



Source Code International

Case Study: Data Mining application for a Retailing Company

The Client:

The Client is among the top 5 Retailing Company in the GAMING industry in the UK, trading in hardware (Xbox, PlayStations, etc), software (Games) and Peripherals (Joysticks, etc).

The Challenges:

The Company is currently growing inorganically through acquisitions of retail stores. Each store runs a stand-alone Point-of-Sale software, hence the transactional data are completely localized.

The Retail Industry is highly competitive and hence demands dynamic decisions based on sale patterns, demand-supply analysis, etc.

Primary Data capture happens on an outdated version of MS-Access.

The Solution:

We provided a batch application, scheduled to auto-run post midnight every day, which uploads the MS-Access databases from each store. Subsequently, a comprehensive Merge routine was devised, to pick up raw data from the MS-Access databases, and store into a centralized SQL database with meaningful semantic.

Stock valuation calculation and per transaction profit calculation algorithms were implemented.

A demand-supply based Pricing Control mechanism was devised to prompt for dynamic price changes. An end-to-end solution provided for Price Change, including update of new prices to each store level electronically.

An inter-store Stock Leveling algorithm was implemented, to evenly distribute stocks across stores, based on historic sales patterns.

Incisive Information reports were designed to provide executive level decision making, relating to Inventory management, Store performances, Cash Reconciliation, Sales and Purchase Patterns.

Benefit:

- With ZERO human intervention, the End-of-Day routine enabled assimilation of all Store Data into a centralized data repository, making the comprehensive data centrally available.
 - Immense monetary savings were realized on the Inventory front because of availability of Stock Valuation and Stock Levels on a daily basis.
 - Profitability check on a Transaction-wise as well as summarized basis, in conjunction with a demand-supply analysis report, enabled a highly competitive Pricing Management in the retailing domain.
 - Inter-store Stock Leveling reduced turn-around times for Stores waiting for inventory, hence removing loss of sales for lack of inventory.
 - Management useful reports aided in comparative analysis of performance, stocks, profits and growth.
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Technologies:

- Microsoft .Net Framework 2.0
 - VB.net
 - MS-SQL Server 2005
 - Crystal Reports 10.0
 - Extreme Programming using Agile, with an average iterations of 4 loops
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