

Dialogic® Products Solve Integration Challenges for Gintel at Network Norway

Case Study

Robust Components Provided at an Excellent Entry-Level Price Point

CASE SUMMARY

Challenge

When it received its new GSM license, Network Norway needed to find a customizable, open-standards-based platform that would allow it to become competitive with the two mobile operators already established in its market. After careful consideration, Network Norway decided to focus on the SME segment and created a specification for a platform that could replicate PBX functionality and connect to mobile, fixed, or IP networks. Compatibility was also a critical issue as was the ability to support NGN architectures such as IMS.

Solution

After a rigorous selection process, Network Norway chose Gintel's Easy Virtual PaBX (EasyVPaBX) for its new Mobile Office service offering, and the first test call was placed within six weeks. To provide cost-effective components for network infrastructure compatibility, Gintel selected the Dialogic® IMG 1010 Integrated Media Gateway, the Dialogic® MSP 1010 Multi-Services Platform, and the Dialogic® IP Media Server. The combination of EasyVPaBX and the Dialogic® components allowed Network Norway to offer its new Mobile Office service at a very attractive price in a highly competitive market segment.



Challenge

As the third entrant into the Norwegian mobile market, Network Norway faced considerable challenges in building market share with two other mobile operators with GSM licenses already in the market. Network Norway needed to differentiate itself with competitive offers and build market share without beginning a price war. The new mobile operator decided to focus on the small-to-medium enterprise (SME) market segment since it promised to provide the highest potential revenue and margin.

Typical customers were profiled in its chosen market segment to help it understand its target customer base. Network Norway found that its prospects often had multi-site operations, which included international facilities, with high mobile use between sites and field locations. Mobile use was high, but mobile phones were often incompatible with the various PBX solutions deployed in the regional sites. Tracking calls was difficult or impossible, and the existing systems did not offer an easy upgrade path to IP communications. Prospective customers wanted solutions that could not only be used immediately, but can also provide a clear path to IP. They wanted the same functionality for each user, irrespective of whether callers were connecting via a mobile, fixed, or IP handset – that is, they wanted a seamless, common communications infrastructure across the entire enterprise. Tracking the location and status of users as they performed their activities was also important.

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Network Norway took the knowledge about its prospects and created a communications-platform specification that would allow it to deliver the needed services to their chosen segment immediately and in the future. The customizable platform would have to provide hosted telephony services that could replicate enterprise PBX functionality and be able to connect to any desired network (mobile, fixed, or IP). Compatibility was also a critical issue. The platform needed to be compatible with Network Norway's existing GSM network, and interface to the CAMEL overlay that was used to manage legacy services. Finally, the platform had to be non-proprietary and ready to work with NGN architectures such as IMS.

Solution

After an extensive review of proposals as part of its RFP process, Network Norway chose Gintel AS as the vendor for its complete "Mobile Office" flagship service offering.

Gintel offers a hosted PBX application, EasyVPaBX, which met all of Network Norway's needs. It provides full PBX functionality, and because it is a software application hosted by the operator, it allows any connected device to register and experience the same feature set as a device connected to a traditional PBX switch. EasyVPaBX provides full switchboard capabilities, offering a console that can be used to manage user mobility and status, with self-provisioning options to ensure that the system is updated at all times as to user preferences.

EasyVPaBX also provides transparency, permitting users on different networks to connect to the platform. It conforms to the basic IMS service architecture, leveraging standards-based SIP application servers and allowing Network Norway to easily incorporate EasyVPaBX into an advanced network architecture in the future. Most importantly, the Gintel platform is delivered with a powerful service composition tool, Easy Virtual Composer. This tool provides almost unlimited service creation possibilities via a simple GUI, letting Network Norway tailor individual services to meet the needs of specific customers and provide the additional differentiation needed to carve out a niche in its chosen market segment while anticipating future growth.

Although at a functional level Network Norway had found what seemed to be the perfect solution, some system requirements needed to be resolved. Although IP connections are anticipated as its network evolves, Network Norway is now largely TDM based. Because EasyVPaBX is SIP-based and needs to connect IP sessions, a media gateway was required to interface legacy TDM traffic with the IP platform. Gintel looked at a number of options, and selected the Dialogic® IMG 1010 Integrated Media Gateway to meet this need. The IMG 1010 offers several important features, including a full range of CODECs and strong internal routing capabilities, but the most compelling in this case was the integrated SS7 support. This support allowed Network Norway to terminate ISUP traffic directly on the IMG 1010 without having to deploy separate signaling gateways to perform this task. In addition, the IMG 1010 offers bi-directional ISUP to SIP translation, permitting EasyVPaBX to manage all traffic via SIP.

