IBM®

**Data Management Solutions
IBM Informix Portfolio
Future Directions**

White Paper 3

Notices

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5/15/2002

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Objective of the document

April 24, 2002 marked the first anniversary of IBM's announcement of intent to acquire Informix Software, the database division of Informix Corporation.
This product portfolio white paper is intended for customers and partners of IBM Informix products.

The objective of this white paper is to:

• Update you on the actions taken for our customers and business partners, and emphasize our continued commitment to the protection and leverage of your Informix investment.

• Present details regarding the future product direction for Informix users and the evolution of the IBM Informix products.

• Present IBM's Data Management strategy and how Informix technology supports that strategy.

We begin with some words from Janet Perna, General Manager, Data Management Solutions, IBM.

Letter from Janet Perna

Dear IBM Informix customers and partners,

Last year I wrote to you about IBM's intention to acquire the Informix database business and our ongoing commitment to you, the Informix customers and partners. In July 2001, the Informix database business became part of the IBM Data Management business and I'm delighted with the progress that's been made so far. The expanded team is executing as one single team dedicated to our customers. We've seen virtually no attrition from the Informix team who joined us. We've shipped over 20 Informix product releases and updates since July, and have received tremendous support from all of you.

Even with this progress, we know there is more to do. We've been listening to you and realize that we need to provide you with more information, more frequently. We have heard that you still have questions regarding the future of the Informix products. You want to know how long we will support the Informix products that you rely on. You want to know what new enhancements we are building into upcoming releases. You want to understand IBM's Data Management strategy for supporting the e-business infrastructure, how Informix technology supports that strategy, and the role of DB2. You want confirmation that IBM will continue to protect and extend your Informix investments and will not force you to move to DB2.

Let me begin by reassuring you that we are committed to supporting and enhancing the Informix product line at regular intervals for as long as you require. We realize that your companies have mission-critical applications deployed on IBM Informix products and that many of our partners have businesses based on these products. There will be no forced migrations from Informix to DB2. As long as the Informix database products serve your application needs, by all means continue to use them with confidence.

While richer than the first version published in May 2001, the last version of the white paper didn't provide you with enough of the detail you were looking for. This update is designed to provide more detail regarding our plans for the Informix product line including updated product roadmaps, planned enhancements, and updates or programs for customers and partners in general.

In addition to the Informix Product Roadmap, we also want you to understand more about our Data Management strategy. We also want to provide enough insight into DB2, which is the technology base for IBM's future Information Infrastructure, to enable you to consider it as you plan for new applications. We continue to accelerate the delivery of new functionality into DB2, making it the industry leader for Internet based applications, including unsurpassed scalability, availability, and performance for mixed workloads, management of structured and unstructured information, and native XML support. You'll note that our strategy prominently includes the delivery of key Informix features into DB2.

Please take the time to read through the information provided. We are working hard to provide you the most up-to-date information and plans. But most importantly, invite your IBM sales team or one of our many business partners to schedule time with you to see how one or more of IBM's software offerings can help you resolve your toughest data management problems.

Over the past year I've had the privilege of meeting many of you, explaining our strategy and listening to your business issues. I welcome the ongoing dialog between us and am committed to providing you with data management products and support that enable you to create value for your business.   Please don't hesitate to let us know how we can continue to improve our value to you.

Sincerely,

Janet Perna

General Manager, IBM Data Management Solutions

IBM Informix Team Update and Contacts

This is the second update of the original IBM Informix Portfolio Future Directions white paper published in July 2001. Since IBM and Informix came together in July of last year, we have been focused on "the power of one": one strategy, one team, one commitment to our partners and customers.   We understand the value you place on your existing investment in database technology, as well as its importance to your success. And we realize that your companies have mission-critical applications deployed on IBM Informix products. We trust you will find that the detailed product plans that follow confirm our unchanging strategy to support IBM Informix customers with ongoing quality and feature improvements. In addition to these plans and the more detailed Data Management vision and strategy, we first want to provide for you an overall update.

New Product Deliveries

Since our commitment at the acquisition to support Informix products, IBM has shipped over 20 Informix product releases and updates. This includes new Server and Bundle releases of Informix Dynamic Server Version 9.3, Informix Spatial DataBlade Module Version 8.11, Law Enforcement Foundation for Biometrics, Server Studio JE (Java Edition) Version 8.32, Informix XPS Version 8.32 and Informix OnLine Version 5.11; new Application Development Tools releases of Informix 4GL Family and Informix SQL Version 7.31, Four J's Business Development Suite Version 3.20, and Office Connect Version 3.0; and new API and Connectivity releases of Informix Client SDK Version 2.7, Informix Enterprise Gateway Manager Version 7.31 and Informix Enterprise Gateway with DRDA Version 7.31.

More details on these releases are listed among the product roadmaps in later sections.

Customer Support and Services

A shared vision for both IBM and Informix prior to the acquisition was a common philosophy on the importance of customer support and services and an unwavering focus on customer satisfaction. With our Customer Support and Services organizations working as one team, we are able to take advantage of the best practices of IBM and Informix and to leverage a greater pool of database expertise in meeting the needs of our customers and partners across the product lines.

Our IBM Informix support centers around the world continue to focus on delivering timely, responsive, high quality assistance to customers. The

combination of the strong Informix support model and the added advantages of the breadth and depth of IBM's acknowledged leadership in Customer Support are proving to be a winning combination. We continue to provide the key support processes that you relied on such as direct-to-engineering and follow-the-sun, and we are developing new offerings applicable to the entire product line.

IBM continues to maintain services staff skilled across the product lines with the ability to do database installation, performance tuning, replication implementation, system health analysis, and ad hoc DBA work.

Our professional services and education teams also continue to provide offerings across both the Informix and DB2 product sets. We have extended the reach of these offerings and skills via strong partnerships with IBM Global Services and IBM Learning Services. The Data Management services and education team -- now about 500 worldwide personnel -- are available to ensure customers and partners have access to the skills they need to deploy and effectively leverage the technologies and solutions we build.

Partner Investment

For our partners, our strategy is to embrace, enhance, and extend our partnerships by protecting their investment, providing leadership programs, and expanding the opportunity for existing and new partners. IBM has maintained the previous Informix business terms that partners have come to rely on. In addition, we have integrated the Informix product lines into our award winning PartnerWorld partner programs and are actively reaching out to all of you to join the partner marketing program that applies to you. The partner programs offer you numerous marketing benefits, including sales and technical education, product enablement, and technical support.

Business partners continue to be a critical component of our Customer Support and Services focus. Whether it is in the delivery of maintenance to your customers, or skills transfer into each other's delivery teams, we are focused on constantly creating new areas of opportunity to partner and win. The Informix business partner community is seeing new opportunities opening up via the relationship with IBM, and we are fully committed to extending this value of relationship with our Customer Support and Services team.

Commitment to IBM and Informix

IBM remains committed to the Informix customer and partner base and we appreciate your ongoing commitment to us. Many thousands of customers have recommitted to the Informix product line since the acquisition. Examples of some customers and partners are Merrill Lynch, Sears, Home Depot, Qwest

Information Systems, Mercy Ships, ROI Systems, Inc., Prelude Systems, Inc., Shutterfly, Epicor, ONLINE Computing, Klinikum der University Munchen, AF Informatica Aplicada S.A., International Decision Systems, Inc., Storis, Reynolds & Reynolds, Hubbell Canada, Datatel, Lincoln Life, TECHSYS Inc., and Geac Public Safety, a division of Geac Computers, Inc. just to name a few.

We also want to acknowledge the exhaustive efforts of the International Informix Users Group Board of Directors and its membership in their support, encouragement, and feedback.

Come Visit Us

We invite you to visit the following websites for up-to-date information on our product lines and programs and to register for newsletters and upcoming conferences.

Informational Websites:

Data Management website: http://www.ibm.com/software/data/

Informix specific website: http://www.ibm.com/software/data/informix/

Partner website: http://www.ibm.com/software/data/partners/

International Informix Users Group: http://www.iiug.org

Signup for upcoming Product-specific newsletters:

InformixToday: http://www.ibm.com/software/data/informix/informixtoday/

U2Today: http://www.ibm.com/software/data/u2   (newsletter announcement coming soon!)

Register for upcoming technical conferences:
IBM Software Symposium in Vienna in June 2002:
http://www.ibm.com/services/learning/conf/europe/sfw_symp/index.html

Informix User Conference in Anaheim in September 2002:
http://www.ibm.com/services/learning/conf/us/dm/index.html

Both conferences will feature a wide variety of demonstrations and seminars on how to gain added value from your existing Informix investment, including ways to leverage the benefits of other software products offered by IBM Software Group and our worldwide partners.

Data Management Vision and Strategy

Vision

Recognizing that the audience for this roadmap white paper is primarily Informix users, it would not be complete if it didn't answer the question "Whatever happened to Arrowhead?" The Arrowhead vision at Informix was to provide the leading e-business database, optimized for handling the most demanding and unpredictable workloads with the highest performance, scalability, availability and security for OLTP, BI or both simultaneously. Since, multi-tier application environments introduce increased complexity we planned for advanced levels of self-management and integration between the components to maintain low costs of ownership. Finally, we intended to provide all of this across a broad range of hardware and operating platforms, including low-cost Linux and Windows platforms.

Customers can be confident that the goals that drove the Informix Arrowhead vision parallel very closely IBM's goals for DB2. Upon acquisition, Informix technologists viewed this as confirmation of their vision and furthermore, appreciated the fact that the IBM team had also been focusing on additional areas – particularly in solving the problems of managing the broad range of digitized content and how to process, analyze and derive intelligence from the wide variety of data in structured and unstructured format all around the enterprise. The Content Management and Information Integration projects in progress at IBM are focused on these two opportunities and are valuable extensions to the common data management infrastructure vision we share.

The combined team now shares the following, unwavering Data Management vision. We are and will continue to be the leader in delivering an information infrastructure for managing, analyzing, securing, and accessing all forms of data and digitized content to help customers build and deploy competitive e-business solutions.

Strategy

What is our strategy for executing this vision?

