



Overview

Country/Region:

United States

Industry:

Hedge Fund

Business Situation:

Increasing data volumes, coupled with time consuming and error-prone manual data manipulation and analysis, led these four organisations to reassess their business processes.

Solution:

By using Xenomorph's TimeScape data and analytics management platform, our clients were able to streamline and enhance their management and analysis of data, leading to a reduction in manual effort, so that more time could be spent on analysis.

Benefits:

- **Speed and flexibility** of TimeScape
- **Easy to use**, innovative features such as SpreadSheet Inside and an intuitive business-oriented language QL+
- **Reduction of risk** by providing a master copy and removing the need for manual data capture and mining
- **Do more in less time**, resulting in significant competitive advantage

TimeScape

Attacking the Business Problem

INTRODUCTION

This short paper illustrates how TimeScape has been used by Xenomorph clients to streamline and enhance their business processes, thereby freeing up time to allow them to focus on analysis and making trading decisions.

The common theme of the examples is clear: reducing manual effort in terms of data capture and mining to arrive at a point where analysis can be done productively. In addition, the ease with which existing analysis can be enhanced and new analysis undertaken empowers users to do more in less time than was previously possible, thanks to the speed and flexibility of TimeScape Database technology with its innovative features such as SpreadSheet Inside and an intuitive, business-oriented query language, QL+.

Example 1

Requirement: To optimize a basket of assets such that their aggregated prices track a particular exchange-traded fund (ETF), minimizing tracking errors; plus the ability to store assets and weightings in the basket historically to optimize the fit. Take the most highly-correlated pairs and back-test a strategy based on mean reversion to buy/sell the pair if the price exceeds a certain statistical measure from the long-term average; calculate the PnL summary for a given trade notional and commission over a large range of historical data. Allow this to be done over multiple pairs in the basket to assess the PnL of each pair.

Solution: TimeScape allowed the data capture (from Bloomberg) to be streamlined and automated. A workbook was developed to address each of the issues, including basket optimization, correlation matrix and covariance matrix. The Analytics add-in framework was used to implement the strategy to calculate PnL. SpreadSheet Inside was used to extract and calculate the appropriate data to feed to the PnL function via QL+. All functionality is accessible either in Excel or any of the TimeScape APIs.

Implementation Time: 3 Days

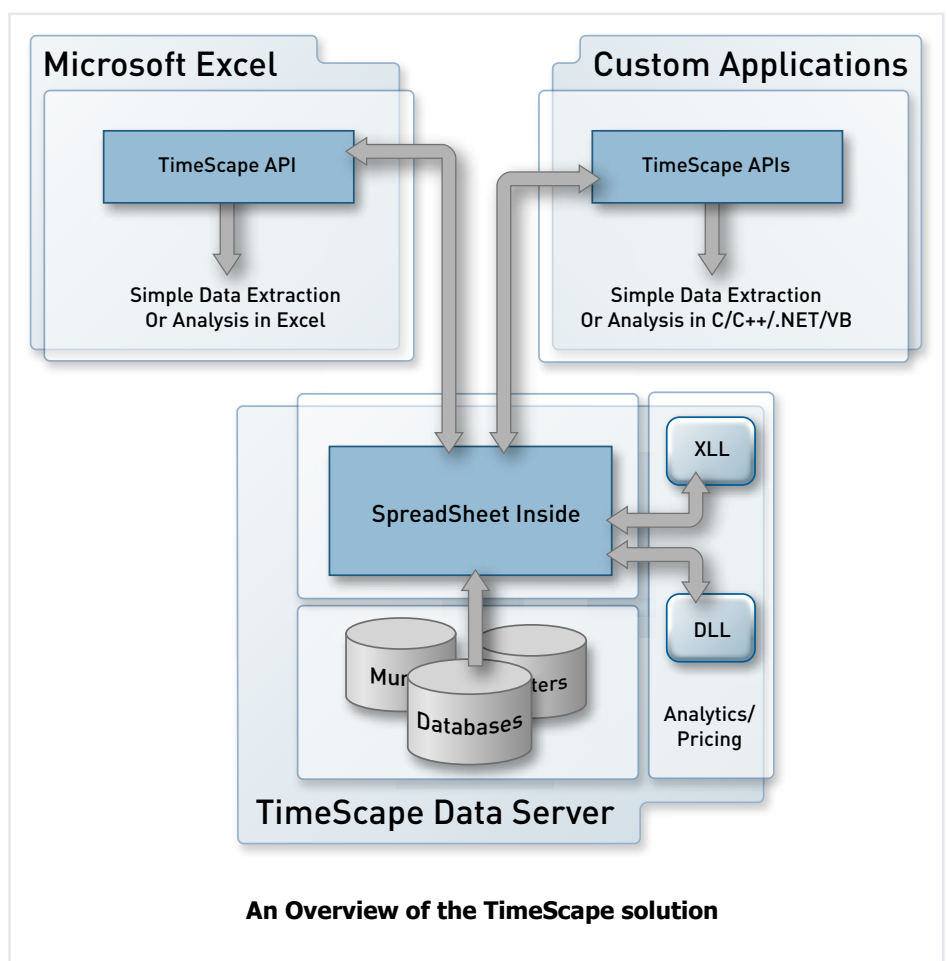
Example 2

Requirement: To screen large amounts of data (historical prices from all major US Equities and Indices), applying statistical and financial calculations together with historical, curve-fitting techniques to yield possible trading signals; back-testing strategies over historical market data to test the effectiveness of existing strategies and to test possible new ones in terms of PnL calculation.

