

DATA PREPARATION WITH COGNOS® BUSINESS INTELLIGENCE



**COGNOS DECISIONSTREAM™:
UNIFY DATA FOR CONFIDENT
REPORTING AND ANALYSIS**

Cognos DecisionStream complements the Cognos end-to-end business intelligence solution by delivering a consistent data foundation for reporting and analysis across the enterprise.

Simplified reporting is a key objective of any data warehousing exercise. Cognos DecisionStream is an enterprise-scale data integration platform with the same objective. It delivers a data foundation ready for business reporting and analysis. Integrated with the full range of business intelligence (BI) capabilities offered by Cognos, DecisionStream delivers this data foundation in the shortest possible time.

POWERFUL AND EASY-TO-USE

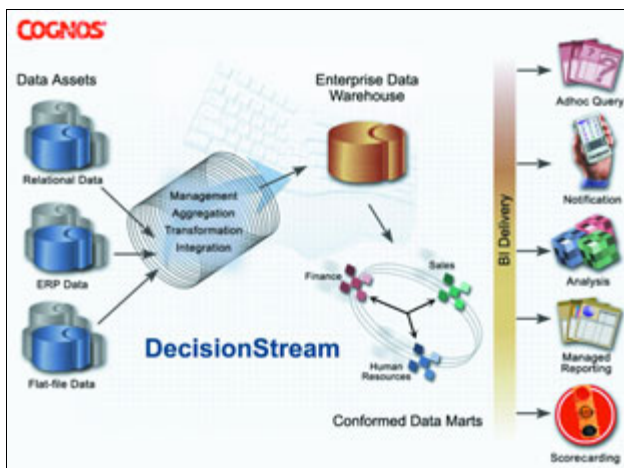
DecisionStream simplifies data extraction, transformation, and loading activities for IT departments. DecisionStream works from a single interface with 'live' graphical displays of the builds used to construct the data warehouse. This enables easy drill-through to display and modify properties. Automated wizards lead developers through the steps in creating a dimension or fact build, and the many transformation functions. IT activities are streamlined and supported through automatic dimensional management processes and a powerful engine supporting aggregation and merging.

THE DIMENSIONAL FRAMEWORK

Successful data warehousing projects are built on a dimensional framework. Dimensional design eliminates the most common and yet significant difficulties in the design, implementation, and maintenance of a data mart or data warehousing environment.

The use of shared or conformed dimensions across departmental, process, and business boundaries means that distributed data sources can be integrated into a consistent, enterprise-wide view. To do this, the software organizes the common descriptors into dimension tables and places the factual material into fact tables.

Central to the DecisionStream engine is a dimensional framework that builds and manages conformed subject-matter data marts as part of a complete enterprise data warehouse. DecisionStream gives users access to consistent business metrics, allowing more collaborative decision-making. It builds an end-to-end solution with Cognos BI services to deliver a common, consistent data view for faster, more confident decision-making.



DecisionStream's shared dimensional framework allows you to design a series of coordinated data marts.

Cognos DecisionStream simplifies the complete data integration process for IT. It works with data from any of the common relational formats, ERP data sources, flat file formats, or data accessible by the ODBC (open database connectivity) application protocol interface. As a result of DecisionStream's data integration, the software can deliver results in a variety of formats, such as a dimensional framework or relational tables, and users can move and copy data from one environment to another.

COGNOS®

THE NEXT LEVEL OF PERFORMANCE™

The dimensional framework benefits organizations by:

- Ensuring that data is structured and checked for integrity according to specific business dimensions, such as customer, time, and location, to support the way business users think.
- Enforcing a consistent view of corporate information across the enterprise data warehouse, because all data transformation jobs use the same dimensional framework.
- Providing a central location to update dimension definitions.
- Aggregating transactional data along dimensional hierarchies.
- Automatically managing many of the complex processes associated with warehouse dimension table creation and management. These include surrogate and dimension history management, support for slowly changing dimensions, and effective date time-stamping.

KEY FEATURES

Late arriving facts and dimensional history

DecisionStream has full automatic support for late arriving facts and the loading of dimensional history. With the late arriving facts feature, DecisionStream expands its support for slowly changing dimensions. This feature allows for the arrival of fact records that must have a surrogate assigned from an older dimension record. By automating these features, DecisionStream demonstrates its leadership in data integration platform tools to deliver complete business intelligence solutions.

A pipelined transformation engine

DecisionStream's transformation engine works within existing data architectures to transform high volumes of transactional data into a data foundation for BI. The transformation engine, or data pipeline, provides the ability to read in a single pass the data delivering multi-level aggregations, referential integrity, and metadata components. The result is the highest possible throughput with minimal hardware investments.

