

# Presentation Kit



## Informix Corporate Overview

*Database Technology for Dynamic Organizations*

*Confidential: For Informix internal and partner use only*

# Informix Corporate Overview

## *Presentation Materials*

This booklet contains suggested scripts for giving an Informix corporate overview presentation. Never attempt to use all of these slides in one presentation. We have purposefully included more than twice the number of slides you'll use so you can pick and choose the most appropriate slides for your specific needs. A good rule of thumb is never to show more than 40 slides at one 45 minute presentation.

### **Related Marketing Materials**

The following pieces are associated with this kit and can be ordered through sales administration:

- this presentation kit, containing one PC formatted disk (to open on a Mac see next page) with two PowerPoint 4.0 files (# 000-20741-96)
- 35mm slides (# 000-20747-91)

### **Using Electronic Presentation Files**

Each disk contains two files:

- 35mmCO is for outputting to film to create 35mm slides, or for displaying on your computer.
- ovrhdCO is for printing to a color or black-and-white printer—overheads or handouts.

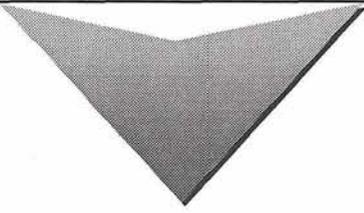
The electronic files may also be accessed via the fox server. They are stored under fox/marcom/presmat/*part number* (fox also has an index).

## **Macintosh Users**

This same file works on a Mac or a PC with PowerPoint version 4.0. To open a PC disk on a Macintosh, follow these steps:

1. Before you insert this PC disk, find the utility that came with your Macintosh System Software called Apple File Exchange and launch it.
2. Once Exchange is running, insert the PC disk and the Mac will accept it without the "...format?" message. The PC PowerPoint files will appear.
3. Copy the files to your Mac's hard drive and quit Apple File Exchange.
4. Launch Mac PowerPoint.
5. Once you are in PowerPoint, choose open and find the PC file. It will open in PowerPoint.

Another way to get this file onto your Mac is by dragging it off of the fox server.



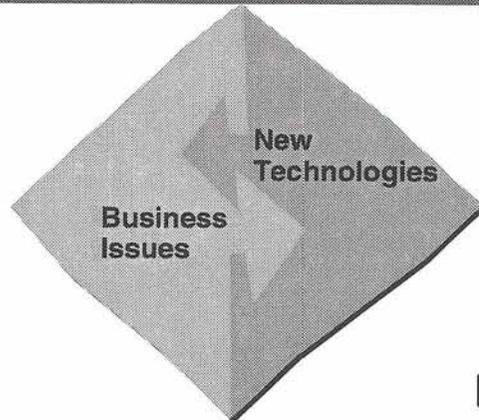
# ***Database Technology for Dynamic Organizations***

 **INFORMIX**

In a swiftly evolving business environment, organizations must be able to monitor the marketplace in order to keep pace with change. Organizations are under greater pressure than ever before to be competitive, and they need technology that increases their competitiveness and responsiveness.

New Technologies Solving Business Issues

## Informix Focus

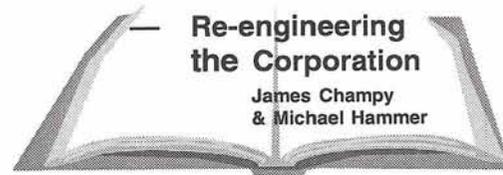


 INFORMIX

Thanks to the rapid evolution of powerful new technologies, Informix has developed some new technology to help you resolve your business issues.

## Businesses Re-engineering

**“Re-engineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed.”**



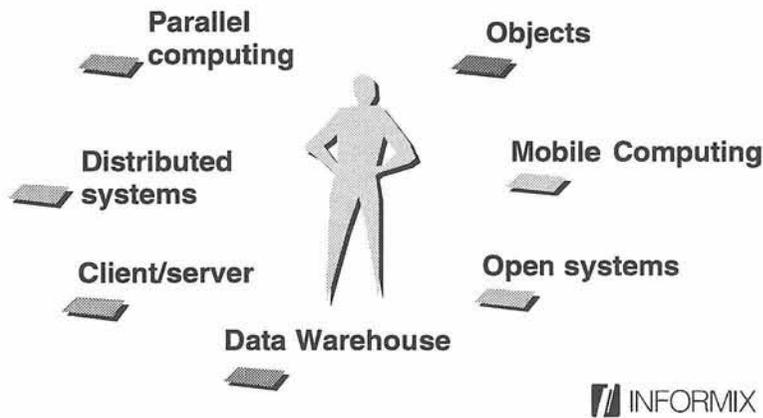
 **INFORMIX**

Re-engineering to take advantage of these new technologies is probably the top issue for organizations today.

This quote from James Champy's (who spoke at our user conference July 1994) *Re-engineering the Corporation* says it best: "Re-engineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service, and speed."

Re-engineering starts with an organization asking, "How are we going to redesign our business processes to make them more efficient?" And that naturally leads to, "What kind of information systems do we need to put in place so that we can effectively implement these new processes?"

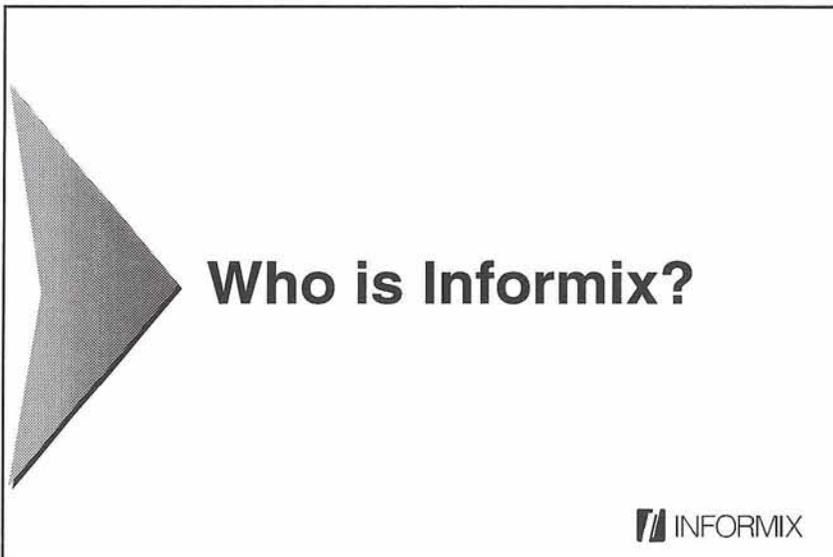
## MIS Leveraging New Technologies



What are some of the new technologies MIS can leverage to achieve this new generation of information systems? Some of the many options include:

- Parallel computing jump started the hardware world by offering order-of-magnitude improvements.
- Objects hold the promise of reusability.
- Distributed systems disburse the power to outlying divisions or departments where meaningful decisions are now being made.
- Mobile computers keep sales personnel in touch with the home office while they are on the road and empower them to make decisions and book orders immediately that formerly took days.
- Open systems brought the price of technology way down and help stave off obsolescence.
- Data warehouses allow management to make better informed decisions based on vast quantities of data within the organization.
- Client/server technology takes advantage of the high price/performance ratio of microcomputer clients to run the applications and allows knowledge workers access to powerful number-crunching, multigigabyte database servers.

*Speaker note: This slide is just a touchstone; it is not a place to camp! Just hit each one briefly and move on.*



# Who is Informix?



Now let's look at who we are and how we can help.

## Technology Leadership

- **First RDBMS for UNIX**
- **First fourth-generation language for UNIX**
- **First OLTP server architecture for UNIX**
- **First UNIX multimedia RDBMS**
- **First RDBMS to meet NCSC B1 and C2 security levels**
- **First, and most frequently used, UNIX RDBMS for TPC-C benchmark results**



What makes Informix a leader? Look at our history.

We were founded back in 1980 on the belief that UNIX was going to become a commercially-viable operating system, and were the first to release an RDBMS for it. Back then, that was a long shot, because UNIX was mostly found in engineering environments. But what we have seen since then is a dramatic growth in commercial applications using UNIX. And this became the foundation of the open systems movement.

Our track record of technology leadership is tremendous:

- Not only did we develop the first 4GL for UNIX, but it is the largest-selling 4GL on the market today.
- Back in 1987, we were the first company to introduce an OLTP server architecture for UNIX.
- That first generation of technology was followed in 1990 by the introduction of INFORMIX-OnLine, our next generation product, which added high-availability features as well as multimedia capabilities—another first.
- We were first in the United States to meet the National Computer Security Center (NCSC) B1 and C2 security levels.
- We were the first UNIX database company to publish TPC-C benchmark results. I'll be talking more about the benchmarks later.

## Award-Winning Software



We continue to get accolades from independent sources for our software:

Database Advisor (1992 and 1993) rated us the best UNIX relational database system.

We won the Datamation's Reader's Choice award (in 1993 & 1994) with INFORMIX-OnLine, our high-end server product.

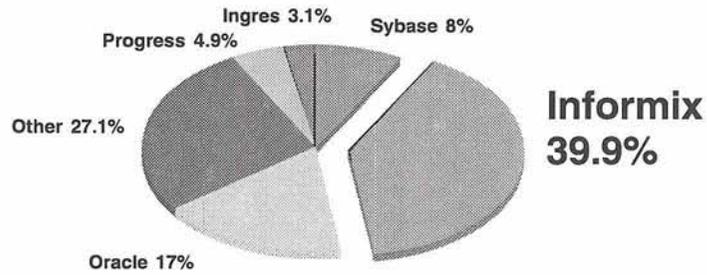
In 1994, over 2,700 VARs voted us VAR Magazine's Best Partnership and Pricing by a System Software/Database Vendor.

In DBMS Magazine, we won the Reader's Choice award in (1992) for our 4GL.

SCO magazine rated us the best 4GL (for 1992).

Leader in UNIX RDBMS

## Worldwide UNIX RDBMS License Shipments



Source: IDC 1994

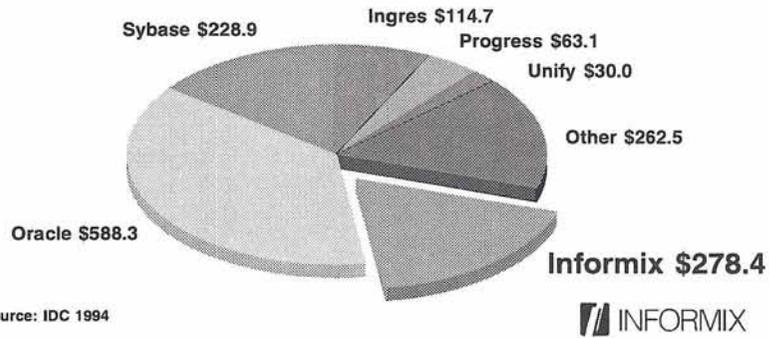
**INFORMIX**

Quantitative market research also puts Informix in the lead. IDC released market share figures for UNIX RDBMSs (in 1993) that show Informix with a significant lead in number of licenses sold. That means more people are using Informix than any other RDBMS.

*Speaker note: They will be releasing their 1994 figures about mid-1995.*

Leader in UNIX RDBMS

## Worldwide UNIX RDBMS Revenue

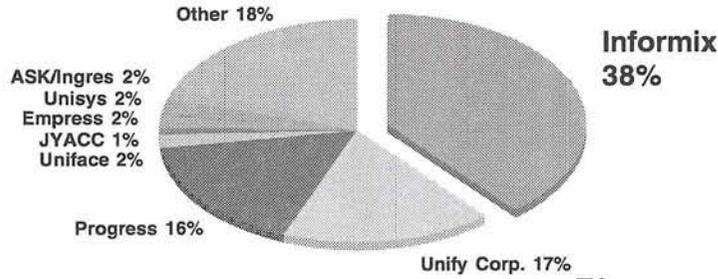


Translating that into revenue (in 1994), we are second only to Oracle with \$278.4 million. And, as you can see, we shipped almost \$50 million more than Sybase.

