Informix

Informix MetaCube 4.2
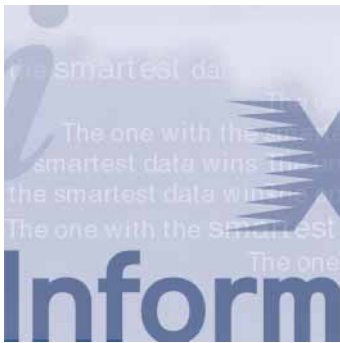Delivering the Most Flexible Business-Critical Decision Support Environments

The true measure of an effective decision-support solution is how easily and efficiently you can retrieve the data, and quickly transform that data into actionable information.

MetaCube®, Informix's on-line analytical processing (OLAP) solution, represents the leading edge in decision-support technology. MetaCube is a fully extensible business intelligence solution, optimized for smarter data access, analysis, and reporting. As an integral component of Informix® Decision Frontier™, MetaCube delivers the most complete, flexible, and customizable decision-support environment for data warehouses and data marts.

MetaCube Features

- **MetaCube Incremental Aggregator**
Only MetaCube provides a mechanism that incrementally, and automatically updates existing aggregates as information in the data warehouse is updated. This flexible approach enables you to quickly and intelligently build and use new aggregates as you need them, without ever writing custom programs.

- **MetaCube Warehouse Optimizer**
Working in conjunction with the MetaCube Aggregator, MetaCube Warehouse Optimizer automatically monitors database and third-party query-tool usage patterns and recommends the best aggregations in order to ensure the fastest possible performance.

The Open, Fully Extensible OLAP Solution

MetaCube provides data administrators and business users alike with easy, efficient, secure, and above all, smart access to data in a data warehouse or data mart—via a client/server interface or a full-functionality, Web-browser-based interface to deliver on the cost-of-ownership benefits of thin-client computing.

A sophisticated, yet easy-to-use business intelligence tool, MetaCube helps you drive smarter decisions out of your data quickly and incisively; it enables you to make sense of what is happening—or what has happened—within your business, to help bolster competitive advantage.

Implementing MetaCube for your data warehouse or data mart delivers key benefits, most significantly:

- MetaCube provides a smart view of the data within your data warehouse or data mart via reports and charts that match how you intuitively think about your business.
- MetaCube supports an open, multiplatform architecture that allows integration of third-party tools and analytical applications, and the development of custom applications. Your decision-support environment can be completely customized to meet your specific needs.

- MetaCube integrates the extended reach of the Web and ROLAP scalability together allowing you to perform the most advanced OLAP functions—drill anywhere, drag-and-drop query building, charting, bucketing, and more—within your standard Web-browser-based environment.
- MetaCube delivers high-performance data access in close to zero time. Through smarter data manipulation for improved speed and quality of analysis, answers are delivered more rapidly to expedite the creation of new business opportunities.
- MetaCube reduces database administration costs by making data warehouse and data mart maintenance easy—via a complete suite of advanced tools designed to simplify and automate optimization of small and very large data warehouses and data marts alike.

The Power of Insight

MetaCube Drives Smart Decisions with Smart Data

High-quality or "smart" information is critical to strategic decision making. The challenge is in having instant access to this smart information to know what you are doing right, learn what you should do, and discover what you are doing wrong.

- **MetaCube Sampler**
  Sampling is MetaCube's patent-pending performance feature that enables queries to return accurate answers from a small statistical sampling of the database. Sampling allows users to estimate results in a fraction of the time it would otherwise take to retrieve an answer.

- **MetaCube QueryBack**
  With MetaCube QueryBack you can submit queries that run in the background, immediately freeing your PC for other tasks. You can also easily develop recurring (daily, weekly, monthly, quarterly) reports, and submit long-running queries to run at night. You can even use MetaCube Scheduler to run queries at pre-specified dates and times.

- **MetaCube Secure Warehouse**
  MetaCube Secure Warehouse provides cell-level security for data warehouses and data marts. It includes mandatory filters for controlling row-level access; secure column and hierarchy-level access; mandatory QueryBack for controlling date and time of access; and secure PDQ priorities for controlling the levels of database resources available to each user.

- **MetaCube Warehouse Manager**
  An advanced administrative tool, MetaCube Warehouse Manager delivers sophisticated, graphical metadata administration that provides a logical, user-friendly way to manage the metadata that describes the data in your data warehouse.

- **Agents Administrator**
  With MetaCube's Agents Administrator you can schedule MetaCube Agents to update your warehouse on a daily, weekly, or monthly basis or at specified times. For example, you can schedule aggregate table updates and sample table updates to occur when usage is lowest.

MetaCube gives organizations insight to metrics they couldn't see before. It allows you to look at business areas like finance, sales, marketing, and customer service from all angles, and effectively transform those views into business-critical information that drives strategic decision making.

