dBASE IV OVER dBASE III PLUS

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dBASE IV is the latest addition of the dBASE series. dBASE IV is designed with a totally different architecture from its predecessors. Many new functions, commands, and options have been added to almost all previous features, such as reports, labels, screen forms, application generation, etc. Actually, dBASE IV is more powerful and user friendly.

The Control Centre replaces the dBASE III+ Assistant mode which is the entry point in dBASE IV. Control Centre provides access to most of the DOS command i.e., without leaving dBASE IV.

We know that the maximum 128 fields can be used in dBASE III+ but in dBASE IV a database file can have up to 255 fields and up to 99 fields of all types including 10 database files can have up to 47 index files.

Another advantage is automatic program compilation. If we want to compile the dBASE III+ programs we have to use some other software such as clipper. dBASE IV includes a built-in compiler which automatically compiles our programs to speed up programs execution. All object codes created when we design our reports, customs screens, labels etc. are converted into the dBASE IV source code. So that we can combine all these into a 'single program' if we want to market our products too. For this reason programmers like dBASE IV over dBASE III+.

Instead of several separate index files for a database file, dBASE IV maintains a single production index file which has the same name as the database file but which a file extension 'mdx'. All index files are stored in the production index file, and any time when we want to open a database file, the corresponding production index file is automatically opened and we can add, delete, change data in any record of the file without hesitating about the index files. So it is a great advantage to us.

In dBASE IV report two includes a "header" and a "Footer". It permits an unlimited number of subtotalling operations whereas in dBASE III+ there were only two but in dBASE

IV unlimited. So nice. The report design screen permits use of special print features, such as bold, underline, different pitch i.e., compressed printing etc. So from dBASE report file we can design our text like wordProcessor. So it is another advantage for the programmer. Similarly the label design permit us to design any kind of label what we want. The important new features that have been added include a facility to use the graphics characters in the screen; several new picture functions such as centering or right aligning data in field removing leading and trailing blank spaces and multiple choice display and selection; messages to be displayed while entering data in fields; carry forward or default values for selected fields; coloring of selected area of forms etc.

In dBASE IV a new loop Scan-Endscan has been introduced, which can be an efficient alternative to Do while.not.cof[]—Enddo loop in several cases. For example,

```
  Clear
  Use marks
  Do while .not. cof[]
  If name = 'Nasima'
  List roll, name, marks
  Endif
  Skip
  Enddo
```

We can use the Scan-Endscan loop

```
  Clear
  Use marks
  Scan for name = 'Nasima'
  List roll, name, marks
  Endscan
```

Query By Example (QBE) is an easy method of retrieving the required information from a database file. It is a significant improvement over dBASE III+. In dBASE IV we can install up to four printers. One of them is the default printer and the others may be selected as and when required. In dBASE IV we can select a default data format such as American, ANSI, British, French, German, Italian, Japanese, USA and others. Similarly we can also define the currency symbol as Cent, Pound, Yen, Peseta or Franc. We can also change the clock format. Again in

case of date we don't have to write a date as a character. If we simply enclose a date type data in braces like {10/10/93} to tell that it is a date and then Dion automatically converts a date-type field into a character string in the format '1993/10/10'. This function is also useful for indexing a database file on a date field.

In dBASE IV, we can define our required function. Once defined, these functions can be used anywhere in a program. User defined functions are similar to a procedure and are stored in the procedure file and begin with Function <function name> and end with Return command. Again in dBASE IV, it can hold up to 1,092 procedures and user defined functions whereas in dBASE III+ we can use only 32 procedure file. So it is a more advantage.

dBASE IV has added Windows. A window is basically a Pop-up screen which is temporarily shown superimposed on an existing screen display. Later, when dBASE IV wants to remove it, the original screen is restored within no time. Windows are also used for displaying memo fields.

In dBASE IV Rollback is another command permits a database file to be restored in a previous stage. This is actually useful in case of power failure. Again keyboard macro is a new facility which can be used to enter a lengthy sequence of depressions of keystrokes stored for certain dBASE IV operations just by pressing a single key. In dBASE IV array is used. An array is nothing but subscripted memory variables.

New four financial functions have been introduced in dBASE IV. They are: FV[], PV[], PAYMENT[], NPV[]. Again for improving searching another new functions have been added like Soundex[]. Soundex[] function permits searching for words which may have different spellings but sound alike.

There are several other new commands and functions. These commands and functions makes dBASE IV and extremely powerful language. But if we really want to know dBASE IV we have to actually use dBASE IV to really know how powerful it is.

Reference :

dBASE III PLUS MADE SIMPLE WITH dBASE IV and FoxBASE+

Small Unix systems have their advantages

The economic advantage of small multi-user Unix systems over LAN-based computing has led to their proliferation, especially in replicated sites, with applications such as point-of-sale, airline terminals, small business administration and self-serve gas station control, to name a few. These devices are normally in the serial interface, due to low cost of cabling and ease of maintaining. One factor drawing users to Unix is the low investment cost, a result of keen competition. Also, Unix takes advantage of multitasking in high security open systems more cost-effectively.

