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Telecom Italia Turns Packets Into Savings

A presentation by RHK analyst Shing Yin at the NGN 2002 conference shows that in the current environment, telecom carrier OPEX expenses will need to come down 55% in order to just break-even. Impossible you say? Well, most industry observers would probably agree with you. However, evidence is mounting that a C2P transition is the best way to achieve significant long-term reductions in the cost of network operations.

But many incumbent carriers have been reluctant to risk their bread-and-butter voice revenues to a packet-based platform, especially one based on IP routing. Until now.

Telecom Italia has been working with Cisco and Italtel, the incumbent telephony equipment supplier, to convert its intercity voice trunking network to one based on IP packets. The Italian PTT has already converted 100% of the telephone calls on its heaviest voice corridor, Rome to Milan, as well as 50% of their international pan-European voice traffic. This represents over 3 billion minutes of telephone calls a year.

Validation of C2P and VoIP

This C2P decision is important for two reasons. First, Telecom Italia is the 8th largest PTT in the world with 27 million fixed lines and over 24 million mobile lines. This will be one of the largest C2P deployments by a national network operator in Europe. A network transformation on this scale provides additional validation for our position that sooner or later, the major regional, national and international network operators in Asia, U.S. and Europe will begin to accept C2P as the inevitable migration.

Second, this deployment is very significant for Cisco, because unlike the trend among large U.S. carriers (Sprint, Verizon) to adopt VoATM, the Telecom Italia solution is based on VoIP over MPLS. In other words, it plays directly into Cisco's core

competencies in IP routing. At the heart of the network are Cisco GSR core routers, essentially replacing the role of the Class-4 transit switch. Italtel, which is 20% owned by Cisco, is providing its iMSS multiservice softswitch, and is performing the systems integration work on the project. Clearly, both Cisco and Italtel are reaping the benefits of this strategic investment.

The initial application will be circuit-to-packet trunking gateways between cities. 24 MGX 8250 gateways will replace 64 Class 4 circuit switches. The gateways compress the voice calls using G.729, and feed the VoIP traffic into the GSRs. The GSR sets up the MPLS label switched paths, and uses DiffServ to prioritize the voice packets.

Capex is today, Opex is forever

The current emphasis on cutting capital expenditures is a shortsighted approach taken by many carriers, who are acting out of desperation in the face of flat or falling revenues. Sometimes, it is necessary to spend a little more today in order to achieve significant and lasting expense reductions in the future. That appears to be the primary motivation in this case.

Telecom Italia executives were looking to transform their existing network in a way that would drive down operational expenses. Their business case estimated savings were in the range of 60-70%. Part of the savings is achieved with reduced facilities. The majority of the savings will come from reduced operational and personnel costs associated with the upkeep of one as opposed to two separate networks.

"We chose VoIP because we could save two thirds of our transit operating expenses and give our customers and shareholders a better service. By the end of 2003, we estimate that 80% of Telecom Italia's transit voice traffic will travel over the new network," said Stefano Pileri, head of Telecom Italia's domestic network.

Telecom Italia - Wireline Transit Diagram

