

VENDOR NEEDS AND STRATEGIES

InterSystems: Best-Kept Secret in the DBMS World

Carl W. Olofson

IDC OPINION

InterSystems is a successful, growing software company with interesting and innovative technology, yet it seems to be virtually unknown in the database world outside its sphere of dedicated, loyal users and partners and those seeking specific database technology characteristics that they seem to be able to find only with InterSystems' flagship product Caché. The company's relative anonymity may have played a role in its success up to this point, along with:

- An iconoclastic approach to database management systems that ignores the longstanding demand for doctrinaire relational adherence
- A practical approach to database technology that favors capability over support for the *feature du jour*
- The loyalty of its devoted customer, partner, and user base
- Its willingness to continue to innovate and take risks in developing what otherwise would have been a very mature and somewhat dated technology

IN THIS STUDY

This IDC study examines the software company InterSystems, and in particular its postrelational database management system (DBMS) Caché, which is sold almost entirely indirectly through independent software vendors (ISVs) as an embedded component of their products. Given the scope of the capabilities and the users of Caché, the product and its maker qualify as the best-kept secret of the software industry. InterSystems maintains a low profile, as is commonly the case for embedded DBMS vendors.

This study provides some background on the history of InterSystems and looks at Caché in relation to the DBMS marketplace in general, giving some salient examples that highlight its distinctive features. It also provides an overview of InterSystems' other products and the nature of its business and concludes by offering some observations regarding the impact of InterSystems on the market and the opportunities represented thereby.

SITUATION OVERVIEW

Company Overview

InterSystems is a privately held software company, headquartered in Cambridge, Massachusetts, which has played a key role in the evolution of database technology. Mention of the company is, however, almost guaranteed to draw blank stares from cognoscenti in the industry. InterSystems began in 1978 as a provider of technology in support of MUMPS, an operating system that also acted as an interpretive language runtime environment originally developed for use by the Massachusetts General Hospital. The language was also called MUMPS, or M, and included a "global array facility," really a simple multidimensional DBMS. InterSystems developed a version of this facility that it originally called InterSystems MUMPS (ISM) to distinguish it from DSM (Digital Standard MUMPS), which was offered by Digital Equipment Corp. until InterSystems bought that version as well in 1994. The company also acquired a version called DTM (DataTree MUMPS) and another, by Micronetics, called MSM. InterSystems offered M Technology on VMS and most leading flavors of Unix.

In 1997, InterSystems released Caché, a postrelational DBMS that used the M Technology storage engine but layered over it object-oriented services, an M Technology compatibility layer, and an ANSI standard SQL API. Since MUMPS and M Technology were originally used mainly by hospitals and healthcare IT service and software providers, the initial customer base for Caché was heavily oriented in the healthcare direction, although there was some interest from the financial community owing to its high performance. As the product improved, with object-oriented scripting capability and direct Web support, it engendered considerable interest among other ISVs and has now developed a global following, especially in Europe, Japan, Brazil, Israel, southern Africa, Australia, and New Zealand.

Product/Service Offerings

Today, InterSystems offers two main product lines: Caché and Ensemble. Caché, in addition to its traditional healthcare customer base, is increasingly used for applications that require large databases that include complex objects and direct access via Web pages.

Ensemble is an integration server software platform (ISSP) that incorporates a range of process integration features along with technology underlying Caché to provide tools and a runtime environment for the rapid development and deployment of enterprise integration solutions. Ensemble's features include development tools, application server and portal development and deployment capabilities, and a persistent object engine that ensures reliability and recoverability of business processes and provides access to live and previously processed messages for auditing and business activity monitoring (BAM) purposes.

Caché is embedded in a wide variety of software products, including healthcare applications, development tools, enterprise resource planning (ERP) applications, online information clearing-house products, and, most recently, defense logistics software. Outstanding examples exhibited at the most recent Caché Developers Conference include:

- ☒ The U.S. Naval Air Warfare Center's Aircraft Division produced an application called Warfighting Architecture Requirements (WAR). This application permits the generation of dynamic warfighting scenarios to build integrated global information grid (GIG) architectures.
- ☒ Tannema Finance Sàrl, based in Belgium and Hungary, produced an application called AUTOTEC:ONLINE, which is a rental and fleet vehicle tracking system using GPS.
- ☒ The Institute for Clinical and Experimental Medicine (IKEM), based in the Czech Republic, produced an application called Zlatokop, which is a medical record and diagnosis information system.
- ☒ Cumberland Systems Co., based in the United States, produced an application called The Opt-Index Real-Time Business Directory — a Web-based directory service that gathers all its information directly from individual businesses and organizations that list themselves voluntarily (opt-in).
- ☒ INTRAPREND Gesellschaft für Intranet Anwendungsentwicklung mbH, based in Germany, produced an application — called Purchase Manager, A Business Process Outsourcing Application — that is software for business purchase service providers, initially in acquiring "C" items.
- ☒ Sonic Healthcare, based in Australia, produced an application called Morpheus. This uses a combination of pattern matching and rule processing to apply the intellectual property of highly paid senior medical scientists and pathologists within a Caché application to add comments on a broad range of abnormal results for tests from referrers and patients.

