



The State of the Union

A look at how the jBASE, Temenos and Mpower1 relationship benefits jBASE users around the globe.

1989: jBASE the Product

Since its founding in 1989, the history of jBASE is characterized by pioneering spirit coupled with ground-breaking innovations and collaboration with customers around the globe. Coming from what was then a world leading database vendor and solutions supplier, McDonnell Douglas Information Systems Ltd., the early jBASE pioneers had an insight into how the database vendors were dealing with the move to open systems. In fact, in all cases "Open Systems" seemed only to mean "operates on UNIX". Realizing that solutions for business needs were not always to be found in the use of one database and understanding that access to all databases transparently would be beneficial (and truly open), they embarked on a mission to design, from the ground up, an open database product that would bring the strengths of not only multiple platform, but also multiple database access into the mainstream computing market.

From the very beginning, jBASE was designed with both database and platform independence in mind. Before Microsoft delivered Open Database Connectivity (ODBC), jBASE engineers had already built a Database Management System, (DBMS) which was completely database independent. By means of an innovative open and published interface (jBASE External Device Interface, jEDI), customers could achieve seamless integration with foreign databases. This meant that any jBASE developed application could read and write to whichever database was required for data storage such as the native jBASE database but also Oracle, DB2 and others – a first in the industry.

Not only was jBASE the industry's first, database-independent solution, it was also the first to be available across all popular, commercially viable platforms such as Windows 95, NT and Linux. Today, jBASE runs on all of the most widely used hardware and operating systems, with the inherent ability to port to different platforms designed into the product in the very early stages.

A combination of powerful tools, a powerful database, together with a truly open middleware revolutionized the industry for developers and end-users alike.

Twenty one years on, jBASE is still recognized as the most technologically advanced product available in the market, with a customer base that has grown exponentially. From a geographical perspective, the jBASE market spans the world, with an impressive installed base spread across 70+ countries worldwide in almost every facet of daily life including Banks, Retailers, Healthcare, Government and General Commerce. Over 300,000 users and 8000 businesses around the world rely on jBASE for mission critical information management.

1998: TEMENOS™ and jBASE Software

TEMENOS Group AG is a public company based in Switzerland, quoted on the Zurich stock exchange. TEMENOS software provides banks with a single, real-time view of the client across the enterprise, enabling banks to maximize returns while streamlining costs. Whether providing 24/7 functionality to the wholesale, retail and private banking sectors, partnering with central banks on core system replacement, or working with the World Bank on solutions for the emerging markets, TEMENOS knows banking.

In 1998, TEMENOS had big plans for their TEMENOS GLOBUS™ banking system but felt technically restricted by UniVerse, the database technology upon which their products were based. To progress from providing targeted solutions in smaller environments to major solutions for top tier banks, TEMENOS needed to move into the mainstream not just with databases but with tools and connectivity. They were determined to do this while remaining truly open, operating on multiple platforms and databases and other technologies without restriction. TEMENOS needed to achieve this without rewriting the application in order to retain the benefits of its widely accepted rich functionality.

Late in 1998, TEMENOS had its first client requirement to serve 6,000 users. At that time, TEMENOS undertook an extensive examination of jBASE technology and proved to themselves within months that the jBASE advantage was a viable and commercially acceptable solution. Benchmarking results in their tests against UniVerse showed that the average throughput on jBASE was 2.6 times that of UniVerse but also, and more significantly, this was in tests simulating 6,000 users with Transaction Journaling in operation versus 2750 UniVerse simulated users without. The benchmarking was a clear signal to TEMENOS. The client was won and remains a leading client of TEMENOS today.

Performance and scalability were proven and, as a jBASE solution allows the database layer to be almost anything via the open jEDI interface, TEMENOS could harness this power to enable their clients to store their data in the market leading DBMSs. Database storage would now be a matter of client preference and budget.

1999: TEMENOS Acquires 100% of jBASE

It was clear that implementing jBASE would allow TEMENOS to position their product as a multi-platform, multi-database solution, but there was one risk involved: the reliance on a company the size of jBASE Software. Despite a huge client base, jBASE Software was a company of only 18 people worldwide and therefore the inward investment to the product was limited to that of a company with less than \$1 million dollars in committed development funds. It was vital for TEMENOS to protect their existing clients' investment and to address the potential concerns of their clients with regard to licensing a database from a relatively small company. The perfect solution was for TEMENOS to buy jBASE and invest in the technology. TEMENOS acquired 100% of jBASE Software in 1999 and began to fund research and development on a scale previously unachievable in jBASE Software's ten year history.

