Information Management Solutions



Nature's elements work in harmony to shape and define our world. Informix believes that technology must work in the same way to shape the corporate computing environment. Informix offers complete, end-to-end information management solutions, from the database through the desktop. Informix began with a vision many thought radical at the time: that UNIX[®] would become a mainstream commercial operating system, and that relational databases would be integral to the future of data management.

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Today, UNIX *is* in the mainstream of corporate computing. Relational database technology is driving UNIX into applications that no one would have predicted possible ten years ago–applications that go far beyond the traditional UNIX strongholds of scientific and technical computing into areas that are critical to the day-to-day operation of business.

As database information becomes integral to business success, UNIX database systems must become faster and more fault tolerant. At the same time, technology on peoples' desktops will become more sophisticated; database systems will need to handle a flood of graphical and audio information along with traditional alphanumeric data. Finally, the power to make the most informed decisions will require a straightforward, effortless interface between the database information and the mere mortals who need to use it.

Informix is providing solutions *today* to meet tomorrow's data management challenges. Informix provides the only complete end-to-end database management solutions-from the database through the desktop. Powerful fault-tolerant database management systems. Graphical technology across desktop standards. Connectivity spanning industry-standard networks. Service and support to ensure your success.

Read on.

YOUR PARTNER IN SOLUTIONS

begin with a commitment to solving real problems.

Our customers must agree. Some of the largest and most highlyrespected organizations in the world rely on Informix products. Hyatt Hotels. AT&T. The Internal Revenue Service. Ogilvy & Mather. Sheraton Hotels. Manufacturers Hanover. Measurex Corporation. Charterhouse Bank. The U.S. Army. General Dynamics. Siemens. The U.S. Department of Labor. TSB Trust Company. Domino's Pizza. And thousands of other organizations worldwide.

The reach of Informix extends beyond large organizations into operations of all sizes. Through a network of over 1,000 value added resellers (VARs), Informix-based solutions are solving problems in industries as diverse as distribution, education, manufacturing, state and local government, accounting and finance, and communications.

The success of Informix and its partners is built on a mutual commitment to open systems. Founded a decade ago at the birth of open systems, Informix has been a leader in shaping the standards that others now follow. Senior Informix executives continue to play a leadership role in X/Open and SQL Access, and Informix is an active member of UNIX International and the Open Software Foundation (OSF). The Informix commitment to open systems guarantees that your freedom to choose the right solution is protected now and into the future.

In the final analysis, the success of any partnership is based on the strength of its partners. Informix will help you meet the challenges of the future through aggressive product innovation balanced by a sound approach to business.



2



Informix Firsts

Informix's decade of experience includes pioneering products such as: INFORMIX-SQL, the first ANSI-standard SQL DBMS; INFORMIX-4GL, the first true fourth-generation application development language; INFORMIX-TURBO, the first UNIX on-line transaction processing database engine; and Wingz, the first 3-D graphical spreadsheet.



management systems will be as integral to computers as their operating systems.

Information is basic to running any business. You need to store it, organize it, and access it with a minimum of effort–all reasons that computers are now commonplace in the business environment,

At first, every computer had only one vital software component--its operating system. That has changed. The rapidly-growing need to organize and process computer-ized information is making the database management system just as integral to computers as the operating system.

In just a few years, virtually every computer will be running a database management system or will be connected to one. And business's dependence on databases will force a growing demand for performance and reliability from the database software industry.

Informix is ready to meet the challenge head-on.

We're the only major database software company to offer a choice of two database engines: a fast, fault-tolerant engine that can handle demanding on-line transaction processing (OLTP) applications; and a low-maintenance engine for environments where ease-of-use is essential. Both are fully relational; both are based on industry-standard structured query language (SQL); and both share a common set of development tools.

> he 1990s are here. The new decade brings with it new trends for computing and data management, trends Informix has identified and is already addressing with a complete line of industryleading products.

Database management systems will be as integral to computers as their operating systems.

> Desktop productivity tools will integrate with databases.

> > Radical new kinds of data will be stored in databases.

> > > UNIX will be at the heart of distributed computing solutions.

DATABASE ENGINES

______ nformix database products are based on the client/server architecture. The application tool, or client, provides the user interface to build and run applications. The database engine, or server, handles all data management, including the storage and retrieval of data. Clients and servers can reside on the same computer or on different ones connected via a network. This separation of the processing delivers optimum performance and maximum flexibility.

