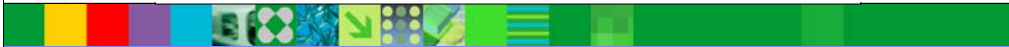# Announcing
Informix Dynamic Server 9.4
Performance. Reliability. Scalability

name
title
IBM Information Management Solutions

@business on demand software

DB2 Information Management Software

Insert your name and title!!!

Agenda

- **Introduction**
  - ▶ Informix @ IBM
  - ▶ IBM's *on demand* environment
  - ▶ Get ready for 9.4!
- How did we arrive at an IDS 9.4?
- What's new in IDS 9.4?
- What Customers & Business Partners are saying
- The IDS Product Bundle
- IDS – past, present & future
- Summary – why upgrade?!

Agenda slide –discuss what you're about to move into in the next section…

Χοωερ τηισ <u>ωηεν νοτ</u> πρεσεντινγ ΙΔΣ πιτχη αφτερ Ινφορμιξ ≅ IBM πιτχη

Το ηιδε α σλιδε, γο το τηε □σλιδε σορτερ□ ϖιεω, ριγητ χλιχκ τηε σλιδε ανδ χηοοσε □ηιδε□ ιτ ωιλλ ινδιχατε ιτ βψ χροσσινγ ουτ τηε σλιδε νυμβερ□.

e business on demand

The *on demand era* is upon us.
Are you ready?

IBM Informix Dynamic Server 9.40:

- Simplifies the management of complex databases
- Provides seamless access to all client data
- Maintains a large community of business applications
- Supports open standards
  - lower costs of development, maintenance and growth

DB2 Information Management Software

Optional slide – cover the high-level marketing ideas on this one

IBM

IDS 9.4 – Delivering Business Value

- **During this presentation, we would like you to see how:**

  - IDS 9.4 provides the **performance, reliability and scalability/availability** needed for today's demanding and global e-business environments

  - 9.4 continues to reduce the complexity, time, DBA skills and costs associated with database management by eliminating, simplifying and automating many tasks traditionally associated with maintaining an enterprise-class database.

  - IBM & IDS enables Customers and Business Partners to improve their profitability, reduce their risk and deliver best of breed solutions.

  - IBM & IDS offer a proven track record of database innovation

High level business value of IDS 9.4

Whose software keeps 9 of the top 10 retailers selling strong?
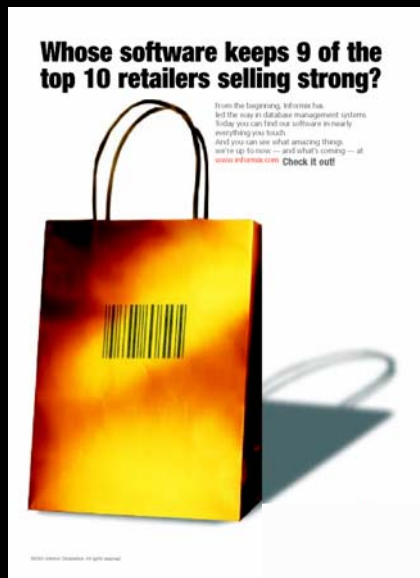
Chances are, You'll have an encounter with Informix Dynamic Server Today…

Fun slide – leave in, but feel free to gloss over if there is nothing interesting to say…

Whether at your favorite retailer, making an airline reservation, or online, chances are you'll have an encounter with Informix Dynamic Server today. Thousands of business rely on the performance, reliability and scalability of IDS to run their enterprise.

For over 15 years, businesses that demand high-performance, reliable data management systems have put their trust in Informix Dynamic Server, known as IDS.

Now IBM introduces IDS 9.40, the fastest, most scalable Informix object-relational database ever.

Get Ready for IDS 9.40!

The fastest, most reliable, highest scaling IDS database ever produced. Informix Dynamic Server 9.4 provides the performance and reliability needed for today's always available, demanding and global e-business environments.

✓ most impressed"

BAE SYSTEMS

✓ "the only database to fulfill the stringent needs of our manufacturing environment…smooth and trouble free"

ACI Packaging
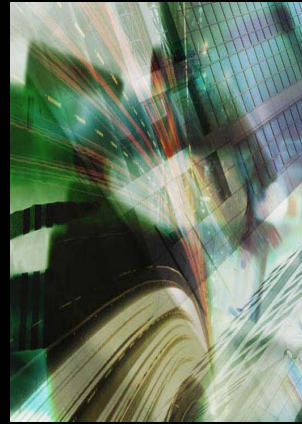
✓ "delivers consistent high performance"

Valenite

This is a 'tease' slide, that you can start to introduce the customer benefits of IDS 9.4…

Agenda

- Introduction
- **How did we arrive at an IDS 9.4?**
- What's new in IDS 9.4?
- What Customers & Business Partners are saying
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- Summary – why upgrade?!

Agenda slide – review key points from the last section, discuss what you're about to move into in the next section…

Database Software Customer Pains

- What's needed in a database to provide 'Time to Value'
  - ▶ Access to information, applications, etc. "on-demand"
  - ▶ Easy to install and manage
  - ▶ Rapid, easy application development
  - ▶ Deploy and go to market quickly

- Integration
  - ▶ Need to access wide variety of enterprise information
    - • various types of data
  - ▶ Need to integrate with packaged applications

- Cost of Ownership
  - ▶ Minimize amount of time required to manage database infrastructure
  - ▶ Minimize people costs to manage database infrastructure
  - ▶ Reduce skill requirements and learning curve

Need to be able to access, store, manage, analyze, integrate & distribute key business information across the enterprise and externally.

these are the 3 pains customers are trying to solve

IBM

IDS Customer Pains

- **Scalability**
  - ▶ Need ability to manage more than 4TB of data
  - ▶ 2GB chunk limit makes disk management cumbersome
- **Performance**
  - ▶ Previous 9.x versions did not offer the performance of 7.x
- **Replication**
  - ▶ Want the flexibility to use HDR and ER simultaneously
- **Application Development**
  - ▶ Need state of the art multi-language support
  - ▶ Need to port applications from other platforms easily
- **Data Security**
  - ▶ Information in transit was unencrypted
  - ▶ Want to use 3rd party mechanisms to increase security
- **Life Cycle**
  - ▶ IDS 7 products are nearing end of marketing
- **Need to Establish a Technology Plan**

These ar ethe issues that have been felt by IDS customers since IDS 7. This sets up what we have addressed with IDS 9.40

Agenda

- Introduction
- How did we arrive at an IDS 9.4?
- **What's new in IDS 9.4?**
  - ▶ Back to basics – performance, reliability, scalability
- What Customers & Business Partners are saying
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IBM

IBM Informix Dynamic Server

- Full-featured, high-performance database products, targeted to the needs of high-growth vertical markets
  - Leading Extensible, High Performance OLTP Database
    - Via parallel everything architecture
  - Leading High Availability Solutions
    - Informix Enterprise Replication
    - Informix High Availability Data Replication
  - Easily scales
  - Mission Critical 24x7 Reliability & Availability
  - World Leading Extensible Database Platform
  - Easy to Administer
  - Available on a wide range of hardware / OS platforms
  - Financial Analysis and Securities Trading
    - Informix Finance Foundation for Capital Markets
  - Law Enforcement
    - Informix Law Enforcement Foundation
  - Geo-spatial, Land Management/Cadastral applications
    - Informix Spatial DataBlade Module

This is a slide that is overview, some technical detail.   Pull this slide if using the detailed charts from the appendix…

IBM

IDS 9.40

Available March 28th!