MetaCube allows you to compare information over any combination of business dimensions. For example, comparing sales over time and across geographies, you can ask:

- How do sales from last week compare to the same week a year ago?
- How does my sales pipeline vary by geography?
- Which customers are most profitable over time?
- Who are my top five customers and how have they changed over the last two years?

MetaCube also understands and represents the hierarchical nature of your dimensions, so you can easily drill anywhere. You can drill down for more detail, drill up for more summarized analyses, or drill across to compare values. From any dimension, MetaCube presents a high-level, well-rounded view of your data warehouse or data mart that matches how you intuitively think about your business.

With MetaCube, your users don't need to know any of the complex relational schemas, tables, columns, or joins. Instead, MetaCube simplifies data warehouse and data mart analytic searches by presenting the data in familiar business terms that users understand. Users can query various aspects of operational data and quickly slice-and-dice the information across several dimensions, adding, removing, or sampling to visualize data from different perspectives (see Figure 1).

Enterprise Reporting Made Easy
Seagate Info, the industry-leading enterprise reporting system by Seagate Software, is bundled and shipped with MetaCube to deliver a comprehensive decision-support solution. Seagate Info is natively integrated with MetaCube to offer users the flexibility to create, schedule, and distribute presentation-quality MetaCube reports securely throughout your enterprise. Seagate Info's report distribution infrastructure provides an opportunity for Web-distributed decision making, extending full benefits to remote users with access rights.

Total Extensibility

Creating Your Custom Solution
MetaCube is the only multidimensional analysis tool that allows you to extend its ROLAP capabilities to meet your unique business needs.

Using MetaCube's Software Developer Kit, or by writing directly to the published application programming interface (API), you can easily tailor the MetaCube analysis engine to fit your specific analytical requirements. For example, you can add custom mathematical calculations that compute commission rates, or build formulas to model complex financial derivatives.

Delivering Business Intelligence Solutions
MetaCube opens its analysis engine to third-party development environments through an OLE automation/DCOM-based interface, and to other data-query tools through an aggregate aware ODBC driver. You can use your favorite executive information system directly with the MetaCube engine, or build a front-end application using Excel or other OLE-compliant development tools—either way you'll be able to integrate, extend, and customize your decision-support environment quickly and easily.
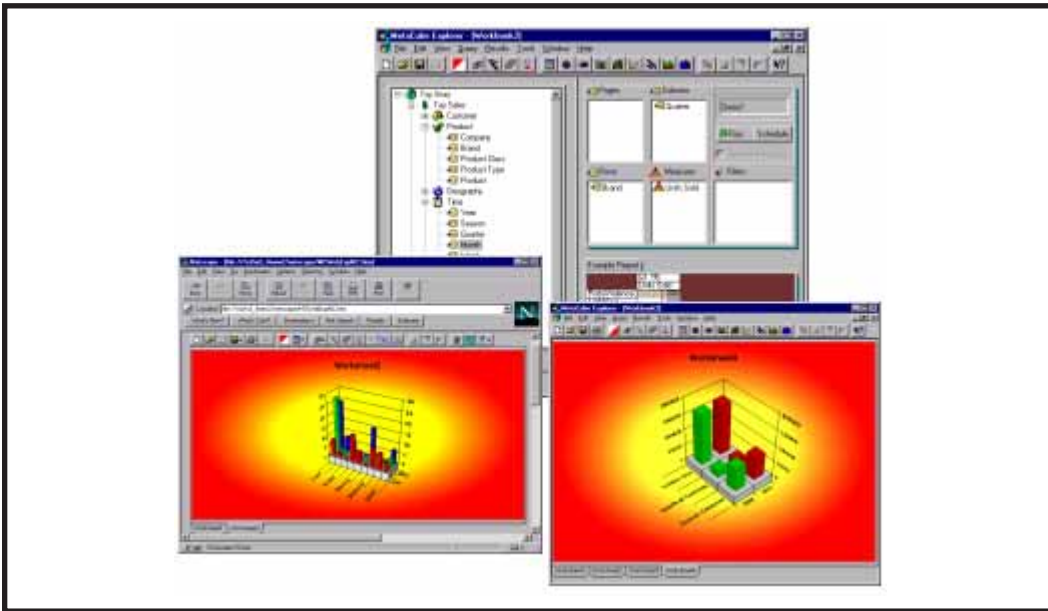
Figure 1: MetaCube Explorer—end-user query, reporting, and analysis.

Bringing the Web and OLAP Together in One Solution

MetaCube Web Explorer delivers the industry's only complete Web-based ROLAP interface. It delivers full functionality consistent with the client/server MetaCube Explorer, allowing you to perform every available ROLAP function directly from your Web browser. MetaCube Web Explorer eliminates the need to distribute, install, and maintain database connectivity middleware throughout the enterprise, thus delivering on the cost-of-ownership benefits of thin-client computing.

