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Business Intelligence at a Fraction of the Cost

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Executive Summary

SQL Server 2000 Accelerator for Business Intelligence can cut the time and expense needed to create enterprise-level reporting solutions incorporating multi-dimensional databases and data mining by over 75% compared to competitive products from other vendors. It can open the door to real-time business analysis of the type formerly accorded only to Fortune 500 companies with large, established IT infrastructures and cadres of dedicated developers using expensive, proprietary products. And it does it with off-the-shelf, generic, Intel-compatible servers running Microsoft Windows 2000 Server and the Microsoft SQL Server 2000 relational database product, which comes with BI analytical capabilities built-in at no extra cost.

> **The SQL Server Accelerator for BI provides a flexible, manageable, and extensible data processing and analysis infrastructure.**

The SQL Server Accelerator for BI includes a number of key features to help you quickly build valuable, customized business intelligence solutions. These solutions also cover most ad-hoc type reports that you formerly had to request from the MIS or IT department, often with lead times of several days to weeks. The four pre-configured data models provided with the Accelerator for BI act as a "point of departure" and are customizable to your particular needs.

Data Models

Developed by experienced business consultants in conjunction with Microsoft, data models for the SQL Server Accelerator for BI serve as a starting point for developing BI solutions that meet customers' needs. The data models consist of relational and multi-dimensional (OLAP) database schemas, dimensions, measures, key performance indicators (KPIs), and client views. The client views can be displayed in tools like Microsoft Excel (through Pivot Tables and Pivot Charts) and other third-party viewers such as ProClarity. The Customer Profitability cube in the Financial Services model is shown in Figure 1. These models encompass the following:

1. **Retail Analytics**: The retail analytics data model focuses on store operation and includes measures and KPIs to support sales performance, fraud detection, store performance, and marketing campaign analysis.
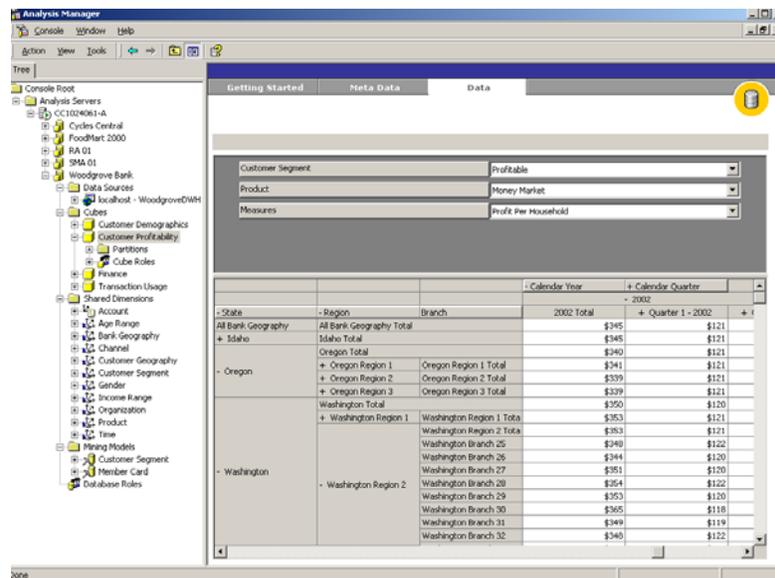
Figure 0: Analysis Manager displays the Customer Profitability cube

2. **Sales And Marketing Analytics**: The sales and marketing analytics data model is more horizontally-focused and includes measures and KPIs to support orders and backlogs, sales and shipments, returns analysis by customer type, sales force performance, and marketing campaign analysis.

3. **Manufacturing**: The manufacturing data model addresses the need to measure shop floor performance to quickly identify production problems, understand their causes, and quickly take action to correct them. Some of the areas covered by this data model include analysis of labor cost, defect and scrap rates, production cost, and equipment servicing needs.

4. **Financial Services**: The financial services data model focuses on the needs of retail banking to minimize costs and increase profitability while continuing to provide superior customer service. With this data model, banks can analyze their company-wide financial position, identify their best customer segments, improve their channel effectiveness, and more.

Data Processing And Movement Infrastructure

The SQL Server Accelerator for BI builds a complete data processing and management application that moves the initial and incremental loads of data within your analytical application and processes the multidimensional "cubes" within the analysis database. Until now, this type of infrastructure has been built by hand. Even using high-productivity tools like DTS in SQL Server, this is a time-consuming and tedious process.

The data processing and movement infrastructure has traditionally been a roadblock to rapid design iteration, because even a small change in a schema's structure has required days of hand-work to retrofit and test the changes. The SQL Server Accelerator for BI provides a flexible, manageable, and extensible data processing and movement infrastructure to automate this process.

Basically, the SQL Server Accelerator for BI consists of:

1. A set of customizable templates to customize the design of OLAP cubes, measures, and

dimensions according to the business requirements of the client. BI viewers like Excel pivot table/pivot charts, ProClarity Clients or other third-party OLAP viewers can be connected to the cubes through the corporate intranet and/or over the internet. The cubes are optimized for medium to large businesses, and incorporate substantial security to permit segregation of sensitive data or views by users (executives, business analysts, IT resources, etc.)

2. A build utility that automatically creates:

i) All requisite relational databases to store data provided by periodic feeds from enterprise data stores or warehouses, ERP, CRM, and other sources.

ii) The analysis database (which holds the cubes, measures, and dimension used by the client viewers.)

iii) All extract, transform, load, migration (ETLM) functionality.