High-performance technology
- ✓ 8-15% improvement in internal benchmarks
- ✓ Cleaner indexes and improved memory management for more-efficient use of memory and processors.
- ✓ Enhanced buffer priority management for more-efficient use of large amounts of memory
- ✓ Smarter query optimization

Scalability
- ✓ Data capacity of a single instance **128 PB**
- ✓ Maximum chunk size 4 TB
- ✓ Maximum number of chunks 32 K
- ✓ Maximum LVARCHAR size 32 KB
- ✓ DBMS utility file size limit 7 EB

Interoperability with IBM Software
- ✓ Better integration with Tivoli ADSM
- ✓ WebSphere App Server/Portal Server
- ✓ Web Services
- ✓ Lotus Enterprise Integration/Domino 6

Availability/Reliability:
- ✓ HDR & ER Co-existence

Security
- ✓ Secure over-the-wire encryption using OpenSSL encryption libraries
- ✓ Configurable user authentication mechanisms using Pluggable Authentication Modules (PAMs)

System management
- ✓ Automated backup and restore functions
- ✓ Increased media efficiency by tape-handling utilities
- ✓ More flexible restore options
- ✓ NEW! Informix Server Administrator, v1.5

Application development
- ✓ SQL language enhancements
- ✓ Expanded Unicode support
- ✓ Multiple collation support
- ✓ NEW! Client-SDK, v.2.81
- ✓ Continued support of IBM Informix 4GL,SQL,ODBC,JDBC,OLE/DB,SQLJ

This is a GREAT DEAL of information on one chart – use this slide OR use the ones from the appendix that drill down in more detail…

- **High performance technology**
  - Faster than IDS 7.x
- Unlimited scalability
  - Create and manage HUGE instances
- New availability features
  - Expand best-in-class features
- New restoration features
  - Better protection and new features
- More!!!

High-performance technology

8-15% improvement in internal benchmarks

IBM

Mission Critical Reliability & Availability

- IDS delivers 24x7 databases!
  - ▸ Use IDS's highly flexible, multi-node replication solution
    - • Enterprise Replication (**ER**)
  - ▸ Use IDS's market-leading fail-over solution
    - • High Availability Data Replication (**HDR**) - 15 second fail-over
  - ▸ Now HDR & ER coexistence
    - • Greatly improved data availability while **simultaneously** providing for complete disaster recovery
  - ▸ Choose from **cluster fail-over** solutions via:
    - • **IBM** HACMP, **Sun** Cluster, **HP** MC ServiceGuard, **Legato** Cluster Enterprise, **Veritas** Cluster Server
  - ▸ Leverage **Geo-Cluster Replication**
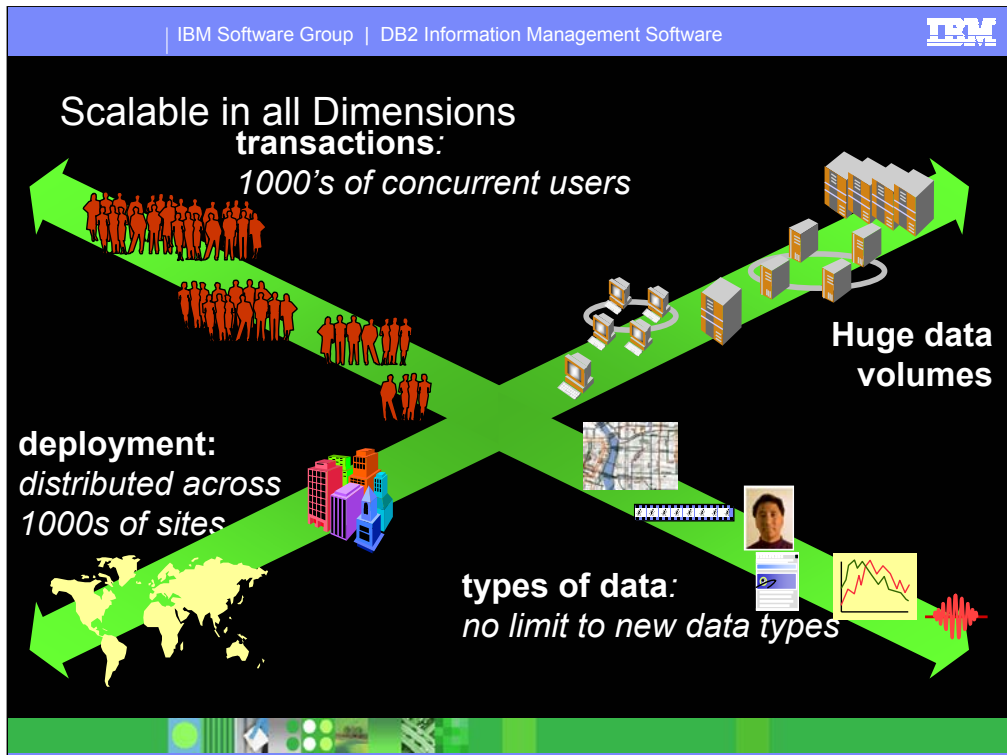   - • EMC Symmetrix Remote Data Facility (SRDF)

This is a slide that is overview, some technical detail.   Pull this slide if using the detailed charts from the appendix…

No matter what requirement, IDS & Informix Partners provide an availability solution that works for you.

IDS's Enterprise Replication allows customers to locate data where it needs to be. Entire databases or subsets of data can be distributed anywhere to deliver data for fast reporting without impacting critical OLTP operations. ER supports a complex topology based on a tree architecture. It does not require a direct connection between the source of replication and the target during replication.

IDS's unique HDR solution has been in the field for years as part of IDS 7 & 9.   It's a proven HA solution ideal for requirements for near-zero downtime! HDR is in use today around the globe at major customers.

Oracle 9i claims to have a copy-cat solution called Oracle 9i Data Guard. This is brand new technology, which copies Informix, but doesn't have the years of field proven hardening.

Scalable in all Dimensions

transactions:
1000's of concurrent users

Huge data volumes

deployment:
distributed across 1000s of sites

types of data:
no limit to new data types

IDS scales to handle most OLTP applications.   IDS is a " no-limits "database that can handle the most demanding application requirements.   IDS 9.40 can handle up to 128 pedabytes of data. At current prices, 128 pedabytes of disk storage would cost approximately 3 billion dollars. At a load rate of 1TB per hour, it would take 15 years to load 128 pedabytes.

Scalability

✓Maximum chunk size 4 TB

✓Maximum number of chunks 32 K

✓Data capacity of a single instance **128 PB**

✓Maximum LVARCHAR size 32 KB

✓DBMS utility file size limits -- 7 EB (7 trillion MBs) for some, 4 TB for others

IBM

(4TB chunk) x (32k chunks) = 128 pedabytes!

- Just how BIG is 128 pedabytes?

- At a load rate of 10 gigabytes an hour it would take well over a 1,000 years to fill a 128 pedabytes database.

- At the current price for high-end structured storage it would cost $3-4 billion to buy 128 pedabytes of storage.

- And let's not forget about IDS mirroring – fully supported and doubles the cost!

- The US Library of Congress contains an estimated 10 terabytes of printed material. *128 pedabytes* is equal to *12,800* Libraries of Congress.

I think this slide speaks well enough for itself.

With the increase in hardware processing power and inherent advantages of a multi-threaded architecture plus the ability to create and store large amounts of data, there are no scalability limits to the IDS. There is no other product on the market that can match this either.

Scalability

✓Maximum chunk size 4 TB

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Informix Customers are responding!

✓ 81% of the International Informix Users Group's (IIUG) membership has stated that they intend to stay with their current Informix products or try updated versions

✓ In fact, loyalty to the Informix product line is so strong that IIUG's active membership grew by 43% in 2002.

Survey from the IIUG

IIUG section will cover this in more detail…

Who's using IDS 9.4?

TCH – Transportation Clearing House – Transportation's Premier Financial Services Firm – Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back   •   →   •   ☺   ☑   ☑   Search   Favorites   History   •   ⬅   ᴚ   •   ⊟

Address http://www.tch.com/

TRANSPORTATION CLEARING HOUSE

TCH

Products & Services   For Carriers   For Truckstop Operators   For Drivers

The **Most Powerful**
Fuel Management Programs
Available

Application
Hosts 40,000 financial transactions daily for transportation industry

Business Benefits
Can now offer more secure and highly available processing environment with added encryption and combined ER & HDR functionality. Large chunks saves DBA cycles.

"We chose Informix over Oracle for its superior performance and stability, as well as its extremely competitive price. That decision has consistently reaffirmed itself in our ongoing evaluations of the data management marketplace.

We have no doubt that IBM Informix 9.4 is as robust and reliable as any database available today, and the absolute leader in cost-performance."

Stephen Cobb
Senior Database Administrator

This is our strongest IDS 9.4 Beta reference, and is the .pdf success story/case study on the IDS launch site.

