

Welcome to

# The Diver Solution™

A Personal Approach to Information Delivery



- Collection
- Assembly
- Delivery

# THE DIVER SOLUTION

The Diver Solution delivers all of the capabilities possible for collecting, assembling, and delivering your data. Three simple modules make up The Diver Solution:

1. **Collection:** Gathers data from disparate sources
2. **Assembly:** Organizes data into Models and applies business rules
3. **Delivery:** Presents information to a broad range of end-users

Whether users are accessing information through a browser window, via a LAN/VPN, or they need to access details for analysis, or simply view a report, all needs are met.

With The Diver Solution you can:

- Improve your organization's ability to make timelier and more accurate decisions.
- Obtain all technology capabilities without restriction or high server-based price tags.
- Expand seamlessly as your needs evolve.
- Provide information that is tailored to the different groups of users who access the system.

This document provides an overview of The Diver Solution's components, their capabilities, and the benefits you will receive from their use.

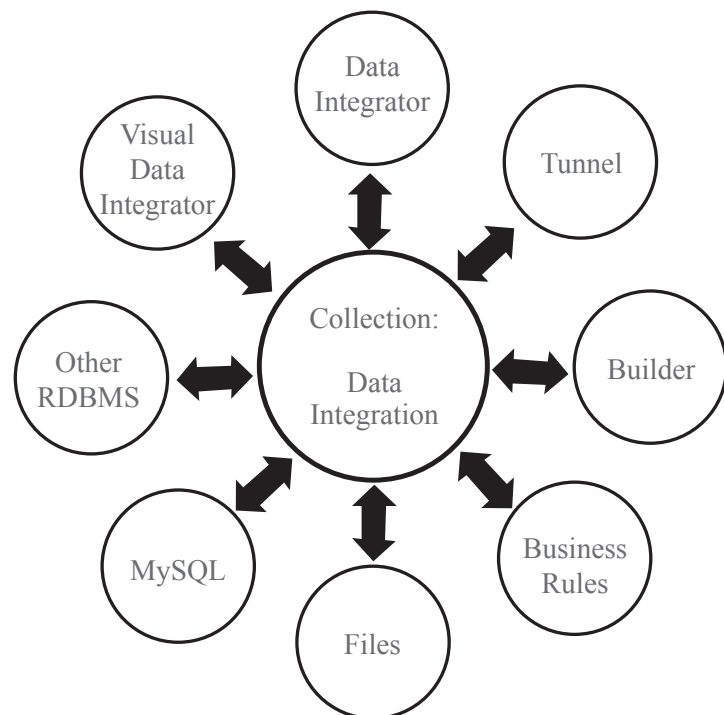
## COLLECTION

### Visual Data Integrator

Visual Data Integrator (VDI) is a Java graphical interface that works with the Data Integrator to prepare data to be used in Dimensional Insight's "Builder." It alleviates the need of writing most scripts, and allows administrators to seamlessly manipulate and integrate flat or relational files from disparate sources. Once the production environment is defined and scheduled, programs created by VDI can be run in Data Integrator to extract data from multiple data sources, run the calculations and processes, and transport the cleansed data into the Builder.

#### Benefits

- There is no programming involved for transforming the data. The actual scripting is all done "behind the scenes."
- Input files, scripts, processes, and output files appear as objects on the screen, allowing an abstract concept to be seen as a concrete data flow with its underlying relationships.
- VDI combines each piece of data (text files, ODBC, relational database files, or excel spreadsheets) in different ways, performing the necessary calculations and lookups.
- Written in Java, VDI is built for ease of cross-platform portability.



## Data Integrator

Data Integrator is an object-oriented ETL (Extraction, Transformation and Loading) programming environment that manipulates and integrates flat files and/or relational database queries from disparate sources. It is an iSeries, Windows, or Unix/Linux based application that allows for element selection for Builder input files, joins for table/file integration, and creation of new files for the Builder. Once the production environment is defined and scheduled, Data Integrator processes will automatically extract data from multiple data sources, run the calculations, filters, and transformations, and transport the cleansed data into the Builder. Also, the Data Integrator can randomly generate streams of data that can be loaded into major relational databases such as Oracle or MS SQL Server for database design testing and performance benchmarking.

