

QCS™ BUSINESS INTELLIGENCE MANAGER™ PRODUCT OVERVIEW

The QCS Business Intelligence Manager (QCS BIM) presents information from the databases in your current business process software to executives, administrative staffs, and operational managers in dashboard instruments and reports.

FOUNDATION

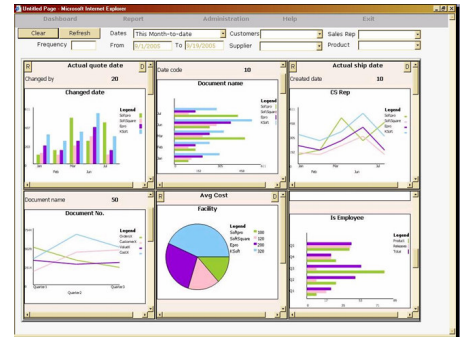
It is vital that you be able to gain the benefits of Business Intelligence by using the software and operational business processes that you already have in place. QCS BIM achieves this with three major aspects of its design.

- **Data Independence:** QCS BIM works with any of a wide variety of business applications and databases – including yours. It does NOT require that you change the software you are using today to run your business. It does NOT require any change to the structure and content of your existing databases. The QCS BIM works with Microsoft® SQL Server® and also with many other database systems. It only reads, never modifies your databases and requires no change or replacement whatsoever of your current software.
- **Security:** QCS BIM contains a powerful information security module that works with and complements the security you already have with Microsoft Windows®. With this security you can restrict access to specific dashboard instruments and specific reports to Classes and Groups of users.
 - Classes of users can be defined as Customers, Suppliers, Sales Reps, etc. Users in a Class can only see their own data. This allows you to make carefully controlled information accessible to authorized people in the organizations with which you do business.
 - Groups of users can be defined to provide more specific limitations of access. For example, you restrict access to instruments and reports that show margin or profit information so that only certain people within your organization can see that very sensitive business information.
- **Multi-Language Support:** QCS BIM allows users to choose whether they want use the program in Thai or English. And they can change their choice at any time. In addition, the program can be extended to additional languages with no programming required. For example, you may need to allow users in your company or among your suppliers or customers to work in Japanese, Cantonese, Mandarin, Malaysian, German, French, etc.

USER INTERFACE

QCS BIM provides two ways for users to obtain the business intelligence from your production software systems:

- **Dashboard s,** consisting of multiple Instruments , each of which shows one important aspect of your business in a combination of graphs and tabular data.
- **Report Selector,** provides a simple, non-technical step-by-step approach that lets users select and customize reports on-the-fly to meet their needs of the moment.



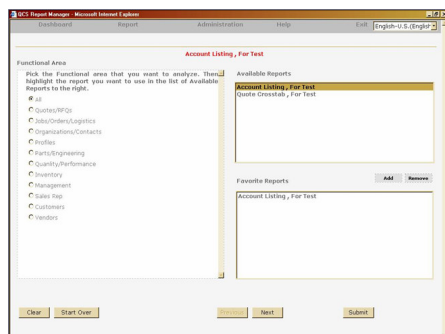
DASHBOARDS

A Dashboard is a set of up to six graphs or tabular data, each presenting one of the important aspects of your business operation. You can:

- Have a dashboard constructed to your specific needs, using your own live production data, with no change to your production software.
- Have multiple dashboards for more insights into your business, or for use by different groups of people in your organization.
- Select which dashboard you want to use on-the-fly anytime you are running QCS BIM.
- Have instruments that display graph, tables of data, or both; when you have both, you scroll down as necessary to view all of the versions of the data.
- Select different views of the Business Intelligence anytime you want. You can select: A date range, a specific customer, a specific supplier, or a specific sales rep (At installation time, you can choose a different set of selection options if you wish).
- Refresh your dashboard display whenever you want, to be sure you are looking at up-to-the minute information. And you can have the program automatically refresh the data at regular intervals (e.g.: every 15 minutes).
- From each dashboard instrument, you can “drill down” to more detailed information by clicking a button. Doing so produces a report that gives you detailed information that went into the graph or table in the instrument. For example, if you are looking at Shipments this week-to-date to your customer, Acme Corporation, the drill-down report will show you details of each specific shipment in that time period.

