Aperio CI Case Study: Bell Mobility Business Intelligence Data Warehouse

Aperio CI

The Experts in Data Management

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About Bell Mobility

Bell Mobility is Canada's largest communications company, consistently investing more than any competitor in innovation to provide a comprehensive and ground-breaking suite of broadband communications and content services to consumer, residential, business and not-for-profit and government customers in Canada.

The Challenge

During the winter of 2010 Bell Mobility contracted Aperio CI to complete the second and final phase of their business intelligence data warehouse solution. The existing BI solution consisted of the following challenges that Bell Mobility wanted to solve within phase 2 of this project:

- Basic BI Analytics were being provided from a variety of **disparate systems** and data sources.
- Lack of processing power to support the require volume of data for timely, accurate trending and patterning analysis (ex. A complex query may take up to 10 hours).
- support of multiple data store systems requires on-going operation cost
- Unable to quickly analyze network CDR data to support Churn, Market Share and Social Network analysis.
- Inability to characterize the customer's network experience

The scope of the project included the receipt and confirmation of the following groups of source data feeds:

- Real time network data consisting of:
    - Call Usage
    - SMS/MMS Usage
    - Data Usage
- Subscriber Information
- Click Stream Data (Smart Phone Web Browsing)
- Static and user maintained reference data

Once the data was received and confirmed on the file collection server, Aperio CI designed and built the ETL process using IBM Data Stage and Tivoli. The selected database was Teradata. The ETL processes were designed to examine the file formats, file naming conventions, sequences as well as volume trending. Upon successful load to

the warehouse Aperio CI built a series of stored procedures that related each of the usage types to a subscriber. At this point in the process all of a subscriber's usage was keyed and accessible for reporting.

The process designed by Aperio to manage user maintained reference data provided users the ability to update reference data in a non-governed schema in the warehouse. Once the updates were approved the user sets a flag in a table that is scanned every hour via a scheduled job in Tivoli. If the flag for a given table is set the data is move from the non-governed to able to a governed table in the data warehouse. This allows user to make updates without impacting production process and data is refreshed in a controlled manner.

Bell Mobility Licenses Aperio CI's Global Business Intelligence - Functional Data Model (GBI-FDM) to be deployed as part of Phase 2 of the BI data warehouse project. The GBI-FDM includes scoring and aggregates that supported reporting and analytics to be used by the Bell Mobility business analytics team. The Aperio CI's GBI-FDM enables our clients to:

- Acquire customers
- Minimize the cost of customer acquisition
- Reduce churn rates
- Increase customer loyalty
- Build brand loyalty
- Measure market campaign effectiveness
- Satisfy compliance and regulatory mandates in commodities, price sensitive environments.

Aperio CI mapped the data from the base layer in to the GBI-FDM and wrote the stored procedures that aggregated, scored and populated the presentation layer in the model to be used by Bell business analytics team.

Benefits

The on-time & on budget deployment of the project benefited Bell Mobility as their analytics now contained a single version of the subscriber including plan level information, start & contract dates, usage and click stream data. The business team at Bell Mobility was provided with the supporting data system that would empower them to perform detail analytics in the areas of churn, click stream information and market share in support of marketing campaigns as well as financial reporting. The final stat system won numerous awards within Bell Mobility for both the project success as well as the project team.