IBM has a business strategy that draws heavily on a commitment to customer satisfaction. We believe that the way to earn trust and loyalty from new and long-term customers is to continue to provide value through leading technology, services and programs. This means that even a very aggressive vision for the future cannot compromise the level of attention paid to customers running today's technology.

Therefore, there are no changes in the strategy that IBM has outlined for earning the ongoing trust and loyalty of our Informix customer and partner base. We remain committed to delivering support and enhancements to the Informix products as we have detailed later in this paper. We will continue to offer industry leading support and services, investment protection and flexibility and world-class programs for our partners. And, we will offer many opportunities to leverage the benefits of the rest of the IBM Software portfolio to add value to an existing Informix environment.
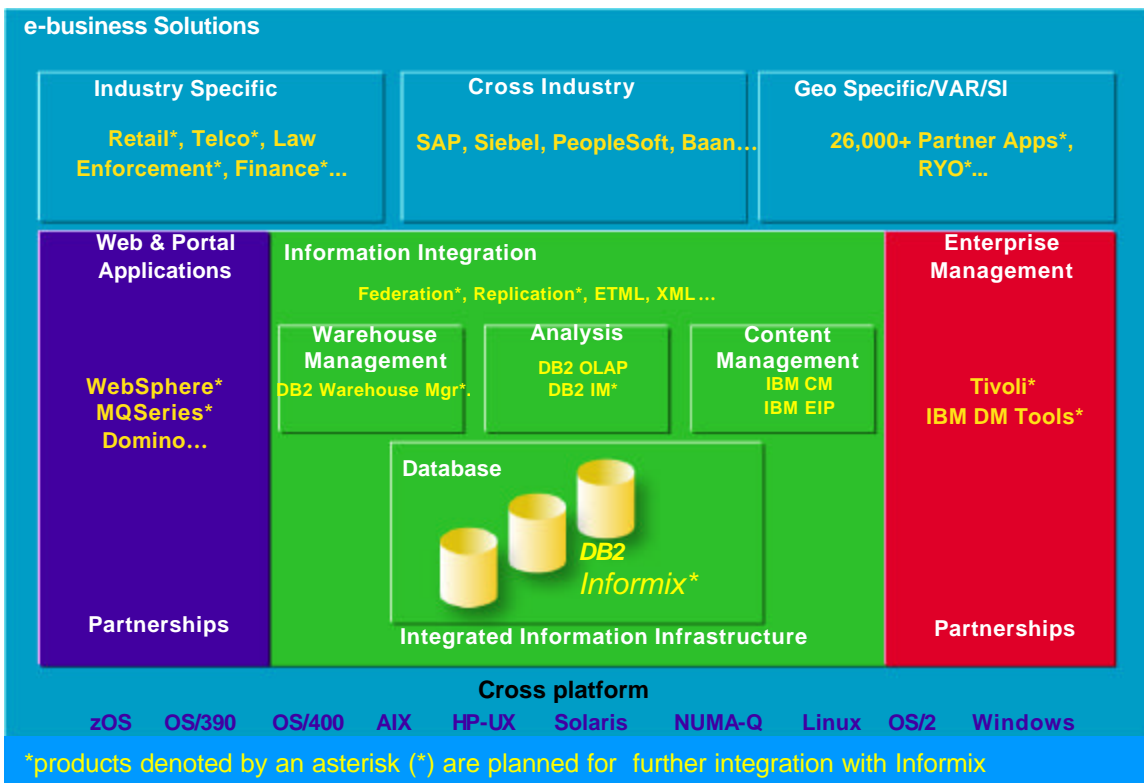
Also, key to IBM's Data Management strategy is investing heavily to maintain and grow DB2's technology leadership as the database for e-business applications. This strategy involves the introduction of unique Informix compatibility features, previously considered essential to Informix's Arrowhead vision, that we trust will make DB2 the obvious choice of customers or partners who wish to build new e-business applications or enhance solutions currently running on Informix. This process involves continuous innovations in content management, information integration, and in the scalability, availability and performance necessary for the unpredictable internet-based workloads. The Data Management technical leaders, consisting of architects and engineers from DB2 and Informix, are working as one team on implementing the details for our shared vision.

Shortly after the acquisition, the technology teams of Informix and DB2 sat down to answer a tough question: on what database platform would we combine our efforts to provide the leading e-business infrastructure platform? As we reviewed the pros and cons of each approach, we came back to the fact that a big job still remaining at Informix was combining the BI, OLTP and Object Relational attributes together in one product – something that DB2 had spent the last several years completing. When we analyzed where the market momentum was, it was also clear that while DB2 was gaining, Informix had been losing share. Finally, given that many of the leading application providers have committed to DB2 as their strategic Unix database, we decided to build on that base. In short, IBM is committed to the Arrowhead vision and is implementing it on the DB2 technology base.

DB2 is the fastest growing database in the industry and is used by over 400,000 companies and partners in support of their mission critical applications. DB2 has delivered many of the advanced technology features that have been the hallmark of IDS and XPS. Today DB2 supports massively parallel architectures, integrated object relational models, online utilities, industry standard SQL, and the world's most advanced query optimizer for processing complex query applications. In addition, DB2 supports a number of other features, such as the industry standard stored procedure language, XML, Web Services, and federated database. We will continue to accelerate the delivery of new functionality into DB2, making it the industry leader for Internet based applications. This includes unsurpassed scalability, availability, and performance for mixed workloads,

management of structured and unstructured information, and native XML support.

The following graphic depicts the complete e-business infrastructure offering that IBM provides for both DB2 and Informix. The Data Management team at IBM is teaming up with peers in WebSphere and Tivoli to offer a truly integrated multi-tier application development and runtime environment.   In addition, we're committed to evolving a complete system management framework into a self-managing/self-healing environment through SMART initiatives. All of this operates on a broad range of hardware and goes to market with partners in all of the most demanding vertical marketplaces. Many of the components listed such as WebSphere integration, MQ Series support, Tivoli support and several BI Tools either already exist on Informix or are in plans for upcoming releases.

e-business Solutions

Industry Specific	Cross Industry	Geo Specific/VAR/SI
Retail*, Telco*, Law Enforcement*, Finance*...	SAP, Siebel, PeopleSoft, Baan...	26,000+ Partner Apps*, RYO*...

Web & Portal Applications

Information Integration

Federation*, Replication*, ETML, XML ...

Warehouse Management	Analysis	Content Management
DB2 Warehouse Mgr*.	DB2 OLAP DB2 IM*	IBM CM IBM EIP

Enterprise Management

WebSphere*
MQSeries*
Domino…

Database

DB2
Informix*

Tivoli*
IBM DM Tools*

Partnerships

Integrated Information Infrastructure

Partnerships

Cross platform

zOS   OS/390   OS/400   AIX   HP-UX   Solaris   NUMA-Q   Linux   OS/2   Windows

*products denoted by an asterisk (*) are planned for further integration with Informix

Informix and DB2 Compatibility

The combined Data Management development team, are implementing many Informix compatibility features and other strategic initiatives in DB2. Informix customers and partners can be confident that, if desired, transitions from Informix database servers will be more and more smooth with each upcoming release of DB2.

To begin with, DB2 and Informix database servers have a lot in common. Both use standard SQL, invented at IBM. Both leverage shared nothing architectures for high end scaling. Both provide user extensibility through similar object relational models. And both have integrated many of the same OLAP and Business Intelligence reporting extensions.

To help smooth future transitions, upcoming DB2 releases will emphasize two general areas: Native Informix connectivity and Portability enhancements in the server.

Native Informix connectivity
Informix applications written in 4GL or ESQL/C communicate through a proprietary API called SQLI. DB2 has a similar API called DRDA. We plan to develop a set of client-side libraries that communicate directly with DB2. IBM is confident that this approach will offer the best performance for the least amount of work by the application developer. 4GL connectivity directly to DB2 should be ready for new application development by the end of 2002. The features needed for easier porting of existing Informix 4GL applications on DB2 are planned for 2003.

Portability Enhancements
Each database server on the market has added customer-requested extensions to the SQL-92 standard. IDS adapted its extensibility API from Illustra, the original object relational database originally acquired by Informix. Red Brick introduced a number of built-in aggregation and financial reporting routines. XPS and IDS support a different stored procedure language than other vendors. IBM has a unique advantage in employing many of the Informix inventors to integrate support for unique Informix features in DB2.

Informix portability features are scheduled to appear in DB2 in two phases. The first phase will include native Informix Connectivity and many Portability enhancements. In particular, the first phase includes flexible transaction parameters, the Informix set of date types and associated functions, IDS style replication for high availability, Red Brick style loader enhancements, and Red Brick style STAR Join optimizations.

The second phase will add IDS/XPS-style fragmentation as well as RTree and Timeseries indexes to support Informix Datablade spatial indexes and the Financial Foundation bundle. Timeframes have not been specified for either phase, but because IBM understands the benefits that these features will offer current Informix users and the broader market, work is proceeding steadily.

IBM expects to further refine the set of portability requirements as we continue to meet with and listen to our Informix customer and partner base. Of course, some Informix features will not make their way in. However, we plan to choose features that will make the transition the smoothest. We are also building tools to

help convert schemas, triggers, Stored Procedures and application code from Informix to DB2 syntax. The first tool of this kind is now in test and expected to be available by mid-year 2002.

DB2 or Informix for new applications?

Given the preceding information on IBM's vision and strategy, it makes sense to finish with some advice regarding a customer's database choice for new application development.

IBM recommends that Informix customers and partners implementing new applications strongly consider DB2. We recognize that this is a broad statement. Therefore, customers should speak with their IBM sales representative about what might be right for their situation. Some will find advantages to starting a transition soon. Others will decide to continue on Informix and consider a transition when more of the Informix portability has been built in. Either way they will benefit from investigating the investment protection options available through the Gold Program, which your sales representative can explain. For those customers looking to transition, we can provide tools and assistance to make this as smooth as possible. With the underlying technologies and visions so similar, the transition within the IBM Data Management family of products will be your most straight forward.

