



# Fixed Operator Case Study

## Networking Optimisation and Centralised Number Portability Management



### Optimising your infrastructure for the future

Sometimes, network operators can achieve success that delivers more traffic and growth than they had forecast in their original network planning. At the same time, critical, deployed equipment can be subject to forces beyond their control, such as when a vendor declares a product line end of life (EoL).

These two influences can have a powerful impact and force a network operator to evaluate its network evolution strategy both to meet unprecedented demand and also to resolve continuity of supply issues. It can be an opportunity to both secure critical network elements and to consider a more effectively optimised infrastructure for the future.

#### The Challenge

A Tier 1 carrier in Romania encountered just such a situation when its existing Media Gateway (MG) solution was declared EoL by the current vendor. With rapid growth, the carrier had already deployed 16 MG platforms, spread across several cities in order to collect and deliver traffic from SS7 TDM networks to VoIP. At the same time, the carrier needed to ensure number portability (NP) was correctly implemented for all traffic where this was a requirement.

Its challenge was to leverage the opportunity afforded by the EoL notification and move to a new architecture while enabling it to leverage as much of its infrastructure as possible. The carrier needed an optimised solution for future growth, including expansion into neighbouring countries.

#### The Solution

The carrier contacted Squire Technologies and sought advice on how to address the situation. After analysing the requirements, the team at Squire Technologies proposed

a revised network architecture that consolidated control into a centralised session function, while maintaining the diversified point of presence base.

Squire Technologies proposed to achieve this by implementing a Session Border Control function in the shape of its SVI SBC solution. The SVI SBC would provide a robust and highly scalable session control function for all traffic. This could also interact with the NP database to ensure that ported numbers could be identified and the correct routing applied to complete the session. The carrier was also able to maintain its existing billing solution, which minimised the impact on other key network functions and elements.

This left the question of the existing MGs. Although a replacement had been proposed, this lacked the scale to meet the evolving needs of the carrier. Instead, working in tandem with Squire Technologies some alternative MGs were sought on the open market. The cost of acquiring these was significantly less than the cost of purchasing replacement MGs from the original vendor.

Alongside the SBC, a media gateway controller would also be provided. The SVI MGC provides full interconnectivity between the legacy SS7 network and the NGN IP core. It controls the deployed set of MG solutions and enables session information to be conveyed to the SBC from each MG. The SBC examines the data, processes the NP function, initiates billing control and routes the call according to requirements. The media can then be routed from the MGs to the appropriate destination network.

The carrier was able to take advantage of Squire Technologies' specialist SS7 interconnection service to ensure connectivity with the legacy SS7 network. This service has been proven on numerous occasions with BT, France Telecom, Telefonica, Telecom Italia, Telecom New Zealand and many more.

## Results

With the new architecture in place, the carrier had a simple means of extending capacity in each deployed site. It also enjoyed the ability to add more locations that leveraged the same session control solution, ensuring centralised control of all sessions from a flexible, scalable platform. With the rapid growth encountered, this provided a more robust and adaptable solution to meet future needs.

The EoL MGs could then be replaced with a more suitable solution that not only offered the additional local capacity

required, but which integrated smoothly with the centralised MGC and SBC architecture. This had the result of reducing future upgrade costs when new capacity is added and new locations activated. The carrier also made considerable CAPEX savings by obtaining the new solution at significantly lower cost than that proposed by the original vendor. In addition, when adding new country sites, the carrier can confidently approach new legacy SS7 interconnection requirements, thanks to the specialist services offered by Squire Technologies.

The SVI SBC was also able to support all NP requirements, ensuring effective call delivery across all connected networks. By consolidating this functionality into a single platform, more efficient use of resources could be achieved, so that the carrier could smoothly add new traffic and perform relevant NP functions as its network of connected locations grew.

Squire Technologies was able to assist the carrier in obtaining solutions to a range of problems. While the network enhancements were initiated due to the EoL notification, this presented the carrier with an opportunity to review its network requirements and design a more scalable, flexible solution to meet long term needs.

Squire Technologies' experts provided insight to identify the real needs and challenges behind the situation. They used their experience to ensure that the carrier obtained a solution that is optimised for current and future requirements, at the same time delivering both CAPEX and OPEX savings.

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