SSC – single Master Data Management system

“Siberian Services Company” CJSC (SSK) (http://www.sibserv.com), Russia - a major drilling contractor providing services to the leading Russian and foreign Oil & Gas companies: investigation and drilling of oil and gas wells, well service and workover, sidetracking, design and maintenance of drilling fluids and mud cleaning systems, well cementing.

SSC operates throughout Russia via network of 9 Regional Offices located in key oil production regions – Volga Region, Western and Eastern Siberia. In 2006 the company opened an operations support office in Uzbekistan and thus expanded its activities abroad.

Customer’s request:
SSC information management used data from different systems at branch-offices. The same information stored in different systems was processed in different ways. There was no single master data source for all systems – thus each data modification had to be duplicated in all systems, which was very time consuming and resulted in data inconsistency.

To eliminate the problem SSC management was looking for a proper Master Data Management (MDM) System to improve corporate information management process. Digital Design has had MDM expertise delivering a similar project for TetraPak - this expertise helped it win a tender and develop MDM system for SSC.

Solution:
MDM system developed by Digital Design is a web-application providing role-based access for the system users and single interface for input and modification of the data used by over 20 different systems. Data exchange between MDM system and other applications (external systems) is provided through BizTalk Server 2006 R2.

The BizTalk Server processing is built on a “publisher-subscriber” architecture. Messages are placed (published) at the MDM system and then received by one or several “subscriber”-applications. BizTalk Server receives messages from the MDM system via its receipt-port and sends them via its send-port to the customer’s external systems – e.g. Assets management, Supply management, Tax&Accounting, HR & Salary etc.

Access to external systems is provided via SOAP over HTTP protocol - through the web-service adapters installed at each company’s branch-office. At each new data entry “subscriber”-applications receive notification about the new modification.

Process models are described in BizTalk Server Orchestrations (BTO) terms. BTO enable code implementation isolation from the overall process and make it possible to add “subscriber”-applications with no impact on the BizTalk implementation code.

The MDM system provides effective access rights management, change-tracking functionality and versions control. It also allows simultaneous work with data across the enterprise – please, see the system architecture in **Figure 1** below.

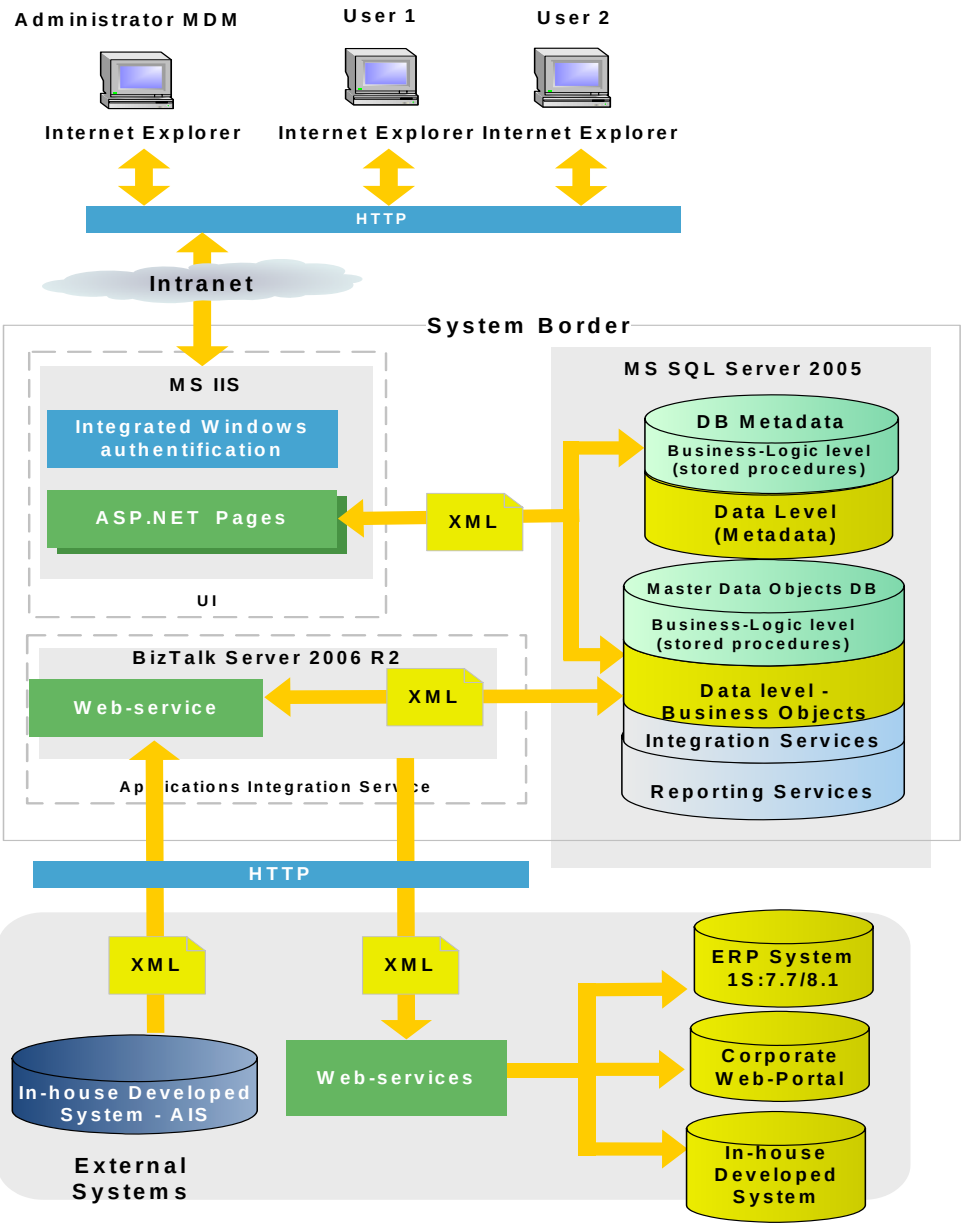

Figure 1. System architecture

Technologies used:

- SQL Server 2005 (incl. Reporting, Integration and Analysis Services)
- BizTalk Server 2006 R2
- ASP .NET/ .NET 2.0

- Web-Services
- OLAP, MDX
- XML
- COM

Results:
The MDM system implemented by Digital Design helped SSC achieve dramatic increase of the enterprise productivity through consistent, accurate and always available business critical data, substantially reduced time for new data input and efficient access rights management.

Within the project runtime the following external systems have been integrated with MDM application:

- Russian ERP System (1 S 7/7-8.1) modules:
    - Assets management
    - Supply management
    - Transport expenses
    - Drill master terminal
    - Tax & Accounting
    - HR & Salary
- DocsVision – Document Workflow system
- Production cycle management
- AIS
- BMS

The solution is flexible enough to on-board new application data, as well as get integrated with any new systems to be used by the company's branch-offices and/or any of its business-partners – both in Russia and abroad.

Prospects:
As soon as the MDM project is finalized the customer is ready to start the next iteration using BizTalk Server for delivering data from the branch-offices' accounting (ERP) system to the company's HQ in Moscow.