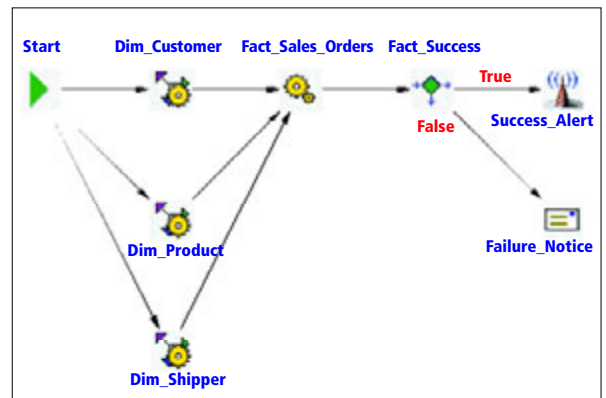
A sophisticated multi-developer environment

DecisionStream integrates with source control systems, promotes or shares components from environment to environment, and performs component impact analysis.

The integration with source control systems capability allows users to lock components while development occurs. Users can maintain multiple versions of a component or catalog, and determine where a specific component is being used. This functionality allows small companies to work with minimal source code controls. It allows larger organizations to implement stringent development guidelines. All of these functions are completed with DecisionStream's easy-to-use, graphical interface.

Crafting an event process

There are many events in the data integration phase. These include the delivery of the target tables, calls to existing business rule modules, report launches, email notices, and rebuilding indexes for the database. These events are all designed in a drag-and-drop visual palette to produce a coordinated set of commands called a JobStream. A JobStream can multi-task events and allow commands to be executed in a parallel or serial manner. Conditional events control the processing path based on situations such as the existence of rejected records, a specific day of the week, or simply errors encountered during the process.



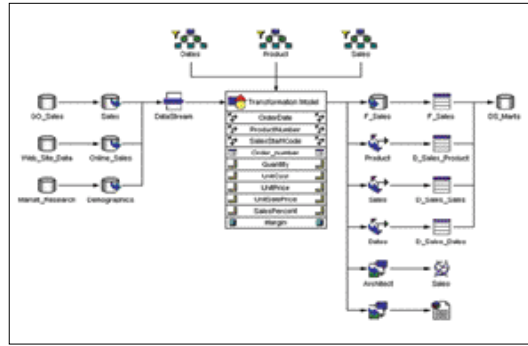
DecisionStream's unique JobStream window enables visually scheduling and controlling all steps of the ETL process.

Prototyping and deployment

DecisionStream's graphical design environment lets users prototype warehousing solutions and deploy them quickly. It provides:

- Visual reports for JobStream actions, build processes, source and target mappings, and star joins of fact and dimension tables in a star schema.

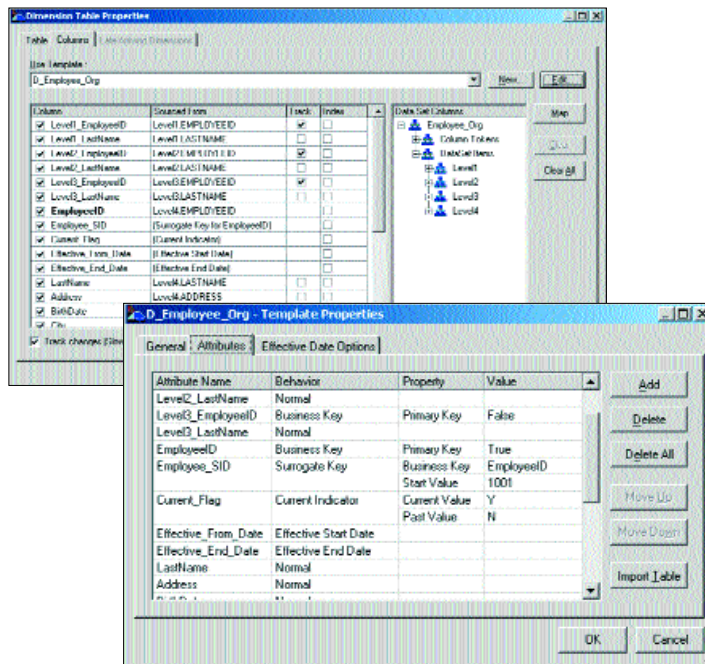
- A reference explorer for prototyping and validating business rules in the dimensional framework.
- An integrated SQL browser for interactively editing and testing queries.
- The ability to package components and easily move them from environment to environment.
- The ability to test functions and scripts as they are developed in the same environment.
- Automatic generation of the data definition language (DDL) for creating tables and indexes.