*Speaker note: They will be releasing their 1994 figures about mid-1995.*

Leader in UNIX 4GL

## Worldwide UNIX 4GL License Shipments



Source: InfoCorp 1993

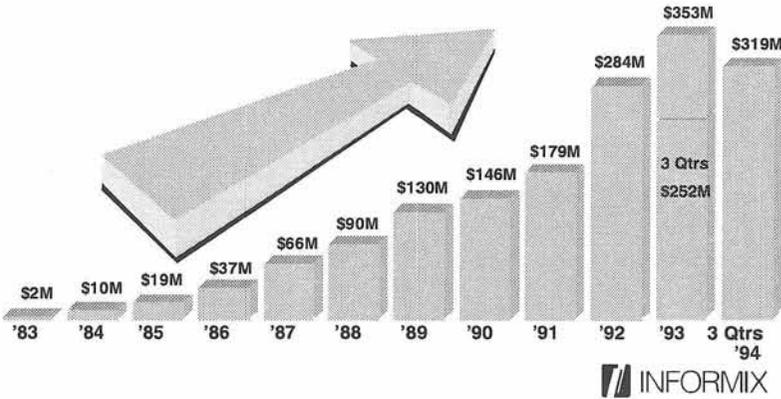
 INFORMIX

The same is true of our 4GL. These are InfoCorp's figures for shipments of 4GLs, and once again, Informix is in the leadership position in terms of licenses shipped worldwide for 4GL or database language products.

*Speaker note: These figures are for 1992, which is the last time InfoCorp did this study. We called them recently and they said they will not be doing this particular study again any time soon.*

Revenues

**Informix Charts Continuous Growth**

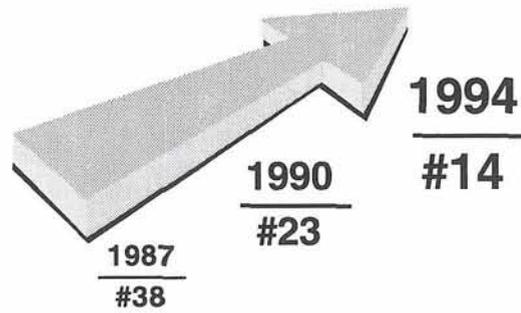


We've seen remarkable growth as a company—uninterrupted growth since 1983 and accelerated growth over the last three years.

Between 1991 and 1993 we practically doubled in size. And in Q4 of 1993 we had our first hundred-million dollar quarter.

As you can see, as of Q3 '94 we are \$67 million ahead of where we were last year.

## Informix Moving Up



Source: Software Magazine

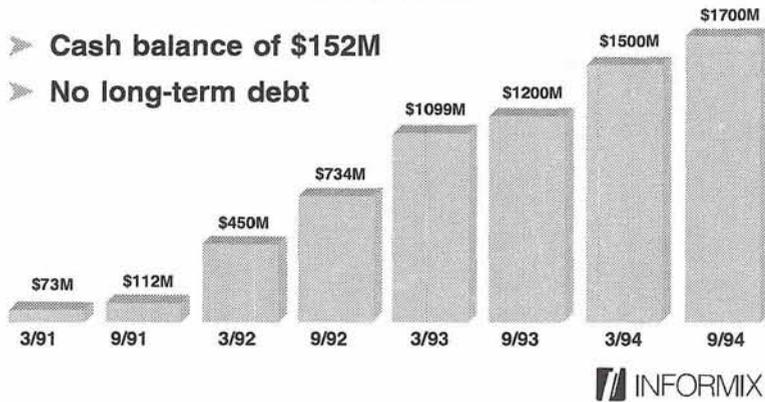
 INFORMIX

Our ranking as an independent software vendor has continued to rise as well, making us one of the major players in the market.

## Total Market Value for Informix Stock

### Stock Market Recognizes Informix

- Cash balance of \$152M
- No long-term debt



This chart shows the growth in valuation of our company's stock on the market. We've gone from being valued at \$73 million back in 1991 to being valued at well over one-and-one-half billion dollars today.

*Speaker note: Beware saying anything more about this slide. Obviously our stock price varied within these months, but we picked a value within the given months to highlight its overall trend toward continuous growth.*

## Informix Worldwide

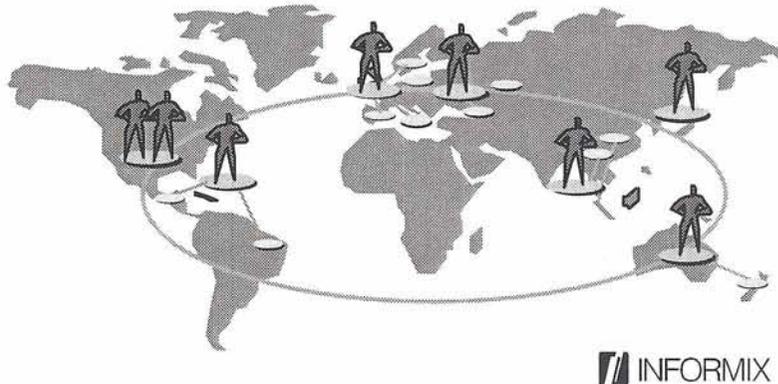
- **Subsidiaries in over 35 countries**
- **Over 2,000 employees**
- **8 regional support hubs**
- **Business partners worldwide**
  - System companies
  - VARs
  - Distributors
  - System integrators



Our business strategy is to serve a global market with software and services.

We have three major regional headquarters: the Americas, Europe, and Asia/Pacific, with offices in 30 countries and eight regional support hubs. We also have business partners worldwide to leverage local expertise in emerging markets.

## Worldwide Customer Services



Informix provides consistent customer services worldwide. Each subsidiary (the smaller disks on this map) offers a range of services—typically in the local language. Subsidiaries, in turn, are augmented by full support hubs (the larger disks) in Munich, London, Singapore, Sidney, Japan, and Miami with full complements of trained engineers to assist when additional skills or resources are necessary. In the limited cases where the support hubs need additional help, it is available from the advanced support center in our corporate headquarters in Menlo Park, CA.

In the U.S., pre-sales engineers, trainers, and client services engineers are in each local office. Lenexa, Kansas is the support hub for all of North America. Telephone support for all products is handled by the excellent team of support engineers in Lenexa.

## Customer Services

- **Integrated, consistent worldwide services**
  - Training • Openline
  - Consulting • 24x7
  - Assurance • InformixLink
- **Infrastructure designed for highest response**
- **Continuous quality improvement**
- **ISO 9000 Certification**



Our customer services organization is dedicated to providing the same high level of service, regardless of where our products are used, worldwide. We offer training, consulting, and assurance (assurance provides updates and upgrades to the most current releases of Informix software) for our customers around the globe.

- OpenLine provides telephone support for developers, systems administrators, and database administrators during normal business hours.
- As an additional offering, Informix provides 24 by 7, that means twenty-four-hours-a-day, seven-days-a-week, emergency service for those customers running mission critical applications around the clock. Such users appreciate the security of knowing if they have problems, Informix is available to them at any time, day or night.
- InformixLink is our interactive electronic information service that allows you to keep current on the latest technical information for our products and services. It also includes the latest information on problems other customers are experiencing, reasonable work arounds, and scheduled fixes.

## Customer Services

- **Integrated, consistent worldwide services**
  - Training
  - Openline
  - Consulting
  - 24x7
  - Assurance
  - InformixLink
- **Infrastructure designed for highest response**
- **Continuous quality improvement**
- **ISO 9000 Certification**



Informix has invested substantial resources in infrastructure, people, and training to provide the most responsive service possible to help you resolve Informix-related issues. This is proven by the following statistics (and these are the kinds of numbers we monitor all the time to keep them within acceptable limits).

- In the US, calls are directed to an engineer via an Automatic Call Distributor. Calls are answered in less than one minute over 80 percent of the time. And, over 80 percent of cases opened are resolved in one business day.
- Outside the US, information is collected about your problem, and a call back is arranged within two hours. Cases opened are generally closed within a business day.
- For emergencies, we call these priority one's, where a system or application is not operational, we typically are able to recover the system within one-and-one-half hours. We have over 60 support engineers trained to recover downed systems worldwide.

Informix monitors customer satisfaction with an annual formal survey administered by an independent customer survey organization. The survey includes other firms so we can benchmark satisfaction levels against our competitors. Informix has shown continuous improvement with customer satisfaction for the past three surveys. Items not to our satisfaction receive executive-level attention for the development of improvement programs.

In order to implement quality management systems, Informix adheres to ISO 9000 standards. ISO 9000 is a standard driven by customers who want assurance their vendors have active programs to improve quality. The standards are rigorous, require certification by an outside agency, and are frequently monitored by that third party. Now let's look at our sites that have been recommended for certification.

## Awarded ISO 9000 Certification

	UK	9002	December 1992
	Germany	9002	December 1992
	Singapore	9002	June 1994
	France	9002	September 1994
	Ireland	9002	April 1994
	NACS, USA	9002	November 1994
	ES, USA	9001	November 1994



Ever since our first certifications, in the United Kingdom and Germany in December 1992, we've continued to achieve ISO 9000 certification for our support centers and hubs throughout the world. Most recently, our Ireland operations and North American customer service (NACS) organization were recommended for ISO 9002 certification. Our education services (ES) department in the US achieved the most difficult standard, ISO 9001 in 1994.

Our closest competitors have not demonstrated this level of commitment. (To our knowledge, Oracle only has a single European site ISO 9000 certified, and Sybase has none. On the other hand, high quality service companies like Hewlett-Packard have over 150 certified sites and IBM has over 50.)

*Speaker note: On the enclosed electronic files, it inaccurately shows that Ireland has 9001 certification. Please change the file to reflect Ireland actually having 9002 certification.*

## Wide Range of Customers (partial list)

AAA Insurance	Hyatt Hotels and Resorts
Agence France Presse	Inland Revenue (UK)
American Airlines	KFC
AT&T	Kmart
Bank of America	Kroger
Citibank	Mayo Clinic
Dai-ichi Kangyo	McDonald's
DHL	Motorola
Dresdner Bank	Reynolds Metal
Federal Express	Teléfonos de México
Federal Ministries of Germany	The Home Depot
German Telekom	United Airlines
Hacienda y Crédito Público	VISA
HCIA	Volkswagen
Hewlett-Packard	Wal-Mart

 INFORMIX

We have a broad base of customers worldwide representing all major market sectors, including finance, manufacturing, retail, telecommunications, hospitality, and many more.

*Speaker note: We've provided this one generalized slide to talk about a wide range of customers. Call out a few that would interest your customer. It lists some of the largest well-known organizations worldwide that we work with. At the end of this show there are many slides with listings by industry; and behind that we have done some specific profiles of our high-visibility accounts.*

## Informix Focus

- **Leading technology based on industry standards**
  - **Servers, tools, and connectivity**
- **Real-world performance leadership**
- **Dedicated to open systems**
- **Leverage extensive partnerships**



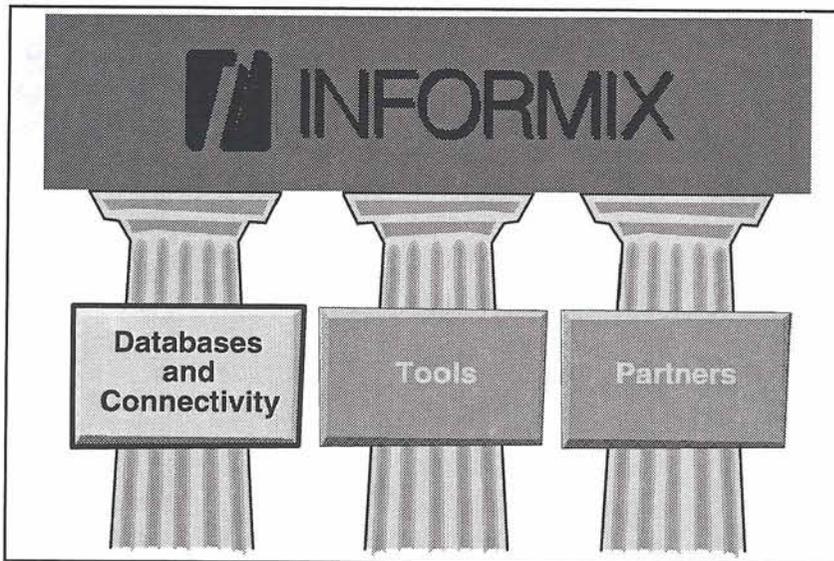
Why is Informix enjoying the success we've seen worldwide? Because we are focused on delivering the technology our customers need to meet their ever-changing demands in the real world.

- As you'll see on the next slide, databases, connectivity, and tools are our sole product focus.

Our real-world performance leadership is demonstrated in two ways: 1) Prospects who benchmark our software against our competitors' software chose Informix time and time again, and 2) we have more independently audited benchmarks (TPC results) than our competitors.

Our open-systems dedication is the foundation of our product strategy, which is key when you want to take advantage of the cost benefits of open systems, or need to deploy in a heterogeneous environment.

Unlike our competitors, a key part of our business strategy is partnerships. By leveraging our partners, we can offer best-of-breed functionality and a wide choice of applications.



The next section of the presentation is divided into three parts.

- We will start with a brief overview of our database engine technology— including its interoperability and our connectivity strategy.
- The second section will focus on our development tools.
- And the third key part of the presentation, the role of partners in our strategy.