The decision to merge the strengths of both companies was based on a strong belief in jBASE's future potential as a standalone product as well as the synergistic value of a jBASE / GLOBUS™ solution. This belief soon became a reality and, since 2000, TEMENOS GLOBUS™ has shipped exclusively with integrated jBASE technology. The transition from UniVerse to jBASE laid the foundations for GLOBUS' successor, TEMENOS T24™. One of the prerequisites for TEMENOS T24™ is the jBASE open connectivity technology integrated with the banking functionality and coupled with an open database such as Oracle, IBM's DB2, Microsoft's SQL Server or jBASE, which provides clients with numerous options with regard to future direction.

It is relatively easy to choose a system that will meet today's requirements. What is more difficult is choosing a system that has the flexibility and support to meet one's demands far into the future. Since embedding jBASE into their banking solution, TEMENOS clients can now select the best database vendor or environment to suit their own needs whether this is low cost, high performance, local support or any other factor. If this changes in the future, they can switch database vendor without altering their investment in TEMENOS T24™. This will provide true longevity in the client's chosen system.

Since the introduction of the jBASE technology of the development and runtime environment, the database independent connectivity TEMENOS has been able to spread its reach into the market delivering what clients demand. This successful strategy see an approximate split of database deployment as so ; 60% on jBASE, 30% on Oracle and 10% on either IBM DB2, Microsoft SQL Server and some remaining pre-2004 installations still running IBM's UniVerse. It is the unique architecture of the jBASE technology that allows this to be the case while retaining a single set of application code.

Internally, TEMENOS development, training, support and QA departments are using jBASE to support their operations. In addition, and perhaps more importantly,

jBASE has allowed TEMENOS to expand its technological view significantly. For example, TEMENOS is now able to take advantage of Java technologies to provide interoperability and scalability options. And jBASE applications can easily integrate with mainstream technologies such as MQ Series and other such protocols. Further, TEMENOS can now deliver their solutions on jBASE, Oracle, DB2 and SQL Server. None of this would have been possible without jBASE.

The jump to jBASE allowed TEMENOS to position itself as a serious market leader and expanded its ability to pitch to 100% of its targeted market. In ten years, TEMENOS has grown from a \$25 million dollar company (1999) to a predicted \$500 million dollar company this year (2010) with a present market cap in excess of one billion dollars and is covered by all the major market analysts on a regular basis. TEMENOS has enjoyed 1st or 2nd position in the International Banking Systems sales league for the past decade and presently leads the pack by a significant margin.

2002: Engagement of Mpower1 International

In 2002, Mpower1 International forged a partnership with TEMENOS and attained the worldwide support, distribution and existing client rights of the full jBASE product set with the exception of TEMENOS' own application sales. The UK-based business empowerment company embarked on a major investment program by reorganizing jBASE sales and support personnel into an independent sales, marketing and support channel for jBASE customers and partners world-wide. The new 100% Mpower1 owned subsidiary, jBASE International, became the exclusive distributor of the jBASE software with the exception of where TEMENOS licenses jBASE in conjunction with their own application software.

TEMENOS retained the intellectual property rights and continued their investment in the jBASE product with a dedicated jBASE development department in its own R&D organization. Although TEMENOS remain extremely committed to the jBASE database, the diversification into the sales and marketing of database technology

such as jBASE was not in line with its core business objectives in the Banking industry vertical. This engagement enabled jBASE International to fully focus on support and continuity, while at the same time allowing TEMENOS to concentrate on delivering its jBASE developed banking solution to its own clients.

Eight years on, the jBASE International market is strong, stable and growing, and TEMENOS' business has grown beyond recognition.

Formal Development Team

In 2002, TEMENOS consolidated jBASE development into one central office in the UK. This was carried out in order to implement formal development management which would live up to the scrutiny expected of a public company by external accounting auditors and ISO auditors.

Clive Ketteridge, co-founder of the jBASE company back in 1989, remains at TEMENOS as General Manager, jBASE. "It became necessary to align our processes with that of an internationally recognized standard," says Ketteridge. "Today everything from source code control, development, quality assurance to disaster recovery as regards development of jBASE is regularly scrutinized externally in order for TEMENOS to maintain its ISO certifications and credibility as a public company."

Through this period, stability within development has been achieved with many of the team passing their ten year service and many more their five year service with the jBASE team. At the same time, new blood continues to arrive so that today jBASE development numbers 33 and is growing.

