

A CASE STUDY OF: ALL-IN-ONE MULTISERVICE MEDIA TRANSPORT SOLUTION



The Company



KT (Korea Telecom) is the leading communications service provider in South Korea and has been driving the country's development of the information & communications business for the last 25 years. KT was established in 1981 and fully privatized in 2002. Drawing on cutting-edge technology, KT has played a key role in turning South Korea into an IT and electronics giant on the world stage.

KT's goal is to build a network infrastructure that enables them to maintain and strengthen its communications leadership. With the fast growth of video services and the move towards high-definition content, media services are starting to dominate the overall network bandwidth. A key requirement for the future network infrastructure is therefore to provide flexible and expandable media transport with high quality of service.

The Issue

KT initially needed to provide a solution for broadcaster SBS (Seoul Broadcasting System), who would use the network for video and audio services between Seoul and nine other cities in South Korea.

From the SBS main broadcasting center in Seoul various media services would be distributed out to local broadcasters in nine regions. Services include uncompressed high-definition (HD) and standard-definition (SD) video for digital terrestrial TV (DTT), compressed video for mobile TV distribution, FM radio channels, digital audio services, and various data signals for traffic information, program schedule data, etc. The same network should also allow each local broadcasting company to send uncompressed HD and SD video for contribution purposes and to share the contents between SBS and local sites.

In Korea several studies have been conducted on how picture quality is perceived by the end user. It has been concluded that terrestrial TV services should be distributed in uncompressed format as far out in the network as possible to minimize problems with pixelization and latency. This calls for a cost-effective infrastructure that is able to combine distribution and contribution of



video services. If possible the same transport platform should also support radio channels, digital audio services and IP/Ethernet data. Other key requirements include high availability of services providing resilience against failures of both equipment and transmission media, and a flexible multicasting mechanism to allow KT to monitor the video services carried between SBS and the local broadcasters.

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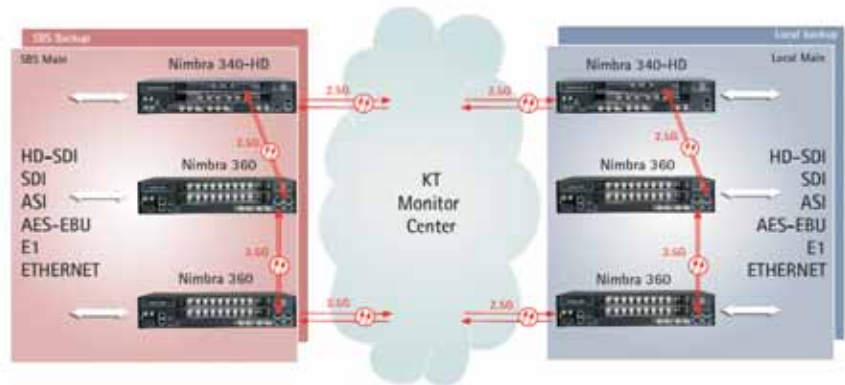


The Solution

Before selecting the solution, KT carried out extensive qualification testing of multiple vendors in their labs for several weeks. The competitive benchmark tests (BMT) included product functions and characteristics, temperature cycling and other climatic tests, and network management.

As a result of the tests, Net Insight's Nimbra platform came out as the preferred solution. Key reasons why KT chose the Nimbra platform include its wide multi-service capabilities, future scalability, low latency and its compatibility with a large number of different media content standards. Since KT wants to offer its customers the ability to distribute uncompressed HD video end-to-end, the low latency of Nimbra is a crucial success factor. KT was also impressed by the strong features of the Nimbra Vision network management system.

KT will make the most of the multiservice transport capability of the Nimbra platform by combining HD-SDI, SDI, ASI, AES/EBU, IP/Ethernet, and E1 services over 2.5 Gbps high-capacity transport links. The initial deployment for SBS comprises more than 100 Nimbra 300



series nodes in dual ring topology for maximum availability. Given the flexible topology support offered by the Nimbra platform, which allows for a complete mesh network, KT can easily expand the network as customer demand is growing. A newly added Nimbra node instantly and automatically establishes contact with all existing network nodes and vice versa.

The flexible multicast solution of the Nimbra platform enables KT to monitor the quality of transmitted video services at its own premises. The Nimbra platform also offers 1+1 redundancy with automatic switching and rerouting in case of failures. The end-to-end provisioning capabilities and graphical overview featured in the Nimbra Vision management system makes it easy to manage and monitor the network and allows for easy setup of dedicated end-to-end transport of media contents.

The Results

The Nimbra solution was installed in KT's network during the 4th quarter of 2007 connecting Seoul with nine other cities in South Korea, delivering all required media services for SBS and the local broadcasters.

Net Insight's partner Sanam Technologies and systems integrator Yukyung Technologies have built up local training and support facilities to help KT make the most of the solution.

Jeoung Ha-Myung, General Manager for the leased-line technology support team at KT, explains why the company chose Net Insight's Nimbra platform: "We take great pride in being the world's leading broadband operator. We take even greater pride in combining our industry-leading know-how with partners and operators around the globe as they deploy networks that push technology and solution offerings to even higher levels in the global telecom market and Net Insight fits well into this."