

ACI 4D Product Line

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ACI 4TH DIMENSION (4D) is the basis of the complete 4D Product Line. 4D is a 32-bit, graphical, multithreaded, relational database designed for end users and expert developers. Combining an intuitive interface with a powerful programming language, 4D is the ideal development and deployment environment for companies of all sizes. With 4D, you can create virtually any type of application, from simple contact management systems and product catalogs to sophisticated multimedia applications and full-scale accounting packages.

The 4D Product Line meets a wide variety of needs, equally serving:

- Power users wanting to create personal applications
- Vertical-market application developers
- Professional corporate programmers and system integrators

The 4D solution is the most consistent and cost-effective choice on the market:

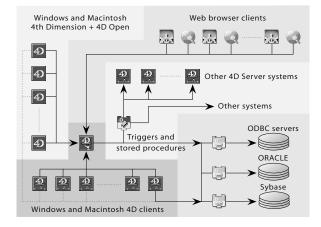
- A 4D application created for one platform can be deployed immediately on another. 4D provides native support for Windows 95, Windows NT, Macintosh, and Power Macintosh.
- Any single-user application easily scales to a workgroup client/server solution using 4D Server.

 Any 4D or 4D Server application smoothly interfaces with existing enterprise databases using 4D Connectivity Plug-ins.

Because the same tool can be utilized in many situations, companies using 4D save the time and cost associated with maintaining multiple development environments.

For more detailed information, please visit the ACI US Web site at http://www.acius.com, or call ACI US Sales toll-free at 800-881-3466.

ENTERPRISE-WIDE INFORMATION MANAGEMENT IS SEAMLESS WITH THE ACI 4D PRODUCT LINE



4D Server

4D Server is the cross-platform data and application server for 4D. Any 4D application created for Windows 95, Windows NT, Macintosh, or Power Macintosh easily scales to a workgroup client/server solution. 4D Server addresses the needs of workgroups in businesses of all sizes and users of all levels of expertise.

4D Server provides a fully integrated architecture in which both client and server use a single 4D application. 4D Server frees developers from the need to design separate front-end and back-end applications.

4D Server fills the gap between low-end file-sharingbased systems and complex SQL-based RDBMS systems. Any 4D Server application smoothly interfaces with existing enterprise databases (ORACLE, Sybase, or any ODBC-compatible server) with 4D Connectivity Plug-ins.

INTEGRATED BACK-END AND FRONT-END ARCHITECTURE

No additional middleware or development are required to operate in a client/server environment. 4D, 4D Client, and 4D Server share the same interface tools, language, and information management system.

"ZERO ADMIN" DATA AND APPLICATION SERVER



4D Server benefits from the user-focused heritage of 4D. As a result, 4D Server is a complete plug-and-play (PNP) system.

- ► Graphical administration of 4D Server
- ► Simple on-line graphical centralized information
- Automatic and dynamic update and version control of client workstations

- Automatic asynchronous connections to both local and remote mixed network protocols
- Automatic session and state maintenance for 4D Client and Web connections
- Automatic record locking
- Integrated user-interface messaging system
- Automated startup and disconnection methods
- Integrated backup system

INTEGRATED WEB SERVER

4D Server includes an integrated Web server. 4D Server applications can be published directly on the Web. No CGI is required.

- ▶ On-line, transparent HTML translation
- Dynamic access to records and data
- Session maintenance and database context
- Transparent multi-user maintenance and transaction management
- Web process maintenance
- ► HTML and JavaScript encapsulation

DEVELOPMENT SERVER

4D Server is a complete multi-user RAD environment benefiting from all the built-in 4D features:

- Automatic checking-in and checking-out of all database objects and version control. Database modifications are reflected in real time for each developer on the team.
- Simultaneous debugging and testing
- Multiprocess debugging on the client and server machines
- Unlimited extensibility

TRANSPARENT APPLICATION PARTITIONING AND SERVICING

With multi-process management at both server and client levels, multi-process stored procedures, and an interprocess management system, 4D Server permits sophisticated application partitioning and scaling.