Improved Deliverables

The consolidation and restructure has proved successful and deliverables are achieved within planned timeframes, consequently allowing TEMENOS and jBASE International to better assist their respective clients in effectively planning their business.

"The development team has monitored and improved on a solid delivery mecha-

nism,” says Ketteridge. “It is our intention to strictly adhere to the development board’s agreed schedule and so far we have been successful in meeting each milestone since 2002. The structures and processes that are in place today have removed any possibility of significant delay in product rollout.”

Of course to achieve this, some of the high risk ground breaking propensity has had to evolve into straightforward deliverables as development has moved from out and out pioneers to production line status. “That’s not to say that the cutting-edge, inventive spirit doesn’t remain,” says Ketteridge. “In fact, the development team has accelerated research and development into emerging technologies and today has a presence on the XML development boards of Oracle and IBM.”

Quality Assurance

Another aspect of the more controlled environment is the adherence to a progressive Quality Assurance framework. This ensures a more rigorous and repeatable approach to the establishment of consistent, high quality standards for the jBASE product.

A dedicated team continually ensures that each new release is an improvement on the previous, as all new releases are subjected to meticulous internal testing in both the TEMENOS development offices in the UK and Chennai, India. Before jBASE is delivered to a client site, it has undergone significant testing in the UK, including the exercising of complex application code. It then goes into a three month testing cycle at the Chennai TEMENOS offices where the entire application of several millions of lines of code and thousands of business rules developed in jBASE are tested.

So, while it may take longer to reach general release status, it becomes quicker and easier to implement thereby saving effort for TEMENOS, jBASE International and their respective customers.

Strategic Relationships

Relationships between jBASE development and HP, Sun, Oracle, IBM and Microsoft have strengthened and regular communication takes place between the vari-

ous development teams allowing the jBASE product to benefit from this type of privileged information exchange.

Under a pre-release initiative, these vendors supply jBASE development with hardware and software product and information prior to general release so that they can be tested with jBASE for compatibility and jBASE can be tuned to adopt certain vendor enhancements that will eventually benefit any applications developed in the jBASE product line.

Regular workshops take place with these vendors as well as consultation as and when required. This means that the Development Team is always ahead of the game, developing the building blocks for future releases of jBASE.

Enhanced Support to jBASE International Customers

jBASE has a long-standing, excellent reputation for providing first-class support and consulting; the Mpower1 partnership has allowed that to continue. Separate jBASE International support offices in the US and the UK were merged into one expanded entity with personnel located on multiple continents, creating a more effective support team and providing a cohesive and consistent interface for customers and partners.

“The reorganization of the support team and the addition of new in-house technical skills is a natural evolutionary step for jBASE”, says Pete Loveless, CEO of jBASE International. “It solidifies jBASE’s position as a leading provider of support in our industry and allows jBASE International to provide the level of experience, value, and guidance expected from an implementation partner.”

The Support and Development Teams meet weekly to discuss outstanding issues and client requirements. Major projects such as upgrading large sites now occur as meticulously planned projects between the client, the Support Team and the Development Team.

In addition to offering superior support, jBASE International’s staff of technical consultants offer access to expertise in the jBASE product line, providing training

and consulting services to maximize the client’s technology investment. jBASE Professional Services meets needs ranging from straightforward programming to comprehensive project management encompassing strategic planning, implementation, and deployment to ensure each client’s unique business needs are identified and fulfilled.

Value Added Products

Mpower1 have invested in multiple complementary add-on products to enhance jBASE and extend the existing functionality. Through strategic business alliances with the Mpower1 group of companies, BlueFinity International and SC Systems, supplementary products have made their way into the jBASE International product family.

Data at Rest Encryption

Data at Rest Encryption Module (DREM) is a powerful cross platform jEDI, which supports 128-bit encryption and decryption of data at the file system level without any changes to the application code.

.NET Integration

mv.NET provides developers with a comprehensive solution to the challenge of creating or enhancing Microsoft .NET based applications requiring access to MultiValue databases. Its unique set of features allows the developer to use the latest Microsoft technology while still leveraging all of the traditional benefits of MultiValue functionality.

SQL Data Integration

mv.SSIS allows MultiValue users to extract data from any major MultiValue database (in both bulk and filtered export mode) to other data repositories using Microsoft’s SQL Server Integration Services (SSIS) product.

Microsoft Reporting Services

Reporting Services Data Connector (mv.RSDC) offers unparalleled Microsoft SQL Server Reporting Services integration across a wide range of MultiValue platforms.

