

THOUGHT™

The Dynamic O/R Mapping Company™

CocoBase® Enterprise O/R

**Company
Introduction**

**CocoBase® Provides The Full Solution
For Managing Data In The Enterprise.**

Dynamic Object to Relational Mapping™

CocoBase® Enterprise O/R from THOUGHT Inc.®, the Dynamic O/R Mapping™ Company, is the market leading and award winning Java tool for persisting data in enterprise-level applications. It has evolved to be the number one foundational solution for managing data. CocoBase® cuts the cost of database access development by up to 85% for a significant savings of time and money.

Business Problem

The major challenge for companies today is delivering relevant and meaningful information to where it is needed in real time. Finding software solutions that provide the building blocks needed to do this successfully is important. A majority of companies now use the Java software platform to build their applications. These companies typically use a relational based database like Oracle or DB2 to store their data. The next step of retrieving and using this data is where a host of tools and technologies come into play together.

Choosing the technical architecture with which to implement a solution for delivering information has coalesced around some key technologies. The foundational technology here is data persistence or more commonly referred to as Object to Relational (O/R) Mapping. This refers to the process of extracting data from the relational database, delivering it to the application and then back to the database in an as efficient and smart manner as possible. The specific technical implementation or styles range from simple persistence of data to methods able to handle complex needs such as Transparent Persistence and Enterprise JavaBeans (EJB).

Once a company has identified the business challenges needing to be addressed by the use of the information or data, then the appropriate technical solution or style usually quickly clarifies itself. In most situations the use of O/R Mapping technology is the best solution with the details of which implementation or style to use simply a quick exploration. The tried and true points to make a decision on are good guidelines; solution is proven to work, solution saves time and money, has good industry acceptance as the market leader, is implemented according to software standards, and the vendor has a solid track record with long-term stability.

Customer Successes

Major Fortune 1000 companies like Harte-Hanks, Keane, UAL, TRW, etc. all use CocoBase® in key business applications delivering data within their company, to partners and customers. Keane Consulting for example, built a social services application for the State of Maine, Department of Human Services that runs the breadth of their activities all based on CocoBase. It is called the Automated Client Eligibility System (ACES). This custom built application provides Maine's Department of Human Services with the first advanced, web-based eligibility determination and benefit issuance system in the United States and has improved process time for eligibility determination from days to hours.

"We are very satisfied with our choice to use CocoBase® for the State of Maine project," said Tom Mechachonis, Managing Director for Keane. "The tool easily met the technical requirements needed and supported our staff in achieving a quick time to market release of the application."

Another company, Harte-Hanks, Inc (NYSE:HHS) a worldwide marketing company, based in San Antonio, TX, provides end-to-end Customer Relationship Management (CRM) and related solutions for businesses and organizations in both consumer and business-to-business markets across North America, Europe, South America and the Pacific Rim. Their product is built on CocoBase delivering information to over ten million customers a day.

"Using Cocobase has been quite straightforward and very valuable. It has decreased our production time and has given us an important foundation for database access in our product, while your support as been outstanding, " said Brian Cornelius, Senior Architect, Harte-Hanks, Inc.

Industry Acknowledged Leader

* 2003 SD Times TOP 100 - THOUGHT Inc.® chosen in the top 100 Innovators / Leaders for Java companies. "There are leaders and innovators. And there are followers. The first annual SD Times 100 recognizes the leaders and innovators of the software development industry."

* CocoBase® Enterprise O/R Named Winning Object To Relational (O/R) Mapping Tool By The 2003 WebSphere Advisors Editors' Choice Awards. CocoBase® is named Best Object to Relational Mapping tool in the Data Integration category for development on the IBM WebSphere platform, by the 2003 WebSphere Advisors Editors' Choice Awards. The award recognizes the overall success of CocoBase for quick and easy persisting of data with the IBM Java tools suite, consisting of the WebSphere application server, WebSphere Studio / Eclipse development environments, and the Rational Rose UML object modeling tool.

"The Silver award from WebSphere Advisors magazine is consistent with the industry-wide acceptance of CocoBase and awareness of the critical need for O/R Mapping in enterprise development," said Ward Mullins, President and CTO of THOUGHT Inc.® "The ability for developers to easily persist their data and automatically generate high performance components such as EJB CMP / BMP Entity Beans, Session Beans and Java Server Pages is key to their success."