3. A set of pre-configured client views for use by client applications, like ProClarity and Excel. Figure 2 demonstrates the use of a Microsoft Office Web Components (OWC) charting object

embedded in a web page. Collections of these objects can be used to rapidly build a configurable "digital dashboard" available throughout the enterprise.

Once the business requirements have been gathered and codified into a data model, the build utility is used to automate the construction of the physical infrastructure of the BI analytical application at the press of a button. The analytical application can be modified in response to feedback from users, or multiple parallel versions may be created in tandem to compare features and performance.

Since the BI analytical application is centralized, and refreshed automatically from existing Enterprise data stores, all users see essentially the same version of the data. Security can be applied to present the dissemination of sensitive enterprise data to non-approved users, or special views of the data can be created for general availability throughout the enterprise. Robust client tools can be used by business analysts to manipulate, present, drill down, and roll-up the data in a multitude of ways hence eliminating the need for most "ad-hoc" reports. Users who need to see the source data can be empowered to "drill-through" the cells.
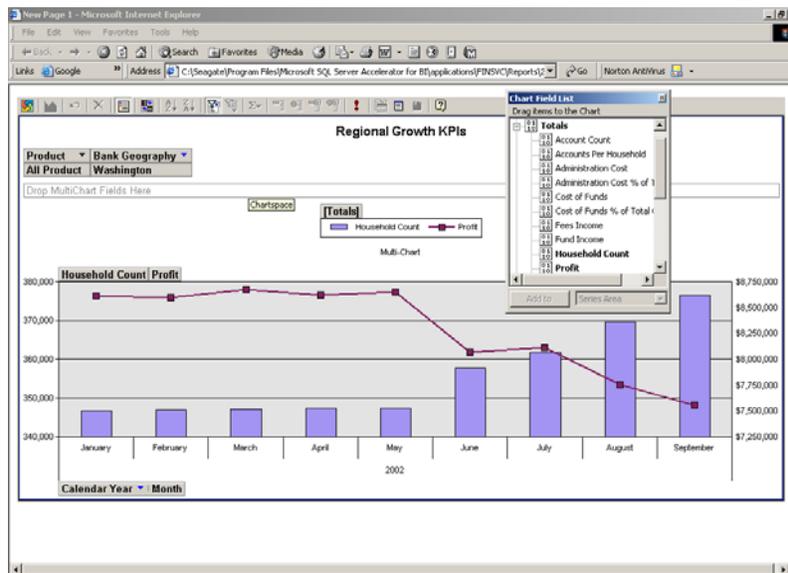

Figure 0: Office Web Components (OWC) can be embedded in a web page to provide configurable charts or tabular representations of data. The field list is shown to demonstrate some of the different KPI's that can be analyzed.
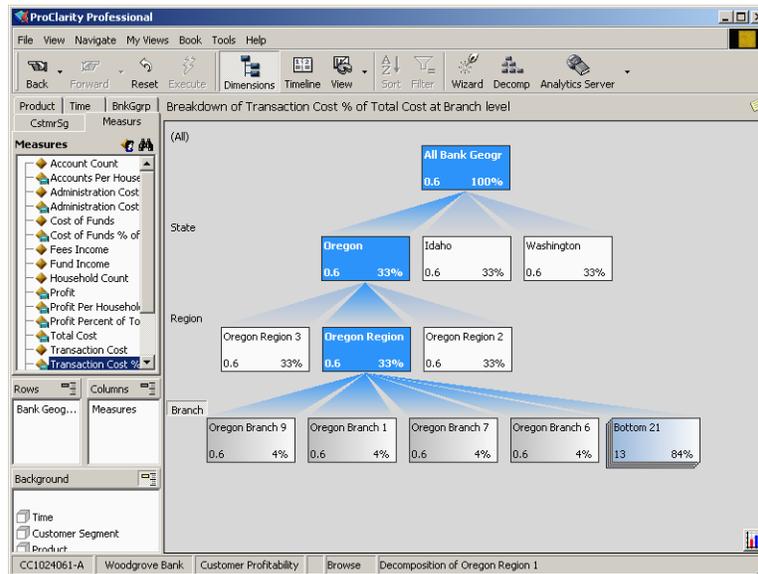
Figure 0 - The ProClarity desktop client can be used to analyze data in innovative ways ; shown is a decomposition of transaction cost percentage by bank geography

This centralization of business intelligence along with the controlled empowerment of end users allows the re-deployment of talented IT resources to more strategic projects with a greater return for the enterprise. Immediate requests from superiors for information will no longer be stymied by compartmentalization of the enterprise data nor by the limited time available for strapped IT personnel who have the arcane skills needed to extract and aggregate data from disparate systems. Any user with the requisite security will be able to connect up to the multi-dimensional application from commonly available desktop clients like Microsoft Excel and obtain the answers in record time.

- Are your promotions optimally targeted at the right group of prospects or customers?
- Why is profit dropping even as throughput continues to rise?
- Are your security programs reducing shrinkage?
- Are they targeted at the right audience?

Let our specialists at Borzal show you how you can enjoy the benefits of immediate, enterprise-wide access to the business information necessary to stay ahead of the competition at greatly reduced cost by using Microsoft SQL Server Accelerator for BI to create a business intelligence application tailored to your specific needs.

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