You can find the full TCH story on the site at www.ibm.com/informix/ids94

Valenite® using IDS 9.4 for Data Warehousing

- "Valenite's ... chose IBM Informix Dynamic Server (IDS) **over Oracle for its ease of use and attractive price-performance ratio.**

- We will soon be installing IDS, Version 9.4, to serve as the foundation of our **data warehouse** and as the backend data management platform powering our production applications. We expect to benefit greatly from **the improved performance and ease of use** that the new release delivers. We expect that its enhanced **automated backup and restore functions** will free our systems administrators from manual database management tasks and enable them to focus on optimizing our production environment.

- **IBM's acquisition of the Informix database business strengthens not just the Informix product line, but the entire community of IBM data management customers.** ...."

Richard Green,
Technical Developer/DBA,
Valenite

Valenite – makes a strong IBM statement, re-affirming IBM commitment to Informix…

Use a few of these customer references – not all – hide slides you don't want to use…

IBM

ACI Packaging choosing 9.4 to run SAP

- "ACI Packaging is... one of the world's largest manufacturers of glass containers and plastic packaging. ... chose Informix Dynamic Server (IDS) over all of the other major databases to power our **SAP enterprise resource management,** business information warehouse and our manufacturing systems.

- The upgrade of our IBM Informix Dynamic Server environments to the new release, Version 9.4, is just the next logical step for us. **Our previous IDS release upgrade from Version 7.31 to Version 9.3 was smooth and trouble-free, and we are confident that the move to Version 9.4 will be no different. The many enhancements in the new release—such as elimination of the 2GB file size limitation—will improve our disk utilization and make our data management tasks even easier."**

Ged Doyle,
Chief Information Officer,
ACI Packaging

Use a few of these customer references – not all – hide slides you don't want to use…

Additional Beta customer references… BAE is a customer of SGI, another Beta participant

Use a few of these customer references – not all – hide slides you don't want to use…

IBM

Application Partners include:

- Combine IDS with our partner's products to achieve world-class solutions for any business problem!
  - ▸ For BackOffice
    - IDS & SAP
    - IDS & BAAN
    - IDS & PeopleSoft

That's just a small part of the IDS partner story

IDS & [… hundreds of partners …]

Use a few of these customer references – not all – hide slides you don't want to use…

IBM

IDS 9.4 and

LAWSON™

"… Lawson Software has been an IBM Business Partner for many years and optimizes our products to integrate with IBM databases, such as IBM Informix Dynamic Server (IDS)."

"We are impressed with the latest release of IDS, version 9.4. Like all of the previous Informix releases we have worked with over the years, version 9.4 delivers **consistent high performance, strong data management functionality and features the ease of administration that is one of the hallmarks of IDS.** In our view, each new release of IDS, along with the industry-leading product support provided by IBM, is further proof of their unwavering commitment to the Informix product line and user community."

Tony Komor,
Director of Development,
Lawson Software

Use a few of these customer references – not all – hide slides you don't want to use…

IBM

IDS 9.4 and SAP

"Sap has supported Informix since 1992 and continues to have a strong commitment to the platform...We will support the current versions of IDS on SAP 4.6C at least until 2006...SAP will sell and ship mySAP.com on IDS to new and existing customers and support this platform. It's business as usual..."

Karl-Heinz Hess,
Member of the Extended Executive Board at SAP,
September, 2002.

Use a few of these customer references – not all – hide slides you don't want to use…
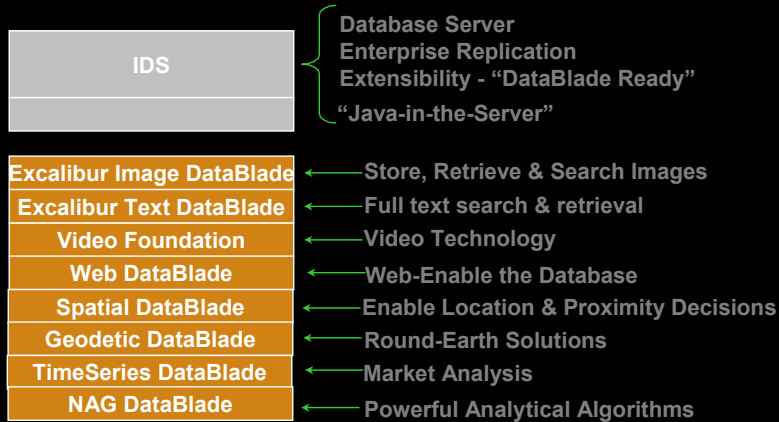
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IBM Software Group | DB2 Information Management Software

IDS and Informix DataBlade modules

Informix DataBlades extend the functionality of the database to add business value

IDS

- Database Server
- Enterprise Replication
- Extensibility - "DataBlade Ready"
- "Java-in-the-Server"

DataBlade	Function
Excalibur Image DataBlade	Store, Retrieve & Search Images
Excalibur Text DataBlade	Full text search & retrieval
Video Foundation	Video Technology
Web DataBlade	Web-Enable the Database
Spatial DataBlade	Enable Location & Proximity Decisions
Geodetic DataBlade	Round-Earth Solutions
TimeSeries DataBlade	Market Analysis
NAG DataBlade	Powerful Analytical Algorithms

Hide this slide if you don't want to or aren't able to go into details on DataBlades….
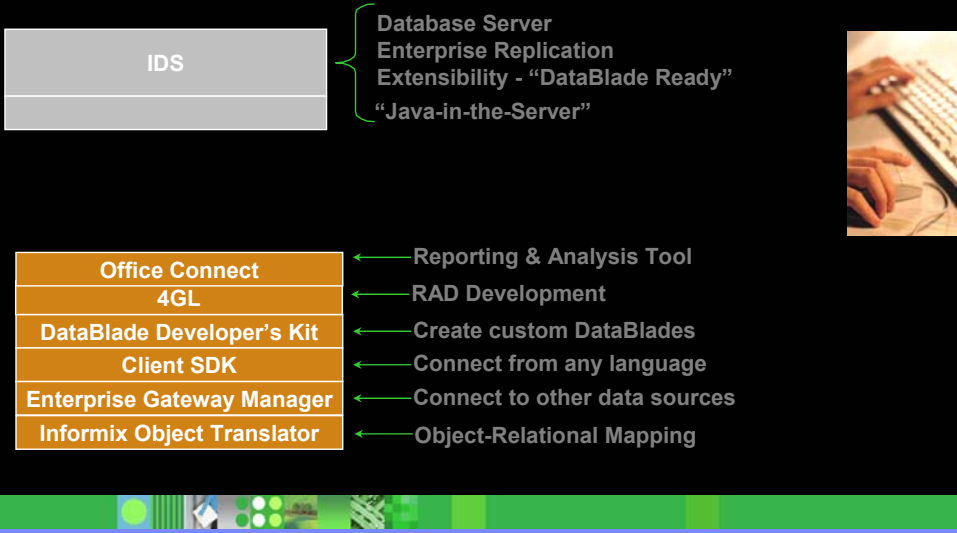
IBM Informix DataBlade modules deliver real business value quickly. IBM offers DataBlades to help manage Image, Video and Text data as well as build applications that allow business to make key decisions based on location and proximity (such as where to locate a new retail outlet or where certain services are located).

IBM's unique Geodetic datablade treats the earth as a sphere rather than a flat object for scientific and other applications that demand precise spatial information.

TimeSeries, TimeSeries Real-time Loader and NAG datablades provide the functionality to perform real-time market analysis. Up to 100,000 records can be loaded with as little as .1 second latency.

IDS and Informix Tools

Informix Tools simplify application development to add real business value

IDS

Database Server
Enterprise Replication
Extensibility - "DataBlade Ready"
"Java-in-the-Server"

Office Connect	← **Reporting & Analysis Tool**
4GL	← **RAD Development**
DataBlade Developer's Kit	← **Create custom DataBlades**
Client SDK	← **Connect from any language**
Enterprise Gateway Manager	← **Connect to other data sources**
Informix Object Translator	← **Object-Relational Mapping**

With IBM offers tools which speed development time and allow IDS to connect to any language, any database to deliver real business value.