Rapid Application Development

OSMOSIS is a 4GL Rapid Application Development toolkit based on MultiValue principals. As a key feature, OSMOSIS in-

cludes a high quality conversion component for System Builder and SB+, which even converts paragraphs into usable BASIC code.

“The addition of new products complements our core product and service offerings and provides our reseller network with an excellent opportunity to also add value to their end-users”, explains Loveless.

Mpower1 plan to continue their investment and commitment to forward thinking products. “The addition of cutting edge tools gives customers the ability to modernize applications and opens new markets for the sale of application software,” continues Loveless. “We are committed to offering customers complete solutions and will continue to develop and adopt state of the art products that enable increased connectivity and flexibility.”

Product Roadmap

A clearly defined product roadmap for jBASE is in place with fully funded projects within this underway. This roadmap follows a strategic schedule and illustrates the planned testing, release and availability dates for jBASE releases and shows the expected times new releases will move from testing through to beta and then to final production.

jBASE Release 4

“jBASE Release 4 was been a substantial engineering project undertaken by TEMENOS” says Ketteridge. “It represented a significant investment in the future of the jBASE product as the heart of the TEMENOS T24™ solution and is now embedded at some of the worlds lead financial organizations. In fact, jBASE Release 4.1.x has been successfully shipping with T24 to TEMENOS banking clients since the beginning of 2005.”

Recent features available in 4.1.6 deliver more flexibility, scalability and ease of administration. Enhanced SQL, Java and XML support position jBASE on a level playing field to the mainstream DBMS. In addition, the thread signal handler has been reworked to ensure full thread safety, making jBASE the only fully thread safe database of its kind. A new file type

has been added, jPlus, which offers the ability to use large files (greater than 2GB) without administrative headaches. jBASE 4.1.5 also adds Sun's Opteron platform as well as HPUX Itanium to its list of supported platforms.

jBASE Release 5

After an extensive and very successful Beta program jBASE 5 is now released and fully available. The Beta test program was run both internally and with a handful of partners and ran smoothly with major applications being migrated across from jBASE 4.1 with remarkable ease.

jBASE 5 is a true 64 bit implementation offering non-stop capability in the database. The benefits of the new release include all the advantages that 64-bit runtime will provide, such as those relating to file sizes and memory allocation restrictions. In addition, there are specific features that aid development and non-stop computing. These enhancements allow jBASE to be truly non-stop as a technology platform.

TEMENOS has been shipping the 64-bit version of jBASE technology since April 2007 meaning approximately 250 upgrades and new implementation projects rely on jBASE 5 technology to run their businesses 24/7.

With some 600 banks live or implementing in more than 120 countries, the critical mass for a proven, reliable platform for business software has long been surpassed and today jBASE 5 technology is shipped on a daily basis around the world without concern regarding quality and reliability.

“Since its first commercial install in February 1993, jBASE has offered unparalleled robustness, scalability and connectivity. The next generation of jBASE is being designed to continue this tradition,” says Ketteridge. “The roadmap includes an increasing investment in jBASE as we move forward into in the next era of development.”

Beyond jBASE 5

The next phase of development of jBASE is going to be concentrated around the core of jBASE 5.2. The fully funded roadmap

shows a phased release of new and improved functionality as opposed to a prolonged development prior to a major new release. This is aimed at a more flexible approach to meeting our customers' needs. Currently being considered are jBASE monitoring improvements including JMX beans for session, lock, and connectivity monitoring, but the key elements to the plan will see a further significant expansion of support for Java. Then, because of the demands of the scale and operational demands from the banks using T24, there will be major investment in high availability and performance improvements.

Future

Through its organization, management, partners, products and services, jBASE International is in a stronger position than ever to seize opportunities in the global market. Collectively, Mpower1, jBASE International and TEMENOS have an experienced team of over 40 personnel addressing all aspects of the jBASE business and have ensured that product development and quality assurance through to sales and post sales support are strengthened going forward. In addition to this, jBASE International's distributor network spans the globe and is expanding in many areas including Australia and Europe.

Clive Ketteridge remains steadfastly confident about the future of jBASE. "I have sat back and listened to the comment and rumor in the marketplace for years now. At last we have TEMENOS history to point at and say 'told you so'! TEMENOS promised significant investment and gave significant investment; TEMENOS promises more and is giving more. The investment is solid, considerable and a direct benefit to the jBASE community." Ketteridge concludes, "I am looking forward to the future with a firm certainty of continued investment and controlled, timely deliverables and I hope the jBASE community feels the same!"

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