

Call Notify SMS Service Helps GloBul Build Customer Satisfaction

Case Summary

Challenge

GloBul, the second-largest wireless operator in Bulgaria, wanted to add a new service to help its customers handle missed calls.

Solutions

The new service, known as Call Notify, was built on the JN Missed Call Notification (MCN) system from Bulgarian telecom solution supplier Applicata, and was based on a fully redundant SS7 configuration from Dialogic. This easy-to-use new service has been well accepted by GloBul subscribers and has met its goal of helping the company enhance customer satisfaction.

Challenge

GloBul built its business on providing open and fair mobile communications, and building credible relationships with its expanding customer base. To help its subscribers avoid missed calls, GloBul decided to provide a new SMS notification service. The target customer group for this new service was subscribers who were uncomfortable with voice mail but who still wanted to receive information about calls they missed while they were out of coverage or when their phones were switched off. Although the service would be free for customers, GloBul would benefit from having more completed calls in the network and improved customer satisfaction.

The service, which GloBul named Call Notify, needed to provide several key features:

- Inform a caller who fails to reach the called party that the subscriber will be notified as soon he or she becomes available.
- Collect the phone number of each calling party who tries to reach a subscriber, and note how many times each party called.
- Send an SMS message as soon as the subscriber gets access to the network providing the subscriber with the numbers of all callers who have tried to reach the subscriber.

The service also needed to be easy for subscribers to activate and deactivate. To meet these goals, GloBul began searching for a system that could support:

- SS7 Integrated Services Digital Network User Part (ISUP) as an SS7 node with single Signal Processing Component (SPC)

- Communication with the SMS gateway over an IP network
- Expansion from 200,000 subscribers to more than 2 million
- High availability requirements

Solution

To meet all its requirements, GloBul turned to Applicata, a Bulgarian company specializing in computer-based telecommunications applications. Applicata developed and installed a solution based on a fully redundant SS7 configuration built with Dialogic® components, purchased through authorized distributor CTI-Pro Ltd. in the Czech Republic. Called JN Missed Call Notification (JN MCN), the Applicata system incorporated all the key features GloBul needed:

- Support for the SS7 ISUP protocol
- SMS delivery rate control
- Procedures for real-time registration and deregistration
- Blocking lists that would prevent SMS message delivery for selected subscribers
- Embedded fields for dynamic message content
- Multilanguage support for the generated messages, with a preferred language feature
- Different class of service (COS) for different groups of subscribers
- High availability

Technologies

Applicata based the JN MCN solution on highly available servers integrated in signaling and processing clusters and Dialogic® SS7 boards mounted in separate chassis for dual resilience.

Consisting of a signaling SS7 cluster node and an application cluster node, the entire system can be easily expanded by adding application nodes. The signaling node is connected to the application nodes through a TCP/IP link. Spreading the signaling node over two chassis enables the system to operate seamlessly even if the processor in one of the chassis was to fail. Each signaling unit has corresponding SS7 hardware. The SS7 signaling is transferred using E-1 trunks to the input

ports of each signaling unit, which extracts and processes the signaling links.

Figure 1 shows how the service operates. The subscriber's call forwarding or home location register (HLR) is provisioned with the platform number to allow call forwarding based on a special category. If the subscriber is not available, the mobile switching center (MSC) forwards the call to the JN MCN system. The MSC then sends an ISUP initial address message (IAM) to the JN MCN system. The system analyzes the IAM parameters, and then decides if the called party should be notified. The JN MCN system releases the call with a predefined release cause, depending on the notification decision. Based on the release cause, the MSC plays an announcement to inform the calling party. The JN MSC system checks to see if there are old SMS messages still not sent to the called party. If there are, the new call is consolidated with previous calls and the old SMS is replaced with a new one containing both new and previous calls.