DecisionStream's graphical design environment displays the data flows of a build and allows for direct access to build object properties, enabling rapid prototyping and deployment.

Full integration with Cognos Business Intelligence

DecisionStream is a fully integrated component of Cognos' industry-leading, end-to-end BI solution. With its ability to transform and load data into data marts and deploy business models and reports, DecisionStream makes BI projects quick to deploy. As part of the comprehensive BI solution from Cognos, DecisionStream builds default analysis PowerPlay® models (PowerCubes) from the dimensional framework and coordinates PowerPlay Transformer jobs to create and refresh these PowerCube data sources. Also from the dimensional framework, DecisionStream publishes metadata to Cognos Framework Manager, the metadata environment for Cognos ReportNet™.



DecisionStream's fully automated dimensional management features include checking attributes for slowly changing attributes, assigning surrogates to business keys, and automated attributes such as effective dates and current indicators.

Automated dimensional management

DecisionStream's unique dimensional framework automates the tasks required to deliver a dimensional model, without the need for coding. Specific tasks or areas automated include:

- Generating and managing surrogate keys and fact tables
- Slowly changing dimensions
- The arrival of late arriving facts
- The process of loading dimensional history

COGNOS BUSINESS INTELLIGENCE: BI FOR THE INTELLIGENT ENTERPRISE

Cognos business intelligence (BI) delivers the information framework that lets anyone in your organization understand your corporate performance—from any angle and to any depth. It lets you communicate the results—whether business as usual or breakthrough insight. It can even notify you if a critical event occurs, wherever you may be.

Build a solution using Cognos components or purchase a pre-built solution. Either way, ease of use and deployment, combined with user self-service, means you're up and running quickly and seeing ROI faster than you imagined. All Cognos components feature:

- **Centralized security:** A single LDAP-based component delivers seamless, secure access for all users inside and outside the firewall in conjunction with your own user authentication and security systems. IT can manage user profiles and classes for all Cognos components through centralized SSL security.
- **Zero-footprint Web deployment:** Users access information in pure html using their Web browser, making Java applets or proprietary plug-ins unnecessary. Share strategic information over a secure extranet with partners, suppliers, customers, and a mobile sales force with the bandwidth-saving benefit of a stateless environment.
- **Scalability:** Cognos BI has been tested and proven scalable to tens of thousands of users through load balancing and a distributed architecture supporting Unix and Windows.
- **Central administration:** Manage all BI applications from one central console, or distribute management among departments or locations. Control request processing at the server, application, PowerCube, and report level. Monitor throughput across multiple servers at a glance and fine-tune multi-server environments. The platform-independent, remote Java administrator program lets you administer any server from any machine.
- **Shared metadata:** Create and manage all BI metadata and business rules in a single metadata model based on shared dimensions. This model provides a consistent enterprise data view with minimum development effort. The SQL-based environment ensures the metadata is optimized for each BI application.
- **Extensible BI:** Using our open API based on a web services architecture, IT can integrate BI directly into third party portals or specialized web applications. The software's shared data foundation and integrated,

modular approach means it can be easily implemented in steps across the entire enterprise. It can grow as the business grows, while reusing existing technology investments to save on costs.

- **Local language, local currency:** Localized product versions let users work in their own language and view figures in their own currency, using regional settings—all from a single application server.

TECHNICAL SPECIFICATIONS

- **Server Platforms:** HP-UX, Sun SPARC Solaris, IBM AIX, Compaq Tru64 UNIX, Windows NT, or Windows 2000.
- **Designer Platforms:** Windows 2000, Windows NT, or Windows XP.
- **Database Source / Target Support:** Oracle, Informix, Sybase, MS SQL Server, DB2, Teradata, ODBC, or Flat Files.
- **Other Source Support:** SAP R/3 (using the DecisionStream Connector for SAP R/3).
- **Other Target Support:** Cognos PowerPlay, Impromptu, or Architect, or other OLAP servers such as Microsoft SQL Server Analysis Services.

System Requirements

To install and use DecisionStream for Windows, computers should have the following minimum configuration:

- RAM 128 megabytes or above.
- A hard disk with at least 55 megabytes of free disk space.

For high-volume jobs involving many dimensions and aggregation, we recommend a high-end UNIX machine with at least two gigabytes of memory.

WHY COGNOS?

Only Cognos delivers a complete range of integrated, scalable software for corporate performance management. Cognos products let organizations drive performance with enterprise planning and budgeting, monitor it with scorecarding, and understand it with business intelligence reporting and analysis. Founded in 1969, Cognos now serves more than 22,000 customers in over 135 countries.



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Stock NO.: 034962
(09/04)

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