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ASHTON-TATE SHIPS dBASE IV TO CUSTOMERS

**New Technology Platform First Step in Global Database Strategy;  
Highest-Performance Database Management System  
for Personal Computers and Workgroups**

TORRANCE, Calif., October 24, 1988 -- Ashton-Tate Corp., (NASDAQ: TATE) developer and marketer of the industry-standard dBASE family of database management software, today began shipping dBASE IV, dBASE IV Developer's Edition and dBASE IV LAN PACK to its customers. dBASE IV is the successor to dBASE III PLUS, the world's best-selling database management system.

"We're thrilled to ship dBASE IV today and are pleased to have met our quality standards and deliver a product that's everything we'd said it would be," said Edward M. Esber, Jr., chairman and CEO of Ashton-Tate Corp. "dBASE IV is the key to our workstation and workgroup DBMS strategy and elevates the dBASE standard well into the realm of OS/2 and minicomputers."

The company also announced that the purchase price of dBASE IV 1.0 includes an automatic update to the next release of product for all registered users. Ashton-Tate previously announced dBASE IV Version 1.1, which will support the Ashton-Tate/Microsoft SQL Server database server, is due for release next spring.

The OS/2 version of dBASE IV will ship in the fourth quarter of this year.

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"For the productivity user, dBASE IV sets new standards for ease of use, power and performance. The new interface allows users to perform tasks, even generate whole applications, without writing any programs," Esber said. "The new dBASE IV Developer's Edition provides a complete development, test and distribution environment for single and multi-user applications."

dBASE IV's new built-in dBASE/SQL relational database language has already set a new programming standard for applications developers. New automatic record and file locking capabilities provide for easily networked multi-user operations.

With its intuitive, point-and-shoot menu-driven interface, dBASE IV is easily the most usable, high-performance database management system (DBMS). dBASE IV offers data integrity, recovery, security, transaction processing and networking features found only on production-oriented mainframe database systems.

Since announcing dBASE IV in February, the company has also introduced the dBASE Professional Compiler, a native code compiler for database applications developers, as well as Step IVward, a conversion utility for owners of competitive database management systems.

"Our revitalized dBASE developer community and corporate customers now have something new to cheer about," Esber said. "Our conversion products and free update policy guarantee an effortless upgrade to the SQL Server."

Among the major new features of dBASE IV is the addition of non-procedural interface (or NPI). The NPI in dBASE is called the Control Center. Users simply point the cursor and make a series of menu selections to perform various tasks, such as sorting a file of records. Without any traditional programming, the menus can create and organize data files, data entry forms, data queries, reports, and labels into complete applications.

The procedural interface, the familiar "dot prompt", is still available at any time. Using the dot prompt, users can program traditionally in the dBASE language by writing sets of sequential programming statements or procedures.

dBASE IV features major enhancements to the dBASE programming language, including seamless integration of IBM SAA-compatible Structured Query Language (SQL), a simple yet powerful English-like relational database sub-language. This integration has created the dBASE/SQL language. dBASE/SQL is the new programming language for dBASE IV and will be an application programming interface for the Ashton-Tate/Microsoft SQL Server, the OS/2 workgroup database server.

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With the dBASE/SQL programming language, users can create, modify and query databases using SQL commands or traditional dBASE commands. Users can interactively execute dBASE/SQL commands at the dot prompt with the results displayed immediately after each command. With dBASE/SQL, users can create dBASE IV programs that include SQL procedures along with dBASE statements.

dBASE IV features an automatic, built-in program compiler that increases execution speed to more than 10 times that of dBASE III PLUS. All "dot prompt" commands and dBASE IV applications are automatically compiled when first run.

dBASE IV Developer's Edition, positioned as "the complete dBASE IV programming environment" and designed for advanced users, applications developers and consultants, will feature the dBASE Professional Compiler. Purchasers of Developer's Version 1.0. will automatically receive the dBASE Professional Compiler when it ships in the first quarter of 1989.

For novice users and experienced programmers alike, dBASE IV's new applications generator leverages valuable development time. Users merely define tasks and the files to use. The applications generator then ties them all together. Users can also add pull-down and pop-up menus with the WYSIWYG menu editor. When finished, dBASE IV generates all necessary source code. The "Quick Application" option gives novices a pre-defined application in minutes. For advanced developers, a template language is provided in the Developer's Edition for sophisticated customization of complex applications. All source code produced is available for analysis and modification.

With the new forms manager, users can visually lay out data entry forms with the Control Center's WYSIWYG work surface. The full-screen editor allows users to design and modify forms with advanced features such as pre- and post-processing for powerful data entry validation and look-up capabilities. Later, forms are called up by name for interactive and pre-programmed uses.

The new query design system is a toolbox which helps users retrieve, organize, edit and display data. It features Query-By-Example or QBE, an easy-to-learn, interactive query system which automatically relates data from two or more databases. By building an example of what the user wants, the user tells the QBE system what to do, but not how to do it. QBE displays "logical views" of only the requested data which appear on screen as if two or more files had merged. The physical files remain unchanged.

