

Enhancement of roaming call back user experience

6GMOBILE

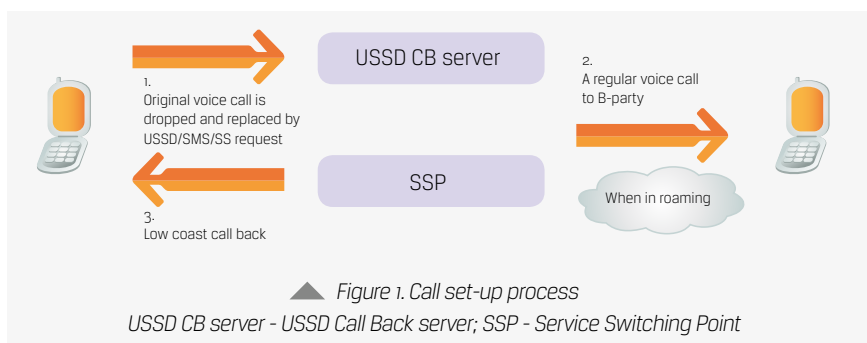
Due to the increasing amount of players on the telecommunications market, operators must look for new strategies for cost reduction in order to retain their competitiveness and provide attractive services to their (potential) clients. The attractiveness of a service, however, is not only measured in terms of its price and functionality, but also in relation to the usability and user experience, which are major ingredients of how lucrative a service is to customers in the present-day market.

The Business Need

6GMobile changed the way in which roaming calls were performed within the network. Instead of traditional roaming connections within 6GMobile, the call direction is swapped to decrease its cost and enrich the calling experience. On the phone side, the call set up process is mainly controlled by the SIM card. When a user triggers a call and the phone is in roaming mode, the SIM breaks the outgoing call and asks the network (by means of a USSD/SMS/SS message) to set up the connection between the caller and receiver. Fundamentally, the network does this by calling both parties and pairing these connections together when they are ready (Picture 1).

The problem, is that from a user's point of view the behaviour, described above, is very confusing and renders fairly poor user experience when making a phone call – firstly, the user is displayed information that the call has ended, and is then asked to authorize the sending of a message to the network, followed by confirmation that the message has been sent. Finally there is an incoming call from an unknown number, which is intended to be answered. Moreover, the call history has an unorthodox format following this process, as in addition to the outgoing calls there are also incoming. Users would need to be taught how to handle this solution, in order to be able to perform roaming calls. It is obvious, however, that such unusual and unintuitive solutions, even if more cost-effective, will not be welcomed by customers with open arms.

The aim of the project in question was to improve the user-friendliness of the solution by concealing all phone indications of events occurring during the connection set up, and through answering the incoming call automatically. This would enable users to make call-back roaming calls in exactly the same manner as standard types, and would significantly improve the user experience of the solution. At the end of the process, users should be provided with a transparent solution enabling them to use their phones during roaming, in the same way as they do in their mother network, without having to be aware of the operations performed behind the scenes.



Customer:

6GMOBILE, Netherlands

Industry:

Communications

6GMOBILE is a next generation MVNE/ MVNO, fully licensed and operational in the Netherlands. 6GMOBILE offers a range of mobile communication services that combine the strengths and structures of GSM with the agility and flexibility of the Internet. 6GMOBILE offers turnkey services, ranging from prepaid consumer oriented mobile services to integrated converged mobility solutions for corporate customers. 6GMOBILE is a pioneer in the development and deployment of integrated Mobile Internet services, turning customer handsets into mobile communication devices for voice, audio and data oriented communication services. 6GMOBILE has deployed state-of-the-art back-office systems enabling extremely rapid service deployment at attractive unit costs.

Comarch products & services:

Comarch Mobile Solutions

The Approach

As there is no possibility to directly control the system messages in the Symbian OS, Comarch suggested implementation of an EZROAM application overlying the screen and serving as a controlling interface of the telephony system during roaming. EZROAM is a lightweight application started at system boot up, and which is completely invisible to users in the mother network.

This application is only activated when a phone leaves its mother network and enters roaming. It then begins to observe the telephony system within the phone, and each time a user makes a call, the application takes control of the calling process. First of all, the screen is overlaid by a UI prepared for this purpose. Technically, this is implemented by means of manipulating the order of views on the window stack, and through continuous monitoring of the displayed views and messages. As soon as an unwanted window wants to present itself on the screen, it is sent back so that the user is not disturbed by it or the operations in the background.

In addition, the application also suppresses other indications of call-set-up-related activities, such as vibrations and sounds. Moreover, EZROAM automatically confirms the messages to be sent to the networks, in order to set up the connection. Finally, the incoming call-back call is automatically answered. In the meantime, an appropriate audio message, stating that the connection is being set up, is played to the user.

When the call is ongoing, the EZROAM application takes over full control of the telephony system within the phone, and provides exactly the same functionality as the standard telephony interface. Among others, these contain simultaneous calls, conference calls, switching on/off loudspeaker mode, mute, hold, switching between calls, DTMF options and call termination. When the call is ended, the system logger (call history) is updated so that it contains the relevant information.

The solution was created for the Symbian S60 3.x and 5.0 devices.

Why Comarch?

"6GMOBILE (formerly BT inmo BV) is an MVNE in the Netherlands, which has been cooperating with Comarch since 2006 in the area of software development. The quality of services provided by Comarch has always been excellent, and the cooperation seamless. This, taken together with its vast experience in providing mobile solutions and unique expertise in mobile platform insights, makes Comarch the perfect partner for accomplishing the project's objectives."

Eildert-Jan Boekholt, Director, Development and Operations, 6GMOBILE

The Result

The application enabled 6GMobile to introduce a new strategy of roaming call support and, therefore, provide its customers with more cost-effective and completely transparent roaming voice services, without the loss of user experience and usability.

The aspects of the project which were most appealing to 6GMobile were the agile methodology used, which enabled a gradual approach to the desired solution and flexibility in tackling the problems encountered. The rhythm of application development, enabled by this methodology, together with the clear reporting of work progress (which was rated very highly by the client), meant that the project results were easy to forecast in terms of both quality and time/schedule.

Comarch SA

Al. Jana Pawła II 39 a
31-864 Kraków
Poland

phone: +48 12 64 61 000

fax: +48 12 64 61 100

e-mail: info@comarch.com

About Comarch:

Comarch is a global supplier of IT products and services for the telecommunication industry. The company's flexible solutions are industry standard compliant and developed in-house. Comarch solutions constantly evolve based on customer demand. Since 1993, the company has accumulated experience and knowledge in the fields of designing, implementing, and integrating IT solutions. Comarch serves some of the market's largest players - such as Telekom Deutschland (former T-Mobile Germany), T-Mobile Austria, E-Plus Germany, Vodafone Germany and Telefónica O2 Germany, as well as companies from the KPN and France Telecom groups. Comarch provides COTS products in the areas of BSS, CRM, OSS as well as a range of comprehensive services.

www.telecoms.comarch.com

comarch.com comarch.pl comarch.de

Comarch Spółka Akcyjna with its registered seat in Kraków at Aleja Jana Pawła II 39A, entered in the National Court Register kept by the District Court for Kraków-Śródmieście in Kraków, the 11th Commercial Division of the National Court Register under no. KRS 000057567. The share capital amounts to 8,051,637.00 zł. The share capital was fully paid, NIP 677-00-65-406
Copyright © Comarch 2011. All Rights Reserved.

EN-2011.09

COMARCH