Performance and Scalability Without Walls

Maximize Your Query Performance

MetaCube delivers high-performance data access in close-to-zero time. Not only does it improve the speed at which data is accessed, but also the speed at which data can be manipulated in order to acquire the answers you need to create new business opportunities in less time.

MetaCube handles large volumes of data with ease, accommodates long and complex queries, supports hundreds of users concurrently, and still provides exceptional performance. It delivers power disguised by ease-of-use for business-critical decision support. MetaCube facilitates this process with:

- high-performance pivoting for faster calculations;
- instant drill for zooming in, drilling down on query results;
- auditing to track usage patterns by MetaCube and third-party query tools;
- cost/benefit based automatic aggregate recommendation to provide the most efficient balance between storage requirements and performance;
- automatic aggregate creation;
- incremental aggregation for updating aggregates quickly (eliminates rebuilding of aggregates); and,
- sample creation for rapid delivery of results based on smaller samples of data.

Through MetaCube's openness, this power can be extended to third-party OLAP tools allowing users to turbo charge their desktop OLAP solutions.

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- **MetaCube Explorer**
  MetaCube Explorer is a decision-support tool for end-user data access and analysis. MetaCube Explorer provides data warehouse and data mart access, reporting, charting, and application integration through a sophisticated, yet easy-to-use drag-and-drop interface. MetaCube Web Explorer brings all of MetaCube's analysis capabilities to your Intranet via integration with popular Web servers and Web browsers.

- **MetaCube Web Publisher**
  With MetaCube Web Publisher, users can schedule, generate, and publish ROLAP reports from any Web-enabled desktop. This capability lowers the overall deployment and user-support costs by reducing the number of common queries issued against your data warehouse or data mart. And, MetaCube Web Publisher boosts user productivity by eliminating the need to generate multiple copies of commonly used reports.

- **Alert Agent**
  MetaCube's Alert Agent extends data warehouse reporting to an even broader audience by "pushing" information out to users via e-mail when pre-defined conditions occur in the data warehouse or data mart. MetaCube's Alert Agent notifies users when trends start to emerge so that quick, decisive action may be taken.

MetaCube Web Explorer and MetaCube Web Publisher, combined with the Alert Agent, ensure your organization derives maximum value from your data warehousing investment—by enabling more sophisticated users to do in-depth analyses, end users to view and analyze reports, and decision makers to be notified of important trends and events when they occur. The ability to deliver value to the full spectrum of users across your enterprise translates into an optimal return on investment.

Reducing Administration Costs

Optimize Your Decision Support Environment

MetaCube's intuitive user interface makes administration and optimization of your decision-support environment easy. By automating certain administrative tasks—i.e., aggregate recommendation, automatic aggregate creation, and scheduling—DBAs can focus on other, more complex tasks such as scheduling updates, usage audits, metadata management, security, and user accessibility. Despite their complexity, MetaCube offers a graphical user interface and Wizards to facilitate administration—DBAs can perform these tasks with a mouse-click and without ever having to write code. As a result, they spend less time maintaining the environment and more time being more productive.

Summary

MetaCube provides data administrators and business users alike, with easy, efficient, secure, and above all, smart access to data in a data warehouse or data mart. A sophisticated, yet easy-to-use business intelligence environment, MetaCube helps you drive smarter decisions out of your data quickly and incisively.

By combining a comprehensive and extensible OLAP environment with the performance and scalability of a database engine, MetaCube helps you to fully maximize the return on your overall data warehousing investment.

- Drive smart decisions from smart data
- Deliver customizable business intelligence solutions
- Maximize your query performance
- Optimize your decision-support environment

About Informix Decision Frontier

Informix Decision Frontier is a complete, end-to-end technology solution for business-critical warehousing. It is the only specialized, high-end technology solution for delivering customized data warehouses and data marts. From start to finish, Decision Frontier provides all the "tools" required to build a flexible foundation that will expand and evolve as business requirements dictate. Decision Frontier makes the selection and construction of high-performance data warehouses and data marts of any size—from megabytes to terabytes—as simple in practice as it is attractive in theory. It is the "no-limits" technology solution for delivering smart data marts and data warehouses in less time.

About Informix

Informix Corporation, based in Menlo Park, California, provides innovative database solutions that assist the world's major corporations attain competitive advantage. Informix is widely recognized as the technology leader for corporate computing environments ranging from small workgroups to very large parallel processing applications. Informix's database server, application development tools, superior customer service, and strong partnerships enable the company to be at the forefront of major information technology solution areas including data warehousing, high-performance OLTP, and Web/e-commerce. For more information, contact the sales office nearest you or visit our Web site at http://www.informix.com.