### Benefits

- Extracts information from various database tables.
- Requires only an ODBC driver to go against different types of relational databases or files.
- Integrates scripts in batch files as part of data update production systems.
- Generates fictitious data to be used in design/testing.
- Performs joins, table lookups, and row and column selections.
- Cleanses and transforms data between the source databases and other Dimensional Insight products.

## ASSEMBLY

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### Detail Builder

Detail Builder integrates the detailed rows of original data as a Dimension, making access and navigation seamless and simple. Users do not need to interact with your enterprise database directly, or any other applications, in order for the detail information to be available. Detail Builder makes it possible to access detailed information, such as complete invoices, patient records, shipping manifests, purchase orders, items in a General Ledger, etc. Until now, this granularity was very difficult or impossible to retrieve due to the size of the source data files. As always, there are no pre-defined hierarchies or “drill paths” required.

### Benefits

- Users can instantly see the underlying detail from the source data in a Diver interface.
- Decisions can be made based on the deepest data analysis possible. (i.e. line-item transaction patterns and claim detail)
- The Detail Model contains all of your Dimensions, Information Fields, Summary Fields, and references to your original data for day-to-day analysis.
- The information from the rows of your source data is referenced directly within the Detail Model for instant access.

## Analyst

Analyst allows users to define business rules, metrics and thresholds that trigger reports to be delivered, via email, to appropriate individuals. The type of report and the recipients to which they are delivered is driven entirely by the information contained within the report. It enables administrators to build applications using the information contained in the Data Models as the database engine.

### Benefits

- Offers increased options that enable a programmer to build custom applications that automatically analyze updated Data Models, create custom markers, and push them out to users via email.
- Allows administrators to compare different Data Models and perform calculations between them to create sophisticated analysis tools and reports.
- Uncovers the relationships between data sets that affect your business on a daily basis.
- Provides the ability to write custom conditional logic outside of Diver, allowing for conditional statements across multiple Models, which enables a higher level and complexity of exception reporting.
- Provides the ability to manipulate data externally, and populate the data into relational databases or other applications.

## Model Splitter

The Model Splitter accepts one or a number of DI Models as input and creates smaller Models for disconnected users. For example, this allows a site to build one large Model for total sales, and then use the Model Splitter to divide this large Model into a number of smaller Models - one for each salesperson - without having to go back to the source input data. This makes the data portable and useful even when users are not connected.

### Benefits

- Can create multiple Models based on data from a large Model.
- Prepares a report file listing the Models that have been built, the Dimension values they contain, and the Information Fields or Dimension values used for generating the output Model name, which facilitates distribution of Models.
- When corporate information is updated, ModelSplitter automatically produces the targeted "mini-Models" for your disconnected users, which eases the burden on administration.
- IT professionals can provide users with access to the specific data they need, when they need it, no matter where they are. Users receive smaller Models via e-mail, diskette, CD-ROM, or a download process to store on their laptops and PCs. This provides remote, disconnected use for people who are traveling or do not have an Internet connection.