Client-SDK 2.81

Informix® Client SDK™ offers customers a single packaging of several application programming interfaces (APIs) needed to develop applications for Informix servers.

- Generally Available 3/31/03
- Improved performance with a newly re-architected OLE DB provider
- UniCode support to Microsoft Visual Basic or Visual C++ applications
- Supports JDBC V2.21 Type 4 driver
- Java Driver is Optimized to work with IBM WebSphere Application Server
- Supports Unicode standard 3.1.1 in OLE DB and ODBC

The Client-SDK Allows developers to write applications in the language they are familiar with, whether it be Java™, C++, C, or ESQL Provides the customer with more choice of programming environments and promotes easier development of applications for Informix servers : A high performance OLE DB provider brings solid data access improvement and unicode support to Microsoft Visual Basic or Visual C++ applications that require data access in a variety of locations and formats

•   A unicode-enabled, industry-standard compliant ODBC driver enables developers to dynamically access a broad range of Informix database servers including IDS, XPS, Online and Standard Engine

A more robust and feature rich ESQL/C module adds flexibility and reliability for Online Extended customers with ESQL/C application development needs and benefits Informix 4GL customers who write applications connecting to IDS servers.

ODBC/ OLE DB will support .NET applications to access IDS server via Visual Studio .NET bridge for ODBC/OLEDB.

IBM Informix JDBC driver 2.21 and embedded SQL/J require JVM compatibility with SunSoft's JDK 1.2 (or higher) which is compliant with JDBC 2.0 specifications.

4GL and ISQL 7.32 - Improving Informix Productivity

- Perfectly suited for IDS 7 to 9 Upgrades
  - ▸ Superior IDS 9 server compatibility
  - ▸ New SQL data types: INT8, BIGINT, SERIAL8, and NCHAR/NVARCHAR
  - ▸ Supports Long Identifiers
- Highly Efficient Memory Utilization
  - ▸ Dynamic arrays allocation, de-allocation, and resizing
  - ▸ Dynamic arrays are no longer limited to 32,767 elements
- Ideal for 4GL 7 to 7 Upgrades
  - ▸ Direct 4GL 7.32 to OnLine 5.20 connection
  - ▸ No need for I-NET or I-STAR
  - ▸ Latest internationalization
- Availability on Latest Platforms
  - ▸ Available on all major Unix (32-bit and 64-bit) as well as Linux Intel platforms
  - ▸ Fully compatible with CSDK 2.81

SPECIAL!
- **Purchase qualifying 4GL/ISQL**
- **Receive 20% discount on tools**
  IBM Office connect
  DB2 Web Query
  DB2 Table Editor
  Offer good until May 19, 2003

4GL and ISQL 7.32 – Features, Benefits, and Value

Best Suited for IBM Informix Dynamic Server (IDS) 7 to 9 Upgrades

4GL 7.32 will allow users currently on IDS 7.x databases to take full advantage of the latest function-rich IDS 9.4 server release. 4GL 7.32 offers superior IDS 9 server compatibility with features that support new SQL data types INT8, BIGINT, SERIAL8, and NCHAR/NVARCHAR. This release also supports the important IDS 9 Long ID feature that allows handling of identifier names up to 128 characters in length.

Highly Efficient Memory Utilization

With the new Dynamic Arrays 4GL 7.32 feature, customers can allocate just the amount of memory needed for their arrays, rather than having to pre-allocate enough space for the worst-case scenarios (and then still run out of space). Using simple 4GL 7.32 language statements, programmers can dynamically allocate the amount of space actually needed, and then release that space when it is no longer needed. Programmers can also resize dynamic arrays. Also, dynamic arrays are not limited to 32,767 elements as statically allocated arrays are.

Ideal for 4GL 4 to 7 Upgrades

Customers can now upgrade their legacy Informix 4GL 4.x applications to Informix 4GL 7.32 and take advantage of many of the new 4GL features

IBM

IDS 9.4 Packaging and Pricing

- NO PRICE INCREASES

- Enterprise Edition available in:
  - ▶ Unlimited Edition
  - ▶ Per Concurrent Session, purchased in increments of 1 **new*
    - IDS 10 packs Withdrawn

- Workgroup Edition
  - ▶ No change – 2 CPU limit and functionality restrictions

- IDS 7 to 9 Trade Up Licenses

- Transaction Processing **Gold Bundles**
  - ▶ Allow the customer to purchase licenses that apply to either Informix or DB2 UDB database licenses
  - ▶ ibm.com/software/data/programs/goldoffer.html

Significant points:

Customers can buy in increments of one

GOLD BUNDLES – be able to discuss and position these

IDS 9.4 Platforms

Platform	OS Build/Certifications
▪ HP 32-bit PA-RISC	▪ HP-UX 11.0, 11i
▪ HP 64-bit PA-RISC	▪ HP-UX 11.0, 11i
▪ Sun 32-Bit	▪ Solaris 6,7,8,9
▪ Sun 64-Bit	▪ Solaris 7,8,9
▪ IBM 32-Bit	▪ AIX5L version 5.1, 5.2
▪ IBM 64-Bit	▪ AIX5L version 5.1, 5.2
▪ Windows 32-Bit	▪ NT, 2000, 2003 Server , XP
▪ Windows 64-Bit	▪ 2003 Server
▪ Linux zSeries	
▪ Linux Intel	▪ Linux Kernel 2.4.x, glibc 2.2.x, and Redhat, SuSE, SCO Unixware+LKP 7.1.3
▪ Compaq DEC	▪ Tru64 V5.1, 5.2a
▪ SGI 32-bit	▪ IRIX 6.5x

New!

Other platforms are planned for later release (SGI 64-bit, Itanium II)

Consulting Expertise from IBM Software Services for Data Management

- Offers customers deep technical skills and support required to take a project from its conception, through planning and development, to testing, implementation, and beyond.

  - ▶ Database Fast Start Program
  - ▶ Database Design Review
    - Special Programs for SAP, PeopleSoft, & BAAN
  - ▶ Migration Planning & Support
    - From competitor's products to IDS
    - From Online 5 to IDS
    - IDS Upgrades
  - ▶ System Health Checks
  - ▶ Enterprise Replication Requirements & Deployment
  - ▶ Custom Programs to fit your needs!

- For more information see ibm.com/software/data/services
  - ▶ or email : dmskills@us.ibm.com.

Training

- Training is available in your geography & on your site!
- Training Curriculums
  - ▶ Foundations (6 courses for IDS)
  - ▶ Level I (7 courses for IDS)
  - ▶ Level II (10 courses for IDS)
  - ▶ Master's Course in Advanced Performance Tuning

- All updated to reflect IDS 9.4

•The above courses include development courses that apply to IDS such as 4GL development.

•CBT also offers distance training courses. However, these courses have not been updated for IDS 9.

•Informix is committed to providing the best training and doing it at your convenience! Not ours.

IBM DeveloperWorks - Informix Developer Zone

- Everything you need to know about Developing Applications for IDS
  - IDS
  - DataBlade Modules
  - 4GL
  - Java
  - Systems Management
  - Tools
  - Connectivity
  - And More!
  - www7b.boulder.ibm.com/dmdd/zones/informix

Informix Developer Zone
your growing on-line community

PROGRAM OBJECTIVES

• Provide technical resources and information that promote the unique benefits of Informix technology to the

• developer/user/customer community.

• Encourage the development and porting of Informix products.

• Promote the ease of use of Informix products.

• Foster a sense of a developer community.

• Communicate with our developers on a regular basis.

• Provide the most up-to-date technical content.

• Technically represent Informix Software to the developer community.

• Encourage and promote a consortium with the IIUG and to provide a feedback loop to Informix from our user community.

• Focus on aiding people who use Informix products and/or services in any way possible. If the IDN doesn't have it, we'll point you to it.

