



# SANGOMA CaseStudy

## Major European Service Provider Chooses AareSwitch for Move to VoIP in Switzerland

Dialogic IMG 1010 Integrated Media Gateway Handles Legacy  
SS7-SIP Connection for AareSwitch System

### CHALLENGES

A leading European Provider of Business Telecom Services wanted to move its ISDN customers in Switzerland from an end-of-life Voice over ATM system to SIP-based Voice over IP (VoIP) quickly. Because the service provider prides itself on the high quality of its network, infrastructure, and customer service, the service provider had an extremely challenging list of requirements.

### SOLUTIONS

After an intense search, the service provider chose AareNet's AareSwitch for the move to VoIP. To make sure that the new system met the high standards of its new service provider customer, AareNet chose the Dialogic IMG 1010 Integrated Media Gateway to handle the legacy SS7-SIP connection that the VoIP system required.

### The Customer

AareNet offers managed services as well as turnkey VoIP systems to telecom service providers, internet service providers, carriers in major cities, cable television companies, and utilities. AareNet designs its systems and services to meet each customer's individual needs and to satisfy the many complex requirements of VoIP solutions based on rigorous professional standards that include excellent quality and high availability. The core element in AareNet's VoIP solutions is its AareSwitch, a Class 5 VoIP softswitch that delivers telephony services to end users. The AareSwitch's technical design, quality of service, and rich feature set make it a leader in its market segment.

For more information, visit [www.aarenet.com](http://www.aarenet.com).

### Business Challenges

When it was notified that the Voice over ATM system it was using for its ISDN customers in Switzerland was going to be retired by the manufacturer, a leading provider of Business Telecom Services in Europe took advantage of the opportunity to move its ISDN customers to new SIP-based VoIP technology.

Requirements for the new VoIP system were rigorous. First, the new system had to support all of the same ISDN features as the old Voice over ATM system, including data services, EFTPOS terminals, fax, Advice of Charge, and many others. The new system also had to work with all the legacy ISDN PBXs currently used in Switzerland.

Second and very important was the requirement that the new system cause no disruptions to end business customers. The migration to the new system had to be seamless and quick with no modification to customer premise equipment (CPE).

Finally, the new VoIP system had to be completely reliable with geo-redundant system setup, auto-provisioning, high availability, and end-to-end monitoring to enable high-quality support services.



## The Solution from Sangoma

After an intensive search, the business telecom service provider chose a geo-redundant AareNet VoIP system based on the AareSwitch AS CG-100 softswitch, which was initially licensed for 10,000 accounts and 100,000 telephone numbers. Along with meeting all the service provider's reliability requirements, the AareNet VoIP system also handles multiple BRI and PRI connections and provides full ISDN functionality.

To complete the system, AareNet needed a field-proven and flexible connection to the PSTN to integrate the traditional SS7 network with its SIP-based softswitch. Because it offers "any-to-any" network connectivity and had all the features needed to fit easily into AareNet's end-to-end support monitoring plan, AareNet chose to use the highly reliable Dialogic IMG 1010 Integrated Media Gateway. The IMG 1010 includes:

- » Integrated SS7 ISUP
- » Any-to-any signaling
- » Any-to-any media for voice, fax, and tones
- » IP address topology hiding
- » Symmetric NAT traversal
- » SIP mediation (includes SIP, SIP-I, SIP-T)
- » SIP lower layer protocol conversion (among UDP, TCP & TLS)
- » Secure SIP signaling and authentication (via TLS)

Figure 1 is a simplified diagram of the new system. Only two customer locations are shown in this example, but the AareNet system is ready to handle a wide variety of CPE, including ISDN PBXs and endpoints — legacy phones, IP phones, mobile phones, fax machines, etc. Redundant AareSwitches and IMG 1010s are in use, and although all customer sites enjoy the same very high level of quality of service and support, only two paths for these are shown in the diagram for clarity.

## The Results

After a smooth migration that required no changes to any customer equipment, the AareNet system with its AareSwitches and IMG 1010s has been in use for more than a year (as of June 2011) at full load and has worked flawlessly. "None of the end customers noticed any change in service, possibly because we have been running with greater than "five-nines" (>99.999%) reliability from the first day," reports Felix Jacob, CEO of AareNet AG.

"Our end customer, the business telecom service provider, did notice one thing," continues Felix Jacob. "They told us that they have never seen so few problems with an introduction of a new system as with our solution based on AareSwitches and Dialogic's IMG 1010s!"

**Figure 1. Simplified Diagram of AareNet VoIP System**