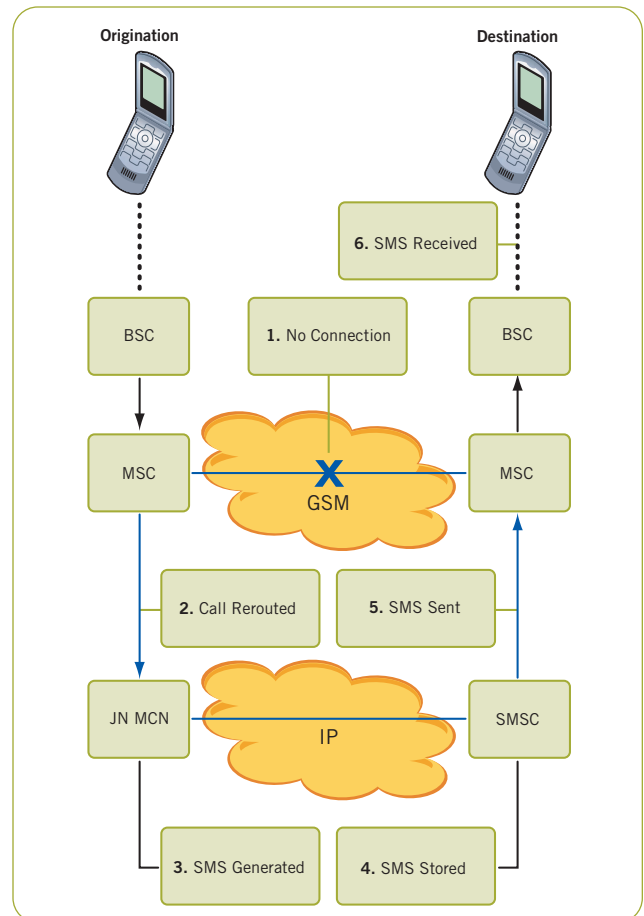


Figure 1. Call Notify service operation

Results

The Call Notify service went into successful operation in July of 2003. "The Call Notification service is easy to use and has been well accepted by our subscribers," explained Petya Stoyanova, marketing and VAS manager, GloBul. "It provides a very good complement to our voice mail service and has achieved its goal of improving customer satisfaction."

About GloBul

GloBul is the trademark under which the company Cosmo Bulgaria Mobile offers mobile telecommunications services in Bulgaria. Founded in 2001, this fast-growing company offers rich international experience and expertise. In only two years, GloBul has covered 91% of the population and 65% of the country, providing roaming in 90 countries with 180 roaming partners. GloBul is one of the fastest-growing GSM operators in Europe, with more than one million subscribers and 500 employees.

About Applicata

Applicata is a Bulgarian company specializing in the design, development, installation, and integration of systems and software for communications, Internet-based applications, and distributed systems. It has long experience in creating and maintaining mission-critical systems for the telco market segment. Several key Bulgarian mobile operators have projects based on the company's JETiNet platform.

About CTI-Pro Ltd.

CTI-Pro provides the critical building blocks and technical services for computer telephony applications and systems. As a provider of Dialogic® telecommunications products, CTI-Pro enables developers, system integrators, and resellers to build telecommunications functionality into computer systems serving both the enterprise and public network market segments. For more information, visit <http://www.ctipro.cz>.

About Dialogic

Dialogic Corporation is a leading provider of open systems platforms to both the Enterprise and Service Provider markets. Dialogic's platforms enable converged communications, allowing service providers, developers, and system integrators to deliver services, content, and applications using multimedia processing and signaling technologies.

Headquartered in Montreal, Canada, Dialogic and its subsidiaries have over twenty offices worldwide, providing local presence, knowledge, and support to serve its customers around the globe. Dialogic's research and development centers are located in Parsippany, New Jersey; Buffalo, New York; London, England; Dublin, Ireland; and Stuttgart, Germany as well as Montreal.

Information about Dialogic is available at www.dialogic.com.

To learn more, visit our site on the World Wide Web at <http://www.dialogic.com>

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Information about Applicata has been provided by Applicata. Information about CTI-Pro has been provided by CTI-Pro. Information about GloBul has been provided by GloBul.

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