IBM developerWorks Live!
The Technical Conference with More
DB2 Information Management, Lotus, Rational, Tivoli and WebSphere Software

Morial Convention Center
New Orleans, Louisiana
April 9 - 12, 2003

ibm.com/events/ibmdeveloperworkslive

Audience:
- Commercial Developers
- Corporate Developers
- IT Strategist
- Planet Tivoli System Administrators
- Industry press and analyst

Technical Sessions
- Technologies, Strategies, and Product Overviews
- Application and Content Development
- Application and Content Management, Deployment and Delivery
- Information Integration, Connectivity, and Database Management
- Planet Tivoli offerings
- 300+ technical session hours
- 49+ Hands-on Labs
- 75 hours / 4 rooms dedicated to Meet the Developers & Experts

An IBM Professional Certification test included in the conference fee. Additional tests are available on-site at a discount.

Welcome to... IBM developerWorks Live!

Note dwLive! Technical conference – encourage customers/partners to visit the web site!
**Take this slide out after 4/1!!!!**

Also - There is a special conference registration code for residents of the Latin American Geo.

On the conference registration page - www.ibm.com/events/ibmdeveloperworkslive when there's a place for the registration code, key in LAD1 and the fee charged will be $795.......$500 off the early bird price which expires 3/16 and $900 off the full conf registration price.

This is only for full time residents of

Agenda

- Introduction
- How did we arrive at an IDS 9.4?
- What's new in IDS 9.4?
- What Customers & Business Partners are saying
- The IDS Product Bundle
- **IDS – past, present & future**
    - ▸ IDS 7; IDS 9.next
- Summary – why upgrade?!
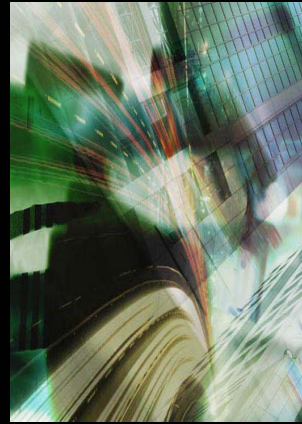
Agenda slide – review key points from the last section, discuss what you're about to move into in the next section…

IBM Informix Dynamic Server – *past & present*

IDS 7.31

Hardened …
- Continuing maintenance and platform support
- **Significant Quality improvements with last sets of interims**
- Interims (fixpacks) delivered every 3-6 months as needed at least through delivery of IDS 9.40
- New functionality comes in IDS 9

IDS 9.40

Features for the IDS 7 user …
Administrative helps
- **Dynamic locks**
- **Dynamic Logs**
- **Large Chunks**
- **HDR with ER**
- More In-Place Alters
- Attach Detach Fragmen
- AGS ServerStudio JE

Developer helps
- **Long IDs**
- On Select Triggers
- Retain Update Locks
- Additional SQL functions
- Non-Logging Tables

Performance
- **Fuzzy checkpoints**
- Memory Resident Tables
- Reduced codepath

Plus …
DataBlade Development Features
- SAPI Enhancements

Spatial DataBlade 8.11
- Nearest Neighbor
- Enterprise Replication

2* improvement for Java UDR Enterprise replication support
- Smart Blobs, UDTs and Spatial
- **Parallel ER target processing (3x better!)**

… but best of all …
- Minutes to upgrade from 7.3

Χοϖερ τηισ <u>ωηεν νοτ</u> πρεσεντινγ ΙΔΣ πιτχη αφτερ Ινφορμιξ ≅ IBM πιτχη

IBM□σ Ινφορμιξ Δψναμιχ Σερϖερ (ΙΔΣ) ισ α βεστ−οφ−βρεεδ, γενεραλ πυρποσε, μισσιον−χριτιχαλ ΟΛΤΠ δαταβασε φορ τηε εντερπρισε ανδ τηε ωορκγρουπ. Φορ μορε ινφορματιον ον ΙΔΣ, σεε

http://www-3.ibm.com/software/data/informix/ids/.

IBM Informix Dynamic Server Roadmap – *the future*

2006

Announced GA March 28th
- Backup & Restore enhancements
- High Availability Data Replication working with ER

2005
- Remove Capacity Limitations
  - >2gig chunk size
- Security Enhancements
- System Monitoring Enhancements

2004
  - track causes of deadlocks
- Utility Enhancements
  - > 2gig file support

2003

IDS 9.40

IDS 9.50

IDS 9.60

Driven by Customer & Partner Requests
- Interoperability and Integration

In Planning:
- Security enhancements
- Track industry standards
- Add'l SQL extensions
- RAS improvements
- Performance Enhancements
- Integration Enhancements
  - WebSphere Application Server
  - DB2 Tools

Χοωερ τηισ <u>ωηεν νοτ</u> πρεσεντινγ ΙΔΣ πιτχη αφτερ Ινφορμιξ ≅ ΙΒΜ πιτχη

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IBM

Agenda

- Introduction
- How did we arrive at an IDS 9.4?
- What's new in IDS 9.4?
- What Customers & Business Partners are saying
- The IDS Product Bundle
- IDS – past, present & future
- **Summary – why upgrade?!**

Agenda slide – review key points from the last section, discuss what you're about to move into in the next section…

Ideas: "Thank you, I'd like to wrap up our discussion on IDS 9.4 with some key points… "

IBM

Why is IDS still better than the competition!

- ▸ IDS runs applications with less hardware than the competition!
- ▸ "For every dollar spent on off-the-shelf software made by Oracle in the 1990s, a customer could pay as much as 10 times more in installation and customization costs, former company President Lane said."   from an article on news.com (July 2001)
- ▸ No expensive 'add-ons'. Everything you need to run IDS is included in one server price.
  - • Partitioning, Spatial, Replication, Availability, Developer's Kit, Web Administration, and more
- ▸ Rapidly deploy new applications in the development environment of choice, whether 4GL, ESQL/C, or Java!
- ▸ Operate IDS databases with fewer DBA's then the competition (2-1, or 3-1 ratio are not uncommon among users of both IDS)

(Optional slide)– if you would like to cover competitive… this is an overview, more detail in the appendix…

Time and time again, when real world benchmarks of IDS are done against the competition, IDS comes out on top.

If necessary, offer to benchmark IDS against the competition using the customer's application.   Informix has won many accounts this way and will continue to do so.

Oracle is the king of unbundling key functionality and making the customer pay through the nose to get what we provide as standard features of our database.

URL to article on news.com

http://news.cnet.com/news/0-1007-201-6375299-2.html

Informix supports all of the most common development methodologies & environments.   Whether the customer wants to use traditional client server using 4GL or our ESQL/C or they want to take the leap into EJB application servers, Informix is there for you.

Why IBM over Oracle or Microsoft?

- IBM became the **leading vendor** in new license revenue in 2001 with a total of 34.6 percent market share, overtaking Oracle.
- IBM also continued its momentum in the **Unix & Windows** markets, experiencing double digit growth in 2001.
- Microsoft has limited capabilities in heterogeneous database and platform environments; limits your **computing platform** choice
    - ▸ Microsoft supports only Windows
    - ▸ IDS & IBM support wide array of OS and HW platforms including Windows 2000 and XP, HP-UX, Sun Solaris, Linux, AIX and OS-390
    - ▸ many tools for heterogeneous data access from multiple data sources
- Support for **Open Standards** - Microsoft tries to drive internal standards as industry standards; IBM supports open standards
- **Service & Support –** while Microsoft provides support through 3rd parties and alliances, IBM provides award winning support through an extensive, well trained organization

(Optional slide)– if you would like to cover competitive… this is an overview, more detail in the appendix…

•IBM's Information Management Software is the leader among database vendors in the world today

•Informix was early to the Unix market, and with its acquisition IBM gains further powerful insight and knowledge into the distributed database environment, augmenting our other Distributed platform database products, like DB2 UDB

•Microsoft may support "any" platform – as long as it's Windows! (sarcastic)

•IBM is truly committed to open standards – with more developers working with Java than even Sun!

•Informix Customers have come to expect the highest levels of support – so have IBM customers, and these two organizations continue to drive customer satisfaction that is the highest in the industry!