INFORMIX-OnLine

When it comes to UNIX database performance, Informix leads the industry. Our newest engine, INFORMIX-OnLine, is the foremost choice for on-line transaction processing (OLTP) in the UNIX environment. OnLine builds on proven technology that has already established Informix as the performance and reliability leader in UNIX OLTP databases. We began marketing INFORMIX-TURBO, the first OLTPcaliber database on UNIX, nearly three years ago.

OnLine is our second generation-product for UNIX OLTP. OnLine is upwardly compatible with INFORMIX-TURBO, and offers significant enhancements in performance, fault tolerance, distributed database and multimedia support.

Multiple log buffers, group commits, advanced query optimization, and multiprocessor enhancements increase the engine's speed in high-transaction rate environments.

On-line archiving, incremental archiving, disk mirroring, and fast recovery help to ensure that your system will be up and running 24 hours a day, seven days a week.



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In non-networked environments, all the database processing takes place on a single computer, often slowing performance. With Informix's client/server architecture, application processing can be off-loaded to a client workstation while the database engine runs on a database server, providing fast response and minimal network traffic. OnLine also features breakthrough multimedia capabilities that allow you to store any information that can be digitized-photographs, videos, charts, and sound-as easily as any text field in the database.

By working with INFORMIX-STAR, our distributed database extension, OnLine's power can be distributed transparently across multiple remote databases. When the information is brought together at the desktop, users and applications can view the data as if it's from one database.

OnLine will be ported to a wide variety of UNIX systems during 1990. Informix also plans to support OnLine running under Novell NetWare 386.

INFORMIX-SE

INFORMIX-SE is an easy-to-install database engine that brings users true relational power with few maintenance requirements. Introduced over five years ago, INFORMIX-SE has the largest installed base of any UNIX database. It's ideal for smaller organizations that want the power of SQL without the need for a high-level database administrator.

INFORMIX-SE runs on UNIX, DOS, OS/2[™] and XENIX[™] giving you the freedom to use multiple platforms and the convenience of having one common database across them.



Corporate Computing Environment

In the future, databases will be as integral to computers as operating systems. Desktops will be more closely linked to these databases, providing a decision support environment for users. On-line applications will require databases with speed and the ability to store and manipulate radical new data types. UNIX servers will be at the heart of these distributed computing environments.

COMPUTING TRENDS

ductivity tools will integrate with databases.

Many database management systems today are used in transactionintensive environments where the flow of fast, accurate data is essential to a company's success. Examples include banking, reservation systems, sales order entry, or inventory management. Turnkey software applications that are responsible for the day-to-day running of a business must be both powerful and reliable.

Informix has spent the last 10 years developing and refining a suite of the most powerful tools available for developing businesscritical on-line applications. Today, Informix-based applications are at the heart of thousands of successful businesses. But in a rapidly-changing world, success today doesn't guarantee success tomorrow. Businesses need the ability to recognize trends, plan, and adapt for future changes like never before.

Companies who want to maintain a competitive edge must complement their mission-critical applications with executive information systems (EIS). The key is to use the database not only to run their business, but also to plan for the future.

This makes it necessary to give users easy-to-use tools that make data more approachable and accessible. By bringing database technology to them in a familiar setting, you remove the fear of the unknown, and increase productivity and decisionmaking power from day one.

Informix offers a wide range of decision support tools for EIS, as well as robust development environments for on-line applications—for both character-based and graphical environments.

ver the past few decades, users have experienced a striking evolution of desktop computing. Today's graphical interfaces provide a new element of freedom, allowing users to work interactively in a threedimensional environment, and eventually to integrate sound and video into their applications.



1970s

Evolution of Desktops



1980s



1990s

DECISION SUPPORT TOOLS

f you're going to make competitive, intelligent decisions, you need complete information. Informix's decision support tools are designed to bring you the facts in a way you can understand them–easily and completely.

Wingz[™] and SmartWare[®]II have already established themselves as leading office automation solutions. Now, with DataLink, Informix's database access tool, they're the first software products to bring the power of an industrial-strength relational database system to users through the familiar interface of an office product. In short, if you can use a spreadsheet, you can now use a database.

Wingz

Wingz is the first fully graphical spreadsheet. Wingz is also a development environment for creating customized graphical applications through HyperScript,[®] its built-in application development language. HyperScript features an intuitive, English-like command structure designed specifically for graphical environments.