## Builder

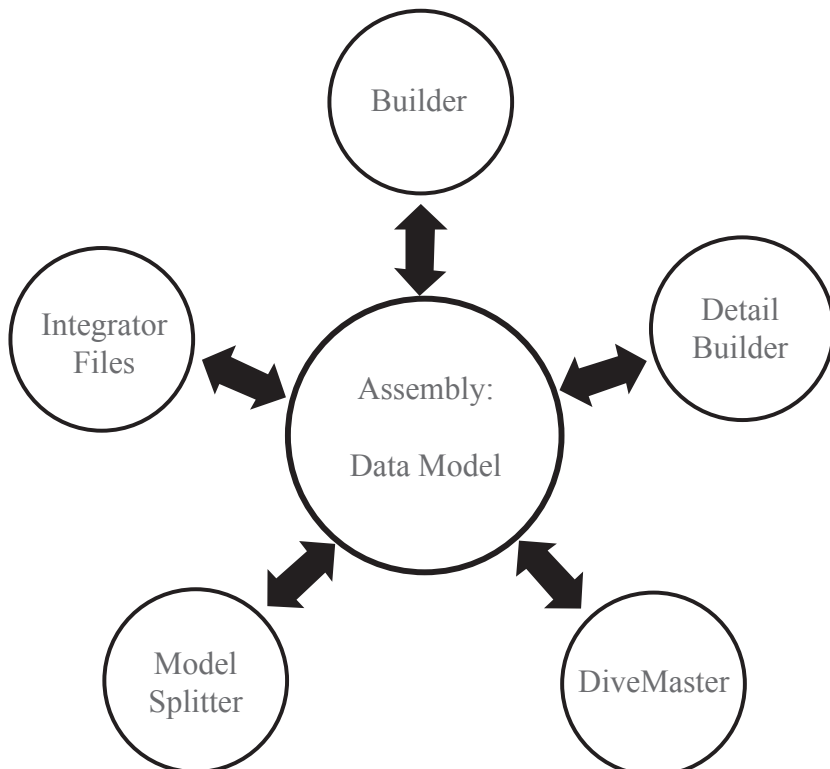
Builder creates multi-Dimensional Models from flat files and/or relational database queries, which are then accessed by Dimensional Insight client software. The Builder accepts Data Integrator output files, ODBC compliant data feeds, as well as any extract from a data warehouse, relational database or legacy system. Using DI's patented cross-indexing technology, the Builder summarizes, indexes and preprocesses the input data stream into a multidimensional data structure that is optimized for query, analysis, and reporting purposes.

### Benefits

- Runs native on the server.
- Builds Models with a unique database structure that allows for fast access Performs joins, table lookups, and row and column selections.
- Allows administrators to specify "Dimensions", or sort keys.
- Processes data overnight so that no user is kept waiting.

## DiveMaster

DiveMaster is a Microsoft Windows application, which allows for the creation of a single virtual single Model from multiple Models, use of lookup tables, and use of cache files. It provides additional control and capabilities for both manipulation and summarization of data marts, once they are built. The following are the two primary functions of the DiveMaster: (1) merging multiple data marts into one cohesive view for consolidation purposes (i.e. many customers make data marts on a monthly basis and then use the DiveMaster to view the months as a single quarter or a single year) and (2) attaching lookup tables to enhance data within existing data marts (i.e. converting product codes to full product names via a lookup table).



### Benefits

- Reduces the number of times that Models need to be rebuilt
- Uses cache, which stores data to speed performance.
- Provides an interface to help customize a Model to users' needs .
- Informs the client software how the Model should be presented to the user.
- Provides the capability to add Categories to the Console.
- Connects Models to lookup tables.