A further problem was the legacy CAMEL signaling overlay in Network Norway's GSM network. EasyVPaBX needed to connect to this overlay in order to leverage existing triggers and use legacy equipment. After exploring several options, Gintel decided to create its own adaptation layer between the different signaling protocols and selected the Dialogic® MSP 1010 Multi-Services Platform as the appropriate component. As support for only a few CAMEL operations and triggers was required, the MSP 1010 was a more cost-effective option compared to other commercial offerings. Gintel used the MSP 1010 to create a device known as an IM-SSF (IMS Service Switching Function), as defined by 3GPP, for conversion of SIP to CAMEL signaling and vice versa. CAMEL support is essential as the system using EasyVPaBX grows, since it avoids the need to terminate all traffic at the platform, which would have serious repercussions for overall costs.

Finally, the platform had to offer IVR capabilities, albeit only for a subset of the traffic. Gintel needed a highly scalable media server that could be controlled directly by the EasyVPaBX application, but which did not require detailed or complex integration. The Dialogic® IP Media Server proved to be an excellent solution to this knotty problem. Since it is deployed as software, the Dialogic IP Media Server can be installed on COTS hardware readily available to Network Norway. The Dialogic solution also presents an open, standards-based interface via SIP and VoiceXML, which enables rapid but powerful integration with EasyVPaBX, and its software architecture allows more capacity to be added easily when required.

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The combination of the three components from Dialogic solved all of the integration challenges posed by Network Norway. Each component can scale easily in the Network Norway installation, and because they are standards-based, they can be deployed in other, future networks as opportunities arise.

Finally, the long-term evolution requirement of Network Norway — that its new platform support IMS architecture — is satisfied by the deployment of a standards-based SIP application server and the IMS-SSF. The IMG 1010 can provide an integrated solution to the functions of the IMS-MGCF and IMS-MGWF (IMS Media Gateway Control Function and IMS Media Gateway Function) of IMS. The Dialogic IP Media Server can provide an IMS-MRF (Media Resource Function), which is a combination of the MRFP (Media Resource Function Processor) and MRFC (Media Resource Function Controller).

Results

After Network Norway selected the Gintel proposal for its Mobile Office service offering in May 2007, Gintel was able to move quickly by using proven off-the-shelf components and a non-proprietary architecture. The first test call for Mobile Office was placed within 6 weeks, and a full commercial launch took place in October 2007, less than 6 months after a contract between Gintel and Network Norway was signed. Within that time, Network Norway customized additional services to build on the existing capabilities of EasyVPaBX, which reinforced competitive differentiation for its future customers.

Because it was essential for Network Norway to build a solid business case for Mobile Office with its prospects, the components selected for the service had to be cost-effective. Gintel knew it would be easy to meet this requirement with its EasyVPaBX platform, based on the growth projections provided, and was delighted to learn that network infrastructure, which often has a high initial cost, would not be a barrier to deployment in this case. Dialogic was able to provide robust components at an excellent entry-level price point, allowing the adoption of an efficient network solution from the beginning and creating an outstanding opportunity for Network Norway to leverage its investment for future growth.

About Network Norway

Network Norway AS is a telecommunications operator that serves 450,000 customers and is based in Bergen, Norway. As the third holder of a GSM license in Norway, Network Norway brings more than 20 years of experience to its business segment, and its goal is to make the work day easier with services tailored to each customer's needs.

For more information, visit www.networknorway.no.

About Gintel

Gintel AS is leading developer of advanced application software for telecom operators and service providers, enabling them to offer innovative and competitive services to the profitable business subscriber segment. Originally established as an R&D division of Telenor, Gintel became an independent company in 2001 and has been at the forefront of IN and service innovation for over 15 years. Its solutions and applications are used by millions of subscribers each day.

For more information, visit www.gintel.com.

About Dialogic Corporation

Dialogic Corporation is a leading provider of world-class technologies based on open standards that enable innovative mobile, video, IP, and TDM solutions for Network Service Providers and Enterprise Communication Networks. Dialogic's customers and partners rely on its leading-edge, flexible components to rapidly deploy value-added solutions around the world.

For more Information, visit www.dialogic.com.

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Information about Gintel and Network Norway has been provided by Gintel for this case study.