REPORT SELECTOR

In addition to the reports that you can see by drilling down from a dashboard, you can also have many other reports. To access



the complete set of reports – drilldown and other – you use the QCS BIM Report Selector. The Report Selector takes you through the following steps:

1. Pick the report you want to run.
2. Decide how you want to limit the report such as by customer, by product, by sales rep, by supplier, or any other selection option that has been established for that report.
3. Decide which columns of data you want to include or omit in the report.
4. Decide how you want to limit the report by a date range.
5. Decide how you want the report sorted and what subtotals and grand totals you want to see.
6. Submit the report to be printed or displayed to you.

ADMINISTRATION

To make QCS BIM deliver the business intelligence you need from your business process software's database, there are two steps for each dashboard instrument or report: Create SQL objects (queries, views, stored procedures) that extract the right data from the right tables; and register those objects in QCS BIM, relating them to the specific report or dashboard instrument that is to use them. The summary list of most frequently-used administration features is:

- **Glossary Administration:** Define and maintain a standard glossary of terms related to your data so that users always see the same user-friendly term, even if the data names in the database and SQL objects are not user-friendly or consistent.
- **Dashboard Registration:** Define a dashboard, its instruments, and the SQL objects for each instrument
- **Report Registration:** Define a report, allowable selection and sorting criteria, and the SQL objects that feed it

GLOSSARY ADMINISTRATION

The QCS BIM Glossary manages the words and phrases seen by users of QCS BIM. There are two categories:

- **QCS terminology:** All of the labels, text, and messages built into QCS BIM.

- **Your company's terminology:** The set of common, consistent terms you want users to see throughout QCS BIM.

During the implementation process, and thereafter as needed, you establish a glossary of terms. For example, you may want to establish a set of terms for the dates associated with a job: Booked Date, Start Date, QC Date, Planned Ship Date, and Actual Ship Date.

Then, all dashboard instruments and reports can use the same standard terminology. This significantly improves ease of use, and helps eliminate confusion.

Another important advantage of the glossary is that it makes it very easy and straightforward to provide multi-language support. For each of the terms you use in your own primary language, it is a simple matter of having a person fluent in both your language and an additional language provide the translation. We provide a tool to extract your terminology in a tabular list so that the translator can simply type the equivalent terms beside the original. Then those terms are imported into QCS BIM.

DASHBOARD REGISTRATION

The software professional who sets up dashboards, uses the Dashboard Registration tool to define the details of each dashboard and each instrument in it. That person can be either a member of the Reseller's implementation team, or can be a member of your own IT staff who has skills in writing SQL objects and an understanding of your business process software's database structure and contents.

REPORT REGISTRATION

The process of producing reports for the QCS BIM is this:

1. Define the report using Microsoft Reporting Services (available with SQL Server 2005). In doing so, make it a simple basic report with no special selection or sorting applied to it.
2. Create the SQL objects needed to feed that report.
3. Consider all of the "reasonable" selection and sorting criteria that users might need.
4. Register the report in QCS BIM, telling it which Reporting Services report to run, what SQL objects it needs, what selection and sorting criteria can be used.

SOFTWARE ARCHITECTURE

The QCS Business Intelligence Manager is designed and implemented using the following Microsoft technology and products:

- Development Platform: Microsoft Visual Studio .Net
- Programming Language: Microsoft Visual Basic .Net
- Database: Microsoft SQL Server 2005

SQL Server objects that retrieve data from your database are stored in QCS BIM's database; your database is not modified in any way.

Everything necessary to provide your specific dashboard instruments and reports is done within SQL Server 2005 and the Registration process in QCS BIM. There is no programming of QCS BIM itself required.

Multi-language support is facilitated because all text that the user will ever see is housed in a single pair of QCS BIM tables. No user-visible text is in the QCS BIM code. The table structure allows for an unlimited number of languages; the only limitation is that your choice of collation sequence when installing SQL Server 2005 will control how data is sorted.

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