## Informix Database and Connectivity

- **Production Databases**
- **Data warehouse**
- **Replication**
- **System management**
- **Security**
- **Connectivity and Interoperability**



First we will talk about our database strategy. We offer something no other RDBMS offers—two databases. We'll go into some depth about the capabilities of those databases.

We'll cover some of the functionality in the core database itself, and talk about how our database lends itself to support very large databases and the data warehouse.

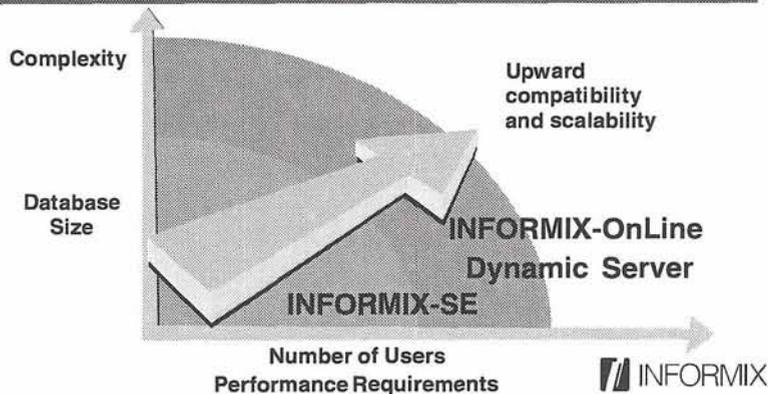
We'll review the various types of replication technologies and how they're incorporated into our parallel server architecture, which we call Informix Dynamic Scalable Architecture or DSA for short.

We'll briefly touch on system management, which is becoming increasingly important in both heterogeneous and large distributed environments.

We'll touch on security, which is currently a prerequisite in government sites, but is becoming more common elsewhere too.

Finally, we'll talk about connectivity and interoperability, critical success factors for enterprisewide computing.

## Two-Engine Strategy for Range of Requirements



We have a two-engine strategy to cover the complete range of requirements.

One of these is INFORMIX-SE, our standard engine. It's a wonderful mix of capabilities and ease of use for deployment, especially for sites without a dedicated database administrator—where you don't want to be doing things like partitioning disks for raw I/O. Larger organizations also use SE because it's the perfect engine for their smaller sites that need the applications, but don't have an MIS department.

INFORMIX-OnLine is our high-end, high-performance, high-availability engine. It provides superior OLTP and multimedia data management capabilities. The newest release, INFORMIX-OnLine Dynamic Server, is poised for upward movement towards maximum scalability and 24x7 (24-hours-a-day, seven-days-a-week) processing.

This yellow arrow represents our commitment to upward compatibility. If you've developed applications on our standard engine, you can migrate those applications into the OnLine environment. So you can choose the right engine for the job, and know that you will have that compatibility when you grow.

## Rich Underlying Functionality

- ✓ ANSI-standard SQL
- ✓ Triggers/stored procedures/referential integrity
- ✓ Distributed database/two-phase commit
- ✓ On-line/incremental archiving
- ✓ On-line recovery/rollback
- ✓ Disk mirroring
- ✓ TP monitor compatibility
- ✓ Row-, page-, table-, DB-level locking
- ✓ BLOB and optical disk support/multimedia
- ✓ Secure auditing
- ✓ Integrated DBA environment
- ✓ Runtime integrity verification
- ✓ Replication



We've talked a lot about being "real world". We are, but we do checklists too. In fact, although you will see a lot of standard items here, our list represents some of the important features Informix provides to enable you to run your systems quickly and reliably. Our competition dwells to such an extent on one or two of these features that people are misled into believing it's something only they have. Not only do we have all the "checklist" items, but we excel at most. And simply having these features is not enough. Again it's only part of what goes into making database applications. It's not the pieces that are going to make the difference, it's the total result.

*Speaker note: Don't get caught up in a checklist war—especially in this overview presentation! The point is to get them away from focusing on checklist items, all the while assuring them that we do measure up, and in fact lead and excel in many areas. Pick your hot points here.*

## Aberdeen Group

**“Sybase and Oracle lack the clarity of Informix’s  
[DSA] architecture. They’re going to have to go  
back to their labs.”**

— Peter Kastner, VP  
Aberdeen Group



What are others saying about Dynamic Scalable Architecture? Peter Kastner of the Aberdeen Group says our competitors lack the clarity of our vision for parallel processing.

## Alternative Technologies

**“The new Informix database system will put the vendor ahead of competitors Oracle and Sybase in support of multiprocessing systems.”**

—David McGoveran, President  
Alternative Technologies



David McGoveran, president of Alternative Technologies, says we are clearly in the lead in support of multiprocessor systems with Dynamic Scalable Architecture.

## Other Analysts Support Informix

- **Gartner Group**
- **IDC**
- **Meta Group**
- **Seybold**



As you can tell by the previous quotes, the Aberdeen Group and Alternative Technologies are big supporters of Informix and our DSA technology. This slide demonstrates that we are in the unprecedented situation of having virtually every key database analysis firm upgrading and supporting Informix technology, confirming that Informix has the best, or one of the best, architectures for parallel database.

The Gartner Group has talked about the need for parallelization done internally (as we did with DSA) to the core architecture rather than an external or add-on module approach. Not only do they recommend this, they predict that others who have done it externally will have to convert. In another annual study, Gartner ranks the database vendors using quadrants on an  $x, y$  axis. The  $x$  is for ability to execute and the  $y$  is completeness of vision. In their most recent rankings of parallel or other DBMS vendors, Informix was positioned as the leader in parallel database technology. While Oracle and Tandem were also in the top right quadrant, they were not positioned as strongly as Informix. Sybase, Ingres, and others were in the bottom part of the matrix.

The Meta Group is also a strong supporter of ours. They have gone on record as saying we have the best scalable technology in the market today.

Seybold has said that Informix and IBM have superior parallel database architectures relative to Oracle and some of the other competitors in the marketplace.

IDC is probably the most widely-subscribed-to service, and has said that Informix DSA promises to vault us ahead of our competition for high-end database functionality.

## Informix Dynamic Scalable Architecture

- **Transparent to applications**
- **Hardware architecture and platform independence**
- **Core internal parallelism**
- **Efficient processing—performance & scalability**
- **Maximum on-line manageability**



Informix's Dynamic Scalable Architecture, or DSA, is the most advanced, high-performance, multithreaded, parallel database architecture. DSA is designed to address the growing, yet unpredictable needs of dynamic organizations, while maximizing performance and minimizing administration.

We minimize administration by enabling a whole host of new features which are transparent to the application and independent of the hardware architecture and the platform. In other words, you won't need to recode your applications to take advantage of multiprocessor hardware, whether it is symmetric multiprocessors, loosely-coupled clusters, or massively parallel machines from any open systems vendor.

The key to the success of Dynamic Scalable Architecture is our commitment to developing a core internal parallelism, or parallel processing capability. We started from scratch to make this the central part of the new architecture. This maximized the efficiency of all processing and minimized implementation needs.

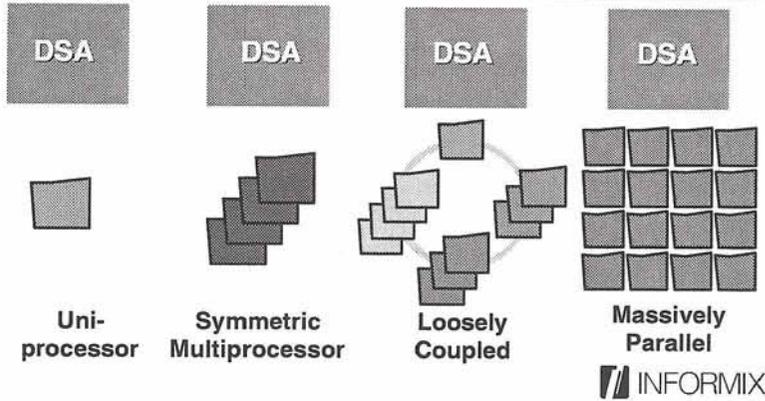
We have built system administration capabilities into the product that rival those available on the mainframe. And we built maximum on-line manageability into the new core architecture. The applications can be maintained on-line. Many of the system administration tasks, as well as backup and recovery routines, can be reconfigured while the application is up and running.

- Our customers are commonly talking about tens of gigabytes for production applications and hundreds of gigabytes for real-time decision support applications, and ad hoc queries doing analysis of large amounts of corporate data. Without these features, managing systems of that size would be very difficult.

Dynamic Scalable Architecture, very simply, is a parallel processing architecture designed to take advantage of the newer, more powerful hardware, especially multiprocessor hardware, so that this level of processing can succeed on open systems.

Hardware Architecture and Platform Independence

**DSA Designed for All**



Informix Dynamic Scalable Architecture is designed to run independent of hardware architecture or platform, including uniprocessor, symmetric multiprocessor, loosely coupled clusters, and massively parallel architectures.

Single Instance

**Proven Large Database Management**

150Gb Agency for HC admin	23Gb Osakaya
150Gb US Army	22Gb Telecom Australia
115Gb AT&T Network Systems	20Gb Hyatt Hotels
80Gb HCIA	20Gb MBNA
70Gb ETC	20Gb Motorola Semicon
52Gb Litle & Co.	20Gb Samsung Aerospace
50Gb Florida Medicaid Services	18Gb AT&T GBCS
40Gb Promus Company	18Gb DISC
35Gb Bloomberg LP	17Gb Seattle Muni Court
30Gb Anset Airlines	15Gb Best Foods
30Gb Bell Atlantic Mobile	15Gb Dun & Bradstreet
30Gb Ministry Transport Taiwan	15Gb HFS
30Gb Nutmeg Mills	14Gb Choice Hotels Int'l
30Gb Value RX	13Gb DongSuh Securities
25Gb Optus	13Gb National Freight Systems
25Gb AT&T E-911	

What are customers doing with Informix databases today? Quite a lot. This list gives you a snapshot of the magnitude of single instances that our customers are running on an Informix database. Obviously, our distributed databases are much larger than this, and run into the hundreds of gigabytes range.

If you are talking with our competitors, ask them to show you a list of their largest single instances.

## TPC-C: Real-World Performance

**“TPC-C is the best-yet benchmark technology for predicting real-world application performance.”**

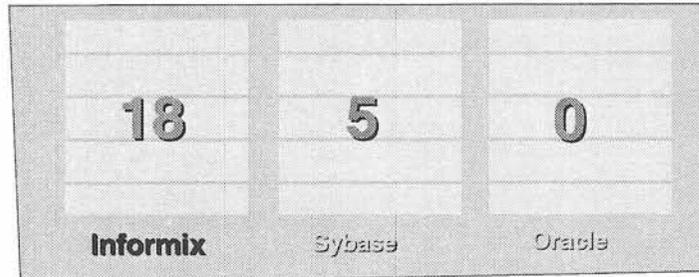
— The Aberdeen Group



Industry analysts agree that TPC-C is the best predictor for the kind of work real-world applications need to do.

## Real-World Database Performance

### Number of TPC-C Benchmarks Published



Source: Transaction Processing Performance Council  
Published Audited TPC-C Benchmarks, August 26, 1994



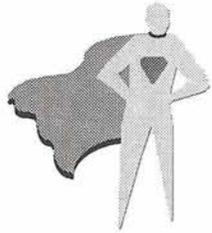
When the Transaction Processing Performance Council designed the new TPC-C benchmarks, they had a real-world performance test in mind. Unlike earlier, simpler TPC benchmarks, TPC-C mirrors transaction-intensive business applications that run a company's day-to-day operations—businesses like yours.

This kind of complex, real-world benchmark requires a high-performance relational database, which is why hardware vendors running TPC-C are using INFORMIX-OnLine at a rate of better than three to one.

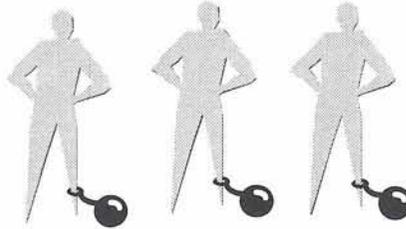
*Speaker note: We are told Oracle won't be doing any more TPCs. We all know why that is. Sybase's recent ads flaunt this fact, too.*

## Deployability a Key Benefit

**Informix Site:  
1 DBA**



**Competitor's Site:  
3 DBAs**



 **INFORMIX**

Most of our customers are looking toward wider deployment of their database software than ever before, which makes it a much bigger dollar issue than in the past. As you know, when we had highly centralized sites, a few copies on larger machines ran the production applications. Nowadays people are deploying software into tens, hundreds, and even thousands of sites.