- ☒ Interpath Laboratory Inc., based in the United States, produced I-Web, a browser-based application developed to give doctors, nurses, and pharmacists live access to both current and archival patient laboratory data over the Internet.
- ☒ Stalis, based in England, produced an application called CareXML Application Toolkit, which is designed for development of applications based on the generic NHS-approved medical form formats.
- ☒ Nifgashim.com, based in Israel, produced an application called Nifgashim.Nifgashim (Hebrew for "Let's Meet!"), which is a public Internet dating Web site.
- ☒ George James Software, based in England, produced an application called VC/m 3.0, which is a version and configuration management tool for the control of application source code. It is targeted primarily at developers of Caché applications and authors of Ensemble productions.

All of these products are built using Caché Object Script, the object-oriented scripting language, and most also use Caché Server Pages (CSP), which are analogous to ActiveX Server Pages (ASP) or Java Server Pages (JSP), except that they run on the Caché server. Many also employ a mix of conventional structured data and complex data, the latter including images and spatial data.

Geographic Coverage

InterSystems is broadly used in the United States, mainly for healthcare applications, though other verticals are rapidly gaining ground. Caché is embedded in a wide variety of applications in Europe, Japan, Brazil, Israel, South Africa, Australia, and New Zealand. It is also used in computer science programs at approximately 200 universities in 30 countries.

Business Model

InterSystems serves a growing base of vendor clients, many of which have been using Caché and the older M Technology for many years. The older base is gradually being supplemented by a newer base of clients attracted by scalability, complex data support, direct Web support, and object-oriented scripting language. Caché is deployed largely on Unix and VMS, with an increasingly significant fraction on Windows. Linux so far represents a tiny but growing portion of the total base.

The selling model for Caché is still mostly indirect, but InterSystems is pursuing a more direct approach to selected industries such as financial services, as well as with Ensemble, selling both to end-user customers and through systems integrators.

FUTURE OUTLOOK

Future Impact on Vendors

There is still plenty of opportunity for vendors in the embedded DBMS space. This is because of the large number and variety of applications that require their own internal data management or have special data management needs that can't be met by the leading relational DBMS products. The opportunity is also great because of the Internet and the range of possible applications that can be hosted on the Web and offered as services. It is possible that for commercial online services, especially ones that are data intensive and require support for complex data objects, InterSystems could become a strong alternative to the leading DBMS vendors in the market today.

Opportunities

InterSystems' opportunities lie in its ability to continue to expand its indirect ISV-based channel with new technologies that address areas not effectively handled by the leading DBMS vendors. These include continuing to exploit its advantages in:

- ☒ Blending structured and unstructured, complex data management with scalability along both the size and concurrent access dimensions
- ☒ Providing a fully object-oriented scripting environment together with its server page technology (CSP) to deliver direct, Web-based access to database information in a programmatic way
- ☒ Maintaining excellent relations with its ISV partner/customers and continuing to provide close support for its technology in the field

InterSystems can build on those capabilities by:

- ☒ Expanding its capabilities beyond the current data types, such as exploiting the native characteristics of Caché and its XML support to act as an enabler for Web services
 - ☒ Leveraging its Ensemble product line in conjunction with Caché to enable ISV partner/customers to provide completely customizable solution frameworks based on a service oriented architecture (SOA)
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Characteristics for Success

InterSystems features these key characteristics for success:

- ☒ Longevity, combined with the fairly long tenure of many of its senior staff, gives InterSystems the advantage of experience over competitors, as well as a proven track record.
- ☒ A strong, positive relationship with both user and ISV customers provides a stable base of recurring business upon which to build.

- ☒ A preference for innovation over simple exploitation of existing technology (i.e., pressing ahead despite risk, not "resting on its laurels") enables the company to attract new customers and provide a compelling vision to existing customers.
- ☒ As a privately held firm, InterSystems can afford to take the long view regarding product development rather than worrying about investor reaction to decisions regarding technology investment versus income on a quarter-by-quarter basis.

ESSENTIAL GUIDANCE

Potential partners, customers, and competitors should consider these issues:

- ☒ ISVs and IT developer users looking for a platform for comprehensive development should compare InterSystems' technology with that of others and consider whether the key characteristics of scalability, flexibility, and ease of deployment trump the considerations involved with those other vendors, which would include brand recognition and various complex channel issues.
- ☒ ISV and IT developer users that are current Caché customers but base their work on the older M Technology should look at upgrading to full Caché and its object-oriented capabilities, especially if flexibility and cross-platform support are issues.
- ☒ Competitors and potential competitors should seek to promote characteristics of their products that compete with the aforementioned strengths of Caché and seek to exploit their brand names and any broader software platform capabilities that they might possess. They would also do well to study InterSystems and emulate its model for customer and partner retention.

LEARN MORE

Related Research

- ☒ *IDC's Software Taxonomy, 2005* (IDC #32884, February 2005)
- ☒ *Pervasive Announces PostgreSQL Implementation: Move Should Boost Open Source RDBMS Acceptance* (IDC #32769, January 2005)
- ☒ *IBM Joins the Open Source DBMS Fray: Java RDBMS Cloudscape Becomes Apache Derby* (IDC #31725, August 2004)
- ☒ *Worldwide Enterprise Database Management Systems 2003 Vendor Shares* (IDC #31681, August 2004)
- ☒ *Worldwide Enterprise Database Management Systems 2004–2008 Forecast* (IDC #31607, July 2004)
- ☒ *The Open Source DBMS Movement Gathers Momentum: New Developments from MySQL, Sleepycat, and Computer Associates* (IDC #31601, July 2004)

☒ *Object DBMS: A Market in Transition* (IDC #31368, May 2004)

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