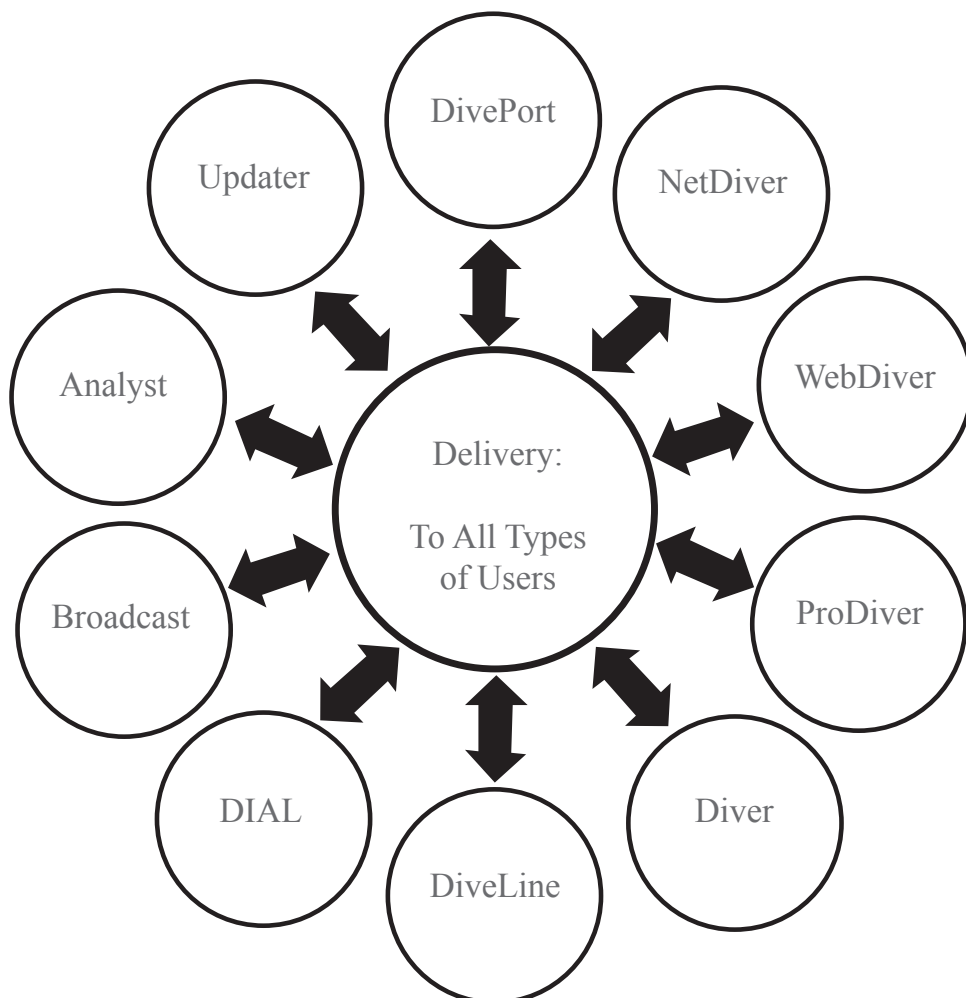
# DELIVERY - NEW COMPONENTS

## DivePort

This portal technology delivers information and access to analytical tools, such as NetDiver, WebDiver, and ProDiver, within one cohesive web-based browser interface. It provides a web-based, executive view of multiple Key Performance Indicators for fast/proactive decisions. DivePort is fully integrated to underlying information sources, providing a methodology that balances the need for rapid assimilation of key metrics by senior executives, with quick and intelligent access to lower level data by supporting analytical staff.

## Benefits

- DivePort leverages the development of Data Models, DivePlans, DiveBooks, and Markers to all types of users from a browser-based interface.
- External business partners can gain access to the information they need within a customized environment that contains just the information that is pertinent to each individual user.
- Each user ID can be customized to present the data and reports that are relevant to each individual user. DivePort uses the security settings within DiveLine.



## DiveLine

DiveLine is a daemon server (Service in Windows NT parlance) that accepts connections from clients, and communicates with them by means of a proprietary protocol known as the Dimensional Insight Dive Protocol (DIDP). It is much like telnet, SMTP or FTP—clients connect to the DiveLine server via TCP/IP, communicate with it, and maintain an open connection until they are finished. This server provides the server-side link to Data Models for all DI client interfaces.

### Benefits

- Enables flexible, scalable, centralized administration to diverse groups of users who access company data.
- All types of users, whether they are internal, remote, or external, are served secure business information that is customized to their needs, with a consistent look and feel for unified understanding.
- Allows you to store the Data Models, and pre-defined reports and views, on multiple machines and disk drives. DiveLine's logic map maintains the relationships no matter where the pieces are stored.
- Administrators make changes centrally. All reports or views that reference the change are instantly updated with the new information.
- Administrators maintain the create/modify/delete functionality for corporate reports and pre-defined views, while users still have the ability to create personal views of their own information.
- With DiveLine acting as a query manager, only the necessary information is sent to the DI clients, reducing the network traffic and resulting in faster response, more efficient use of memory, bandwidth, and disk space.

## Broadcast

Broadcast is a server-based engine that provides automated delivery of Diver markers via email. The emails are generated automatically based on the data contained in the Models. As these Models are updated, the resulting reports and tabular views are automatically broadcast in an email, or as a .pdf, .html, or .xls email attachment.

### Benefits

- Provides exception reporting that can be accomplished within the Diver application.
- Information delivery is automated and minimum syntax is required to broadcast emails.
- Immediately gets information in the hands of those who need it.
- Filters information to the individual or group level.