- Stored procedures
- Client/server bi-directional communication system
- Remote procedure calls
- ► n-Tiered architecture

4D Desktop

4D COMPILER: A MULTI-TARGET COMPILER

4D Compiler is designed to be both powerful and easy to use—thus allowing both beginners and power users to benefit from its feature set. As a true machinelanguage compiler, 4D Compiler allows you to compile applications for a wide range of processors, including:

- ▶ Intel 80386, 80486, and Pentium
- Motorola 68020, 68030, 68LC040, 68040, and 68881/68882 math co-processors
- ▶ PowerPC 601, 603, 603e, and 604

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Because compiled 4D applications take full advantage of the processor speed, it is not uncommon to see compiled applications execute at speeds three to 1,000 times faster than their interpreted counterpart.

In addition, 4D Compiler provides extensive diagnostic warnings and error messages not found in conventional compilers. 4D Compiler also provides:

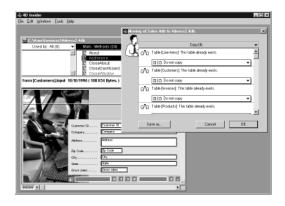
- Systematic analysis of your database and extensive diagnostic warnings and error messages
- Listing of all variables used in the database with their compiler directives
- Automatic typing of active objects, numbers, and character strings
- Dynamic runtime error checking of the compiled database
- Interactive debugging with 4th Dimension
- ► Standalone executable applications using 4D Engine

4D INSIDER: APPLICATION MAINTENANCE AND CODE REUSABILITY

4D Insider is a point-and-click, drag-and-drop code management system enabling component builders and users to modularize or merge existing applications and to examine database objects and their dependencies. 4D Insider provides:

- A complete dictionary of your application
- A display of the application objects and their interdependencies
- ► A global search and replace tool
- ► A cross-referencing and documentation tool
- A code management system allowing you to create new applications easily from previously created components by moving table definitions, forms, and methods across applications while retaining all object properties and relationships
- A structure generator that creates a 4D structure from SQL files generated by common industry CASE tools
- A localization manager allowing you to adapt and to execute your application easily in different languages

4D Insider addresses the most cumbersome and indispensable needs for professional database development in a simple and efficient manner.



4D Productivity Plug-ins

4D Productivity Plug-ins are a complete cross-platform office system operating inside 4th Dimension or 4D Server. They behave as compound database objects and include:

- ► 4D Calc, a spreadsheet designed for analysis, simulation, review, and forecasting of numerical data
- ► 4D Draw, a drawing plug-in for creating diagrams, floor plans, technical illustrations, engineering documents, architectural blueprints, and more
- ► 4D Write, a simple, elegant tool for creating and modifying all types of textual documents, from simple letters to multi-part contracts

4D Calc, 4D Draw, and 4D Write can be used in their own windows or placed on 4D forms. The contents of a 4D Plug-in can be saved as a document or stored directly in a record as a 4D field. Plug-ins can directly reference 4D objects such as fields, variables, commands, methods, and other plug-ins.

When a 4D Plug-in is added to an application, a complete suite of commands are installed, allowing designers to control all aspects of plug-in usage. These commands seamlessly combine with the 4D language.

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ACI incorporated a 4D Write area within this production database to create the PDF and HTML documentation for all 4D commands.

4D Connectivity Plug-ins

With 4D Connectivity Plug-ins, 4D becomes the ultimate client to back-end SQL databases:

- ▶ 4D for ORACLE
- 4D SQL Server (for Sybase)
- ► 4D ODBC

Combined with 4D multi-threaded capabilities, 4D Connectivity Plug-ins provide a simple solution for accessing and managing heterogeneous SQL environments.



4D applications can query data simultaneously from various servers, then merge and display the result with a unified interface, directly inside 4D or any Web browser accessing 4D.

4D Connectivity Plug-ins allow:

- Direct access to low-level application program interfaces (APIs). Each connection is built on the native API for its own environment: Open Client for Sybase and OCI for ORACLE.
- High-level routines: multiple lower-level functions in one call
- A debugger window
- Automatic conversion of data types
- Robust error handling: complete error handling is available at the network, client, server, and API levels.

The 4D local database engine can be used for static and semi-static storage (enables remote operations and subsequent synchronization).

4D Open

4D Open is the 4D API, consisting of Pascal and C libraries on Macintosh, C/C++ libraries on Windows, and a 4th Dimension extension package. Using these libraries, any foreign client application can gain easy access to 4D Server and perform database operations.

4D Open provides a full-featured set of data manipulation routines ranging from basic operations, such as selecting a network server, to high-level data processing capabilities, such as searching, sorting, and performing transactions. In addition to the standard routines expected from APIs, 4D Open provides new methods and tools to improve and enhance interaction between clients and servers.

