

The need for change

With the implementation of Comarch Billing System & Customer Management, an award winning BSS solution, Crnogorski Telekom aimed at increasing the efficiency of customer maintenance, supporting business processes and streamlining daily work of end users. Furthermore, due to the rapid development of the telecommunication industry, each operator is forced to introduce a multitude of new offers and services in order to be competitive and win a maximum market share. Thus, a billing system that is ready for the implementation of new services in fast and easy way becomes a must.

At the beginning of 2003, Crnogorski Telekom in Montenegro was facing the challenge stemming from the fact that its legacy billing system was at its maximum of capabilities. Although the internally developed solution exactly complied with Crnogorski Telekom's requirements at this time, it left no additional room for improvement. Legacy architecture prevented the introduction of new and sophisticated products and services. Moreover, missing service provisioning and workflow functionalities resulted in complicated and inefficient customer maintenance and end user operation.

Taking into account that its billing and customer management solution has a crucial impact on its business, Crnogorski Telekom decided to launch in May of 2003 a public, international tender for a new billing system.

The Challenges

As the tender was published, 16 companies applied with their product portfolio. Their solutions had to stand up to the stringent requirements of Crnogorski Telekom's Billing and Customer Management systems. Due to the diversified network architecture in Crnogorski Telekom, the mediation module had to be capable of handling the variety of switches that exist in Crnogorski Telekom, even those with outdated software releases. The billing system should allow the quick and easy creation and deployment of new products, tariffs and discounts in order to always be a step ahead of the competition. All

Crnogorski Telekom

Crnogorski Telekom is the principal provider of telecommunication services in Montenegro. The company's service portfolio includes fixed line telephony, data transmission services and various value-added products. The company owns 100% in two affiliates: T-Mobile Crna Gora is Montenegro's significant and most innovative mobile telephony provider, while Internet Crna Gora is the leading dial-up and broadband internet provider on the Montenegrin telecommunication market.

customer maintenance done in the Customer Service Center should be realized by a browser based application. The customer activation process has to be done completely from the customer representative's desk, requiring strict integration with workflow management and service provisioning modules. Furthermore, the solution should handle the additional business processes of Crnogorski Telekom, especially processing of payments.

The Project

While migration to a new billing solution is a complex process, the implementation project in Crnogorski Telekom, beginning in April of 2004, took only 9 months. Two months at the outset of the project were spent on an extensive analysis of Crnogorski Telekom's business needs and environment, whereas the last 3 months were spent on comparison and the parallel work of Comarch Billing System and the legacy billing system. In January 2005, Comarch Billing System began commercial operation in Crnogorski Telekom. During the short time of this project, substantial system customization in various functional areas was carried out, in addition to the normal solution implementation.

Of great importance for the success of the project was the excellent cooperation between the Crnogorski Telekom and Comarch project teams.

The Winner

By combining competitive pricing with state-of-the-art products that met all of Crnogorski Telekom's requirements, Comarch left the competition behind.

The implemented solution consisted of five integrated modules:

- Comarch Billing System
- Comarch Customer Management
- Comarch Business Process Management
- Comarch Billing Mediation
- Comarch Service Provisioning

The strongest aspect of Comarch's offer was the ability to cover all Crnogorski Telekom's requirements as well as the ability to fit into the Crnogorski Telekom environment

The Solution

Comarch Billing System with a central database and highly efficient Data Processing Server is the heart of the solution. The database stores all customer data, financial data, tariffs and products as well as usage data. The highly configurable and rule based billing engine allows the implementation of all required products and tariffs and discounts, as well as the fulfillment of regulatory requests. With an almost linear scalability, the processing power is provided by the Data Processing Server, leaving it open for Crnogorski Telekom's future growth. All management and configuration is performed via a dedicated and user friendly GUI.

Comarch Customer Management with the embedded Business Process Management module is the graphical, web based work desk for Customer Service Center representatives. The user friendly, thin interface can be used in the main Call Center and other Customer Service locations, on

any computer equipped with a Web Browser. The workflow module allowed for the implementation of 22 different processes according to Crnogorski Telekom needs.

Comarch Billing Mediation is the module responsible for collection of Event Data Records from a multitude of network switches in different formats and protocols, as well as the delivery of EDRs in the file format expected by the billing system. Furthermore, the mediation module processes collected data and performs necessary tasks, including data decoding, filtering, eliminating duplicate records and enrichment.

Comarch Service Provisioning module is strongly integrated with the Customer Management module. As a result, service activation or changes on the network elements is integrated into customer center business processes and takes place almost transparently for the customer and Crnogorski Telekom representative.

Integration with external systems was an important aspect of the solution. Beyond the integration with Crnogorski Telekom network elements provided by the provisioning and mediation modules, the solution was integrated with SAP General Ledger software and the SpeedCollect collection system, among others.

Business and operational benefits

The crucial benefits resulting from the implementation of the Comarch solutions included:

- Seamless integration and CDR collection to the billing system from a multitude of switches
- Openness for new products and tariffs
- Scalability for future growth
- Fit in all required external systems
- Unification of customer maintenance processes in one, web-based customer center application
- One-click customer activation due to the integrated Service Provisioning module
- Automation of business processes, and a readiness to configure new ones on the BPM engine

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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 7,960,596.00 zł. The share capital was fully paid, NIP 677-00-65-406
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