IBM Informix Dynamic Server (IDS)

IDS is a mission-critical, general-purpose on-line transaction processing (OLTP) database for the enterprise and workgroup. IDS is deployed today at enterprises large and small where a transactional database can solve real-world business problems.

Enterprise businesses

IDS is commonly used for OLTP, decision support, customer relationship management, enterprise resource planning, and many other mission critical enterprise applications.

Small to medium size businesses

In addition to the scalability of IDS at the enterprise level, IDS continues to be a predominant player in the small- to medium- size business marketplace, with installations at well over 20,000 companies across the globe, and with a very strong focus in the Linux market. Many of these installations are due to our strong network of Informix heritage value added resellers, integrators, and ISVs. The additional benefits of IBM's extensive PartnerWorld for Software and PartnerWorld for Developers offerings greatly enhance the opportunities available to these business partners.

To support continued customer success with IDS, IBM has launched a new service offering especially designed for small to medium size businesses with limited DBA resources. Customers can subscribe to IBM's Remote DBA service in which IBM will manage their IDS databases for them from a remote location.

Embedded Applications

Because IDS is easily embeddable, IDS is often integrated into OEM solutions, such as those from Intrado (911 emergency systems), Telelogic (Software Configuration Management), and many others.

Technology Leadership

The IDS product has always had technology leadership at its core. IDS was the first database to bring to market key technologies such as Range (Expression) Partitioning, Fully-Threaded Architecture – the Dynamically Scalable Architecture (DSA), Parallel Data Queries, High Availability Data Replication, Enterprise Replication, Worlds Leading Extensible Architecture, R-Tree & GIS (Spatial) Integration, Time-Series Data, Java in the Database, and much more.

5/15/2002

IDS Product Roadmap

IBM intends to continue to enhance and support IDS for existing customers and partners based on customer, market and technology-driven requirements for as long as they require. IBM is planning new releases of IDS approximately every 18 months as described in the sections below.

IDS 9.30 shipped in October 2001 and is enjoying rapid success. IDS 9.40 is currently in development, IDS 9.50 is in the planning stage, and the roadmap already extends to IDS 9.60. The Workgroup Editions will also continue to be enhanced and supported and kept current with the IDS Enterprise versions.

IDS Version 7.31

IBM will continue to release fixpacks for IDS 7.31 versions of IDS 7 on a regular basis for several more years. IBM will support IDS 7.31 through at least 12/31/2005.

Customers should note that IDS 9 is the platform for future enhancements of the IDS product line.

IDS Version 9.21

Effective 4/1/2002 IDS 9.21 was removed from marketing. IDS 9.30 takes 9.21's place in the Informix lineup as the recommended IDS 9 version for new deployments.   Existing IDS 9.2x customers & Business Partners can continue to purchase additional license entitlements and will receive patch level support for IDS 9.2x. Customers desiring regular fixpacks will now receive them through the new IDS 9.30.

IDS Version 9.30

IBM delivered its promise to the market with the announcement of IDS 9.30 in October 2001. For full details on IDS 9.30, please refer to the IDS web pages: http://www.ibm.com/software/data/informix/ids .

IDS Version 9.40

The feature set of IDS 9.40 has been decided and development is well underway. The team focused on the needs of both the IDS 7 & 9 customers when selecting the feature set for IDS 9.40.   The features and enhancements of IDS 9.40 are based on extensive feedback from our customer base. The projected release date for IDS 9.40 is Q1 2003.

In this release, IDS 9.40 will deliver key, customer requested OLTP enhancements, including:

Enhanced Scalability:

The 2 gigabyte chunk limit and the 4 terabyte maximum instance limit will be wiped out. IDS 9.40 will be able to support *32,768* chunks and each chunk can be as large as *4 terabytes*, which will increase the maximum size of an IDS instance from today's 4 terabytes limitation to *a theoretical 128 petabytes.* Not only will this feature greatly expand the scalability of IDS and allow it to make use of today's large disk drives, but also it will ease administration overhead by greatly reducing the number of chunks that a DBA must manage.

Enhanced Security:

Security is at the forefront of many customers' thoughts today. New capabilities for encryption and authentication are being added to IDS 9.4. IBM is committed to increasing the security features in all of its products.

Enhanced Performance:

Database performance tops many customers' lists. The IDS team is very focused on finding new ways to improve the performance of IDS 9. Included in this project is a focus on reducing the amount of tuning required after upgrading from IDS 7.

SQL Compatibility:

Business partners are always looking for ways to maximize their investments with each of the database vendors they support. The IDS team will deliver SQL compatibility features in every new release of IDS that will make it easier to port and maintain applications that must run against multiple vendors' databases.

Enhanced IDS and WebSphere Integration:

WebSphere Application Server and IDS are today a fully supported combination: a combination that marries the best-in-class web development environment of WebSphere with both IDS 7 and 9. We will continue to work closely with the WebSphere development team to ensure the feature development of both product lines are integrated.

Leveraging IBM Technology:

The IDS team is leveraging the IBM technology base to improve IDS 9.40. A key example of this is that IDS 9.40 will take advantage of the IBM Unicode implementation. In just one release, IDS's conformance to Unicode, from 1.x to 3.x, will be dramatically improved.
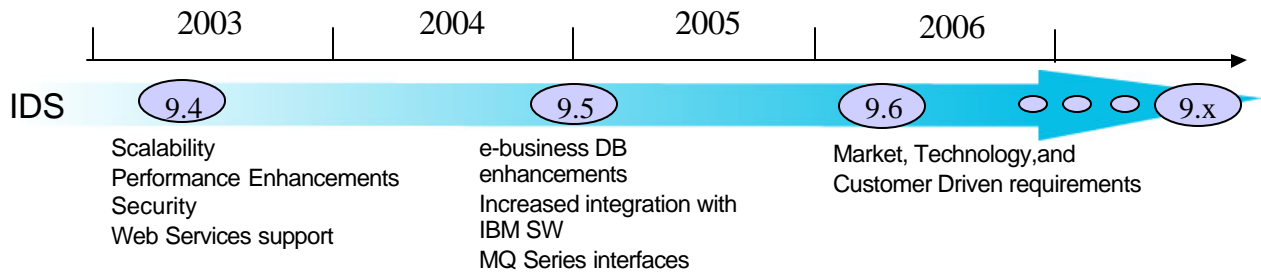

IDS Version 9.50 & IDS Version 9.60

The IDS team is hard at work on product futures beyond IDS 9.40. Your input is always desired. The future of IDS depends on building products that our customers require. If you wish to provide input regarding future IDS functionality, contact your sales team or your local technical support office. They will then forward your feature requests to product management and to the development team.

What are our early thoughts on IDS 9.50? We will continue to collaborate within IBM to improve IDS security, to add more SQL compatibility features, to further raise the performance bar, and, of course, to take advantage of IBM's leading WebSphere technologies. IDS excels in ease of administration features. By

working to bring the IBM's SMART self-managing concepts to the IDS roadmap as well as the DB2 roadmap, IDS will become even easier to administer. And by bringing key features like IDS style replication for high availability to DB2, it will be easier for customers and business partners to take advantage of DB2 for new applications.

In summary,

	2003	2004	2005	2006	

IDS   9.4   9.5   9.6   9.x

Scalability
Performance Enhancements
Security
Web Services support

e-business DB
enhancements
Increased integration with
IBM SW
MQ Series interfaces

Market, Technology,and
Customer Driven requirements

IBM Informix Internet Foundation

The IBM Informix Internet Foundation product bundle is no longer being offered. Existing customers and partners may purchase additional license entitlements and receive support for each product in the bundle.

The J/Foundation Java capability is now available as part of the default IDS 9.30 offering on the platforms that support Java.

Existing Internet Foundation bundle customers can upgrade any or all of the components of Internet Foundation as long they remain on maintenance, per the support plans for each product in the bundle.

DataBlade Modules

DataBlade modules are application and business logic that reside in the database. DataBlade modules allow IDS to integrate new data types, operations that process the data, and access methods that index the data. The server provides the same level of support for these new data types, operations, and access methods that it provides for built-in data types. DataBlade modules add greater capability to the database server and enable you to easily manage any kind of information to meet the needs of your specific business domain.

IBM intends to continue to offer enhancements and support for the DataBlade technology products for existing customers and partners for as long as they require, while integrating key technologies like Rtrees and TimeSeries technology into future releases of DB2. IBM maintains the skilled staff to install, configure, and the support use of these technologies in your environment. More details are described below.

Today, IBM offers the following DataBlade modules:

- **IBM Informix Spatial DataBlade** module enables users to manage geo-spatial data and features a specialized R-tree index, which provides extremely high-performance SQL access to spatial data.
- **Excalibur Image DataBlade** module provides for image retrieval and feature management.
- **IBM Informix Image Foundation DataBlade** module provides for image translation, retrieval of image metadata, and image format conversion.
- **Excalibur Text Search DataBlade** module supports full-text searching of documents stored in IDS.
- **IBM Informix Geodetic DataBlade** module stores and manipulates four-dimensional objects; it is particularly useful for managing spatial-temporal data.
- **IBM Informix NAG DataBlade** module provides numerical analysis functions and formulas.
- **IBM Informix C-ISAM DataBlade** module provides two main features: storage of C-ISAM data in the database and access to C-ISAM files from the database.
- **IBM Informix TimeSeries DataBlade** module supports management and analysis of time series data.
- **IBM Informix Video Foundation DataBlade** module provides an open architecture for video-enabling technologies.
- **IBM Informix Web DataBlade** module eases the development and management of Web-based DBMS applications.

There is a new Geodetic DataBlade module release, Version 3.11 targeted for the second half of 2002. Included in the release is Enterprise Replication support

and enhancements for better R-tree optimizer costing. The newest version of the Spatial DataBlade module, Version 8.20 targeted for the second half of 2002, includes the addition of a Java API and new functions for SRS transformation. The TimeSeries Real Time Data Loader team is preparing for a new feature release, Version 1.10, in the second half of 2002. Enhancements include the support for "regular" Timeseries, templates and new configuration options for data feeds. Support for 64-bit platforms, and ease of use features such as simplified tick handling and command line utility simplification. The team is also preparing fixpacks for the Web, TimeSeries and the NAG DataBlade modules in 2002.

