



*Whitemarsh*

*Information Systems Corporation*

*October 2005*

*www.wiscorp.com*

*Website Announcement*

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## Announcement Topics

The last formal announcement was in June 2002. That's a long time ago and we have been hard at work. The metabase version then was 5.5. Now it is 6.8. The big improvements are an expanded client server layer of human-work saving processes, complete metabase data storage through a SQL engine, and a true multi-user environment for entry, update, and reporting.

Since June 2002, we spent more than a year working on the development of a canonical Human Resources data model for the U.S. Government's Office of Personnel Management. Once that was done we got swallowed up by the Office of the CIO for the U.S. Army. Our task there was to develop a complete and comprehensive plan and infrastructure for data interoperability across the U.S. Army. We are going to be releasing de-Army-ized versions of those documents during this quarter. We have another article in the October 2005 TDAN, ([www.tdan.com](http://www.tdan.com)) bringing the total to twenty-one papers. TDAN is a great publication.

## Data Management Maturity Assessment and Prescription Process

A item of great interest for Whitemarsh is the start of a Data Management Maturity (DM3) Assessment and Prescription process. We are working with Peter Aiken of Virginia Commonwealth University. We have the DM3 Assessment data model complete and the Clarion database application that will hold, analyze, and report assessment results has begun.

Unique to this implementation is that one is able to import a data management work product specification, map this to a set of "ideal" data management work product specifications, and have all of that interrelated with the DM3 Key Process Areas. The assessment will be able to be done for a project, a program, or for an entire enterprise. Best of all, the results will be in a SQL-based database against which can be reported, assessed, improved, and then re-analyzed to show data management quality improvement progress. We will keep you posted as to our progress.

## SQL 200n

In the June 2002 announcement, SQL 200n meant 2003. Now complete SQL 200n means 2007. This next version of SQL will likely be the last one. The language has become very stable. There hasn't been any really significant change proposals for a number of years now. So, I suspect that by early 2008 SQL will go into maintenance mode.



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In the meantime, there are the [SQL 2003 documents](#) you can get from the website. Also available are the current set of base documents for October 2005.

The one very active project is the SQL/XML portion. This standard is due to be completed by early Spring, 2006. Just posted as well to the website is the FDIS (final draft international standard) document. It was thought that SQL/XML would be finished by the end of 2003. A significant slow down in progress occurred because the document was brought into the international arena. With more people in more countries making more reviews this brings longer time periods between document versions.

## **WisWeb Members Section**

We are in the process of updating a number of the WisWeb products. Soon to be posted is an entire DBMS Technology course, overheads, and book. These were recently employed at a local university's graduate school. Enjoy.

## **Metabase Introduction**

The metabase software is described in the *Metabase Overview* document that's available in the Free Downloads section of Wiscorp.com. Metabase Software System users can gather and print these classes of information through a number of different reports. Also on the website are the current set of Metabase meta model figures. These represent the metabase's database design.

Additionally, two new documents are well worth downloading and reading. The first is the [Data Modeler's Architecture and Concept of Operations Guide](#). That will be updated during October. The next document is a fully tutorial on using the metabase for both [reverse and forward engineering](#).

Over the past 30 years database project requirements' analysis has generally been accomplished through an interview process, which has almost always been manual. Once accomplished the data was typically recorded onto word processing files and then printed. If questions were asked, the analyst had to consult notes and attempt answers. Changes and updating this critical information was laborious and time consuming. In addition, any hope for long term updating and for answering the number of different management interrogations has never been considered possible or practical.

The metabase system attempts to solve this problem by allowing the requirement's analyst to record the results of the interview process by capturing this information in the Metabase as records. Subsequent dissemination of this information, such as the characteristics



of information systems, databases, information needs, persons, functions, and organizations that are involved in the various resource life cycles, occurs through report writers such as Crystal Reports. As time passes and the various data changes, it merely becomes a process of updating the Metabase's data records, from which to generate updated reports.