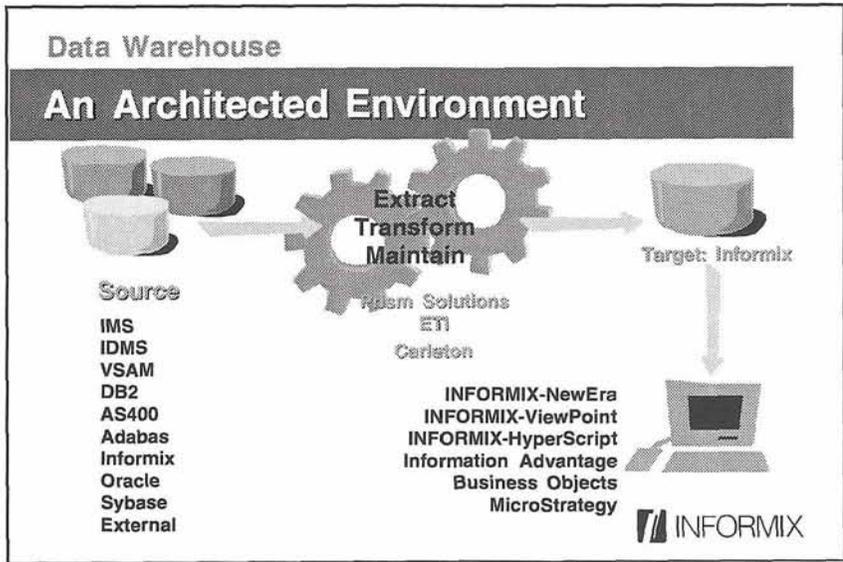
The two main issues for productivity and expense control are time and expertise. You want to ensure that the deployment process is as easy and straightforward as possible, without any surprises. And you don't want to have to bring in an army of experts to get the job done.

Why don't you need an army of experts with Informix? Because we have hidden the complexities, and have built intelligence into our products to handle deployment.



Let's talk briefly about a subject which is becoming increasingly important to organizations today—Data warehousing.

The basic concept behind a data warehouse is that a company extracts data from various production systems and integrates or consolidates it into one large central repository of data, which is modeled and managed specifically for decision support. These data warehouses are typically separate from production systems, and often consist of hundreds of gigabytes of data.



The basic model for a data warehouse is that there are a variety of source databases around the company; traditional mainframe database sources, like DB2 or Teradata systems; legacy data, like IMS and VSAM; or other proprietary systems or UNIX databases.

You can use a variety of third parties to extract, model, and structure the data specifically for the data warehouse. Informix is partners with Prism, ETI, and Carlton, the three leaders in that area.

We have architected the Informix database to handle very large databases efficiently—the target for the data warehouse.

The fourth component is the desktop decision-support and the application development tools which help build applications that do decision support, such as NewEra, ViewPoint and HyperScript Tools, from Informix, or some of the other off-the-shelf products.

## DSA Supports Data Warehousing

- **Parallel data query**
- **Database partitioning**
- **Efficient loading and indexing of data**
- **High availability**
- **Dynamic system administration**
- **Open systems standards**



Previously, most data warehouses were built on large, very expensive proprietary mainframe systems, such as DB2 or Teradata; but now, with Informix's parallel RDBMS technology, we're seeing dramatic interest in building database warehouses on open UNIX RDBMSs.

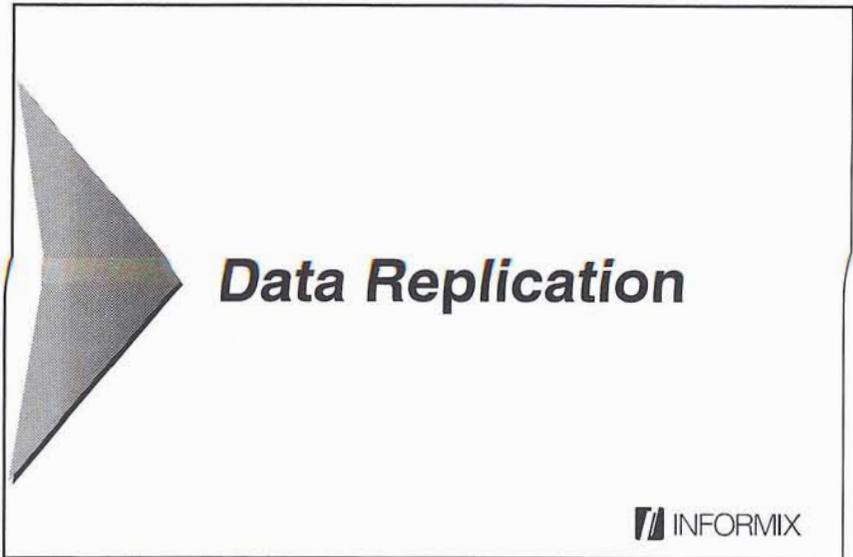
DSA is able to support data warehouses because it has some of the core functionality required, including parallel data query to divide large queries into subtasks and assign them to multiple CPUs and disks at the same time.

Database partitioning allows you to treat a large database as if it were a lot of small ones which means you gain efficiencies in loading and indexing of data in very large systems.

High availability is now on open systems, and it's approaching the full robustness of mainframes.

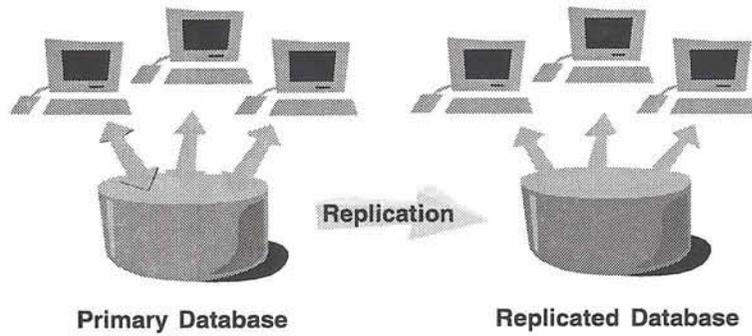
Dynamically, you can manage a lot of the system capabilities on line, where you used to have to shut the system down, kick the users off, reconfigure the tables and bring them back up. That is why we call it high availability.

Finally, because it's open systems, it's often one-fifth to one-tenth the cost of traditional mainframe systems. So we're seeing a whole new class of data warehouses being built which are more cost effective and more flexible to real-world business needs.



Another area of great importance today is data replication, both for security and for decision support.

## High Availability Data Replication

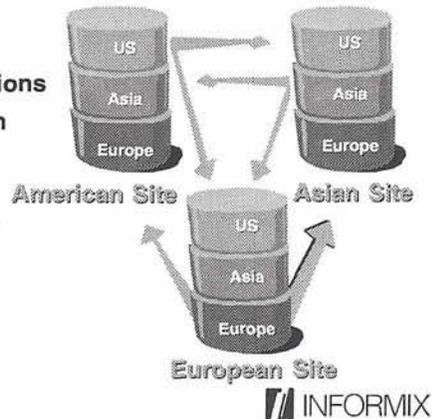


 INFORMIX

Now, for the case where you need concurrent OLTP and DSS, or where you want higher levels of availability on a single system without purchasing fault-tolerant hardware we offer data replication features. Updates go into the primary and then get replicated in the secondary system. The same database can not be updated in both places simultaneously. The replicate is simply a copy of the primary database. That is our high availability model. The replicate is a read-only database, and that is where the ability to do the DSS and the batch jobs comes in. That's the really nice solution to doing DSS, batch and OLTP concurrently. The replication frequency is tunable by the DBA. It can be synchronous or asynchronous.

## Continuous Data Replication

- Multiple replicate sites/  
multiple replicate definitions
- Partition-level replication
- SQL "select"-level  
replication
- Remote updates without  
any conflicts



The second type of data replication is called distributed data replication, sometimes referred to (by Gartner and others) as distributed copy management. The basic concept is that each site is the primary owner of their own data, but can distribute copies of their data to multiple sites around the world. You can set the frequency and the destination of the updates, and even say which segments of the database you would like to replicate around the world.

In this scenario, the U.S., for instance, can send their data to Europe and Asia; but the US still owns the data and they are the only ones who can update it. At the same time, they can read the European and Asian data, which are owned and updated only by those countries.

You can also use this type of replication to do consolidation—multiple sites sending into a central large site.

Distributed data replication is planned for release 7.1 (December '94).

A follow-on capability scheduled for release 7.2 (2H '95) is continuous data replication, which is sometimes called Update Anywhere Replication Technology, whereby any site can initiate updates anywhere.



Open RDBMs are being used in larger, high-performance, widely-distributed sites, where there are hundreds or even thousands of databases being managed. These sites are often heterogeneous environments—different operating systems, hardware platforms, and RDBMs distributed over the network. No wonder we are hearing increasing requests for full-featured system management capabilities.

## Utilizing a Distributed Framework

### System Management

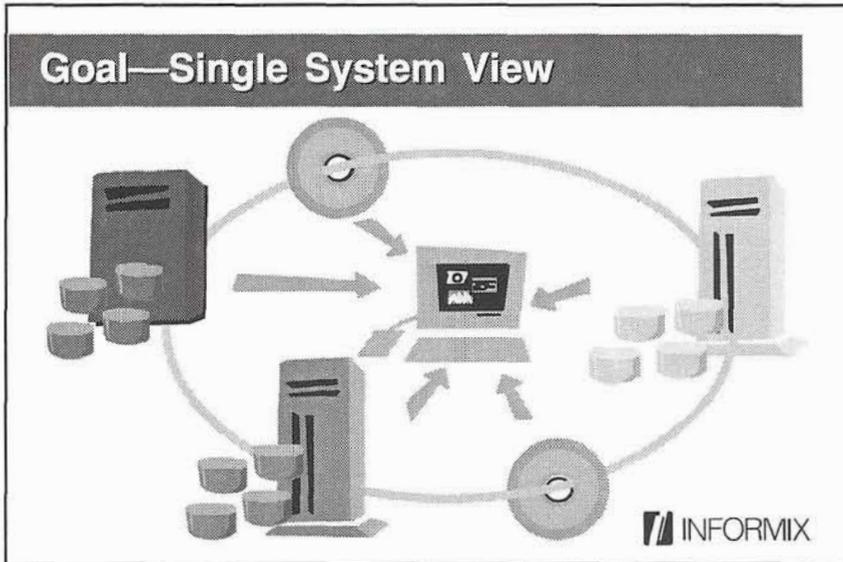
- Monitor
- Control
- Design and layout
- Data distribution
- Storage management
- Open Framework



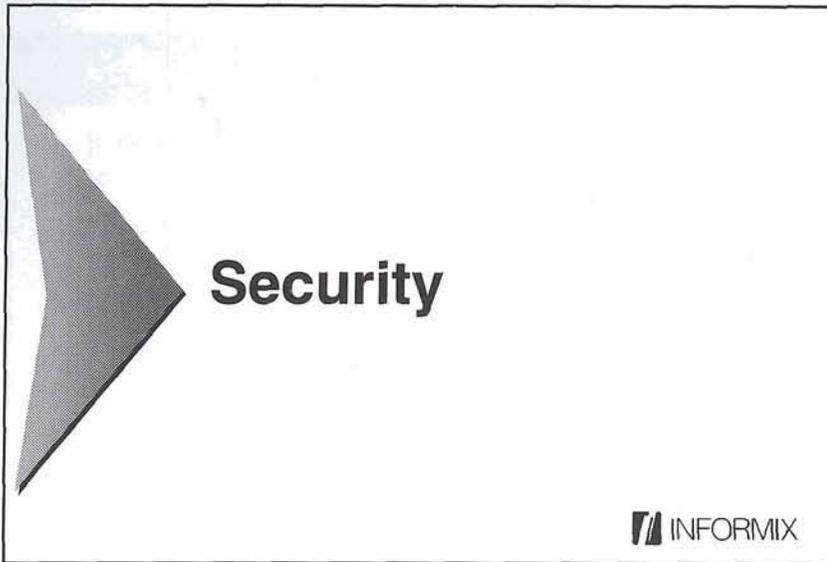
DSA will eventually (1995-96) include a complete suite of graphical management tools covering the categories listed here. All of the tools will be integrated under a unified (Tivoli) framework giving the DBA several benefits: 1) the ability to take advantage of common services (e.g. job scheduling, event logs); 2) the capacity to manage multiple copies of a database residing on different computers as a collection of systems, rather than a number of individual systems; 3) the ability for a DBA to add a user, and authorize that user for access to five copies of OnLine spread across the world; 4) Access to other administrative tools from third parties who have integrated into the (Tivoli) framework.