Solution: TimeScope allowed the data capture and storage process to be streamlined and automated. The manual, Excel-based calculations were moved to SpreadSheet Inside which enabled vector-based, centralized, time-series extraction, calculation and analysis with Excel-like flexibility but TimeScope simplicity. This facilitated much larger data sets to be screened than before, with increased speed and robustness; just as importantly, the risk of error was drastically reduced. Additional functions/calculations for these analyses were added via the Analytics add-in framework, making such functions accessible natively throughout TimeScope.

Implementation Time: 2 Weeks.

"Xenomorph's SpreadSheet Inside technology has revolutionized the way strategies are implemented at the fund; for instance, a strategy that was running on an Excel worksheet with several hundred formulae and a lot of manually entered data has been replaced with a 2 rows and 7 columns SpreadSheet Inside. The manually intensive processing that took several minutes for each stock is now automated and takes a fraction of the time for the complete S&P500."



Example 3

Requirement: To screen large amounts of data (historical prices and financial indicators from all major Equities, Indices, ETFs, Commodities, Options etc.), applying a variable number of constraints on the query to quickly identify assets of trading interest. In addition, a global monitor report, showing price changes, both daily and intraday extremes, over multiple ranges of time-periods (e.g. 1-day, 5-day, 20-day, YTD, 1 Year, 5 Year etc.) for a variety of assets to assess prices now relative to the past.

Solution: TimeScape allowed the data capture (from Bloomberg) and storage process to be streamlined and automated. The original, manual screening process in Excel - consisting of multiple workbooks, DDE formulas to load data and Excel calculation formulas - was replaced by a single TimeScape query allowing multiple constraints over as large a universe as was required. The constraints can include any financial or statistical calculation of any asset class attribute (or multiple attributes via formulas) stored.

The global monitor report consisted of a single SpreadSheet Inside calculation for each asset, yielding all the required results, over any number of assets. Such a report can be generated through any TimeScape API, independent of Excel.

Implementation Time: 1 Week

Example 4

Requirement: To screen large amounts of data (historical prices, financial indicators and implied volatility for options etc.) over mainly US Equity assets. Reports of interest were: historical implied volatility for options; price and historical volatility of underlying asset; stock volatility around option expiry; and stock price variation around earnings announcement dates. Also, the ability to interpolate down through an at-the-money (ATM) implied volatility or dispersion surface (for any strike/expiry pair) historically, and looking at spreads and linear or nth order polynomial curve-fitting with option put and call smiles for a given expiry date and implied volatility date.

Solution: TimeScape allowed the data capture (from Bloomberg and/or Option Metrics) to be streamlined and automated. Most of the reports were produced using SpreadSheet Inside (SSI) calculations, which in this case take parameters to control execution, to make the reports available throughout TimeScape, i.e. centralized for multiple users. The ATM volatility surface interpolation is achieved via the Object Model add-in framework, allowing user-defined objects and methods to be exposed in native QL+ via any of the TimeScape APIs. SSI also allows these things to be done centrally with no coding required, releasing Excel to be used as a simple, visualization/simulation tool with no complex data extraction or formulas/macros.

Implementation Time: 1 Week.

"Timescape's flexible framework has enabled us to explore and test new investment strategies in a matter of minutes, rather than days, while increasing the effectiveness of our current strategies significantly."

MORE INFORMATION

Xenomorph delivers analytics and data management solutions to the financial markets. Our TimeScope technology leverages our clients' proprietary expertise, enabling them to analyse and manage more data with greater control and transparency.

Our focus is to make our clients more successful by closing the productivity gaps between high performance database technology, data management and end-user data analysis. Through unified and transparent access to data and data analysis, our clients achieve even higher levels of financial innovation, business process efficiency and regulatory compliance.

Trading, research, risk, product control, IT and back-office staff use Xenomorph's TimeScope data management platform at investment banks, hedge funds and asset management institutions across the world's main financial centres.

Established in 1995, Xenomorph has offices in London, New York and Singapore.

For more information about Xenomorph:

Web: www.xenomorph.com

Email: info@xenomorph.com

London: +44 (0)20 7614 8600

New York: +1-212-401-7894



XENOMORPH®