## Metabase History

Metabase's first implementation was in 1980, 22 years ago by Hartford Insurance in mainframe Focus. In the interleaving years, Metabase has been implemented in CSC's Manage (1984), Supra (1986), IDMS (1987), and at least four different times in PC/Focus, starting in 1989. This Clarion implementation was started in 1997. Clients who have used Metabase include the States of California and Delaware, the U.S. Army, U.S. Department of Commerce, Freddie Mac, the Hershey Company, and M&M/MARS.

The metabase was designed to support answering the following critical questions:

**Mission Analysis:** What are the essential missions that define the very existence of the enterprise, and that are the ultimate goals and objectives that measure enterprise accomplishment from within different business functions and organizations?

**Functional Analysis:** What procedures are performed by groups in their achievement the various missions of the enterprise from within different enterprise organizations?

**Organizational Analysis:** Which organizations are accomplishing what aspects of missions with what databases, information systems and through which functions?

**Resource Life Cycles:** What are the key Resources (facilities, materiel, staff, etc?) How are they sequenced, interrelated, and how are they supported through databases and information systems?

**Information Needs:** What information (a.k.a., query results or reports) is needed by various organizations in their functional accomplishment of missions and what databases and information systems provide this information?

**Database:** What data is needed to support enterprise resource life cycle nodes, how are the databases defined within data architectures, and how and where are those databases deployed and then used by business information systems in support of mission accomplishment? Also, what are the data model details of the databases?



**Data Modeler:** What are the context independent semantic templates of data elements and how are these configured into models of data (the consequence of policy execution) determined as needed by functional experts in support of enterprise missions, and how are these specified data model requirements configured into implemented databases that ultimately operate within various organizations as they perform the functions needed by enterprise missions? Also, what are the models of data used by Business Information Systems?

**Business Information Systems:** Exactly what are the business information systems, where are they, how are they related to mission, organization, function, and databases, and how are they interrelated to each other including their calendar and business event execution schedules? What is the impact on these business information systems when policy (a.k.a., data) is required or changed?

## Metabase Environment

The Metabase Software System is a CASE/Repository environment that runs on Microsoft Windows operating systems for the presentation layer, and most SQL DBMSs for metabase database storage and access. Because of the SQL engine, the metabase is inherently multi-user. You can also have any quantity of metabase database instances. A given user can have multiple metabase functional modules and multiple metabase instances open at the same time. And, because of the SQL engine, you can report from the metabase through report writers such as Crystal Reports. We include about 100 Crystal Report “rpt” files.

The metabase can read SQL DDL into the SDM, IDM, and ODM data models. It can also write SQL DDL from the same models. If one has a SQL DBMS then one can build a schema and then synchronize with Clarion to then generate the client-side application. The Metabase can also generate Clarion’s native DDL (called a TXD file) so that a client side application can be created without a SQL DBMS. Thus the Metabase functions as UpperCASE, with Clarion as LowerCASE. Together they will be represent integrated CASE.

The Metabase exists in these versions:

**Metabase Demo Version:** This version of the metabase is fully functional. The demo version includes the Movies example database which is automatically installed, and also a single metabase dataset, named Metabase. This version times-out after 90 days. The back end for the metabase is SQL, with reporting being accomplished through an ODBC based report writer such as Crystal Reports.



**Metabase Single User - Single Metabase:** This version is part of the membership to the Whitemarsh website that includes all other website books, methodologies, courses, presentations, software and papers. In addition to the metabase's Movies example dataset, added as part of the installation, the single-user metabase version supports a single metabase dataset. The back end for the metabase is SQL.

**Metabase Single User - Multiple Metabase:** This version of the metabase allows only one concurrent user, but there is no limit to the quantity of metabase datasets that can be supported. Any number of users can report from the metabase through an ODBC based report writer such as Crystal Reports.

**Metabase Multi User - Multi Metabase:** This version of the metabase comes in concurrent user quantities of 1, 4, 10, 25, and unlimited (single server) concurrent user versions.