* JavaWorld nominates CocoBase for Best O/R Mapping Tool in the 2003 Editors Choice Awards. Which Java tools and technologies lead the pack? *JavaWorld* proudly announces the finalists for its 2003 **JavaWorld Editors' Choice Awards**. Established in 1997, the awards recognize innovative companies, organizations, and individuals for their commitment to developing new Java tools and technologies. Finalists were chosen from more than 150 products and technologies nominated by vendors and *JavaWorld* readers, editors, and writers.

Java Standards Based And Most Tightly-Integrated O/R Mapping Tool

CocoBase is a Standards Based, Open (non-proprietary) Dynamic O/R Mapping Tool. It supports the key related

Major companies use CocoBase® for their corporate applications;

Bell Atlantic,
 Bell South,
 Best Foods,
 Bristol Meyers Squib,
 CVS,
 Deutsche Bank,
 Eli Lilly,
 Ericsson,
 Expeditors,
 GTE,
 Harte Hanks,
 HBO,
 Kansas State Government,
 Los Alamos Labs,
 State of Maine Government,
 NCS Pearson,
 Nextel,
 Nike,
 Ohio State Government,
 U.S. Federal Government,
 Perot Systems,
 Siemens,
 Sun Microsystems,
 TRW,
 Tyco,
 Visa,
 World Com,
 Xerox and more.

Java Standards; J2EE / J2SE / EJB 2.0 / JDBC 2.0 / JMS 1.0 / JDK 1.4. It is integrated with all of the leading Relational Databases, Application Servers, Development Environments and UML Modeling Tools.

CocoBase® provides a complete and integrated solution to the developer that is standards based and open (i.e. non proprietary). Once the data is mapped, developers have a full range of choices for which style to use to persist their data. These options include Enterprise JavaBeans (EJB) Container Managed Persistence (CMP) & Bean Managed Persistence (BMP) Entity Beans, Session Beans, JSPs, Servlets and/or Dynamic Transparent Persistence™ (no CocoBase code required in the object).

Tool integrations include the following;

Relational Databases – Sybase, Oracle, DB2, Informix, SapDB, Ingres, Postgres, Progress, MySQL, MS-SQL Server, InstantDB, Cloudscape, or any other with a JDBC compliant driver.

J2EE App Servers: BEA Weblogic, Borland, IBM WebSphere , JBoss, Macromedia JRun, Oracle9iAS, Orion, SunOne, Sybase EAServer, Tomcat

UML XMI Modeling Tools - Embarcadero Describe, Sybase Power Designer, Rational Rose, Together Control Center, Argo UML.

Development Environments - JBuilder, Eclipse, IBM Studio & Visual Age, and Sun ONE Studio/Forte, NetBeans.

Saves Time and Money

Studies indicate that an estimated 70% of developer's development time is spent writing code to persist or manage access to relational data. When developers use CocoBase® Enterprise O/R, an Object to Relational Mapping tool, they can save up to 85% of the time or cost of database access development in Java. The result is savings of up to 60% of the overall project costs, a significant cost reduction.

The typical (i.e. hard way) to address database access or as it is called, the object to relational (O/R) dilemma - known as the "impedance mismatch"

- is hand coding a lot of SQL and JDBC code to map between the conceptual structure of the object data models and the tables, rows, and columns format of a SQL-based relational database. In addition to extensive labor, the intrusive nature of SQL and JDBC coded into objects degrades development, maintenance, performance and scalability.

A faster, simpler and less costly approach is to utilize the standards-based extensibility of CocoBase® Enterprise O/R. CocoBase® is a vendor neutral Dynamic O/R Mapping® Layer that sits on top of the JDBC driver between the application objects (often running in an application server) and the database (which is usually a relational database for most modern IT organizations). CocoBase® manages the persistence and retrieval of data (sometimes referred to as the exchange of data) from the application to where it is stored in the relational database.

CocoBase® takes the database specific code and prewritten SQL out of the object and saves this information to the mapping layer (i.e. map). Thus decoupling the object from being hard coded to the database. The database specific code and SQL is dynamically created at runtime. This allows objects to be easily reused over and over. This dynamic layer provides a multitude of performance and scaling optimizations that are easily changed by the programmer to best fit their specific needs.

Customers realize dramatic cost savings with NO Server, CPU, OR Runtime fees! CocoBase® is sold by the developer license. We have found this to be the best – lowest cost pricing model for our customers whose usual project is based on a fixed budget. In other words, when the number of users rise and additional servers / cpu's are added, the cost of CocoBase remains fixed. This pricing provides the foundation for excellent returns on investment with customers reporting anywhere from 400% to over 1,000%.