## DIAL - Dimensional Insight Access Language

DIAL (Dimensional Insight Access Language) enables external programs, such as Broadcast and DivePort to interface with DiveLine. It is a high-level programming language designed to process, analyze, and distribute information contained in Dimensional Insight Models. This ensures that all data accessed by users through external programs will maintain your security and access privilege settings. DIAL also enables the sending of broadcast emails via your SMTP server to be automated based on DiveLine settings, and customized application development, such as portals, html-based applications, and autoanalysis applications. DIAL is also the engine that generates graphical views for the browser-based interfaces.

### Benefits

- Provides an open environment for custom application development, by both DI and the customer.
- Architecture allows a variety of tools to gain access to information contained in Data Models (such as our latest client and analytical applications - Broadcast, DivePort, and NetDiver) .
- When executed, DIAL programs can find and flag exceptional data values, sending the results out as email or saved reports.
- DIAL can run and save the output of Markers to graphics files for use in Dashboards and Portals.

## NetDiver

A zero-footprint browser interface that allows general business users to access and analyze their data, as well as create .pdf views for printing and sharing. This interface is available via the DivePort portlet pages. People with a basic analytical need are appropriate users for this interface.

### Benefits

- Zero-footprint implementation of Diver – requires no maintenance on users' machines.
- Presents information entirely within the browser – no need to open a separate application.
- Makes delivering analytics to external users, such as customers and partners, easy and seamless.

## Updater

Updater is an installed application for managing data on a client machine for remote computing. Updates can include Models, Markers, DivePlans, Map Information, or any other application. Target uses include: (1) coordinating sales groups before they leave the office to ensure they all have up-to-date content, (2) updating groups of users that are dependent on Map files, and (3) making sure that all users have the latest version of DI software.

### Benefits

- Users and groups of users can be kept up to date from the same source and view available updates on a DiveLine Server, and only the updates needed will be displayed.
- Administrators are able to define packages of files for downloading and make those packages available to users and groups.

# CLIENT INTERFACES

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## Diver

Diver is a full feature client interface designed for power users, developers, and system administrators to manipulate information contained in Models. It is configured to work within either client server or file server environments. This allows data to be centralized, easily updated, and securely distributed to all types of users via the Internet, Intranet, LAN, or physical media. Through a simple point-and-click interface, Diver gives users immediate answers to business questions. It's often difficult to see trends in columns of numbers, but Diver offers interactive graphics and maps that make significant changes stand out, and then lets users explore the detail behind the summary data. In all Diver reports and graphs, every data-point is "live", meaning users may click on the actual table contents, pie chart, bar graph, or report line to "dive" into more detailed levels of information.

### Benefits

- Provides easy, intuitive access, via the Internet or Intranet, to all Modeled information with point and click speed.
- Enables users to automate immediate access to key business performance indicators with which they manage and track their business.
- Delivers "live" reports, tabular, multi-tabular and cross-tabular spreadsheets, graphs, charts, maps, and calendars.
- Allows users to analyze the details behind summary data.

## WebDiver

WebDiver is a JAVA implementation of Diver, which enables remote and browser-based users to access the same data and information. WebDiver provides visualization, analysis and reporting capability in a thin client environment. It resides on the web server, and acts as a bridge between a Java enabled web browser on the client workstation, and the data residing in Models and other data sources on the server or elsewhere on the corporate network. WebDiver uses a similar interface design as Diver, so users accustomed to one product may switch seamlessly to the other. Because WebDiver is a JAVA applet served via the Web, it does not require constant maintenance of client machines, and also allows a user of non-Windows operating systems access the power of Diver's analysis engine, requiring only a TCP/IP connection. Supported Browsers include Netscape Communicator version 4.06 and greater, and Microsoft Internet Explorer version 4 and greater under Windows 95, 98, and NT.

### Benefits

- Offers the same functionality and interface design as Diver.
- Provides visualization, analysis and reporting capability in a thin client environment.
- Features a Java applet that allows users dynamic access to Models stored on a remote server.

# PERFORMANCE BENCHMARKS

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The performance of your data is based on the volume and complexity of your unique data sets, and the hardware and networking systems installed. Dimensional Insight can deliver a benchmarking study to determine the performance characteristics and proper machine/network sizing needs for your implementation. To arrange for this study, please contact your DI representative.