- System Monitoring. The most pervasive need is for complete monitoring of the status, health, and performance of the system. Graphical screens will allow the DBA to monitor system activity at a glance or set predefined thresholds (called alarms) and let the system monitor itself. Functionality also includes recording capabilities for historical analysis.
- System Control. A centralized DBA can control basic operations (start/stop the server, backups, adding new users, etc.), system parameters (disk space, memory allocation), and security (assigning permission to users for database access).
- System Design. We'll include tools to help you systematically design the logical schema and physical layout of the data on the disks, to help with capacity planning.
- Data Distribution. The replication features we discussed earlier will also be controlled by graphical system management tools. Data distribution is further enhanced by DSA's parallel bulk load/unload facilities.
- Storage Management. We will be implementing a storage management subsystem which will allow heterogeneous enterprise server backup from a single node. It will include interfaces to a number of third-party backup devices (tape arrays, optical drives, robotic tape changers, and hierarchical storage managers).

We are currently implementing the Tivoli framework into DSA (and may announce other frameworks like HP OpenView or IBM's NetView), for managing heterogeneous distributed systems. (Currently planned for mid '95).



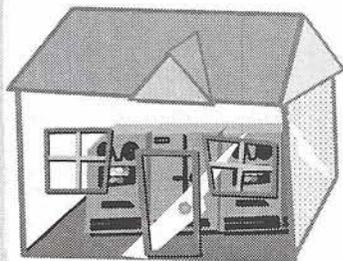
The ultimate goal of our work in the area of system management is to help you reduce the number of DBAs needed to support your systems, and to allow those DBAs to most effectively manage the resources distributed around the enterprise.



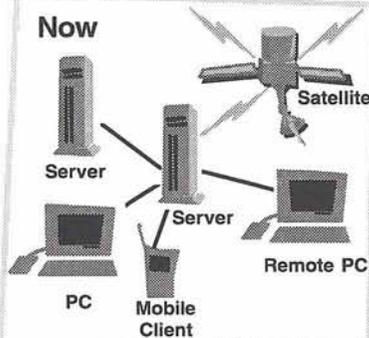
We are seeing more and more interest in security, and it is an area we have invested in extensively. Originally governments were the main driving forces—we have government installations all over the world, including the U.S., Sweden, China, the U.K., and Taiwan—recently however, we are seeing a lot more interest in secure databases from the commercial sector as well.

## Security Becoming Widespread Issue

Old Days



Now



Some of the driving forces for this interest within the commercial sector are based on an IT paradigm shift. In the old days, big mainframes were locked up in a glass house with very limited access, mostly by MIS people. Centralized data, made it easy to control access and restrict usage.

Nowadays, business wants the opposite—highly distributed data access. Their people are scattered around the world, accessing information from PDAs, notebooks, laptops, and PCs in many offices, via satellite modem, or dedicated communication lines. It's clear the data is getting around and companies are looking for new ways to protect that data, particularly in financial services, health care, and some other industries with lots of sensitive data.

## A Leader in Secure Databases

- **INFORMIX-OnLine/Secure first RDBMS to complete B1, C2 evaluation**
- **INFORMIX-OnLine/Secure first RDBMS submitted for B2 evaluation**
- **Insignificant performance cost**
- **Integrated with open security frameworks**



We are a leader in secure databases with our OnLine/Secure product, which was the first and (as far as we know) still the only database product to be evaluated as both B1 and C2 compliant. We have submitted OnLine/Secure for B2 certification, which is the next level and it is the first database submitted for evaluation. We have made this security very efficient, so we're still delivering real-world performance even with the added overhead of the security features.

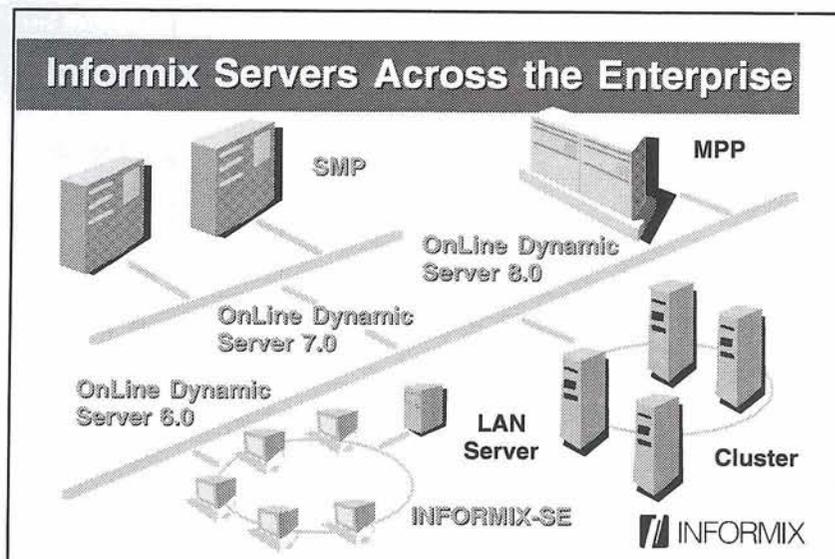
As we mentioned on the last slide, security is becoming more of an issue in the commercial sector too as people begin distributing database access privileges throughout their organizations.

## Security Requirements

- Access control
- Integration with standard security frameworks
- Multilevel database security
- Compliance with and support of industry standards



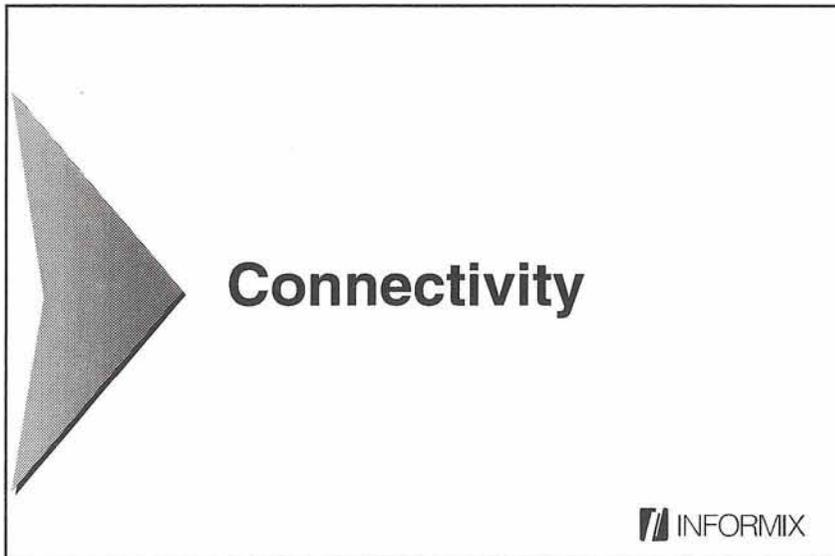
*Speaker note: Please refer to file in the Marcom directory on the Fox Server for the latest notes concerning this slide.*



This slide is a quick summary of Informix and our database technology used around the enterprise.

SE, our Standard Engine, is ideally suited for work group and departmental computing, and for local area networks.

OnLine Dynamic Server, based on DSA, is used for OLTP and decision support on uniprocessor, symmetric multiprocessor, clusters or massively parallel environments. It supports every type of hardware architecture. Our 8.) release will support massively-parallel processors and loosely-coupled architectures. (Currently scheduled for mid-1995.)



Companies have a wide range of computing architectures and databases throughout their enterprise. For instance, many of our large accounts already have DB2, or other types of proprietary legacy data, on mainframes. They also have a variety of desktops, network protocols, and so forth. We realize that to be successful in the '90s, we need to have connectivity and interoperability to virtually everything in your enterprise.

## Connectivity Requirements

- **Interoperability**
  - RDBMSs
  - Legacy data
  - CICS applications
- **Connectivity**
  - Clients
  - Servers
  - Networks/protocols
- **Standards**
  - Official
  - De facto



Interoperability includes the ability to work with both data in RDBMSs and legacy data, whether it's hierarchical or relational, proprietary or open.

Connectivity means we have to be able to connect to a variety of desktops or clients, and to a variety of servers. We need to support the network and protocols supported by your company.

Finally, we realize we need to support both types of standards, the official ones set forth by groups such as OSF and X-Open, and the de facto standards such as DRDA and ODBC, set forth by companies like IBM and Microsoft.

## Informix Connectivity Strategy

<b>Interoperability</b>	• ODBC	
	• DRDA	
	• Enterprise gateway (IBI EDA/SQL)	
	• TP/XA (CICS, Tuxedo...)	
<b>Connectivity</b>	• INFORMIX-Net	• ESQL/C
	• INFORMIX-Star	• TCP/IP
	• DCE/net	• IPX/SPX
	• Others	
<b>Standards</b>	• X/Open	• X/Open XA
	• SQL '92	• ODBC
	• RDA	• DRDA
	• CORBA/OMG	• NIST
	• CICS	• IMS/DC
	• Others	• DCE
		

Our connectivity strategy allows Informix to play at the enterprise level. Our databases are ODBC-enabled, so that any ODBC-enabled tool can work with them.

We are the first UNIX RDBMS to support IBM's DRDA standard, providing seamless connectivity to DB2 and OS400 data.

And we are developing an optimized gateway called the Enterprise Gateway, based on Information Builders EDA SQL technology.

There are several other interoperability partners that we work with as well. (The InSync Catalog lists a number of these vendors.)

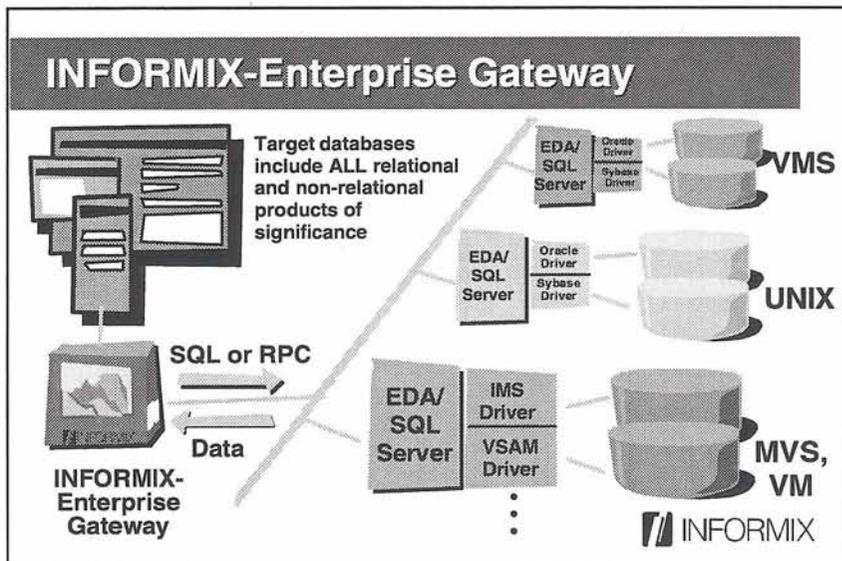
**Connectivity.** The INFORMIX-Net and INFORMIX-STAR products are built into our databases to provide client/server connectivity.

We recently announced a deal with Open Horizon to sell their product called DCE Net to support DCE-based connectivity.

We support TCP/IP and IPX/SPX.

**Standards.** Informix was founded on the belief that standards were key. The founder of Informix was also the founder of the SQL Access Group.

Our senior VP of development was the chairman of the Open Software Foundation, OSF; and one of our VPs is a member of OMG, X-Open, and several other standard-setting groups.

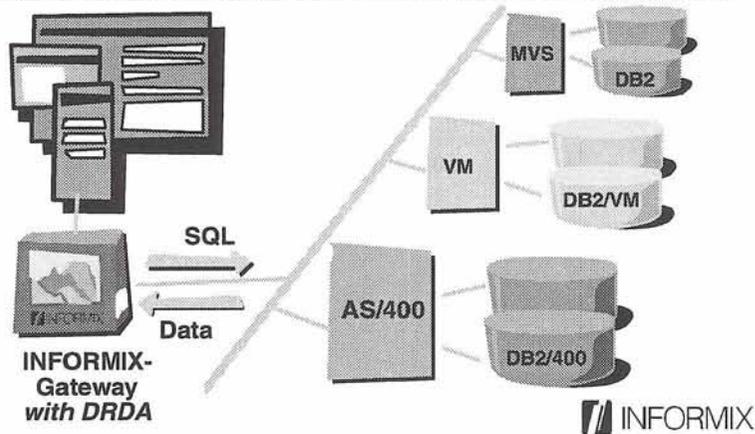


Here's an illustration of the INFORMIX-Enterprise gateway. It provides transparent access to data anywhere in the enterprise through a single gateway. The gateway incorporates EDA/SQL technology from Information Builders and allows you to use either remote procedure calls or SQL to access a variety of DBMSs and file formats, both relational and non-relational.