New Foundation Bundles

Finance Foundation for Capital Markets

The recently announced and well-received Finance Foundation for Capital Markets bundle will continue to be actively developed. This unique product is designed to help securities traders store and analyze market data in real-time. The bundle incorporates the benefits of the IBM Informix TimeSeries DataBlade module, IBM Informix TimeSeries Real-Time Data Loader, IBM Informix NAG DataBlade module, and IBM Informix Dynamic Server into a targeted solution that is ideal for finance professionals. Finance Foundation will be updated to include the latest versions of IBM Informix products, with the many new features and advantages they include.

Law Enforcement Foundation

IBM has recently launched IBM Informix Law Enforcement Foundation designed to help in the exacting field of law enforcement and police science.   This product bundle uses the IBM Informix DataBlade technology to extend the IDS database, adding the ability to handle voice, iris, face, and fingerprint recognition. The unique ability to extend the access methods (index types) of the database allows these multi-dimensional data types to be handled with ease and speed. This provides huge productivity gains for organizations that adopt it.   While only recently launched, this product has already been selected by law enforcement agencies on four continents.   IBM is enthusiastic about the new market opportunities that this product provides and its ability to demonstrate excellent customer value and technological innovation**.**

Other Foundation Bundles

IBM is investigating other industry specific Foundation bundles for various customer segments for the future.   Stay tuned to the IBM Data Management web site for continuing announcements of these products. As with the Internet Foundation bundle, IBM intends to continue to enhance and support the underlying products that comprise these offerings to existing customers and partners for as long as they require, while integrating key technologies of them into DB2.

Business Intelligence Servers (Red Brick and XPS)
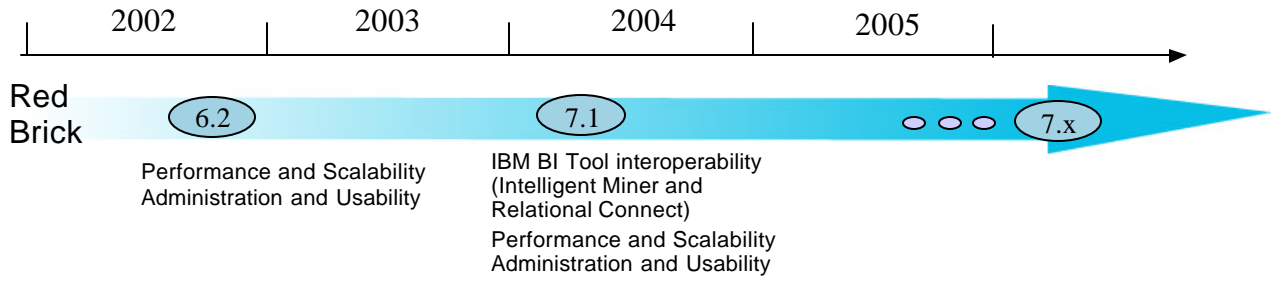
IBM Red Brick Warehouse

IBM intends to continue to offer enhancements and support of Red Brick for existing customers and partners for as long as they require. IBM also intends to integrate key features like Red Brick style loader enhancements and Red Brick style STAR Join optimizations into DB2, making it easier to take advantage of DB2 for new applications.

Themes for Version 6.2, targeted for mid-2002, are integrated analytics, enhanced performance, and continued ease of use. By including support for ANSI standard SQL/OLAP extensions, we will add to Red Brick's strong analytic capabilities. Performance and usability will be enhanced with features such as built-in performance monitor, locally segmented indexes, remote loads, integrated backup & restore, and support for XML.

Planning and some design work are underway for the follow-on release of IBM Red Brick Warehouse. We've been hearing from many of our customers and partners that continued improvements in the areas of ease of use, query performance, and data loading are critical as they continue the push to handle larger workloads with minimal capital outlay. Under consideration for future releases are the following: easier management of PSUs, improvements to basic STARJoin, TARGETJoin processing, and expression rewrites to allow more index use. This release is targeted for late 2003, consistent with our commitment to release new Red Brick updates to existing customers approximately every 18 months.

Since Red Brick version 6.0, customers who purchased Red Brick have received at no additional charge a tool called Vista, which can significantly speed up certain types of queries. IBM's services team can provide hands-on mentoring in the use of Vista and assist your team in implementing it for your user community. They will extend the value of your Red Brick investment by helping you take full advantage of features you have today but may not be using.

In summary,

| | 2002 | 2003 | 2004 | 2005 | |

Red
Brick

6.2

7.1

7.x

Performance and Scalability
Administration and Usability

IBM BI Tool interoperability
(Intelligent Miner and
Relational Connect)

Performance and Scalability
Administration and Usability

Extended Parallel Server (XPS)

IBM intends to continue to offer enhancements and support of XPS for existing customers and partners for as long as they require. IBM also intends to integrate key features like XPS style partitioning (fragmentation) into DB2, making it easier to take advantage of DB2 for new applications.

The major release objectives for Version 8.40, targeted for the second half of 2002 are continued ease of use, additional tool support and performance optimization. This release will include critical customer requested features, such as long identifiers support, distributed support via I-STAR (participant only), Roles and snowflake schema enhancements. In addition, several RAS (reliability, availability, serviceability) features have been incorporated to improve the overall ease of management necessary for running enterprise data warehouse environments.

A subsequent release, Version 8.50, is in the planning phase and will support major themes such as performance optimization and DB2 business intelligence tools integration. XPS version 8.50 will continue to provide ease of use features that make large warehouse administration require even less effort. This release is currently targeted for the first half of 2004, consistent with our commitment to release new XPS updates to existing customers approximately every 18 months.

Future versions of IBM XPS will aim to include tighter integration and support for IBM business intelligence products such as DB2 Warehouse Manager and QMF.
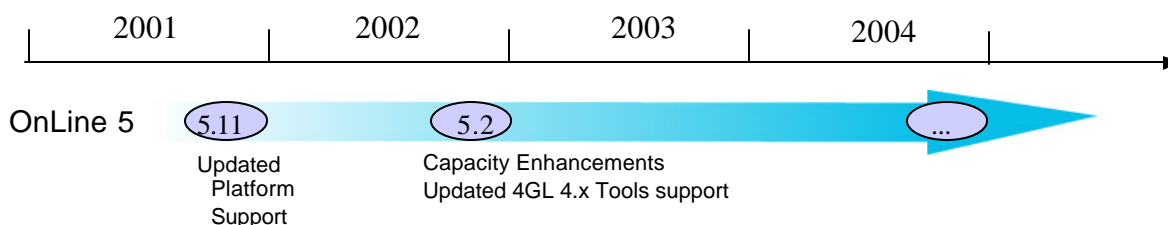
In summary,
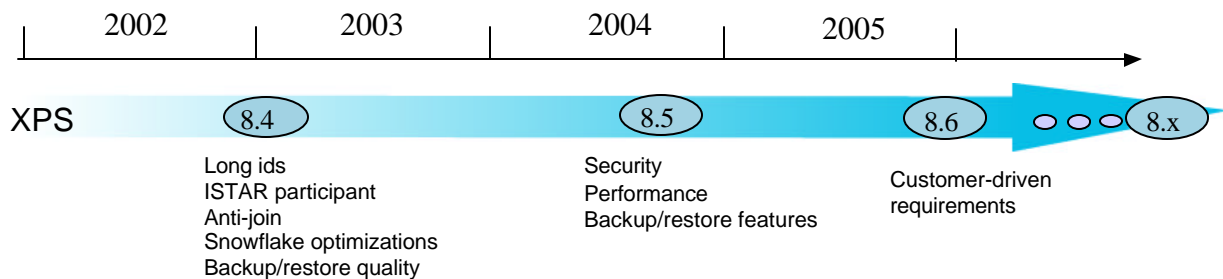
Low-Admin "Classic" Servers

These traditional database servers have earned a reputation for solid reliability, robustness, simplicity and ease of use and are fondly called "The Classics". IBM intends to offer enhancements and support to existing customers and partners for as long as they require. We plan to do this by not disturbing the fundamental stability that makes them so attractive and will be primarily focused on porting them to new and updated operating systems as they become available.

IBM Informix OnLine 5

OnLine 5 will continue to be enhanced for the new generation of lightweight "internet appliance" style servers of 1 or 2 CPUs, as well as continuing to do duty in the thousands of customer and VAR applications that rely on it today. Showing IBM's commitment to this family of products, Version 5.11 was released in December 2001, and includes support for all the latest Unix and Linux operating systems. Version 5.2 is targeted for the second half of 2002.

In summary,

2001	2002	2003	2004

OnLine 5 5.11 5.2 ...

Updated Platform Support

Capacity Enhancements
Updated 4GL 4.x Tools support

IBM Informix SE

Valued by the VAR community for it's ease-of-use and silent install, SE is embedded in thousands of partner applications throughout the world. Version 7.25, released in 2001, includes support for files larger than 2GB and is available on Unix, Linux and Windows. Version 7.26 is targeted for the first half of 2003 but future releases will primarily be to support operating system updates only.

IBM Informix C-ISAM

As the industry standard Indexed Sequential Access Method (ISAM) for UNIX worldwide for more than a decade, C-ISAM is currently available for Linux on IBM 390 Systems as well as a wide variety of Unix systems, Windows and Linux. No future feature releases are planned at this time.

5/15/2002

Development Tools, APIs, Gateways, and Specialty Tools

Application Development Tools

IBM Informix 4GL (4GL) Family

The IBM Informix 4GL family provides a character based, fourth-generation application development environment that includes the Rapid Development System, Interactive Debugger, and 4GL Compiler. 4GL continues to be a predominant application development tool in the Informix development community. Showing IBM's continued commitment to the established 4GL customer base, IBM released version 7.31.UC1 in January 2002. Features included support for long ids, NCHAR and NVARCHAR, among others.

IBM considers 4GL a strategic application development tool for Informix servers and soon for DB2 as well. Support and enhancements will continue for as long as customers and partners require.