Leverage the advantages of Informix @ IBM…

- **Get more information**
  - ▶ Technical White Paper on the IDS website
  - ▶ Talk to your IBM Representative
- Check out **Passport Advantage**, IBM's order processing & fulfillment tool
  - ▶ Earn volume discounts on all IBM Software
- Explore the breadth of **IBM Software e-business offerings** in addition to your Informix portfolio:
  - ▶ Integration with WebSphere Application Server - Servers
  - ▶ Tivoli System Management and Archive tools
  - ▶ Connectivity options for your heterogeneous environment – Gateways
  - ▶ Information Integration Content Management, Business Intelligence Tools

---

•You have lots of advantages as an IBM customer,

  •Leverage the IBM software solutions to augment your Informix technology investment –

    •Application Servers and MQ messaging from WebSphere

    •Systems Management from Tivoli

    •Collaborative solutions from Lotus

  •It's all part of the IBM's Software Solutions, and Passport Advantage, allows you to leverage discounts across all these products and increase the value you get out of IBM.

•please look into them by contacting your local IBM representative today!

Why should upgrade to IDS 9.4 today?

- Performance
  - ▸ 8-15% increase overall
- Availability
  - ▸ High Availability Data Replication (HDR) & Enterprise Replication (ER)
- Scalability
  - ▸ Removes previous size limitations
- Security
  - ▸ End-to-end encryption
- **Easy Upgrade**
  - ▸ Minutes to upgrade from IDS 7

**Announcing
Informix Dynamic Server 9.4**
Performance. Reliability. Scalability

This is a good summary, and part of the final wrap-up

Summary

- Performance, reliability and scalability
- 9.4 continues to reduce the complexity, time, DBA skills, etc.
- Enabled Customers & Business Partners to improve their profitability, reduce their risk and deliver best of breed solutions.
- IBM & IDS proven track record of database innovation
  - Our Promise
    - "We'll continue to support the Informix product line for as long as customers require"
    - "There will be NO forced migrations to DB2"
  - Our Proof
    - Continued investment in Informix technology, on par with the research & development investment in the software industry
    - IBM had a long history of supporting customers
- Best of breed solution means there is no value to migrate to a competitor
- IBM is a powerful ally
- Upgrade today!

As [(EXEC INTRO SPEAKER) Lauren or Don Top or Janet] said at the beginning of our web cast, I hope that we have demonstrated how IDS 9.4 continues to deliver business value that you as our customers have come to depend on IDS for.

Relates back to slide # 5, closes on that introduction as a summary…

We could speak to the rest of these, depending on time, I believe that the slide is self-explanatory!

Thank you!

Questions?

More Information:

- **IDS 9.4 launch information**
  - http://www.ibm.com/informix/ids94/ (webcast replay available)
- New **Inform*ix*** home page
  - ibm.com/informix
- **Informix newsletter**
  - ibm.com/informix/informixtoday
- Join **International Informix Users Group** (IIUG) and your local user group
  - www.iiug.org/join

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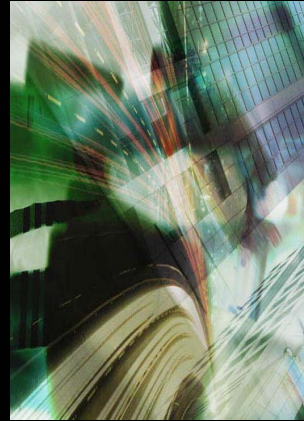
END OF PRESENTATION

Thank you!

More IDS 9.4 information @ ibm.com/informix/ids94/

STOP HERE

END OF PRESENTATION

Agenda

- **Appendix Items**

After this page are optional slides that you may choose to add…

IBM

Informix - SWG Products 2002 Interoperability

- IBM Informix Dynamic Server (IDS) was certified with key SWG products in 2002

WebSphere software

IDS 9.3	Websphere Application Server, V4.0
IDS 9.3, 9.4	Websphere Application Server, V5.0
IDS 9.3	Websphere Portal Server, V5.0
IDS 9.3	Websphere Studio Application Developer, V4.0 Web Services Object Runtime Framework (WORF) V3.5

Tivoli software

| IDS 7.31, 9.21, 9.3 | Tivoli Monitoring for Databases, V5.1.0 |
| IDS 7.31, 9.21, 9.3 | Tivoli Data Protection for Informix |

Lotus software

| IDS | Lotus Enterprise Integration (LEI) 6 / Domino 6 |

Χοωερ τηισ <u>ωηεν νοτ</u> πρεσεντινγ ΙΔΣ πιτχη αφτερ Ινφορμιξ ≅ IBM πιτχη

Outstanding Customer Service

- Consistently considered the top service provider:
  - ▶ Technical Support
  - ▶ Consulting Services
  - ▶ Complete set of Training Programs
  - ▶ IBM Informix Certified Professionals Program
  - ▶ IBM DeveloperWorks Informix Developer Zone

world-class
customer care

IDS is truly a whole product.   When combined with our leading support and consulting and our partners, there is not a business problem we cannot solve.

IBM

Informix Press

- Nearly 20 volumes covering Informix, including:
  - ▸ Open-Source Components for Informix Dynamic Server 9.x
    - ISBN 0-13-042827-2
  - ▸ Informix Dynamic Server.2000 : Server-Side Programming in C
    - By Roy, Jacques
  - ▸ Administering Informix Dynamic Server On Windows NT with CD ROM
    - By Doe, Carlton
  - ▸ Informix DBA Survival Guide
    - By Lumbley, Joe
  - ▸ Informix : Power Reference (Prentice Hall Ptr Informix Series)
    - By Taylor, Art
  - ▸ Informix Handbook
    - By Flannery, Ron M.
  - ▸ SAP R/3 for The Informix DBA
    - By Nathans, Sari

Learning about Informix is not limited to training seminars.   The Informix Press provides a complete range of books covering every area of interest.

IDS vs Oracle: TCO

You need these components from Oracle to get the functionality of IDS:

Feature	Oracle 9i EE	IBM IDS EE
Oracle 9i Database Server	$32,000	$48,438
Software Updates	$ 5,600	included
Software Support	$ 4,480	included
Subtotal	$42,080	$48,438
RAC	$15,000	included
Partitioning	$7,500	included
Spatial	$7,500	included
Diagnostic Pack	$2,250	included
Tuning Pack	$2,250	included
Software Updates	$14,940	included
Software Support	$10,010	included
Total	$91,450	$48,438

IDS vs Microsoft: TCO

- IDS can save your Microsoft SQL Server customers money

	Microsoft SQL Server 2000 EE	Informix Dynamic Server WE
Initial License cost (2 processors/50 Users)	$30,196	$31,400.00
Upgrade Cost	$5,000	$0.00
Support Cost	$1,950	$0.00
Incident Costs for Online Support	$99/PER INCIDENT	
Incident Costs for Phone Support	$245/PER INCIDENT	
Total	**$37,146**	**$31,400**
Second Year Cost		
Upgrade Cost	$5,000	$0.00
Support Cost	$1,950	$0.00
Total	**$6,950**	**$0.00**
Total Cost over 2 years	**$44,096**	**$31,400**

Microsoft support is limited to product defects. Additional support is paid for on a per incident basis. Since these costs can vary greatly, we have not used them in our second cost estimate. Customers should be asked to consider how may calls they typically make and add that to the cost of the Microsoft products.

When you consider the cost of Microsoft support which only covers defects, we can save customers money over SQL Server with IDS workgroup edition.

If customers require some EE features, remember the special bid process that Patricia mentioned as a way of beating Microsoft on price.

IBM

IDS, IBM & Microsoft

- Microsoft has limited capabilities in heterogeneous database and platform environments; limits computing platform choice
  - Microsoft supports all versions of Windows
  - IDS & IBM support wide array of OS and HW platforms including Window 2000 and XP, HP-UX, Sun Solaris, Linux, AIX and OS-390
  - many tools for heterogeneous data access from multiple data sources

- Support for Open Standards
  - Microsoft tries to drive internal standards as industry standards; IBM supports open standards

- Service & Support
  - Microsoft provides support through 3rd parties and alliances
  - IBM provides award winning support through an extensive, well trained organization

Hardware Partners include:

- Sun Microsystems
- HP
- IBM
- Compaq
- Fujitsu-Siemens
- EMC
- Network Appliance
- StorageTek

IBM

For more information

- IDS 9.4 launch page
  - http://www.ibm.com/informix/ids94/
- IDS 9.4 Product Page
  - http://www.ibm.com/informix/ids/

- IDS 9.40 Spec Sheet, White Paper
- Official Product Announcement
- Customer (3/25) and Business Partner (3/18) Web casts
- Worldwide InfoBahn and IDS/Data Management Events
- IIUG Information
- Informix Developer Community Links
- Complementary Product Information Links
- Downloads, Offerings, Promotions and latest news
- How to get support, get educated, buy, get certified, get more information

STAY CURRENT: Informix Today Newsletter!

