[](http://www.google.by/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=bGt2gk_80A6EGM&tbnid=UQw5JkCd-NLRZM:&ved=0CAUQjRw&url=http://www.orchidltd.co.uk/&ei=bk3xUfKEKcm6OPZT&bvm=bv.49784469,d.ZWU&psig=AFQjCNGGXXJtTG8_0SI5hSRL7ZllnezSWA&ust=1374854887632211)

**MiBroKi: Money Transfer**

**BI Solution Concept**

**VERSION NUMBER 1.0**

|  |  |
| --- | --- |
| **Submission Date:** | *7/26/2013* |
| **Requested By:** | *Kyril Bucha* |
| **Business Owner:** | *Irina Brodetskaya* |
| **Contact Info:** | *Iryna\_Bradzetskaya@epam.com* |

# Overview

Before starting to develop of the system of analysis we need to determine the Data of interest. The main source of data for our system - tables constructed on the basis on data received from the files.

The main objects of the developed system are:

|  |  |  |
| --- | --- | --- |
| N | Data of interest | Description |
| 1 | CUSTOMERS | Personal customer information. (First name, Last name, gender, year of birth, account balance, passport data) |
| 2 | TIMES | Time period for analysis: year, month, quarter (last year) |
| 3 | CURRENCY | Types of currencies used in the system (EUR, USD, RUB and ect.) |
| 4 | LOCATIONS | Regions, subregions, countries |
| 5 | OPERATIONS | Types of transactions – deposits, withdrawals, cash transfer |
| 6 | TRANSACTIONS | Full information about transatcion in one time (customer, time, currency, type, tariffs and etc.) |
| 7 | TARIFFS | Information about tariffs of system (the amount of payment, currency and etc.) |

## Business Background

The main trends in the development of payment systems in the world are associated with the implementation of the principles of electronic technologies, the development of mass retail payments, the development of risk management tools and improve the security of payment systems.

«MiBroKi Transfer» is one of the largest and most popular money transfer systems of international class. It operates in the market of money transfers from 1851, namely for more than 150 years. The organizer of the money transfer system serves Belorussian company MiBroKi Transfer. A huge network of MiBroKi Transfer today has 379,000 points on customer service, located in more than two hundred countries, on different continents.

Each client of system has a personal account. The client can enter money into your account, withdraw money from the account, and transfer money to the account of another user of the system.

The main purpose of the electronic system - to provide statistics on the insertion and withdrawal of the money system of the countries on monthly over the last year.

In addition, it is necessary to identify the most popular money transfer rates for each country.

## Benefit

## What benefits the customer receives from the introduction of a data warehouse?

## There is a unified information system of enterprise data storage, which uses a single reference.

## Support for the historicity of data changes.

## There is the possibility of a comprehensive analysis of the business. For example: which customers are most profitable and beneficial, which service, in which customers are the most demanded what sort of claims are most frequent, and in what areas, etc.

## It becomes possible to conduct analysis using historical data. Often operating (automate daily business processes) systems cannot do that, they have not corny enough space for stories and capacity for analysis.

## An opportunity to analyze and crossing of different kind of data. For example, money and traffic, tariffs and the number of failures or complaints, etc.

## There is a basis for a better calculation of the cost of services - on the basis of information from the enterprise data warehouse can receive more adequate data for the natural bases of distribution.

## Statistics for the past year, can accurately predict the level of income the following year. This will make effective business decisions.

## Create Arrays

Table Gen\_Periods will describe the distribution of users by income level.

## Merge Entities

## Merge Year, Month and Quarter, Week and Day tables into one Times table;

## Merge Operation Types, Operation Methods in Operations Table.

## Merge with Countries, Regions, and Continents in Locations Table.

## Summarize Data PLAN

For the Time distribution analyses project was chosen Summaries for Period of Time Data type. Simple accumulations represent the summation of data over one of its attributes, such as time.