Wingz was originally developed for the Apple[®] Macintosh[®] environment, and has since been announced for every significant desktop platform, including OS/2 Presentation Manager, OSF/Motif,[™] NextStep,[™] Windows,[™] and Open Look.

Smart WareII

SmartWareII, a fully integrated, network-ready office automation solution for personal computers, combines database, spreadsheet, word processor, and communications modules. Like Wingz, it also has a built-in programming language for developing customized applications. SmartWareII is available for

DOS and UNIX environments.



ingz, Informix's graphical spreadsheet, allows you to combine words, and 3-D graphics on a single page-and then to print that page as it appears on the screen.

DataLink

Informix offers add-in tools that connect Wingz and SmartWareII applications directly to Informix databases. With DataLink, if you can use a spreadsheet, you can access data from INFORMIX-SE and OnLine. There's no need to understand databases or SQL.

For sophisticated end users and developers, HyperScript has been extended to provide a powerful development environment for creating graphical SQL-based applications.

DataLink gives you the full promise and power of the database– from your desktop.

INFORMIX-SQL

In spite of the growing popularity of graphical interfaces, many applications will continue to run in character-based environments.

INFORMIX-SQL is the leading decision support tool for characterbased database applications.



INFORMIX-SQL gives end users everything they need to develop and use database applications, because it's actually five database access tools in one.

Sophisticated end users and developers can work with forms, menus, reports, query capabilities, and an interactive schema editor– all through one consistent interface. The result is quick application development and complex database application prototyping.

INFORMIX-SQL is available for XENIX, DOS, OS/2, and UNIX environments.

INFORMIX-QuickStep™

Also designed for both developers and end users, QuickStep is an interactive report generator. With pulldown menus and visual orientation, QuickStep allows you to quickly and easily create reports without writing any code-making data more accessible than ever.

Once you've designed your report on screen, QuickStep can automatically generate INFORMIX-4GL source code. This source code allows QuickStep reports to be easily integrated with INFORMIX-4GL applications.

Connecting Wingz and SmartWareII applications directly to Informix databases is now possible with DataLink. With DataLink, if you can use a spreadsheet, you can access INFORMIX-SE and OnLine- without knowing SQL.

DataLink



not all database information is used for decision support.

Literally thousands of applications are developed specifically to make information useful and meaningful in transaction-intensive environments. These turnkey applications require robust, powerful development tools.

When the raw data you need to manage is the information that makes your business run, Informix's on-line tools are the solution.

INFORMIX-4GL

INFORMIX-4GL is the most popular fourth-generation application development environment in the UNIX market. INFORMIX-4GL has full screen-building, report-writing, and SQL database I/O capabilities in a single programming language. It combines procedural and nonprocedural statements which provide you with optimal power and flexibility.

The INFORMIX-4GL product family consists of three products for the professional developer: INFORMIX-4GL Rapid Development System, INFORMIX-4GL Interactive Debugger, and INFORMIX-4GL (C compiler version).

INFORMIX-4GL provides a common development environment for DOS, OS/2, XENIX, and UNIX, so you can develop an application once, and then move it across environments. INFORMIX-4GL will also be offered for Digital Equipment Corporation's Rdb database under VMS[™] for even greater application portability.

INFORMIX-ESQL for C, COBOL, Ada[®], and FORTRAN

INFORMIX-ESQL products allow programmers to embed SQL query statements into C, COBOL, Ada or FORTRAN. INFORMIX-ESQL is the ideal product for developers who prefer to work with third-generation languages, yet want to take advantage of the power of SQL.

Like INFORMIX-4GL, INFORMIX-ESQL is available for DOS, OS/2, XENIX and UNIX environments. ompared to thirdgeneration languages like C or COBOL, INFORMIX-4GL provides a dramatic increase in productivity. For example, the application shown here requires more than 110 lines of COBOL code; building the same application using INFORMIX-4GL requires only 15 lines of code.



Same Application using INFORMIX-4GL

COMPUTING TRENDS



kinds of data will be stored in databases.

Today, a great deal of information used in the office environment is not computerized. If it is computerized, it is not easily located or shared, because it cannot be stored in corporate databases. So, we spend a great deal of time and money on copying, faxing, voicemail, and overnight shipments to deliver memos, documents, spreadsheets, photographs, charts, and verbal notes.