- Informix Today is a monthly newsletter e-mailed to Informix software customers worldwide, providing the latest information on the IBM Data Management Informix products.

- Each issue is filled with:
  - **Latest offers**
  - **Downloads**
  - **Upcoming events**
  - **Web based seminars**
  - **Product news**
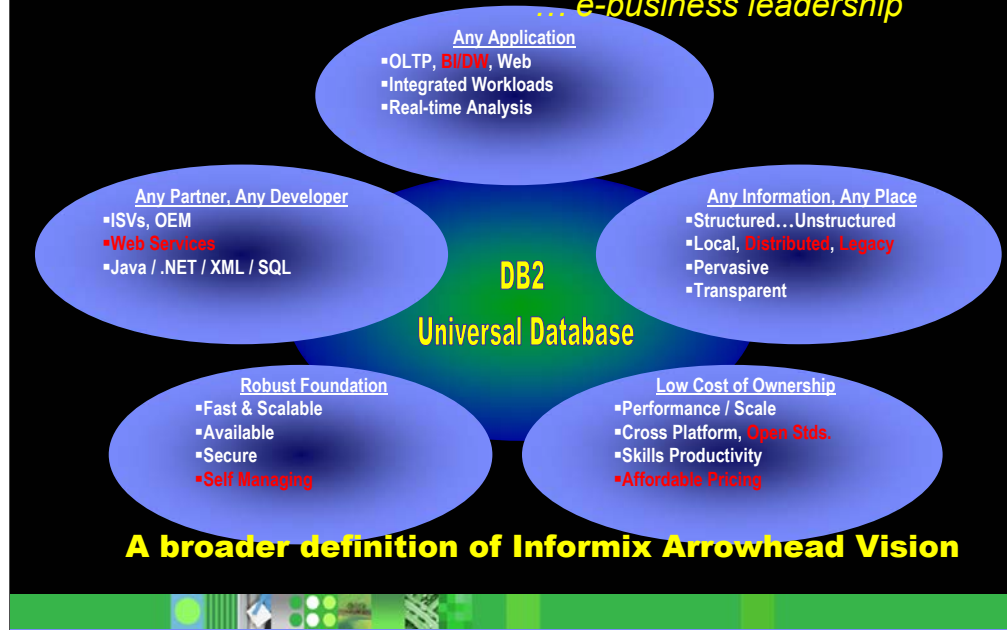- http://www.ibm.com/informix/informixtoday/

Innovation & Technology Leadership
Standards & Openness

- **Patents:** IBM holds more than 1000 data management technology patents. In 2001 alone, 132 patents were issued to IBM for data management technologies. IBM's 524 Software patents surpassed the combined total of patents awarded to its four closest competitors in the IT Software industry - Oracle, BEA, Microsoft and Computer Associates. Oracle, for instance had 67 patents in 2001, half the number of IBM's Data Management Solutions business. (In 2000, the patent score was IBM 300 vs. Oracle 70) BEA had three patents.

- **Linux** -- IBM was the first database to support Linux. Today, DB2 delivers the broadest for Linux from the handheld to the mainframe to clusters of mainframes. According to IDC, IBM is the worldwide market share leader on the Linux platform.

- **Standards:** IBM has more contributions to SQL standards than all database vendors combined. In 1999, IBM contributed 57 percent of all SQL-standards-body submissions.

- **Open Standards:** DB2 was the first database to support standards-based Web Services including XML, UDDI and SOAP. Oracle does not support SOAP and UDDI.
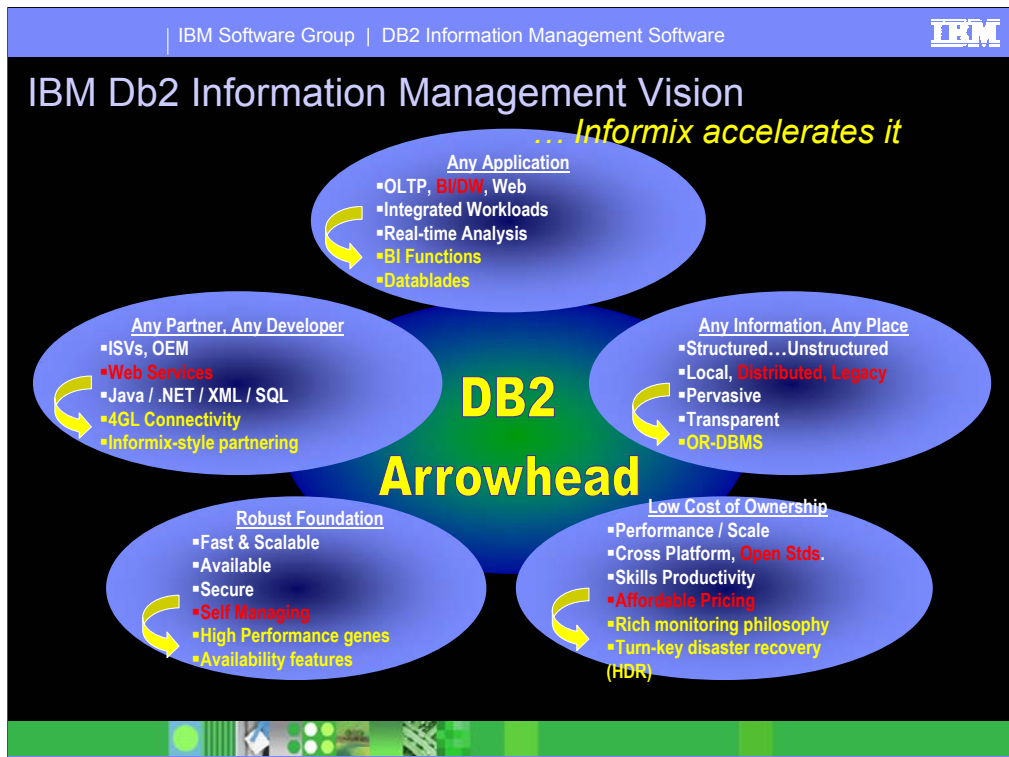
Χοωερ τηισ <u>ωηεν νοτ</u> πρεσεντινγ ΙΔΣ πιτχη αφτερ Ινφορμιξ ≅ IBM πιτχη

At this point, I'd like to spend a few slides on the future, however.

About a year prior to the acquisition, Informix had already decided that it would be impossible to continue the high level of investment on 3 core database products in parallel forever. We had already set upon a course to bring the best of these three databases: IDS, XPS and Red Brick, into a single product which we called Arrowhead. We were 8 months into this project when our world changed in April 2001. With the announcement of IBM's intent to acquire the Informix database business came the need to reconcile this project with the other priorities of IBM's Data Management division.

Soon after we had our senior developers and architects sitting across the table from each other talking about where the market was going and what the next generation database needed to offer. Lo and behold, we discovered that we had arrived at the same conclusions. We'd spoken to the same types of customers and determined that what was needed was more of the same robust foundation, but continuing to support a broad range of partners and developers, a more dynamically changing and combined workload, accessing more types of information from more places and all with cost and management characteristics that would let them compete.

Both the Informix Arrowhead team and IBM's DB2 team were striving to

IBM

IBM Db2 Information Management Vision

… Informix accelerates it

Any Application
- OLTP, BI/DW, Web
- Integrated Workloads
- Real-time Analysis
- BI Functions
- Datablades

Any Partner, Any Developer
- ISVs, OEM
- Web Services
- Java / .NET / XML / SQL
- 4GL Connectivity
- Informix-style partnering

DB2 Arrowhead

Any Information, Any Place
- Structured…Unstructured
- Local, Distributed, Legacy
- Pervasive
- Transparent
- OR-DBMS

Robust Foundation
- Fast & Scalable
- Available
- Secure
- Self Managing
- High Performance genes
- Availability features

Low Cost of Ownership
- Performance / Scale
- Cross Platform, Open Stds.
- Skills Productivity
- Affordable Pricing
- Rich monitoring philosophy
- Turn-key disaster recovery (HDR)

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Informix brings a decade of technology leadership in parallel database processing from the pioneering work done as a joint venture with Sequent computers (another IBM acquisition, by the way). This bring a ton of experience with high performance and high availability.