Development is currently underway for 4GL to support DB2 as a database for new application development - we anticipate that this will be available in the next release, 7.4, targeted for late 2002. Also included in the 7.4 release is support for dynamic arrays. These enhancements provide the opportunity for both the Informix and DB2 application development communities to take advantage of the power of Informix 4GL in new application development.

Based on feedback from the International Informix Users Group (IIUG), IBM is investigating the support of 4GL in the WebSphere family of products, targeted for a release in 2003. Also under consideration for a future release is support for additional datatypes, like CLOBs.

Informix 4GL Version 4.2 customers will soon be able to take advantage of features only provided in 4GL Version 7.x family as we add new features, like local loop-back support, in order to better support the combination of 4GL Version 7.x and OnLine 5.

In summary,
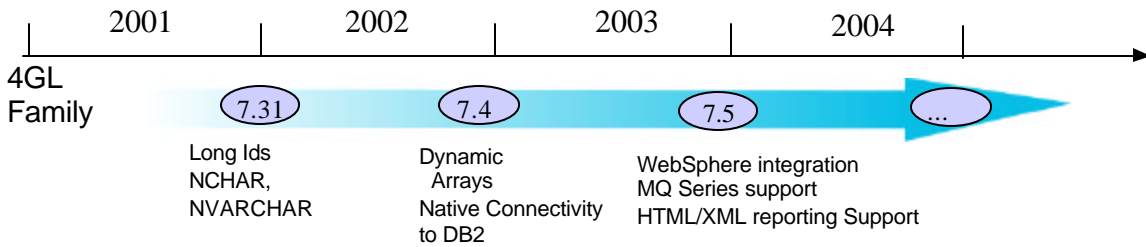
Four J's Business Development Suite (formerly Informix Dynamic 4GL)

In December 2001, IBM signed a Software Remarketing Agreement with Four J's Development Tools for the rights of IBM to remarket Four J's Business Development Suite (BDS). Under Informix, this product was known as Informix Dynamic 4GL. It was a means to quickly and easily recompile 4GL applications to a variety of graphical application development environments, including those that are Windows, HTML and Java based. IBM is currently selling and supporting Version 3.20, released to market early in 2002.

IBM intends to keep current with the newest releases of BDS, expecting newer releases to be available from Four J's within 2002 and beyond. Customers under current Informix Dynamic 4GL maintenance contracts can upgrade their licenses to BDS through June 20, 2002 at no-charge (some restrictions may apply based on existing contract terms). Contact your sales team or local support center for more information.

IBM Informix SQL (I-SQL)

IBM Informix SQL consists of five application development tools: a schema editor, menu builder, SQL editor, forms builder, and report writer. IBM intends to continue to sell and support this product. IBM's commitment to I-SQL is evidenced by a recent maintenance release, Version 7.31 in January 2002.

IBM intends to support I-SQL for existing customers and business partners for as long as they require. No further enhancements are planned at this time.

Client Development Tools and APIs

IBM offers a suite of products to enable clients to connect to its Informix databases, access data spanning multiple data sources, and work with a variety of specialized data types.

IBM intends to support to existing CSDK customers and partners for as long as they require. New enhancement releases are planned to continue support for new server releases and to address performance and standards compliance.
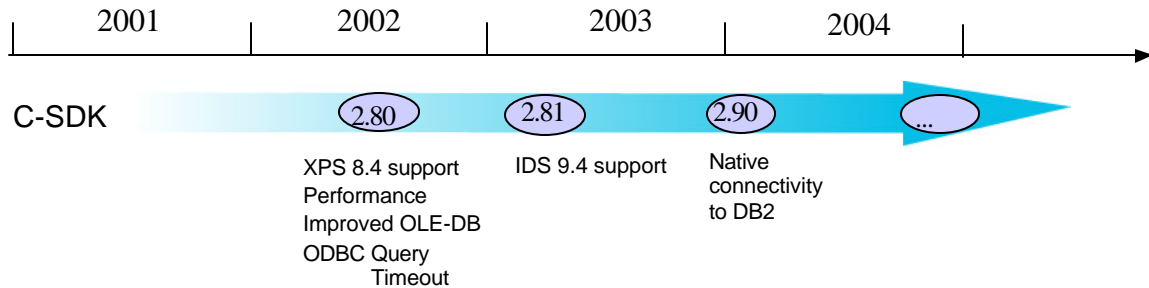
This section summarizes IBM's intentions for the following suite of products:

- **IBM Informix Client SDK** packages several application programming interfaces (APIs) for servers into a single offering. Support is included for JDBC, C, C++, ESQL/C, Open Database Connectivity (ODBC) and OLE DB client side provider
- **IBM Informix Connect** is the set of runtime libraries required by the non-Java components of IBM Informix Client SDK. This software is required for deploying client applications to access IBM Informix servers.
- **IBM Informix JDBC Driver** is a pure Java type 4 driver based on the latest 1.x and 2.x Java Database Connectivity (JDBC) specifications. Embedded SQL/J is part of the IBM Informix JDBC driver.
- **IBM Informix ESQL/COBOL** is for supporting SQL statements embedded into COBOL language applications. The current plans for ESQL/COBOL are to continue to support the product for as long as our customers and business partners require, and enhance with market demand.

The key theme for connectivity products is fast, easy and reliable data access to Informix servers. Client SDK/I-Connect v2.80 will bring performance enhancements, additional platform support, new server support and an enhanced development and deployment environment for windows based developers. While most Client SDK future releases are planned at approximately one-year intervals, v2.81 Client SDK will ship in the first half of 2003. The key features of v2.81 are to support the next major release of IDS and address customer requested features. Other Client SDK features under consideration include the ability to connect ESQL/C applications natively to DB2 databases and support for .Net applications.

The next release of JDBC v 2.21.JC3 will ship later in 2002, focusing on on-going commitment for open standards compliance, supporting the latest servers, integration with WebSphere Application Server, and ongoing attention to product quality.

In summary,

| | 2001 | 2002 | 2003 | 2004 |

C-SDK

2.80 — XPS 8.4 support
Performance
Improved OLE-DB
ODBC Query
         Timeout

2.81 — IDS 9.4 support

2.90 — Native
connectivity
to DB2

...

Gateways

To enable IBM customers and business partners to access data spanning
multiple data sources, IBM offers the **IBM Informix Enterprise Gateway
Manager** and the **IBM Informix Gateway with DRDA**. The Enterprise Gateway
Manager provides programmers with transparent access to a number of non-
Informix DBMS, including those offered by IBM, Sybase and Oracle. The
Gateway with DRDA (Distributed Relational Database Architecture) provides
programmers with access to IBM's DB2 family, using connectivity protocols
defined by IBM.

IBM intends to support existing Gateway customers and partners for as long as
they require. New features under consideration include bi-directional support for
DB2 initiated transactions, via Gateway with DRDA.

System Administration Tools

ISA

IBM Informix System Administrator is a browser-based, cross-platform database server administration tool. ISA provides an easy-to-use interface for the IBM Informix Dynamic Server command line, thus eliminating the need to memorize commands and options. The latest IBM Informix System Administrator, version 1.40, ships with IDS 9.30. This release includes a large number of changes to the functionality while maintaining the easy modification and web based thin client architecture that have made it so popular with IDS users. Features are under review, but not yet finalized for Version 1.50 to be shipped with follow-on IDS servers.

In addition, a new tool, Server Studio JE (Java Edition), is bundled with the IDS 9.30 release. This provides tools for table editing and other administrator and developer requirements that previously needed either use of command lines or bulky client/server products to accomplish.   The Server Studio JE product is a partner product from AGS. A variety of add-ons and extensions are included on a try-before-you-buy basis.

I-DBA

I-DBA, a collection of four MS Windows-based administrative tools has been replaced with the third-party developed Server Studio JE in the second half of 2001. I-DBA will continue to be supported for existing customers and partners for as long as they require.

Performance Tools

I-Spy

I-Spy helps IDS and XPS data warehouse architects monitor client usage patterns and adjust resources accordingly. By using I-Spy, DBAs can tune systems for optimum performance. I-Spy can also be used as a trouble-shooting tool in transaction processing environments.

IBM intends to support existing I-Spy customers and partners for as long as they require. There are currently no new feature releases planned. The IBM Data Management team is investigating the integration of the DB2 and Informix database management tools.

MaxConnect

MaxConnect helps improve the scalability and performance of IDS 7, IDS 9, and XPS servers by separating the physical connection management tasks from the session management tasks and off-loading certain work to a middle tier. In real world benchmarks MaxConnect has significantly improved performance of IDS systems without the need for costly hardware upgrades. Customers with more than 200 simultaneous user connections may benefit from MaxConnect.   IBM intends to support existing MaxConnect customers and partners for as long as require. There are currently no new feature releases planned.

IBM Data Management Tools

IBM is working to bring the strong set of Data Management tools to the Informix portfolio. The first example of this toolset is "DB2 Relational Connect" which today supports IDS 7 and 9. DB2 Relational Connect allows IDS to participate in a federated data query initiated from a DB2 database. The Informix Enterprise Gateway products allow a DB2 database to be queried from an IDS database. For more information on DB2 Relational Connect, see http://www.ibm.com/software/data/db2/relconnect/ .

Over the next 24 months additional compatibility tools will be announced. Informix customers and business partners will benefit from these expansions to the Informix portfolio.

Other Specialty Tools

Office Connect

Office Connect increases utilization of data warehouses and operational databases by making it extremely easy for end users to access, understand, and even update their data using their existing investment in office automation technology.

IBM intends to continue to offer enhancements and support to existing Office Connect customers and partners for as long as they require.

The latest IBM Office Connect, Version 3.0 enhances business productivity with IBM databases by leveraging MS Excel and providing easy, distributed and

secure data visualization, reporting and database update capabilities in both Intranet-Internet (Web Edition) and Client-Server (Personal Edition) environments. IBM Office Connect, Version 3.0 is also now tested and certified to seamlessly support IBM DB2 on both distributed and OS/390 platforms in addition to support of the IBM Informix databases. The next major release of IBM Office Connect is planned for the first half of 2003.