**Metabase Developer:** This version is an unlimited-user single-server version and is provided with six weeks of training. The training's goal is to fully teach the use of the metabase software, while also detailing the metabase system itself to in-house developers. This is done to aid the developers in evolving and maintaining the metabase's database and presentation layers. This allows the developers to meet the specific needs of their organization. Included with this version is all design documents, source code, development environment, and supporting third party tools necessary for a development staff of four.

All versions of the metabase employ SQL engines for data storage and access. We recommend [Mimer SQL Enterprise](#). A developer version is freely available from the Mimer website. Production versions of Mimer are very reasonably priced. We chose Mimer because of its very high level of ANSI SQL standards compliance, its very small foot-print, and because it allows metabase database instances to operate on a wide variety of operating systems. The metabase client side operates on MS Windows environments.

A fully functional metabase demo is [available](#) from the Whitemarsh website. Also available is a full set of documentation along with several other tutorial documents.

A key benefit of having the Metabase operate under an SQL engine is that you can now directly report against the metabase through any number of ODBC compliant report writers such as Crystal Reports. The Metabase's schema is explicit so building reports is very easy.

## Clarion for Windows



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I have been asked to provide a brief overview of the engineering-construct behind the *Clarion For Windows* ([www.softvelocity.com](http://www.softvelocity.com)) product. As you can see from the metabase software, the purpose of the product is to create fully functional Windows software applications. In addition to its comprehensive database system development environment, Clarion offers the following layers of abstraction.

| <b>Layer</b> | <b>Description/purpose</b>   |
|--------------|--|
| n-4          | Style sheets that affect object classes. E.g., all buttons   |
| n-3          | Style sheets that affect certain "object types" that are present in object classes. E.g., all CLOSE buttons changed to now say, Bye-Bye.   |
| n-2          | Templates that are employed that generate layer "n-1" There are about 15 basic templates for things like lists, windows, update forms, report shells, etc. You can modify those present and you can completely define you own. |
| n-1          | Complete methods based language that can be used instead of direct language statements. These methods, when "pre-compiled" product the language for layer "n"  |
| n            | Programming language statements that compile, link, etc. The language is very intuitive.   |

In addition to these layers, there are wizards that operate adjacent to layer n-3. You can also buy "Third-Party" templates that operate at layer n-2 and that commonly include their own wizards. The templates are of two classes: Technique, or application. Technique templates include, for example,

- Advanced report writer
- Advanced update-in-place
- Automatic ASCII and/or dBase data export and import
- Automatic file-dictionary upgrade and damage repair
- Backup and restore
- Email and web access
- Process module security management
- Production data directory path manager
- Software registration
- Tagging





- Tree structures for single-file recursion, multi-file hierarchies, and bills-of-materials

All in all there are about 50 different vendors of 3<sup>rd</sup> party templates. Metabase uses about 10. For applications you can get AP, AR, GL, Payroll, etc. templates. Most of the templates come as a fully-extensible or modifiable Clarion facility.

The software development environment is supported by appropriate screen, report formatters, and editors. The software that results can be distributed without Clarion run-unit licenses or costs. The many data access methods include ASCII, Btrieve, ODBC, and Softvelocity's very fast embedded access method.

Finally, you can embed your own code in the following three places: Before, during, and after anything. Clarion maintains the user-created embedded code such that you NEVER lose the ability to code generate. Whitemarsh primarily operates at the n-2 level. Whitemarsh highly recommends Clarion for Windows ([www.softvelocity.com](http://www.softvelocity.com)).

Good luck with metabase, and don't be shy, email help is available whenever the need arises.

## I-Metabase

Because the metabase's engine is SQL, you can use any Internet tool you wish to create an Internet presentation layer. Building such a layer in Clarion's PHP templates is very high on our priority list this next quarter. We will provide a status on our development in a few months. This I-Metabase front end will be a normal upgrade to the metabase.