You can have full read/write capabilities for databases on VMS and UNIX, including Oracle and Sybase; and MVS and VM data sources such as IMS, VSAM and DB2, over a TCP/IP network.

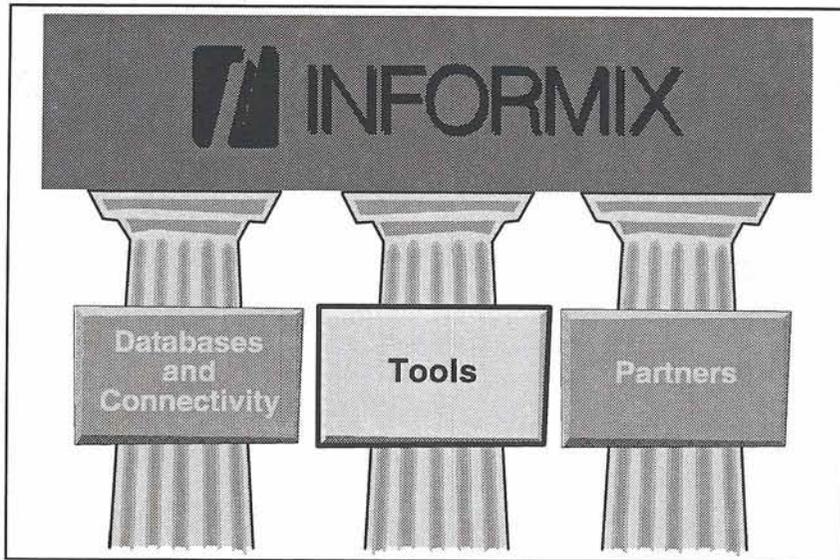
We'll continue to invest in connectivity technology to ensure that we are providing the right solutions for the '90s.

## INFORMIX-Gateway with DRDA



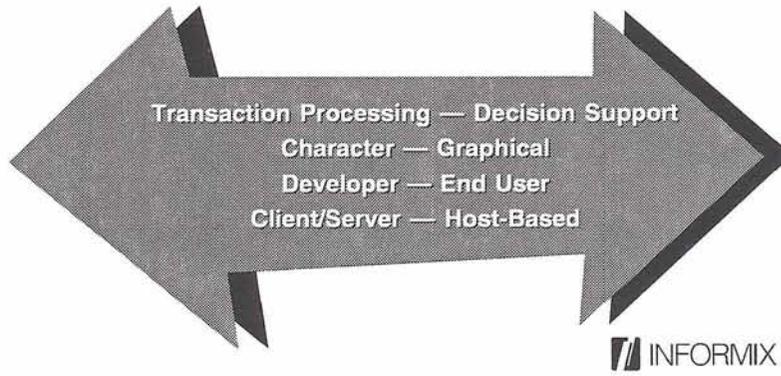
INFORMIX-Gateway with DRDA allows Informix application users and developers to transparently access information on DB2 on MVS, VM or AS/400 platforms, over an SNA (LU 6.2) network, as easily as if they were accessing an Informix database server.

DRDA is IBM's Distributed Relational Database Architecture, and the latest versions of IBM's DB2 databases on these three platforms all include DRDA support at no extra cost.



Now let's take a look at Informix's tools offerings.

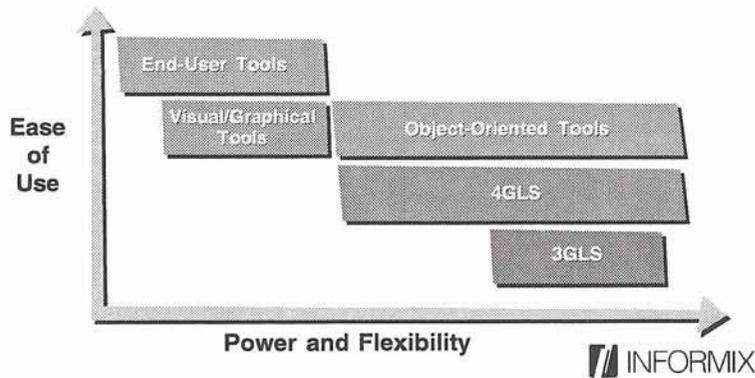
## Informix Tools Support Full Spectrum of Applications



Informix tools support a full spectrum of applications, from transaction applications to decision support, character to graphical, developer to end user, client/server to host-based. Informix tools cover the range of needs that our customers have as they develop their applications.

## Application Development

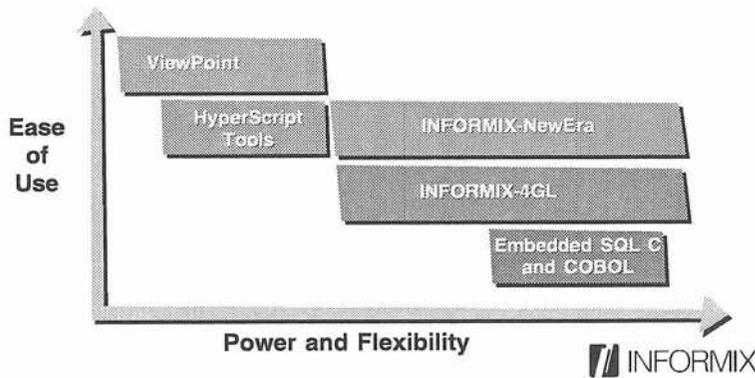
### Different Tools for Different Needs



When developing RDBMS applications, it is important to use the right tool for the job. That's why there is a range of end user tools, visual/graphical languages, 4GLs, and 3GLs.

Ease-of-use is always being balanced against the need for power and flexibility within the application itself. So when you look at the Informix tools that we provide, we meet those diverse customer needs listed here with a range of tools. How do Informix products map to these needs.

## Informix Tools Meet Diverse Customer Needs



Informix has tools in all of the categories we just talked about to meet the diverse customer needs for developing applications.

Our ViewPoint product is a very powerful, easy-to-use product which allows the end user to browse corporate data, without having to understand SQL database schemas. They can ask questions on an ad hoc basis of corporate data.

HyperScript Tools is a powerful set of tools to develop applications for data analysis and presentation.

The foundation of our tools strategy is INFORMIX-4GL and INFORMIX-NewEra, and we will talk more about these programs in just a moment. Finally, we offer our embedded SQL products, so that SQL statements can be embedded in third level languages like C and COBOL, in order to access the power of an Informix server at the back end of an application written in one of those 3GL languages.

Now let's look at our workhorse.

Second-Generation Tool

## **INFORMIX-NewEra**

**An open, graphical, object-oriented  
development environment for  
client/server enterprise  
database applications.**



## Hurwitz Consulting

**“INFORMIX-NewEra is exactly the type of client/server development environment developers need to create production-level applications.”**

**– Judith Hurwitz  
President**



Judith Hurwitz says there is finally a tool available for production level application building.

## Aberdeen Reports on NewEra

**“NewEra looks like it came from an aggressive, technology-rich startup. Moreover, we applaud the way Informix is protecting its customers’ application investments. NewEra is an excellent blend of new CADE technology with the maturity of experience.”**

**– Aberdeen Group, Inc.**



*(Speaker note: Different cultures may not understand that in the U.S., and especially in Silicon Valley, being compared to a “technology-rich startup” is the highest of praise.)*

Naturally as we approach a half-billion-dollar-a-year company, we appreciate it when analysts note our development agility and even compare us to a “technology-rich startup”.

And we always ensure that our architecture evolves in a way that customers can migrate to the new architectures easily, whether it’s database or tools.

## INFORMIX-NewEra

- **Productive visual tools**
- **Flexible, object-oriented language**
- **Reusable class libraries**
- **Platform and database independence**
- **Ease of migration**
- **Scalability**



The visual tools included in NewEra not only allow for rapid prototyping, but the prototypes themselves are so robust, they can actually form the basis of the complete application—increasing productivity even further.

Class libraries offer you a way to write it once and then use it many times. In fact, you can modify them as needed, adding to your productivity. Many of our partners are planning to provide class libraries for NewEra, which you can purchase and use as-is, or customize further to meet your needs.

No tool can anticipate all of the demands of complex, mission-critical applications, so NewEra is based on a flexible, object-oriented language that lets you customize to meet your needs. An object-oriented language enables you to develop objects, which can then be further customized. In a way, you are constantly refining your tools and becoming more productive with every application you build.

We maintain our commitment to open systems by making NewEra platform- and GUI-independent.

One of the biggest advances in client/server architecture is the idea of application partitioning. After an application is developed in NewEra, it can be partitioned to execute on several computers on the network, thereby making the client and the server more efficient.

Finally, if you already have an INFORMIX-4GL application, you have a migration path to INFORMIX-NewEra.

## INFORMIX-NewEra Strengths

### ➤ Scalability

- Designed for building enterprise applications
- Application partitioning
- Team-oriented, repository-based development
- Interpreted and compiled

### ➤ Productivity

- Code/component reuse
- Integration of visual code generation and keyboard programming

### ➤ Extensibility

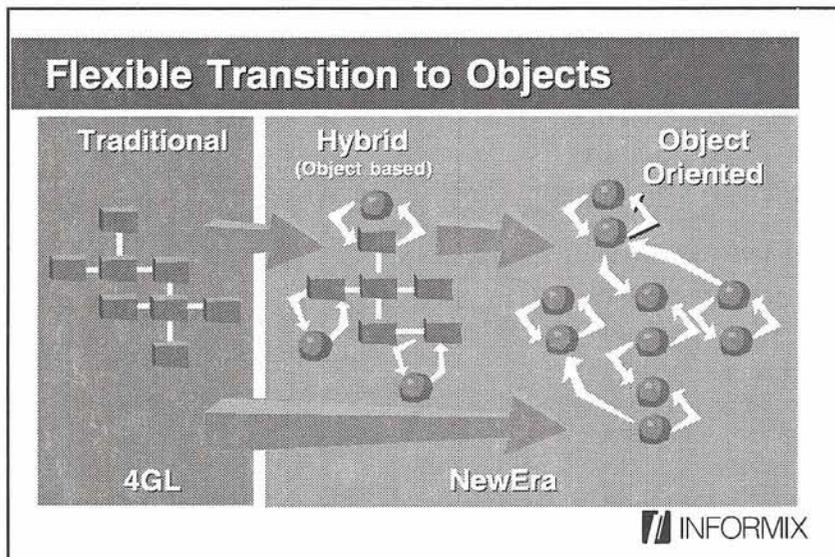
- Class libraries



Let's talk about INFORMIX-NewEra strengths. Scalability. Unlike the first generation of client/server tools, ours has been specifically designed for building enterprise applications with application partitioning being a key feature for performance deployment.

We are providing productivity with the object-oriented architecture, which provides for code and component reuse. We have provided both visual code generation (through the Window Painter) and traditional keyboard programming, so you can go back and forth between the point and clicking of your screen environment and adding the complex logic at the keyboard. As we said at the outset, enterprise applications aren't developed in solitaire, so we offer team-oriented repository-based development, and then the option of either producing an interpreted version for greater productivity at development time, or a fully compiled version for performance at run time.

And the primary reason Informix choose the object-oriented model is not only so you could easily extend your applications, but so we could easily extend our product, through class libraries, without having to go back and rework the compiler each time. This will become a richer and richer product not only because of Informix efforts, but through customers, third parties, and VAR class libraries as well.

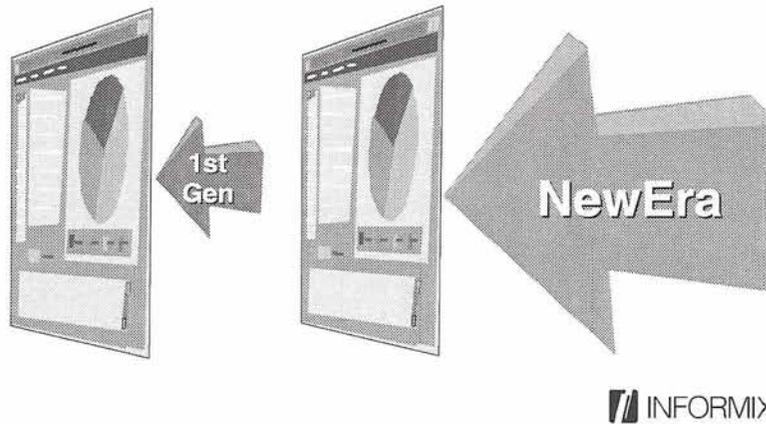


We have designed NewEra to support two methods for bridging the gap between traditional programming and object-oriented programming.