4GL connectivity opens up another important avenue for application development as does the Informix style of partnering with SMB channel businesses.

BI capabilities in Red Brick and Datablade specialties from IDS create support for an even broader range of application capability.

The core OR-DBMS essentials like R-Tree indexing and Timeseries storage open up new ways of storing and retrieving at very high-speed data that goes far beyond the traditional numbers and strings that past databases have worked on.

Finally, the rich monitoring capabilities enjoyed by the Informix DBA as well as the downright easy HDR configuration combine to offer a low cost management and availability environment that is essential as typical IT infrastructure grow more complex and costly to administer.
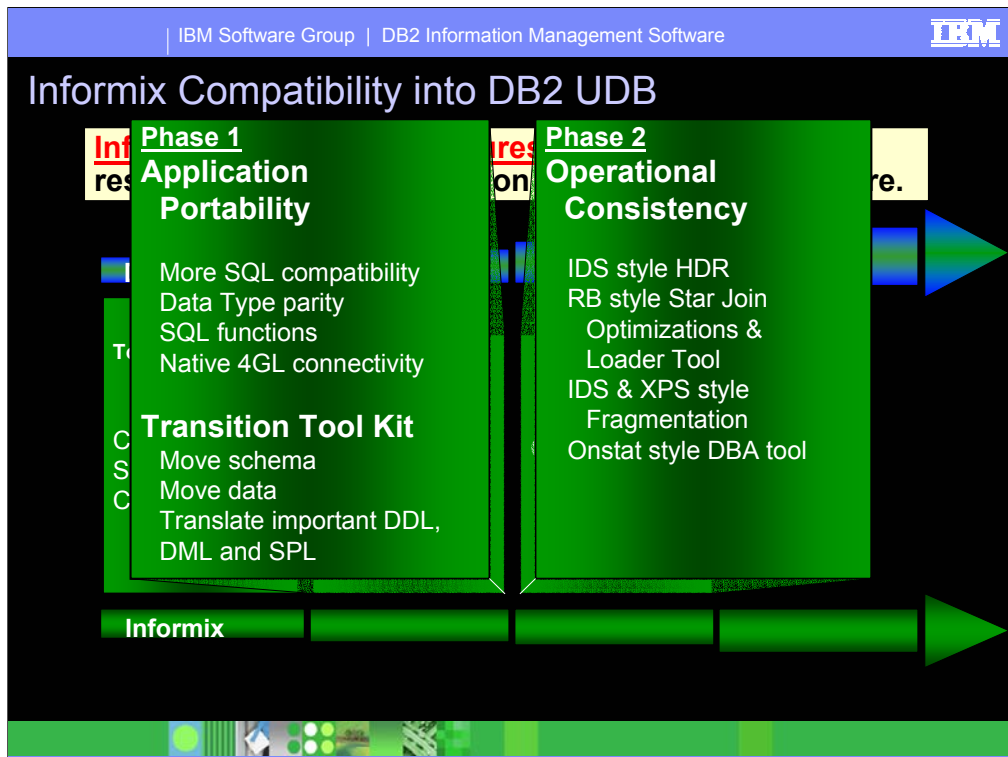
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Obviously, an Informix user today is interested in what the transition from today's products to the next generation will look like.

First of all, realize that this is a multi-year effort. Each new release of DB2 will contain more of this vision realized. There is no need to move quickly, however as you recall, the longterm development roadmaps for the continuing Informix product lines stretch well into the future. Also realize that we aren't starting from scratch. There is already a lot in common between Informix databases and DB2 – SQL is a standard embraced by both, shared nothing scaling is common to DB2 and XPS and there already exist gateways and connectors to support those who wish to deploy DB2 and Informix in the same IT shop.

In the first round of work we are focusing on what it takes for application portability. The second will focus on more consistency of operational aspects of the two environments. More details in the next slide ….

Informix Compatibility into DB2 UDB

Phase 1
Application
   Portability

More SQL compatibility
Data Type parity
SQL functions
Native 4GL connectivity

Transition Tool Kit
Move schema
Move data
Translate important DDL,
DML and SPL

Phase 2
Operational
   Consistency

IDS style HDR
RB style Star Join
   Optimizations &
   Loader Tool
IDS & XPS style
   Fragmentation
Onstat style DBA tool

Informix

Χοωερ τηισ <u>ωηεν νοτ</u> πρεσεντινγ ΙΔΣ πιτχη αφτερ Ινφορμιξ ≅ IBM πιτχη

In Phase 1, by application portability, we mean what it takes to port an application that is today connected to Informix over to work on DB2. When a customer upgraded from version 5 to version 7 to version 9 of Informix, he expected that he would require little or no change in his application. We can't promise the same ease of upgrade, but with a combination of features in DB2 and the Transition Tool Kit, we can make this process very smooth and trouble-free.

We will focus on the differences as they are surfaced to the application – the SQL language and the SQL data types, as well as the capability to connect directly with Informix 4GL programs.

The Transition Tool Kit will help move the schema automatically from its Informix dialect to DB2's. The data will be moved as well as translation of SQL and Stored Procedures that will not be natively supported by DB2.

In Phase 2, we'll be including many of those features that have endeared developers and administrators to Informix. HDR-style failover, Red Brick-style Star Schema optimizations and loader, IDS/XPS-style fragmentation (aka partitioning) which is the foundation for their parallelism. DB2 already has failover capabilities, star schema support and data partitioning, however, the Informix way of accomplishing these has engendered a tremendous

Informix Compatibility into DB2 UDB

Informix compatibility features complement DB2 UDB
resulting in smooth transition path if customers desire.

New IDS features:
will they work in DB2 Arrowhead?

YES!

> IBM standards boards closely monitoring SQL enhancements
> updates to the current code base will transition into DB2 UDB, optimally edited for efficiency
> Feature enhancements with an eye to the future – so key functionality will work

Informix

Χοωερ τηισ <u>ωηεν νοτ</u> πρεσεντινγ ΙΔΣ πιτχη αφτερ Ινφορμιξ ≅ IBM πιτχη

This was added due to customer questions/concerns.

New features in IDS 9.x will always be fit in with an eye to the future. Users shouldn't worry that some cool new feature in IDS will never make it into DB2, yet they should be cautioned that some of the sexier ones will take longer to integrate into the overall product line.

We of course want the take away from the Informix @ IBM presentation to be "Oh, so I should stay right where I am until IBM makes it very easy for me to transition onto the latest platform, when most of the Informix stuff is integrated into the DB2 line"!!

IBM

IDS 9.40

Available March 28th!

- High performance technology
  - ▶ Faster than IDS 7.x
- Unlimited scalability
  - ▶ Create and manage HUGE instances
- New availability features
  - ▶ Expand best-in-class features
- New restoration features
  - ▶ Better protection and new features
- More!!!

These are the drill-down slides, use this series of slides in place of slide #13…

IDS 9.40

High-performance technology

- ✓ 8-15% improvement in internal benchmarks
- ✓ Cleaner indexes and improved memory management for more-efficient use of memory and processors.
- ✓ Enhanced buffer priority management for more-efficient use of large amounts of memory
- ✓ Smarter query optimization
- ✓ Reduced contention between concurrent users

These are the drill-down slides, use this series of slides in place of slide #13…

IDS 9.40

Scalability

✓ Maximum chunk size 4 TB
✓ Maximum number of chunks 32 K
✓ Data capacity of a single instance **128 PB**
✓ Maximum LVARCHAR size 32 KB
✓ DBMS utility file size limits -- 7 EB (7 trillion MBs)
for some, 4 TB for others

These are the drill-down slides, use this series of slides in place of slide #13…

IDS 9.40

Availability

✓ HDR / ER support extended data types
✓ HDR / ER co-existence on the same instance
✓ ER Autonomic Features

✓ LRU fractional values
✓ New buffer priority management system

These are the drill-down slides, use this series of slides in place of slide #13…

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