In summary,

Office Connect

| 2001 | 2002 | 2003 | 2004 |

3.0

Web Deployment
Security
DB2
Connectivity

4.0

Mulit-Dimensional Data Analysis
Accessibility
User Center Design
Localization in IBM
Recommended Languages
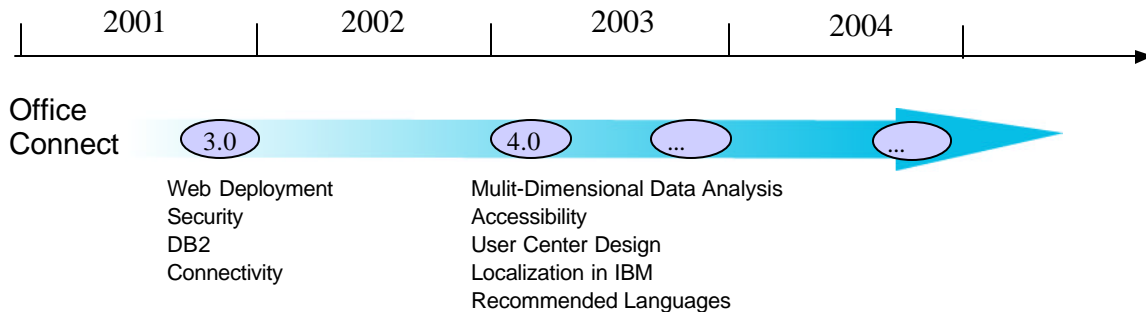
MetaCube

MetaCube provides online analytical processing (OLAP) support for IBM Informix customers and business partners. MetaCube is positioned as an entry-level product that is capable of providing quick deployment for multi-dimensional OLAP applications. IBM intends to support existing Metacube customers and partners for as long as they require. No future enhancements are planned at this time.

Object Translator

IBM intends to continue to offer support for existing Object Translator customers and partners for as long as they require. No enhancements are planned at this time and it has been withdrawn from marketing.   Key features of Object Translator have been included in the IBM WebSphere Studio product family.

Visionary

IBM intends to support existing Visionary customers and partners for as long as they require. No future enhancements are planned at this time and it has been withdrawn from marketing.

Cloudscape

The Cloudscape database continues to be developed for embedding into a number of IBM Software products. IBM is also continuing to license the Cloudscape database to channel partners to embed into their products where they require a zero admin, small footprint, J2EE/JDBC compliant Java database.

IBM intends to continue to support existing Cloudsync customers and partners for as long as they require. The Cloudconnector product has been discontinued in line with IBM/Informix product lifecycle. The unique data synchronization technology provided by the Cloudsync product will be integrated into DB2 Everyplace Sync Server in a future release.

Cloudscape version 5.0 will be available to channel partners in the near future. IBM is not actively marketing Cloudscape to end user customers at this time, however IBM will respond to interested inquiries on a case-by-case basis.

Existing Cloudscape users should check the website (http://www.ibm.com/software/data/cloudscape) for the latest information regarding version 5.0 availability and distribution.

U2 Product Family (UniVerse / UniData)
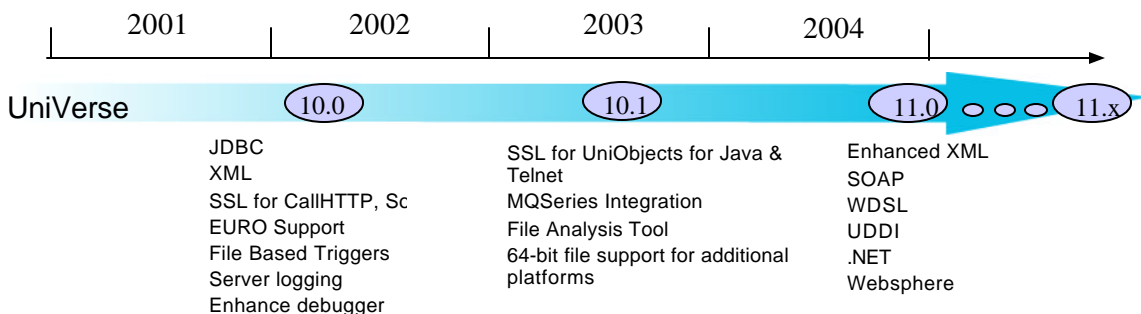
UniVerse

UniVerse is an extended-relational DBMS that supports both direct record I/O as well as standard SQL and offers ActiveX, ODBC, OLEDB, JDBC and Java interfaces.

IBM intends to offer enhancements and support UniVerse customers and partners for as long as they require. More details are included in this section below.

UniVerse 10, released in Q1 2002, provides a native JDBC driver as well as support for XML input and output from the database engine. Security improvements come from the added support of Secure Socket Layer (SSL) for the HTTP and Socket interfaces, as well as an encryption API in the stored procedure language. UniVerse file management, debugger and administration tools have been enhanced. Database triggers now support all UniVerse file types and the data replication feature has been enhanced to support virtual attributes and distributed files.

UniVerse 10.1, targeted for first half 2003 will be a minor update to include enhanced support SSL in both telnet and UniObjects for Java, extending options for secure communication with external applications. UniVerse 10.1 will also include a native interface to the IBM MQSeries (WebSphere MQ) message oriented middleware to offer extended enterprise application integration options. Other functionality being considered for UniVerse 10.1 or 11 include additional debugger enhancements, integration with WebSphere application server, enhanced support for XML, SOAP, WDSL, and UDDI protocols as well as NLS enhancements.

In summary,

2001	2002	2003	2004

UniVerse   10.0   10.1   11.0   ○ ○ ○ 11.x

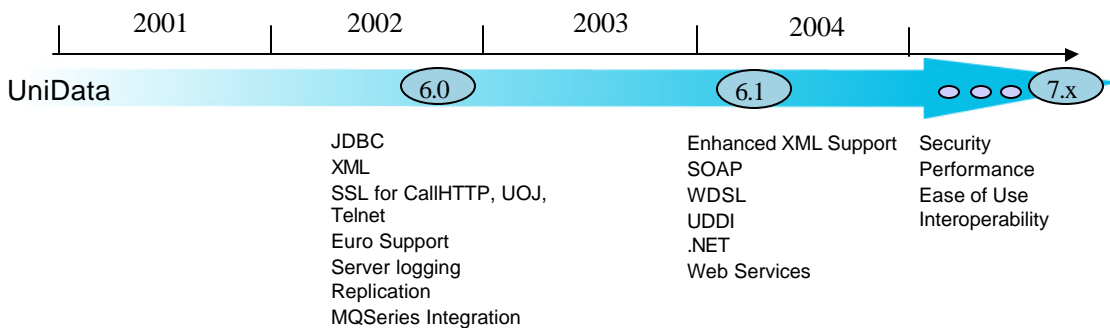|		
JDBC XML SSL for CallHTTP, Sc EURO Support File Based Triggers Server logging Enhance debugger	SSL for UniObjects for Java & Telnet MQSeries Integration File Analysis Tool 64-bit file support for additional platforms	Enhanced XML SOAP WDSL UDDI .NET Websphere

5/15/2002

UniData

UniData is an extended-relational, ODBC-compliant database that supports repeating groups, hierarchies, and arrays. UniData offers both best-of-breed native interfaces with ActiveX, Java and C interfaces as well as industry standard interfaces such as ODBC, OLEDB, and HTTP.

IBM intends to offer enhancements and support UniData customers and partners for as long as they require. More details are included in this section below.

UniData 6.0, targeted for of the second half of 2002, will include enhancements to openness, security, robustness and scalability. This release will provide a native JDBC driver as well as support for XML input and output from the database engine. Security improvements come from the added support of Secure Socket Layer (SSL) for the HTTP and Socket interfaces as well as the telnet and UniObjects for Java protocols. UniData 6.0 will include real-time replication functionality as part of the core database feature set. Also included in this release will be integrated native support for MQSeries (WebSphere MQ).

Enhancements under consideration for UniData beyond release 6 include enhancements to XML, additional support for the SOAP, WDSL and UDDI protocols as well as further integration with the WebSphere offerings.

In summary,

2001	2002	2003	2004	

UniData   6.0   6.1   o o o 7.x

JDBC   Enhanced XML Support   Security
XML   SOAP   Performance
SSL for CallHTTP, UOJ,   WDSL   Ease of Use
Telnet   UDDI   Interoperability
Euro Support   .NET
Server logging   Web Services
Replication
MQSeries Integration

RedBack

RedBack is IBM's scalable object-enabling infrastructure solution for N-tier development for the U2 databases. Its inherent object capabilities, provided through user-defined RedBack Business Objects (RBOs), offer a natural solution for those customers looking to develop scalable object-based client/server or

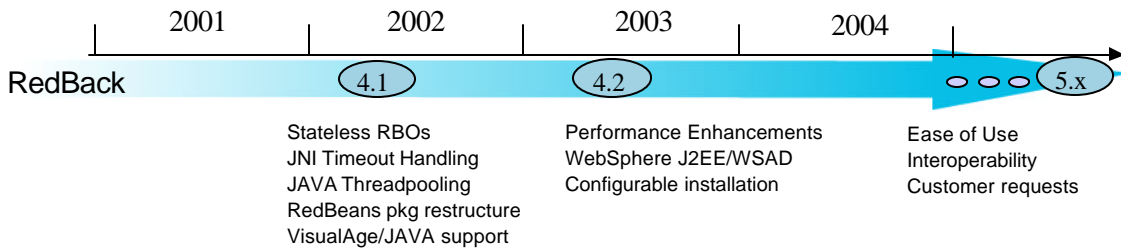web applications, or to interface with other 3rd party object-based products such as Crystal Reports.

IBM intends to offer enhancements and support RedBack customers and partners for as long as they require. More details are included in this section below.