Due to the rapid decline in the cost of certain technologies, we are closer today to the goal of being able to do most of this communication from the desktop. Scanners, laser printers, optical storage devices, graphical interfaces for the PC, computer networks, and audio processors are all available today on a personal or workgroup basis at a reasonable cost.

Instead of feeding paper into a fax machine, for example, an item-could be scanned into a computer and mailed electronically to an unlimited number of recipients. There it can be viewed on their PC or workstation and printed out on a laser printer or stored in the computer.

The final technology which is still needed for this new world of desktop communication is software that will make it easy to locate, read, store, and update these different types of information which we now want to distribute electronically.

In essence, we want the same capabilities that database systems offer today to be extended to all of the information we use-not just the short alphanumeric strings that have always been stored in databases.



Multimedia Database

INFORMIX-OnLine's ability to store multiple data types allows you to integrate graphs, text, charts, video, and sound into your database applications.

ith INFORMIX-OnLine,

Informix's new multi-

media OLTP database

engine, your applications

will never look the same again.



Classic Database

Typical character-based database applications show data fields in a linear text format. When the future arrives, the changes will be astounding.

Imagine how much easier work will be when that information becomes part of the relational database itself, operating under the same security, integrity, and recovery environment and using the same database language, SQL.

With INFORMIX-OnLine's multimedia capabilities, Informix has the technology to consolidate in the database all of the information you use today. OnLine has the ability to store and handle binary large objects such as documents, digitized photographs, charts, and sound.

Other database vendors have added datatypes for storing large objects in the database. But Informix has also solved the more difficult task of integrating objects into all the functions of a database while maintaining excellent performance. With OnLine, you can implement new kinds of applications that you can use today, such as integrated document storage and retrieval, personnel management, and parts verification. OnLine also opens the door for a new class of database applications—such as geographical information systems—that utilize large pieces of diverse digitized data.

OnLine exploits the true potential of database technology. When the office of the future is here, Informix will be ready for it.

> W ith the continuing cost decline of imaging peripherals, it has become practical to utilize laser printers, scanners, facsimiles, and optical storage devices as tools for information management. The INFORMIX-OnLine multimedia database engine is capable of storing and manipulating any digitizable object.

Decline in Costs of Imaging Peripherals



COMPUTING TRENDS



at the heart of distributed computing solutions.

The final piece of the data management puzzle is connecting all of your data sources. They may range across a number of computer systems and environments, and it is crucial that, although distributed, they work together to give you a complete picture.

Companies have long relied on proprietary operating systems for data management. But as the UNIX environment increases in popularity, proprietary systems are giving way, and the need to tie them together is growing and becoming more challenging.

The UNIX operating environment, because of its open systems solution, superior price/performance, and flexible networking will drive the interoperability of data management systems—no matter how diverse their sources. Using UNIX, organizations are able to share data within the workgroup, across departments, and from centralized mainframes. This is the basis of Informix's connectivity strategy: to make all pertinent data available to the decision maker, regardless of its location or operating environment.

Connectivity

The information people need is often scattered among different kinds of databases, on different computers and in different geographic locations. The key to effectively sharing information throughout a business is connecting the sources. Informix provides a wide range of connectivity solutions that support all standard network protocols. This makes it possible to distribute processing and databases to the locations where they make the most effective use of computing resources.

Filesharing on DOS

Informix on DOS LAN products are a perfect solution for small- to medium-sized departments that need to share data. We provide a complete set of application tools on DOS that takes full advantage of your existing DOS local area network (LAN) technology and allows you to share common data. All Informix on DOS LAN products support DOS LAN networks such as Novell NetWare[™], 3Com3+[™], IBM PC LAN Program, and AT&T StarGROUP.[™]

Informix has a wide range of connectivity solutions. These solutions make your data available to those who need it, and help protect it from those who don't. And as your company grows, Informix's easily upgradeable networks make the transition smooth.



Client/Server Processing

For larger departments or databases, INFORMIX-NET products allow you to distribute the processing of application tools and database engines between client and server machines. This architecture means that application processing can be easily off-loaded to a client workstation while the database engine runs on a database server, providing better performance and minimizing network traffic.

INFORMIX-NET offers a full range of client/server capabilities including location transparency, data integrity and security, support for industry-standard protocols, and software compatibility.