4D Extension Kit

4D Extension Kit delivers libraries, documentation, and examples to create 4D Plug-ins.

4D Pro

4D Pro is a complete database application development suite consisting of the following components:

- 4th Dimension
- ▶ 4D Compiler
- ▶ 4D Insider
- ▶ 4D Productivity Plug-ins
- ▶ 4D Connectivity Plug-ins
- 4D Open
- 4D Extension Kit

4D Pro is available only to registered ACI US Partners. Please refer to the next page of this brochure for information on the ACI US Partner Program.

4D Server Pro

4D Server Pro is a complete client/server database application development suite including a three-user license for the following components:

- 4th Dimension
- 4D Server
- ▶ 4D Compiler
- 4D Insider
- ▶ 4D Productivity Plug-ins
- ▶ 4D Connectivity Plug-ins
- ▶ 4D Backup
- ▶ 4D Open
- 4D Extension Kit

4D Server Pro is available only to registered ACI US Partners. Please refer to the next page of this brochure for information on the ACI US Partner Program.

4D Runtime Classic

4D Runtime allows users to operate an application, either in an interpreted or compiled mode, without providing access to its underlying structure.

4D Engine

4D Engine enables the creation of standalone, executable applications and includes unlimited deployment licensing. 4D Engine is available only to registered ACI US Partners. Please refer to the next page of this brochure for information on the ACI US Partner Program.

4D Internet Connection Engine

4D Internet Connection Engine allows unlimited Web connections to an application. It is only available to registered ACI US Partners. Please refer to the next page of this brochure for information on the ACI US Partner Program.

ACI US services

TECHNICAL SUPPORT

If you develop 4D applications and need a quick response to your technical questions, the Technical Support Advantage Program is for you. For a moderate fee, this program provides:

- ► One year of unlimited 4D product support for one user
- ▶ Toll-free 800 number
- Special annual renewal rate

To register, please contact ACI US Customer Service at 408-252-4444 x252.

ACI US PARTNER PROGRAM

The ACI US Partner Program is designed to fit the various needs of 4D developers: power users, vertical application specialists, in-house developers, and consultants. By joining the program, you will receive regular information on ACI technology.

Monthly Partner CD

To keep you current on technical and other issues, ACI US sends a monthly partner mailing and CD-ROM which includes:

- The complete library of ACI US technical notes (1987–present)
- Software updates
- Release notes
- Sample applications
- ► Your company listing on the ACI Global Solutions CD
- ► Marketing information
- ► Co-op advertising opportunities

800-number priority technical support

We provide an 800-number for our registered ACI US Partners for quick, priority access to our qualified technical support engineers.

Eligibility to purchase select ACI products

Registered ACI US Partners are eligible to purchase key products in the 4D Product Line.

Referral alerts

By joining the ACI US Partner Program, you are eligible to receive referrals and referral alerts for prospective or existing customers.

Additional benefits

- ► Four contacts per membership
- Discount admission to DevCon, the annual 4D developer conference
- ► ACI US special electronic forums
- ► Discounts on ACI US University training classes
- ► Third-party product discounts
- ► Trade show participation opportunities

For additional information on the ACI US Partner Program, please contact ACI US Partner Services at 408-252-4444 x248.

ACI US UNIVERSITY

ACI US training services are designed to transfer knowledge—not just information—and to provide the understanding required to put that knowledge to work. To help improve your proficiency with the 4th Dimension environment, every month ACI US University offers training classes to users of all levels in cities across the United States. ACI US University also can teach a customized curriculum at your location.

ACI US University presently offers the following courses:

- Designing Relational Databases
- Introduction to 4th Dimension
- 4th Dimension Programming
- Multi-Process & Multi-User Programming
- Intermediate Programming
- Publishing a 4D Application on the Web
- ▶ 4D for Database Administrators
- ▶ Introduction to 4D ODBC Connectivity
- ▶ Introduction to 4D for ORACLE Connectivity
- Introduction to 4D SQL Server Connectivity

For additional information on ACI US University, contact ACI US Partner Services at 408-252-4444 x248, or visit http://www.acius.com.

A global solution

4th Dimension is available in numerous countries worldwide from ACI or authorized distributors.

ACI COMPANIES

United States ACI US Tel 408 252 4444 Fax 408 252 0831 http://www.acius.com

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