Release v4.0 was made generally available in Q3 2001, re-focusing the product exclusively as an object abstraction tool for back-end U2 databases and business application logic. The RBO scope and analysis tool was re-deployed as a JAVA applet. Enhancements to debugging facilities added the ability to track RBO performance through logging of execution times and optionally recording object properties. A new "SYSINFO" class provides access to installation specific information for problem diagnosis and application control. Auto correction capabilities improve support for XML parsing. RedBack v4 now supports the Microsoft V1.1 SOAP specification. The inclusion of a new RedBeans Server package adds support for J2EE. The RedBack Gateway component now supports variable responder configuration for easier administration.

Release 4.1 of RedBack, slated for general availability in mid-2002, will have further JAVA related capabilities, performance enhancements, improved documentation and demo suites. An IBM VisualAge/JAVA (VAJ) interface will enable access to RBOs through the implementation of EJB prototypes allowing integration with WebSphere applications and services. A new JAVA threadpool sub-system, complete with administration facilities, provides an additional level of scalability. JAVA Native Interface (JNI) timeout handling allows developers to proactively accommodate situations where method calls do not return in a timely fashion. Recordsets can now by supported by entity beans as well as the U2 RPC mechanism. Stateless RBOs improve performance by decreasing I/O related to unnecessary or redundant storage. Streamlining storage and garbage-collections processes will improve performance of stateful RBOs.

Release v4.2, scheduled for general availability in the first half of 2003, continues to build on the performance enhancements and WebSphere interfaces introduced in v4.1. Changes to the U2 back-end state file structures will increase efficiency through a further reduction in disk I/O and will address state file data contention issues. IBM's new WebSphere Application Developer (WSAD) will integrate with RedBack by providing access to RBOs using plug-in technology.

In summary,

RedBack

	2001	2002	2003	2004	

4.1   4.2   5.x

Stateless RBOs
JNI Timeout Handling
JAVA Threadpooling
RedBeans pkg restructure
VisualAge/JAVA support

Performance Enhancements
WebSphere J2EE/WSAD
Configurable installation

Ease of Use
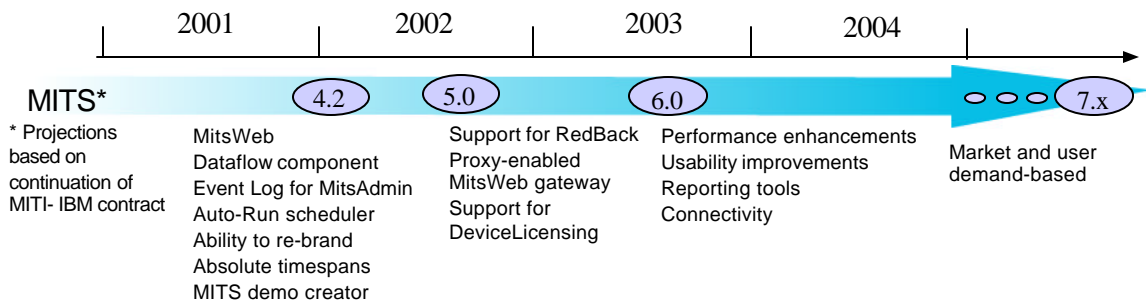Interoperability
Customer requests

MITS

The MITS (Management Information Tools Software) product suite provides an end-to-end business intelligence and online analytical processing (BI/OLAP) solution, specifically designed for the multi-valued, extended-relational database environment. The MITS product family includes MitsMaker, MitsServer, MitsSecurity, MitsAdmin, MitsView and new with MITS v4.2, MitsWeb.

MITS v4.2, released in January 2002, included MitsWeb, a new online viewing tool, MitsAdmin enhancements such as support for Auto-Run scheduler and a new Event Log. In addition, VARS could create a working demonstration system using the new MITS.REL feature. MITS v4.2.1, released in April 2002, improved the usability of all Mits components.

Planned for the next release of MITS, version 5.0, in mid-2002, is support for RedBack via RedBack objects, connectivity with Apache and Microsoft Information Server, support for U2 device licensing, improved data formatting, and additional usability enhancements.

The MITS product family supports the UniData and UniVerse databases and is also available for D3®, mvBASE®, and mvENTERPRISE® as well as jBASE® on both 32-bit Windows platforms and a wide variety of UNIX platforms. IBM has an exclusive agreement with Management Information Tools, Inc. (MITI) to sell this product.

MITS*

	2001	2002	2003	2004	

4.2   5.0   6.0   7.x

* Projections based on continuation of MITI- IBM contract

MitsWeb
Dataflow component
Event Log for MitsAdmin
Auto-Run scheduler
Ability to re-brand
Absolute timespans
MITS demo creator

Support for RedBack
Proxy-enabled
MitsWeb gateway
Support for
DeviceLicensing

Performance enhancements
Usability improvements
Reporting tools
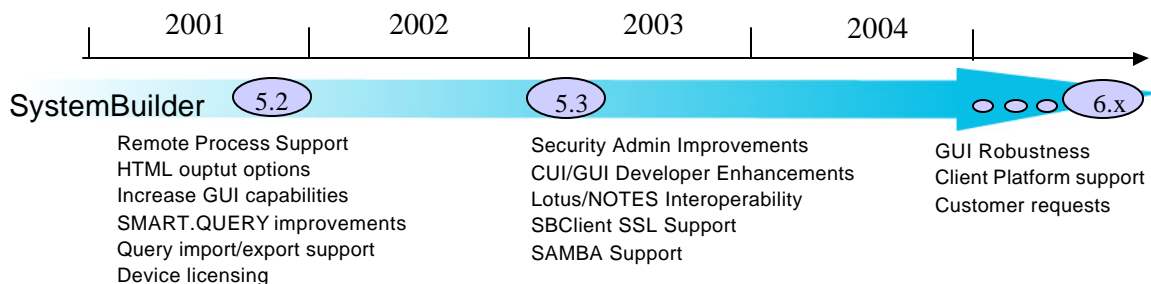Connectivity

Market and user demand-based

SystemBuilder

IBM System Builder is a native 4GL tool set for the U2 databases. SB+ Server provides developers the means to create process-oriented server-centric applications. SBClient further enhances SB+ applications by providing an ActiveX-based GUI environment as well as data migration between the server and client. SB+ integrates with RedBack to extend applications with JAVA technologies and browser-based interfaces.

IBM intends to offer enhancements and support existing SystemBuilder customers and partners for as long as they require. More details are included in this section below.

SystemBuilder release v5.2 has been generally available since Q3 2001. New features and enhancements include the ability to remotely initiate application sessions, increasing versatility and automation. Extensions to HTML-based reporting processes provide additional control and output options. SBClient GUI enhancements allow provide increased user interface functionality. The SMART.QUERY ad-hoc reporting facility was enhanced to meet customer requests. The release improves UniVerse NT communication performance and extended device licensing support to the Microsoft Terminal Server Edition(TSE) and Citrix environments.

Release v5.3, scheduled for the first half of 2003 will enhance security, facilitate data migration, ease development and strengthen GUI support. Security administration will streamline user group management. Support for Secure Socket Layer (SSL) support for the telnet protocol will parallel U2 database ability to provide secure communication channels between the client and server. Support for SAMBA will provide seamless data transfer between UNIX and NT. Enhancements to both server and client interfaces will provide additional functionality and ease of development. In addition System Builder v5.3 will increase interoperability and by adding support for IBM Lotus/NOTES mail integration, MAPI blind carbon copy (BCC) option, and enhancing the ability to launch desktop applications.

In summary,

| 2001 | 2002 | 2003 | 2004 |

SystemBuilder 5.2   5.3   6.x

Remote Process Support
HTML ouptut options
Increase GUI capabilities
SMART.QUERY improvements
Query import/export support
Device licensing

Security Admin Improvements
CUI/GUI Developer Enhancements
Lotus/NOTES Interoperability
SBClient SSL Support
SAMBA Support

GUI Robustness
Client Platform support
Customer requests

COBOL Direct Connect

COBOL Direct Connect (CDC) is a conversion tool and runtime interface for the UniData database. CDC converts C-ISAM files into UniData tables providing COBOL customers with all the advantages of an extended-relational database such as high availability and recoverability options as well as open interfaces such as ODBC, OLEDB, HTTP, and soon XML and JDBC, as well as tools such as RedBack Business Objects Server and the MITS BI/OLAP Tool Suite. CDC permits users to run both native ISAM files and UniData tables simultaneously, giving the user the best of both the COBOL and UniData environments. CDC is available for Acucobol and Merant's Micro Focus COBOL, including Server Express.

IBM intends to offer enhancements and support existing COBOL Direct Connect customers and partners for as long as require.
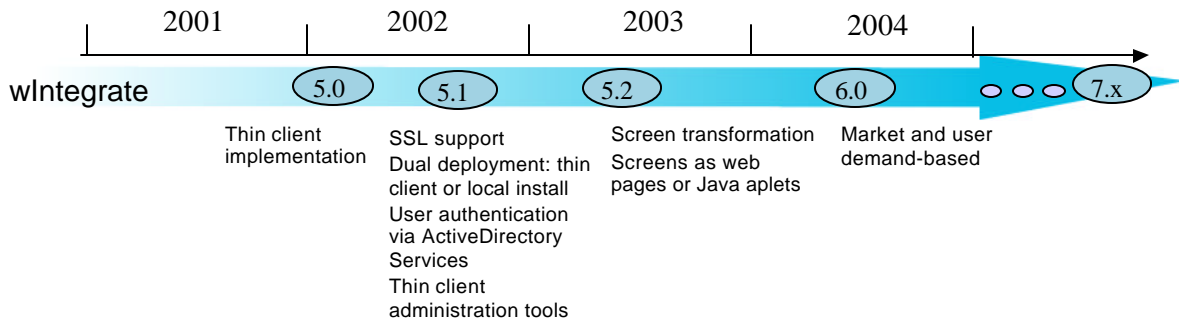
wIntegrate

wIntegrate is an advanced terminal emulation and host-based application enhancement tool for IBM's UniData and UniVerse databases, plus many other multi-valued databases. wIntegrate preserves the investment in host-based applications while giving them a more modern Windows look and feel. Although wIntegrate is not a 4GL or an application development environment, developers can easily create new front-ends for legacy applications and extend them to the web, without changes the logic or structure of those programs.

