators that do not have Infotech's last-mile high-speed network capabilities, or a history of providing applications and content as well as just the connection.

The company is already providing content-based services to local business customers, and finds this provides an excellent opportunity both to add value for clients while growing its own margins. Customers are prepared to pay more for speciality content-based services—such as remote storage and backup facilities—than for simple connections that lack any real application or added value. These services offer genuine cost-efficiency gains for customers, and rely on wide area network (WAN) speeds that match or exceed internal LAN performance.

Because Infotech's network is highly flexible and scalable, customers can tap into these advanced services easily. All it takes is a simple configuration change at the service provider's end—there is no disruption to the customer's IT systems or business activities.

Everyone Benefits

Kuehberger can foresee the potential for Ried to benefit from the high-speed MAN as a wider community. The city administration is already a customer, having procured optical fibre connections from Infotech to connect both its own facilities and some 20 sites across Ried, including elementary and primary schools.

Secondary schools, which are managed by the Austrian government in Vienna, are not currently included in that network, but Kuehberger says Infotech is working on it. "The education market is an important future market for us, though for the moment we are concentrating primarily on business customers."

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