- It provides the ability to make a flexible transition to object-oriented programming through a hybrid or an object-based scheme. You can take advantage of object-oriented programming, but also continue programming within a traditional framework.
- Perhaps you will dedicate a small team to creating these new objects, or code components, which can then be used by the majority of the team within a traditional programming framework that the hybrid or object-based environment provides.
- However, if an organization wants to create application code completely in an object-oriented environment, that option is available as well.

The point is, you can be productive in all three environments, and we allow you to choose how much you want to exploit object-oriented programming.

## Powerful Development Language



Great looking screens aren't enough. NewEra is on a par with the best of the screen painters, but goes much deeper. It's what's behind the screen in terms of the abilities to develop complex application logic that is critical to the success of enterprise client/server applications. We knew that providing a powerful development language behind the visual programming tools was essential—a high-level language with the productivity of our own 4GL. This is where the first-generation of tools has come up short—their simple scripting language cannot create the logic required by these enterprise applications. Far too often, users of first-generation tools have to resort to writing their logic in C. The promise of greater productivity is lost in hundreds of thousands of lines of C code.

## INFORMIX-4GL

- **Most widely used 4GL in UNIX marketplace**
- **A complete programming language**
- **10:1 productivity over 3GLs**
- **Compiled down to machine language**
- **Choice of two compilers (interpreted and C)**
- **Proven for high-performance, complex, OTLP applications**



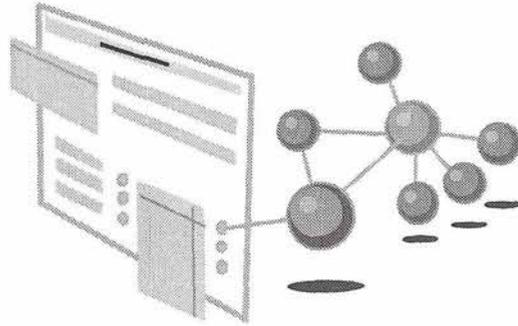
The basis of NewEra is, of course, our fourth-generation database language—INFORMIX-4GL—a remarkable programmer productivity booster that really helps differentiate Informix from our competitors. As you may recall, it is the most widely used 4GL in the UNIX marketplace, according to the InfoCorp figures for 1992 and 1993.

It is a complete programming language, but is much simpler to use. The whole idea behind 4GL was to take the power and flexibility of a COBOL-based environment, and focus on developing a much more efficient language for developing database applications. In many cases, it provides a 10-to-1 productivity increase over using a 3GL, yet you compile the code down to machine level for efficiency in terms of processing performance and for minimal resource consumption. So, once you've written your application, we're providing the ability to make you run as efficiently as possible.



Our vision is far-reaching. It is as wide as your enterprise. As you have seen, it fulfills all of the requirements of a next-generation product that will enable you to create enterprise applications in a client/server environment, and deploy them openly and effectively for a total enterprise solution.

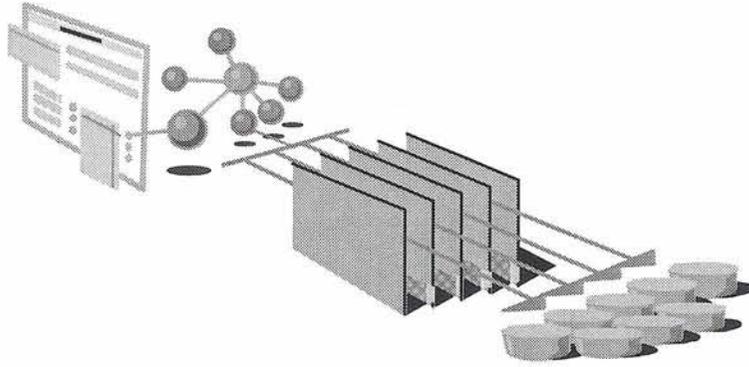
## Object-Oriented Applications...



 INFORMIX

We are talking about object-oriented applications...

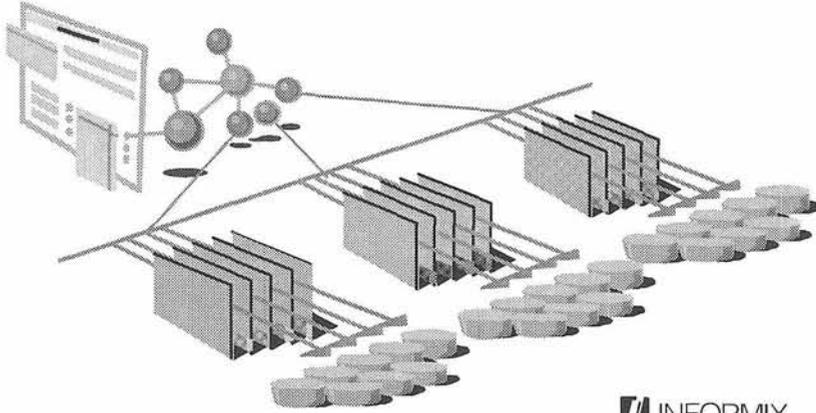
## ...Accessing Parallel Databases...



 INFORMIX

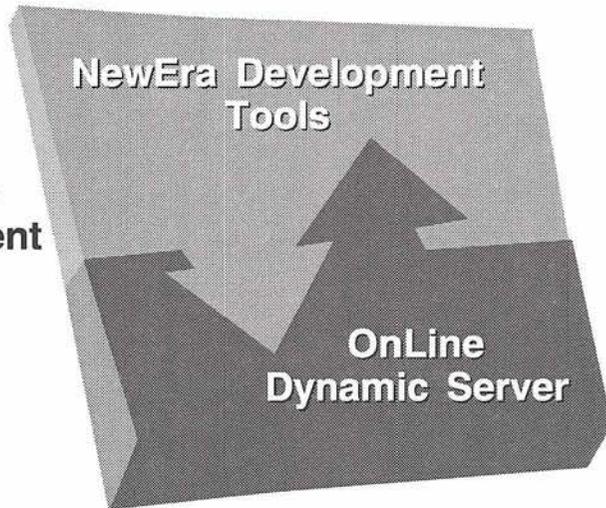
accessing parallel databases...

## ...In an Open, Heterogeneous World

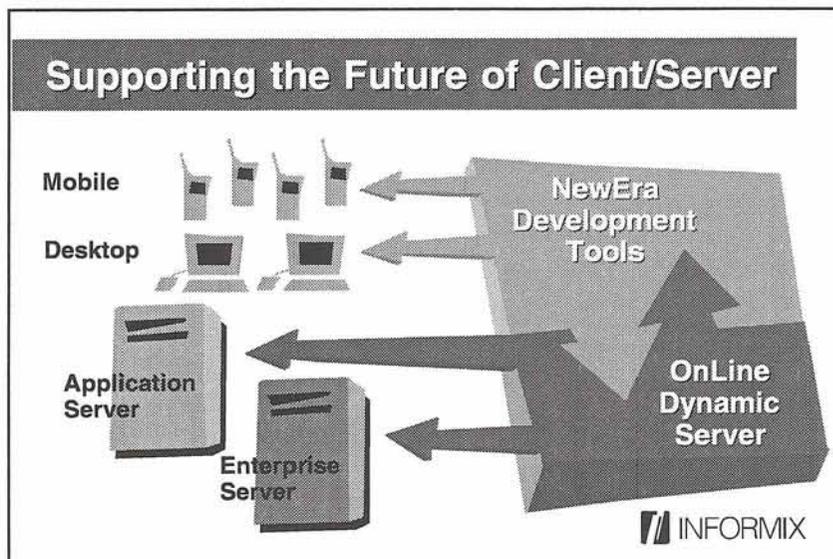


...throughout your enterprise.

**Informix  
Dynamic  
Enterprise  
Environment**



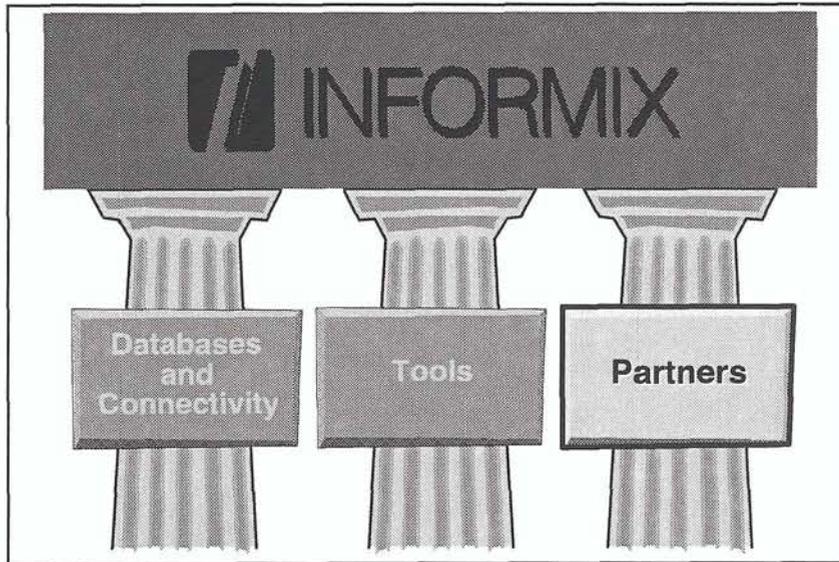
And Informix is delivering all the technology needed for this to take place. You could go to five separate companies for a repository, tools, parallel server capabilities, application partitioning, and object-oriented programming. Or you could go to one—Informix. We're the sole source offering a complete dynamic enterprise solution with the NewEra development tools, and our powerful INFORMIX-OnLine Dynamic Server technology and its parallel processing capabilities.



Supporting the future of client/server becomes more important as computers become more specialized. There are literally hundreds of tools vendors out there. They are not all going to last. But because we are a database server vendor as well, and because we are a \$350 million company, there is a good chance we are going to be around for every iteration of your project. It is important that you not only choose a company that is going to be around, but also a company that has announced technology capable of fulfilling your present and future needs.

People are just now seriously talking about massive deployment of personal data assistants or PDAs. We have over 6,000 hand-held computers running in K-mart stores throughout the world. For over two years, these mobile clients have been sending two million transactions a day using radio frequency technology to application servers at the back of the store. It is this kind of experience we are able to draw upon when we develop our products. And whether you now have agents in the field looking to more fully utilize their subnotebook computers, or you are just starting to look at mobile computing, choose a company with technology flexible enough to help you anywhere you need it throughout your enterprise.

Our tools capabilities are: client/server, graphical, and object-oriented for team development with the performance features for application partitioning. This is matched with our new generation of database servers that offer a powerful parallel processing internal architecture, high-availability capabilities, remarkable price performance, and easy serviceability.



Our final pillar of support is our partners. As we have already said we have a unique relationship with our partners, and this relationship is key to the total picture of our success. The philosophy starts right at the top...

**“Our core strategy is based on leveraging the considerable experience of our partners.”**

— Phil White  
CEO, Chairman  
Informix Software, Inc.



Phil White, our chairman and CEO, feels that our success as a company is due to our effective work with partners.

A major portion of our revenues each year, worldwide, is a result of our partners. In 1993, 54% of our revenue was directly attributable to our partners.

*Speaker's Note for 1993:*

- *OEM, VAR 30%*
- *Resellers 24%*
- *Direct 46%*

## Informix Partners

- **Value-added partners**
- **System integrators**
- **InSync partners**
- **Systems vendors**



It's vitally important to this company that everything about how we do business supports our work with these partners.

- From our value-added partners—the organizations worldwide that take our technology and build products on top of it. They utilize our database technology as the foundation for the solutions they're providing;
- To system integrators—they use our technology to build custom solutions for their customers;
- To our InSync program—the companies that help augment the development and deployment environment for Informix applications;
- Finally our hardware partners worldwide—the computer manufacturers that want to work with us either in co-marketing, co-development, or in some cases actually to sell our technology themselves to their customers as part of a complete solution for developing database applications.

## **VAR Applications—Strong Alternative to Custom Development**

- **Business advantages versus in-house development**
  - Time-to-market
  - Cost
  - Functionality
- **Leverage Informix databases and tools**
- **3,500+ Informix VARs to choose from**
- **Informix VAR applications can be easily customized**



VAR applications are a popular alternative to actually doing original development in an end-user organization. Many of our customers are interested in this approach because of time-to-market, cost, and functionality issues. Nobody is providing a better way to leverage database tools and servers than we are, because over 3,000 Informix VARs worldwide provide solutions that are built on our technology. That is why we have sought to consistently improve our ISV ranking, as you saw in the slide at the beginning of our talk.

And, of course, VAR applications can be easily customized, because their foundation, the technology they're written in, such as INFORMIX-4GL, enables customers to easily enhance those VAR applications.