IBM intends to offer enhancements and support existing wIntegrate customers and partners for as long as require.

The wIntegrate product family consists of wIntegrate and Dynamic Connect, both of which support U2 device licensing. The next release of wIntegrate will allow users to extend their Windows interfaces to the web and WAP via a thin-client interface.

In summary,

	2001	2002	2003	2004	
wIntegrate	5.0	5.1	5.2	6.0	7.x
	Thin client implementation	SSL support Dual deployment: thin client or local install User authentication via ActiveDirectory Services Thin client administration tools	Screen transformation Screens as web pages or Java aplets	Market and user demand-based	

PI/Open

PI/Open is a heritage multi-valued database. IBM intends to support existing PI/Open customers and partners for as long as they require, while also providing a migration path to the UniVerse extended relational database.

Introduction to DB2

In the mid-90s, IBM's DB2 entered the distributed database market to provide an innovative and standards based offering with leading edge technology to meet and exceed customer database needs from single processor to massively parallel systems. IBM's DB2 has experienced 20 consecutive quarters of growth and has outpaced the industry's growth rate over the past few years.

Consider the following DB2 highlights:

- Choose either a complete IT infrastructure or mix-and-match systems

  IBM DB2 is addressing the needs customers have to integrate their databases well with industry leading hardware and applications to build a best of breed solution. Many customers want a vendor that can put a complete IT infrastructure in place and support it -- that's the power of IBM. We supply hardware and software with the services and support to make it all work. Other customers want a vendor that is open and works with best of breed offerings from HW and SW partners. IBM provides this as well, by also offering DB2 on AIX, Solaris, HP, Linux and Windows, among others.

- Performance leadership

  The TPC-H benchmark released on April 9, 2002 gives DB2 the #1 performance leadership at all published scale factors, and #1 price/performance leadership in all but the smallest of those scale factors.

- Innovations and patents

  IBM is the data management technology leader with the most inventions and patents. The relational data model, and SQL language were invented at IBM. Cost based query optimization technology was also invented by IBM, and continues to lead the industry in query optimization.

- Federated databases

  Because very few customers have all their data in a single vendor's database, IBM created the innovative federated approach to data management. Federated databases allow customers to access, manage and analyze data residing anywhere, in any format or in any database -- including Oracle, Microsoft and Sybase. No other database management software company delivers that type of support.

- Integrated XML functionality

  IBM has integrated XML functionality in DB2 to facilitate data interchange in support of business-to-business (B2B) applications. DB2 is the industry's first relational database with integrated in-memory text search capabilities that perform Internet searches more than 10 times faster than traditional database search engines.

- E-business features

  The growth of e-business is increasing the need for customers to manage and distribute digital content, including images, computer-generated output, business documents, and rich media. IBM Content Manager, based on DB2, is the only product of its kind designed to efficiently store and manage all types of content. For example, Content Manager enables corporations to electronically manage, protect and share critical business information, in any format, including XML and HTML. Images, audio and video, computer generated output and business documents can now be securely shared electronically - a crucial step in the e-business transformation.

- Autonomic computing

  IBM is making significant investment in autonomic computing to provide customers with self managing, self tuning and self healing databases to minimize complexities of managing networked computing infrastructure, and reduce the overall total cost of ownership.

- Application compatibility and support

  IBM DB2's leading technology and our strategy of not competing with application vendors has led many application developers such as SAP, PeopleSoft, Siebel, Retek and J.D.Edwards, to choose IBM's DB2 as their preferred database platform for both internal and external applications.

IBM Informix Partnerships

IBM's commitment to business partners is very strong as seen in our award winning PartnerWorld partner programs. Leading application developers, like Baan, Peoplesoft, and SAP are committed to protecting their Informix customer's investments as well as providing their applications on DB2. Their plans have been summarized below.

IBM- Baan Strategy for Informix Customers

The Baan strategy for Informix customers is to continue to provide investment protection & support for existing Baan customers running on Informix. Invensys (Baan's parent company) and IBM are both committed to the support of our joint solution and Informix customers can continue to rely on the existing Informix and Baan product lines. IDS 9.3 certification with Baan ERP is nearing completion. IBM will not force any Informix customer to migrate to DB2. Baan has formally committed support through Baan ERP version 5; however Baan has not yet made any formal commitments, or statements, in regards to Informix support beyond that. That decision is in discussion with IBM and we expect an announcement later this year.

Informix customers may choose to transition to DB2 because they may benefit from having access to Baan's full range of products. A transition to DB2 may be exceptionally timely for existing customers looking to purchase new Baan and Invensys products, such as Baan CRM and WonderWare, not currently available on Informix IDS. For customers considering such a transition it is important to stress that the most secure path is to remain with IBM as both the IDS and DB2 engineers are now part of one development and support organization. For new Baan applications our strategy is to recommend DB2, since Baan is now developing all new applications on DB2. For customers not looking to migrate we also recommend consideration of the IBM Gold Maintenance Program which offers investment protection for IDS customers who want the option to trade licenses to DB2 in the future (see your Sales team for more information).

Companies who have deployed BAAN ERP solutions on the IBM IDS database have the ability to maximize their software and hardware investments by stretching the performance and scalability of their existing environment by using MaxConnect and participating in the Baan Performance Optimization Program.

IBM- PeopleSoft Strategy for Informix Customers

The PeopleSoft strategy for Informix customers is to continue to provide investment protection & support for existing PeopleSoft customers running on Informix.   Satisfied Informix customers can rely on the existing Informix & PeopleSoft product lines. PeopleSoft and IBM are both committed to the support of our joint solution. IBM will not force any Informix customer to migrate to DB2. PeopleSoft has formally committed support through PeopleSoft V8.x for Human Capital Management (HRMS), Financials, ESA, SCM and Distribution product suites. PeopleSoft has not yet made any formal commitments, or statements, in regards to support beyond their V8.x. support for the Informix Platform. IBM expects that decision to be announced at PeopleSoft's User Conference in the summer of 2002.

Informix customers may choose to transition to DB2 because they may benefit from having access to PeopleSoft's full range of products. A transition to DB2 may be exceptionally timely for existing customers looking to purchase new PeopleSoft V8.x applications CRM, EPM (Analytics) or Learning Solutions not available on Informix IDS. For customers considering transition from Informix it is important to stress that the most secure path is to remain with IBM since PeopleSoft has announced DB2 as its strategic database for Unix and IDS and DB2 engineers are now part of one development organization. For new PeopleSoft V8 application decisions our strategy is to recommend DB2. The DB2 PeopleSoft Migration Program is available to PeopleSoft customers considering a database migration in the next 12 months. For customers not looking to migrate now may we recommend consideration of the IBM Gold Maintenance Program which offers investment protection for IDS customers who want the option to trade licenses to DB2 in the future (see your Sales team for more information).

IBM- SAP Strategy for Informix Customers

The SAP strategy for Informix customers is to continue to provide investment protection and support for existing SAP customers running on IDS. For the currently released mySAP products on IDS satisfied SAP/Informix customers can rely on support from SAP and IBM as detailed below.

In 2002, SAP and IBM will enable all currently supported SAP/IDS applications (in their then most current version) on the new SAP runtime environment, WAS 6.20. In addition, any enhancements made to these applications that become available in 2003 and 2004 (WAS 6.30 & 6.40 only) will also support IDS with only two exceptions. Those new features that require JAVA based database access and those which require Unicode support will not be enabled on IDS. The standard SAP support policy applies, so that those applications will be supported until their general SAP defined end of maintenance date, which typically covers 5 years from General Availability. For new SAP application decisions our strategy

is to recommend DB2.   For customers not looking to migrate we also recommend consideration of the IBM Gold Maintenance Program which offers investment protection for IDS customers who want the option to trade licenses to DB2 in the future (see your Sales team for more information).

Informix User Conference 2002

Registration is now open for the Informix User Conference in Anaheim, California, 9-13 September 2002.   Register at

http://www.ibm.com/services/learning/conf/us/dm/index.html

IUC 2002 will be an integral part of the overall IBM Data Management Technical Conference and will run in parallel with the DB2 & Business Intelligence conference. By bringing these two conferences together into one event, the Informix community will be able to network and learn about all of the Data Management solutions, products, and services. IBM Informix customers will continue to have the option of attending a 3-day event (similar to previous conferences) or a new 4.5-day event. The new 4.5-day conference will repeat popular sessions during the last 1.5 days of the conference. This expanded schedule will allow attendees to pack in all the sessions they need!

This years conference will have over 100 Informix and U2 breakout sessions (twice as many as last year's conference), with 75% of them being new sessions. The IIUG, using customer and partner suggestions, has actively participated as an advisor for the content of these breakout sessions.

Free unlimited Informix Professional Certification testing will be available to all conference attendees. Please note that the normal examination retake rules will still apply.

A special keynote address, especially for the IBM Informix community, will feature Don Top and Don Haderle. Don Top, former VP of Informix Product Development and now Informix Customer Advocacy Executive, will review the upcoming Informix offerings at a glance, and Don Haderle, IBM Data Management's CTO, will give you some insight into the next generation of IBM's Data Management database and tools offerings.

Conclusion

IBM has a long tradition of extending the value of customer investments by supporting and enhancing the products upon which our customers rely. Customers and business partners should be confident that their existing investments in the IBM Informix portfolio will be supported and enhanced as described in this paper. Customers and partners using Informix products will not be forced to migrate to DB2.

Over the long term, IBM intends to integrate key technologies from a number of different IBM Informix products into future versions of DB2, supporting Informix's original goals to deliver the Arrowhead vision to the Informix customer base.

IBM recommends that customers and partners implementing new applications strongly consider DB2. Review the vision and strategy earlier in this paper and speak with your IBM sales representative about what will be right for your situation.

The now-integrated Data Management team has a strong history of supporting customers and business partners over the long term. IBM promises to bring Informix users continued support for their products of choice, greater financial stability from their DBMS vendor, and an exciting future with new levels of technical innovation.