Distributed Databases

When your database application involves multiple databases stored on different computers, you need INFORMIX-STAR, the distributed database product. INFORMIX-STAR allows you to join and view multiple databases as if they were one common database. INFORMIX-STAR, an optional enhancement for the INFORMIX-OnLine database engine, provides fast access to distributed databases, location transparency, and reliability while minimizing network traffic. Distributed databases and INFORMIX-STAR are key technologies for the 1990s.

Database Gateways

Informix's connectivity strategy includes providing access through UNIX or DOS machines to non-Informix database engines on strategic platforms. A joint software development agreement with Sterling Software will allow Informix to introduce mainframe gateway products in 1990.

Through these new products, users will have access to databases residing on IBM mainframes. These include DB2, SQL/DS, and IMS databases from IBM; third party databases, including IDMS, ADABAS, and TOTAL; and file systems such as VSAM. Data stored in heterogeneous databases in file formats can be retrieved in a single query with minimal changes to the mainframe database environment.

> f your application requires access to multiple databases, **INFORMIX-STAR** provides the distributed database capabilities you need. When used in conjunction with the **INFORMIX-OnLine** database engine, INFORMIX-STAR allows geographically disparate users to view, query, and join data from multiple database servers as if they were local. **INFORMIX-STAR ensures fast** performance, minimal network traffic, location transparency, and reliability.



Distributed Database

CUSTOMER SERVICE AND SUPPORT

L An integral part of Informix's product strategy and offerings is end-to-end customer service-because the most successful companies are the ones that realize application development and implementation is not a one-time event, but an ongoing process of planning and evaluation.

When you become an Informix partner, we'll help you implement an information processing solution that works today. We'll also ensure that the solutions you implement in the future will continue to be the best for your business.

Planning to be with you for the long run is what customer service is all about.

Professional Services

Our Professional Services staff can consult with you on all phases of the application development life cycle. They also conduct training programs, either at Informix's headquarters, regional or authorized training centers, or on site. Customized training classes are also available.

Informix's Professional Services also include a broad range of consulting packages designed to give you just the right amount of guidance as you design and implement your software applications.



ata is the core of business. Informix surrounds your data with a relational database management system that guards its integrity. Decision support tools bring data to the desktops of decision makers. Transaction processing tools provide a robust environment for building applications that meet specific data access needs. And to make your success complete, we offer customer services to help you maintain your database applications today, as well as manage them for hassle-free transitions as technology changes in the future.

Standard Maintenance

A Standard Maintenance subscription from Informix means technical support when you need it, year round. Standard Maintenance includes product updates; our quarterly technical publication, *Tech Notes*; unlimited, toll-free telephone service; and a trade-up option, should you decide to upgrade your hardware.

Regency Support[™]

If your database applications require dedicated, personalized support, Informix offers Regency Support. When you add Regency Support to your DBMS Standard Maintenance agreement, you receive telephone support from a specific, senior-level engineer.

Mission Critical Support[™]

Mission Critical Support, our newest support offering, was created for organizations that depend upon high availability and uninterrupted operation of INFORMIX-OnLine missioncritical applications.

Designed specifically for UNIX OLTP, Mission Critical Support is available around the clock–24 hours a day, seven days a week. We work with you through the application development cycle to optimize your high availability applications, provide system assurance and system development assistance, and conduct system audits.

A FEW MORE WORDS

bout partnerships: we see them as a lasting commitment. On our part, as well as yours.

So we're working to ensure your success no matter where in the world you do business. With eight international subsidiaries and international distributors in more than 35 countries, Informix is committed to providing products, service, and support worldwide. Translated and fully-localized versions of Informix products are available in a host of languages.

France

Iceland

India

Israel

Italy

Japan

Jordan

Great products aren't the only things that begin with a commitment to solving real problems. Great partnerships are built the same way.

Informix is committed to your complete success-from the database through the desktop.

We're the only software vendor who can make that promise-and deliver on it today.

nformix has established a worldwide distribution

network that includes the

following:

Informix Headquarters **Corporate Headquarters** Menlo Park, California

Informix Subsidiaries Australia Canada France Germany The Netherlands Singapore Spain Sweden United Kingdom

International Distributors Argentina Australia Austria Bangladesh Belgium Chile Colombia Denmark England Finland

Philippines Portugal Puerto Rico Germany Greece Guatemala Singapore Hong Kong Spain Sweden Switzerland Taiwan United Arab Emirates Venezuela Yugoslavia The Netherlands



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