Full Product Solution - Comprehensive Sales And Technical Support

CocoBase® is the award winning, market leader for O/R Mapping, shipping since early 1997. It was the first Java-based O/R Mapping tool and continues to lead the industry with technological innovations providing developers the most full featured and easy to use tool for managing data in Java applications. Now in its' fourth major release with a fifth major release scheduled for later

in 2003, a number of amazing technological innovations, and key patents to protect the customers use of the tool clearly demonstrate why CocoBase is in use in major Fortune 1000 companies.

As one of just a few companies to showcase their technology at the every JavaOne conference since it's inception in 1996, THOUGHT Inc. continues to act on a long-term commitment to the Java industry.

THOUGHT Inc. provides a comprehensive suite of services and support to greatly assist the customer through to project success, including technical support, architectural mentorship, new features, evolving with technological shifts, key updates for the continually evolving Java platform, etc.

Top Level Technical Support - We provide superior customer service and quickly respond to both technical and sales inquiries. We pride ourselves on top-level technical support and rapid response times. We are known for having one of the best support organizations in the business. Our competitors are known for saying "well you can always have our consultants come in and fix this" when their products don't deliver what they should. We, by comparison, don't have a consulting arm, and therefore don't have incentive to build products that require consulting to deliver on the promises made, a seemingly all to common practice.

Highly Experienced Architectural Mentorship - At key points during the project our engineering team is available for providing guidance regarding how to best achieve the business and technical requirements of the project. We find this to be one of the most valuable services based on customer feedback. Giving the customer the ability to take advantage of many years of focused experience in the area of data persistence can be the difference between success and failure. This key service greatly separates THOUGHT Inc. from competitors, especially open-source alternatives that rely on the customers staff for this guidance as well as the needed ability to at times update the tool themselves with little to no assistance.

New Features and Innovations - As customers work through the issues of building the application that can be at times quite complex, there are times where an added feature in CocoBase can be the leap that makes it all work successfully or not. There are many cases where either customer requested features as well as innovations simply provide so much key support that

without it, the project would most likely fail. THOUGHT Inc. prides itself on keeping development closely aligned with customer feedback and requests. We understand this is a partnership and our success is closely intertwined with the customer.

Adaptations to Technological Shifts – The Java software platform continues to evolve in mostly minor and sometimes major ways. Keeping your application updated so that it continues to work on the newest version of Java, of an application server, of Java Server Pages, of a JDBC driver, of a relational database, etc. is very challenging and quite time consuming. This is a key value that is provided to customers of CocoBase. The engineering team does an excellent job of releasing minor and major updates so that the customer is insulated as much as possible from the never ending headache of keeping the application updated and running. This is another key service that differentiates CocoBase from competitors, especially any open-source alternatives where it is expected that the customers' development team also becomes product engineers for the tool which can be an expensive and inappropriate consideration.

Company Information and History

THOUGHT Inc.® is focused on delivering Dynamic Object to Relational Mapping™ OPTIMIZED for EJB and Java. CocoBase Enterprise O/R is the key to success for companies managing information in Java applications for the J2EE, J2SE, and JSME platforms. The CocoBase tool increases performance by up to and over 20,000%, decreases database access development / deployment / maintenance costs by up to 85% and works with any standard J2EE - J2SE Application Server, making it's use a key part of any companies tool set.

Technology: Dynamic O/R Mapping™ - dynamically maps and manages data in applications between the object and the relational database.

Platforms: J2EE, J2SE, J2ME

Implements: EJB CMP / BMP Entity Beans, EJB Session Beans, Java Server Pages, Dynamic Transparent Persistence™, Java persistence.

History

THOUGHT Inc.'s founders lauded the advent of Java as a new and welcome beginning in programming paradigms. With years and years of industry experience, we have crafted products that put the power of java, and all its potential in the hands of the developer. The beauty of CocoBase stems from the simplicity and yet the sophistication of its design.

The company started in the spring of 1993 focused on delivering Object Oriented Solutions to large corporate customers. Soon thereafter, the engineers at Sun Microsystems creating Java, persuaded the founders to look at this new programming language. The Java programming language provided a perfect platform to deliver mapping technology that had been worked on for years by the Thought Inc. founding technologist.

In early April of 1997, the first product "CocoBase Enterprise O/R" was delivered. Over the years different companies have licensed the technology such as Sun Microsystems. Currently, over a 100,000 copies of CocoBase have shipped making it one of the most successful Java tools in the industry.

HOW TO PROCEED

The CocoBase® software is available by download for free from the website at www.thoughtinc.com. Thought Inc.® sales people are available to answer your questions at 415.836.9199.

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