## The calculation of the total amount of money transfers;

## The calculation of the number of transactions made by a particular user.

# Requirements

## Business Requirements

|  |  |
| --- | --- |
| N | Business Requirements |
| 1 | Monthly calculated amount of total Deposits by country |
| 2 | Monthly calculated amount of total Withdrawal by country |
| 3 | Monthly calculated amount of total Transfer of money within country (quantity and amount) |
| 4 | Monthly calculated amount of total Transfer of money incoming from abroad (quantity and amount) |
| 5 | Top used tariffs of transfer of money to user account for each country |
| 6 | Types of transactions – deposit, withdrawal and transfer |
| 7 | Full information about transaction in one time (customers, time, type and etc.) |
| 8 | Total amount of deposit per day by country should be calculated at the end of each day |
| 9 | Total amount of withdrawal per day by country should be calculated at the end of each day |
| 10 | Total amount of transfer of money within country per day by country should be calculated at the end of each day |
| 11 | Total amount of transfer of money incoming from abroad per day by country should be calculated at the end of each day |

## Technical Requirements

|  |  |
| --- | --- |
| N | Technical Requirements |
| 1 | Statistic should be calculated monthly for each country (at the end of each month); |
| 2 | Statistic period - last 12 months; |
| 3 | The system runs 24 hours a day, 7 days a week; |
| 4 | Execution time of each transaction must not exceed 5 minutes. |
| 5 | The user database is constantly growing |
| 6 | The average count of transactions per day is 100000; |

# Solution Sketch

## Source Tables structure

**Table name: CUSTOMERS**

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | DATA\_TYPE | | COMMENT |
| CUST\_ID | Number(32) | Customer unique code | |
| CUST\_FIRST\_NAME | Varchar2(20) | Customer First Name | |
| CUST\_LAST\_NAME | Varchar2(20) | Customer Last Name | |
| CUST\_GENDER | Char(2) | Customer Gender (M/F) | |
| CUST\_BIRTH\_YEAR | Number(10) | Customers date of birth | |
| CUST\_EMAIL | Varchar2(30) | Customers e-mail | |
| CUST\_PASS\_NUMBER | Varchar2(20) | Customer passport number | |
| CUST\_COUNTRY | Number(10) | Customer country code | |
| CUST\_BALANCE | Number(30) | Customers current money balance (U.S. dollar) | |

**Table name: CURRENCY**

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | DATA\_TYPE | | COMMENT |
| CURRENCY\_ID | NUMBER (32) | Currency unique code | |
| CURRENCY\_NAME | VARCHAR2 (32) | Currency name | |
| CURRENCY\_TYPE\_ID | NUMBER (5) | Convertible currency type or not (1/2) | |
| CURRENCY\_TYPE\_NAME | VARCHAR2 (32) | Convertible currency type (CONVERTIBLE, NOT CONVERTABLE) | |
| CURRENCY\_TO\_DOLLAR | NUMBER (10) | Exchange rate currency against the U.S. dollar | |

**Table name: OPERATIONS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NAME | | DATA\_TYPE | | COMMENT |
| OPERATION\_ID | NUMBER (32) | | Operation unique code | |
| OPERATION\_TYPE\_NAME | VARCHAR2 (32) | | Operation name (DEPOSIT / WITHDRAWAL/TRANSFER) | |
| OPERATION\_MAX\_AMOUNT | VARCHAR2 (32) | | Max amount of operation | |
| OPERATION\_MIN\_AMOUNT | NUMBER (32) | | Min amount of operation | |

**Table name: METHODS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NAME | | DATA\_TYPE | | COMMENT |
| OPERATION\_METHOD\_ID | NUMBER (32) | | Method unique code | |
| OPERATION\_METHOD\_NAME | VARCHAR2 (5) | | Name of method (Credit Cards, Direct Deposit, Check, Webmoney) | |

**Table name: TARIFFS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NAME | | DATA\_TYPE | | COMMENT |
| TARIFF\_ID | NUMBER (32) | | Tariff unique code | |
| TARIFF\_TYPE | VARCHAR2 (32) | | Tariff type | |
| TARIFF\_NAME | VARCHAR2 (32) | | Tariff name | |
| PAYMENT\_SUM | DATE | | Payment remittance services (in percent) | |

## Summarize Data Plan

# 