## System Integrators

- **Experts in what they do**
- **Independent perspective**
- **Multiple choices for customers**
- **Proposals tailored to specific customer needs**



System integrators are experts in their field. They are independent, which helps keep them unbiased, and they have multiple choices for their customers. Their proposals are always tailored to specific customer needs. We have worked with systems integrators around the world, and what we have seen is that they require standard platforms that they can rely on to meet these specific customer needs. We have been a very effective platform of database technology to help these organizations be successful, focusing on particular customer situations.

## InSync Partners

- Analysis & design
- Connectivity & API
- Database administration
- Development languages
- Form painters and code generators
- Imaging
- Lifecycle management
- Mainframe connectivity
- Office automation
- Publishing
- Query tools
- Report writers
- Statistical analysis

Over 200 independent software vendors offering horizontal, Informix-compatible tools



The InSync partners and the capabilities of their products is wide-ranging: analysis and design of applications, connectivity, database administration, development languages, form painters, imaging, life cycle management, mainframe connectivity...the list goes on and on. These partners help make the Informix solution a richer solution as a development environment.

Today there are over 250 independent software vendors that are offering tools to augment the Informix development environment.

## System Vendors

- **Joint product development**
- **Performance optimization**
- **Joint solutions for customers**
- **Enhanced customer support**



Hardware vendors are very important partners for us. We do a lot of joint product development with hardware partners, utilizing their resources and expertise in order to bring a piece of our technology to market.

- We developed our new DSA parallel processing architecture in partnership with our friends at Sequent, one of the great pioneers in symmetric multiprocessing.
- We partnered with IBM to develop our DRDA gateway.
- We have partnered with Hewlett-Packard, in fact we recently built a joint development lab with them;
- We have partnered with Unisys, Bull, and have recently built a performance testing lab with Siemens;
- We just announced full support for DEC's 64-bit Alpha AXP platform, and are working together on that project.

All these organizations have worked with us to deliver either products, or functionality within products, that benefited our customers.

Performance optimization is an ongoing project with our hardware partners. Many of these companies send personnel to our development labs in Menlo Park, or to our porting centers in Europe and Asia/Pacific, in order to help us tune our software to run most effectively on their hardware. In fact, as we look ahead to the deployment of the new DSA architecture on a variety of hardware platforms, these companies have committed more resources than ever to make this optimization effective.

Joint solutions for customers means we work with many of these customers often putting together bundles of technology (their hardware, our software together) as a specific solution to meet a set of customer needs. And then, of course, we work very closely with them with issues like integrating our customer support capabilities with their staffing to provide an effective solution to our joint customers.



*Database Technology  
for Dynamic Organizations*

And now I'd like to answer any questions you may have.

## Wide Range of Informix VARs

### ★ Manufacturing

- Baan International
- ICS
- IDS
- Man Trak
- SAP
- SSA
- Symbol Technology
- TECSYS
- Marcam

### ★ Banking

- Broadway & Seymour
- DEC Bank
- Ibank Systems
- Software Alliance
- SSI
- Systematics
- Sanchez

### ★ Retail

- BASS Innovax Concepts
- InfoGenesis
- Post Software
- Shared Financials
- Systems Migration
- Technology Advanced Business Systems
- Dallas Systems



## Wide Range of Informix VARs *(cont.)*

### ★ Hospitality

- Anasazi
- ECI Computers
- Hospitality Management

### ★ Health Care

- ADAC
- DeRoyal
- Pro\*Systems

### ★ Government

- BI-TECH
- Pentamation

### ★ Telecommunications

- Ascom Timeplex
- Aspect Telecommunications
- AT&T
- CSC Intellicom
- NYNEX/DPI
- Octel Communications
- Telesciences



## Informix Customers—Financial Services

### ★ Banking/Brokerage

- Banco Atlantico
- Banc One
- Bank of Russia
- Bloomberg
- Financial Markets
- Caja de Madrid
- Chase Manhattan
- Chemical Bank
- Citibank
- Credit Suisse
- Creditanstalt
- Dai-ichi Kangyo
- Dresdner Bank
- Fidelity Investments
- First Boston
- First Union
- Fisher Capital Management
- Great Western
- Home Savings
- JP Morgan
- Kemper Securities
- Lloyds Bank
- Peoples Bank of China
- Wells Fargo
- Wachovia

### ★ Insurance

- AAA Insurance
- Guardian Life
- ITT Hartford
- Lincoln National
- Montgomery Ward Life
- National Insurance
- New York Life
- Northern Life
- Pioneer United
- Philippines
- Seguros Azteca
- Transamerica



## Informix Customers—Health Care

- ★ Amsterdam Health Authority
- ★ Bay State/Blue Cross
- ★ Easter Seals
- ★ Florida Agency for Health Care Admin.
- ★ HCA
- ★ HCIA
- ★ Hospital Assoc. NY
- ★ Johns Hopkins
- ★ JS Pathology (U.K.)
- ★ Mayo Clinic
- ★ So. Carolina State Mental Health Dept.
- ★ Swedish Health Care
- ★ Yang Ming Hospital



## Informix Customers—Telecom

- ★ AT&T (E-911, others)
- ★ Bell Atlantic (Mobile System)
- ★ British Telecom Mobile
- ★ German Telecom
- ★ GTE
- ★ MCI
- ★ Northern Telecom
- ★ NYNEX
- ★ Pacific Bell
- ★ SIP (Italy)
- ★ Sprint
- ★ Teléfonos de México



## Informix Customers— National Government

- ★ Bureau of Land Management (U.S., ALMRS)
- ★ Canadian Forces Strategic Systems Upgrade
- ★ Docmaster (U.S.)
- ★ Federal Ministries of Germany
- ★ French Ministry of Finance
- ★ German Plant Registry
- ★ Hacienda y Crédito Público (Mexico)
- ★ Inland Revenue (U.K.)
- ★ MELTE (France)
- ★ NAV-SEA, NAV-FAC, and NAVMASSO
- ★ New Zealand Police
- ★ RCAS (U.S.)
- ★ Royal Air Force (U.K.)
- ★ Sallie Mae (U.S.)
- ★ TMAC (U.S.)



## Informix Customers—Retail

- ★ American Stores
- ★ CIFRA
- ★ Conforama
- ★ JC Penney
- ★ KFC
- ★ Kmart
- ★ Kroger Grocery
- ★ Marktkauf
- ★ Sears
- ★ Strawbridge & Clothier
- ★ The Home Depot
- ★ Tower Records
- ★ Wal-Mart



## Informix Customers—Hospitality

★ **Choice Hotels  
International**

- Clarion Carriage House Inn
- Econo Lodge
- Quality Inn

★ **Euro Disney**

★ **Forte Hotels**

★ **Holiday Inn**

★ **Hyatt Hotels and  
Resorts**

★ **ITT Sheraton  
Corporation**

★ **Marriott Corporation**

★ **Promus**



## **Informix Customers— State and Local Government**

- ★ BART
- ★ Colorado Dept. of Corrections
- ★ City of Salt Lake
- ★ Florida Agency for Health Care Administration
- ★ LA County Department of Social Services
- ★ Minneapolis Critical Services (911)
- ★ Orange County Transportation Authority
- ★ Saskatoon Police
- ★ Seattle Municipal Crt.
- ★ So. Carolina State Mental Health Department
- ★ State of Minnesota
- ★ State of North-Rhine Westfalia
- ★ State of Utah
- ★ State of Wisconsin



## Informix Customers—Manufacturing

- ★ AMCC
- ★ Amgen
- ★ Best Foods
- ★ Hewlett-Packard
- ★ Labatt's
- ★ Motorola
- ★ National Semiconductor
- ★ Reynolds Metals
- ★ Rust International
- ★ Sikorsky Helicopter
- ★ 3Com
- ★ Vigoro
- ★ Volkswagen



## Informix Customers— Grocery and Pharmacy

- ★ Associated Grocers
- ★ Best Foods
- ★ Dillons
- ★ Giant Eagle
- ★ Giant Foods
- ★ Kash 'N Karry
- ★ Kroger
- ★ Lucky
- ★ Randall Foods
- ★ Smith Foods
- ★ Supermarkets  
General
- ★ Thrift Drugs



## Informix Customers—Media

- ★ **Agence France Presse**
- ★ **Bloomberg Financial  
Markets**
- ★ **Houston Chronicle**
- ★ **Ogilvy & Mather**
- ★ **Time Warner**



## Informix Customers—Oil and Gas

- ★ Exxon
- ★ Kuwait Petroleum
- ★ Pemex
- ★ Texaco



## **Informix Customers— Restaurants/Fast Food**

- ★ **Domino's Pizza**
- ★ **KFC**
- ★ **Marie Callender's**
- ★ **McDonald's**



## Informix Customers—Transportation

- ★ AAA
- ★ American Airlines
- ★ BART Transit
- ★ DHL
- ★ Federal Express
- ★ Hong Kong Ferry
- ★ M.O. Air International
- ★ Panalpina
- ★ Roadway
- ★ United Airlines
- ★ Züst Ambrosetti



## Success Profile

### Bloomberg Financial Market

- **Industry**
  - Financial information
- **Application**
  - On-line securities information and analytics
- **Informix Products**
  - INFORMIX-OnLine
  - INFORMIX-SQL
  - INFORMIX-ESQL/C
- **Hardware**
  - Data General AViiON
- **Database Size**
  - 10 gigabytes
  - 28,000 users

“With INFORMIX-OnLine, Bloomberg users can be sure that the information is available 24-hours a day, seven days a week.”

— Michael Bloomberg  
Founder



*Speaker note: For more information, this company was highlighted in:*

- *DSA brochure 000-20589-76*
- *Informix Times Issue Four 1994 p.3 000-20746-76.*

## Success Profile

### HCIA

- **Industry**
  - Health Care
- **Application**
  - Data analysis, DSS
- **Informix Products**
  - INFORMIX-OnLine
  - INFORMIX-4GL
  - INFORMIX-SQL
  - INFORMIX-ViewPoint
  - INFORMIX-HyperScript
- **Partner**
  - Powersoft

“ Reports in minutes,  
not weeks—that alone  
has kicked up  
revenue by 35%. ”

— Harry Vanicelli, Mgr.,  
Systems and Networks



*Speaker note: For more information, this company was highlighted in “In Action,” part number 000-20418-73 and 20489-76.*

## Success Profile

### Kmart

- **Industry**
  - Retail
- **Application**
  - On-line order entry, price verification, shelf-price update
- **Informix Products**
  - INFORMIX-OnLine
  - INFORMIX-4GL
  - INFORMIX-4GL/RF
- **Hardware**
  - Unisys 6000/65

“ We basically killed the machine seven or eight times while running 48 test iterations and we never lost a record with Informix. ”

— Bob Lennox  
System Manager



*Speaker note: For more information, this company was highlighted in a Success Story, part number 000-20213-73.*

## Success Profile

# Hyatt Hotels and Resorts

- **Industry**
  - Hospitality
- **Application**
  - On-line reservation system
- **Informix Products**
  - INFORMIX-OnLine
  - INFORMIX-4GL Product
  - INFORMIX-ESQL/C
- **Hardware**
  - Pyramid
- **Database Size**
  - 8 gigabytes
- **Number of Users**
  - 2000+

“ Informix was clearly the best all-around choice. The power and flexibility of Informix products outperformed the others and Informix was selected as Hyatt's long-term software product of choice.”

— Dan Amedro  
VP MIS



*Speaker note: For more information, this company was highlighted in a Success Story 000-20213-73.*

## Success Profile

# United Airlines

- **Industry**
  - Transportation
- **Application**
  - Customer relations
  - Crew and inventory management
  - Flight operations
  - Gate & facility management
- **Informix Products**
  - INFORMIX-OnLine Dynamic Server
  - INFORMIX-SE
- **Hardware**
  - Hewlett-Packard

“ Our next generation [Informix-based] applications will run in hundreds of gigabytes and support 10,000 plus users concurrently. ”

— Donna Fridrych  
VP MIS



*Speaker note: For more information, this company was highlighted in: Informix Times Issue Four 1994 p.5 000-20706-76.*

## Success Profile

### DHL Worldwide Express

- **Industry**
  - Shipping
- **Application**
  - Customer service
  - Package tracking
  - EIS
- **Informix Products**
  - INFORMIX-OnLine
  - Dynamic Server
  - INFORMIX-4GL
  - INFORMIX-ESQL/C
- **Hardware**
  - HP, SCO, Pyramid, Fujitsu

“ Informix has proven that its database products are well suited to the decentralized, high availability environment characterized by our business. ”

— Len Hanlock  
CIO



*Speaker note: For more information, this company was highlighted in a Success Story, partnumber 000-20206-73.*

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