Many companies have turned to Dimensional Insight to solve performance issues with reporting and analyzing large, complex data sets. Here are a few examples of some of these implementations:

- One of the world's largest dairy cooperatives maintains a system that provides data access to 500-600 users (both LAN and WAN) and builds more than 900 data Models from over 200 million source records encompassing 350,000 unique items sold.

Environment: Windows NT Terminal Server on IBM Netfinity (3x P3 Xeon)

Memory: 2.5GB RAM

Records: over 200MM total (Largest Models have 8MM input)

Build Time: Under 1 hour for largest Model. (Entire build with redundant system update fits within nightly production window.)

- The world's largest wine & spirits brand supplier tracks millions of unique product sales daily through its distributor network.

Environment: Red Hat Linux, 2.4 Ghz dual processor

Memory: 4GB RAM

Records: 15MM

Build Time: 2 hours

- One of the nation's largest distributors of wine & spirits analyzes over 100 million rows of data daily from the sales of products to tens of thousands of customers in a multi-state region.

Environment: Red Hat Linux, 10 processors via 2+Ghz Intel machines

Memory: 2GB RAM

Records: Over 100MM

Build Time: Less than 8 hours

# USER LEVELS

## Casual

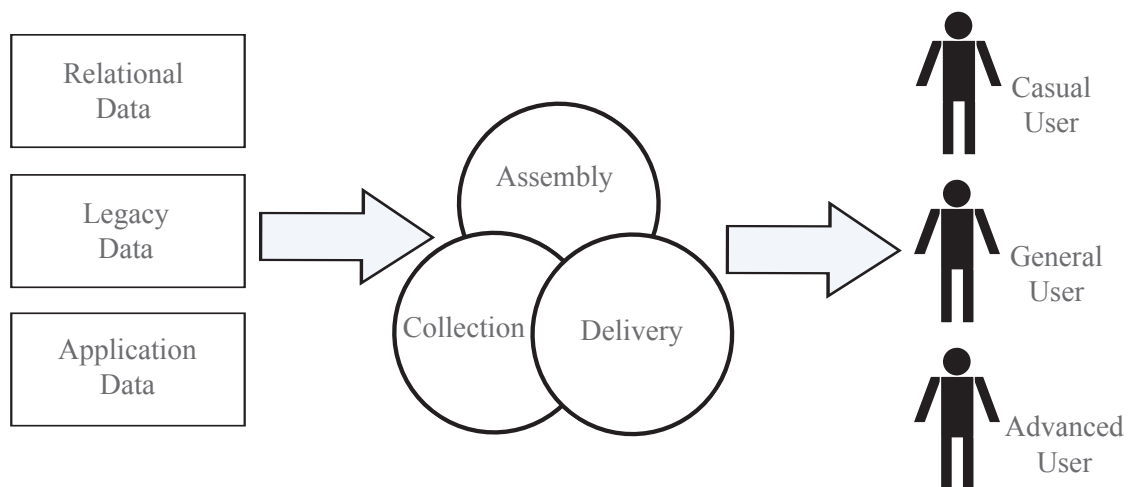
High need for report access, no analytical need - Many remote and external users, such as your sales staff, customers, suppliers and business partners, require only a minimal amount of functionality. They want to see the report and be able to print it or download the contents into MS-Excel. Reports are presented to users in an organized format for easy access. For a very low cost, these users' needs are met with the Casual functionality level.

## General

High need for access to reports, moderate to low need for analytical tools - Typical business users require access to reports and graphs with basic "diving" or analytical capabilities. This level of functionality is delivered via the Web and provides access to reports and charts with "diving" capability either within DivePort or via NetDiver - DI's "zero-footprint" Web-based analysis client.

## Advanced

High need for analytical tool-set - "Power users" and administrative/developer users who require the full power of the Diver Solution's analytical capabilities. Advanced Users are provided with access to our powerful analytical interface, ProDiver, and are also capable of developing and administering the DivePort portal interface, and receive all of the features and functionality possible within the Diver Solution.



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