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The new report writer also uses the WYSIWYG work surface. It incorporates a "band" concept allowing users to easily define sophisticated groupings of data and generate reports. These reports include simple columnar reports, complex multi-file reports with rich page layout facilities and fonts, pre-printed form reports and mail-merge reports.

Ashton-Tate made more than 300 enhancements to its dBASE language and integrated SQL to create the new dBASE/SQL language. New language extensions permit easy-to-use memory variables, two-dimensional arrays, multi-child relational capabilities, data validation, multiple display windows, support for international dates, currencies and numeric formats and many new math, financial and statistical functions.

Networking capabilities are significantly enhanced by dBASE IV. Single-user dBASE III PLUS and dBASE IV programs will automatically run as multi-user programs without modification.

Other multi-user enhancements include:

- \* automatic record and file locking when users attempt to access the same information simultaneously;
- \* transaction processing with complete rollback and recovery to prevent data loss during a system failure or record lockout;
- \* automatic screen refreshing which improves user concurrency by updating common screens every time another user of the same screen makes a change; and,
- \* eight-layer password protection and data encryption.

All previous versions of dBASE III and III PLUS are fully upward compatible with dBASE IV. All data and program files supported by dBASE III PLUS can be used in either DOS or OS/2 environments without modification in dBASE IV.

Conversions of dBASE II data and programs are also easy with a file utility included with dBASE IV.

dBASE IV has a suggested retail price of \$795. The suggested retail price of dBASE IV Developer's Edition is \$1,295. Both products will be available through more than 6,000 authorized Ashton-Tate retailers as well as the company's international and corporate sales groups. Upgrades to OS/2 1.0 versions of both products are available at no charge if users want only OS/2 after initial purchase or upgrade to a dBASE IV DOS product. Users who wish to retain their DOS versions of dBASE IV may upgrade to OS/2 for \$100.

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The price of a regular upgrade to dBASE IV for any user of dBASE II, III or III PLUS is \$175. Users who acquired dBASE III PLUS between February 17 and October 24, can upgrade to dBASE IV for the special price of \$30. dBASE III PLUS will continue to be available and supported by Ashton-Tate for customers with 384 Kb, floppy disk-based machines.

In the single-user mode, dBASE IV will run on an IBM PC, PC XT, PC/AT, PS/2 Models 30, 50, 60, 70, 80 or 100 percent compatible systems. It requires either OS/2 1.0 or PC/DOS version 2.X or higher. Network systems require PC-DOS 3.X or higher.

Minimum memory configuration to support dBASE IV is 640 Kb for dBASE IV under DOS. For OS/2 protected mode, users need a minimum of 2Mb total memory. Extended/expanded memory can be used as high-speed RAM disks only with Version 1.0.

Minimum disk storage requirements are one 360 Kb, 5 1/4-inch or one 720 Kb, 3 1/2-inch floppy disk drive and one fixed drive.

dBASE IV supports IBM monographic or color graphics monitors including CGA, EGA and VGA. Most 80 column printers including laser printers will operate with dBASE IV.

In network mode, all systems must have one or more of the following network systems:

- \* Novell SFT Netware/286 TTS Version 2.10;
- \* 3COM 3+ Share Software Version 1.3.1;
- \* IBM PC LAN Program Version 1.2 or later, including Token Ring (NETBIOS Version 1.0 or later);
- \* Ungermann-Bass Net/One PC Version 16.0A or 100 percent compatibles

All network installations require 640Kb. Some may require additional network memory.

Based in Torrance, Calif., Ashton-Tate markets best-selling microcomputer business applications software for DOS, OS/2 and Macintosh environments. Products are available in six major categories: database management systems, business graphics, word processing, integrated decision-support software, spreadsheets and desktop publishing. Ashton-Tate also markets a comprehensive line of service and support programs for individuals, corporations and government agencies.

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**dBASE CUSTOMER UPGRADE PRICE LIST**

<b>Product Purchased Prior to 2/17/88:</b>	<b>dBASE IV</b>	<b>dBASE IV Developer's Edition</b>	<b>dBASE IV LAN PACK</b>
Friday! dBASE II, dBASE III dBASE III Developer's Release dBASE III PLUS RapidFile 1.2 dBASE III PLUS LAN PACK	\$175 175 175 175 295	\$475 475 475 475 475	FREE to Registered users
<b>Product Purchased Between 2/17/88 and 10/31/88:</b>			
dBASE III PLUS RapidFile 1.2 dBASE III PLUS LAN PACK	\$ 30 250	\$330	FREE to Registered users

All dBASE IV registered users will receive FREE SUPPORT for the first 90 days, effective with the first support call. Support programs are available for a nominal charge following the 90 day period. For support information, please call (213) 329-0086.

Tax, where applicable, and shipping extra. Volume Upgrade Program information available from Ashton-Tate.