This is particularly true for retail, hotel, manufacturing, distribution, hospital and banking applications. Although the PC connectivity industry has been well established for some years, the serial connectivity is continuing to grow—particularly in the areas of direct connect, server/LAN, distributed connectivity and wide-area network (WAN) communications. Devices that users need to connect include terminals, modems, printers, POS terminals, DOS PC, and the like.

Need for connectivity

The development of OS/2, NetWare and NT networks, has brought about a need for connectivity solutions for serial devices such as printers and modems that are attached to the servers on a LAN.

Today's PCs have become immensely powerful with the advent of 486 and Pentium processors and the ability to have multiple processors in one single system to increase performance. Coupled with 'shrink-wrapped' Unix operating system software, these servers are fuelling the downsizing trend. In many cases they have more processing power than some mainframes.

Workgroup computing

To achieve and support hundreds of users connected via terminals, these PC-based Unix servers start exploring the use of cluster controllers, a specialised front-end compu-

ter for controlling distributed groups of serial devices beyond the immediate vicinity of the server. Workgroup functionality and central control and monitoring are important for such a solution. For example, Stallion's Easyreach product, which alone supports over 2,000 serial devices, transparently provides both local (within a building or campus) and remote users (in branch offices) connectivity to a Unix server.

Server/LAN-based serial connectivity

The advantages of server/LAN-based serial connectivity, such as access to multiple hosts, better resource sharing and the ability to locate serial devices anywhere on the network has also led to substantial growth in this segment.

Originally the domain of LAT-based DEC systems, TCP/IP-based Unix LANs are now popular in multi-system installations. Many terminal servers are available for users of such LANs, but not many are designed to harness the functionality of Unix networks.

Entry-level Unix solution

Frequently, a user may need to connect a small user group (eight or more and normally using low-cost terminals) performing some simple functions like inputing data or controlling industrial equipment.

Ideally any new or extended group can be connected directly to the host and become transparent, so that information is available instantly. Installing a PC-base LAN is not feasible and costly. Under such circumstances, investing in a Unix host and using serial connections will be practical and cost-effective.

Graphical interface and system management

Investing in low-cost Unix solutions used to mean sacrificing user-friendliness. Also, troubleshooting was more difficult. [In a PC environment, it can be easily done using utilities such as those from Norton. Unix system management, however,

was by character management and was frequently left to 'experts', with the result that it is usually costly and time consuming]. This was true a few years ago, but now, vendors have started to incorporate user-friendly and graphical base system management tools for Unix system tuning and performance analysis.

PC LANs may be becoming more popular, but low-cost Unix solutions, with their increasing ease of use, low entry cost, and the ability to take advantage of open, multitasking and multi-user functionalities, are still worth a second look.

Michael Dell's Prescription For PC Industry Ills

Address the real needs of the consumer, tap the mass consumer market, be responsible for multivendor support, and forget the technospeak. Those are some of the elements of Dell Computer Corp.'s Chairman and CEO Michael Dell's prescription to solve the computer industry's ills.

Dell made his remarks to attendees at the 1994 Personal Computer Outlook conference held in San Francisco recently. CEOs and senior executives from AST, Borland, Compaq, IBM, Lotus, and Microsoft also addressed the conference.

Dell said the PC industry needs to bulldoze its narrow-minded channel and technology driven approach to marketing computers. He called the industry "a consistent underachiever" when it comes to creating products that address the real world needs of its customers, choosing rather to chase rapid technology turns faster than customer needs evolve. He also chided the computer makers for their investment in proprietary consortia designed to control the technology horizon rather than broaden it, and for taking a fragmented, component-focused approach to product development and marketing. Dell said these short-sighted vendor practices have forced MIS professionals to manage technology integration rather than focusing on their intended roles as information managers.

Dell said systems providers should deliver integrated hardware and software systems that are de-

signed for specific, demonstrated customer requirements and applications, versus the prevailing approach in which vendors develop and market new products based primarily on leapfrogging technology and arcane technical specifications. **"We need the PC equivalent of VCR-Plus,"** said **Dell**. He also encouraged systems providers to take responsibility for supporting multi-vendor systems rather than consumers having to call different vendors for support on different parts of their computer system.

Dell said the industry is presently at a crossroads and will have to choose between broad acceptance or rejection in the mass consumer segment. "The opportunity is ours to seize. We need to become a responsive, no-nonsense, jargon-free industry."

EC Election of BCS

Upon withdrawal of nominations by Mr. S.D. Shahid of NCL and Mr. Sajjad Hossain of NSS (Pvt) Ltd. all the following candidates are elected to the EC of **Bangladesh Computer Samity** for the next two year period upon the expiry of the term of the present EC. As all positions are uncontested, there is no need for voting on December 30, 1993.

President— Mr. Sajjad Hossain of IBM World Trade Corp.

Vice President— Mr. Moin Khan of Computer Solution Ltd.

General Secretary— Mr. Abdullah H. Kafi of JAN Associates

Jt. Secretary— Mr. Ghulam Mohiuddin of CITech Company Ltd.

Treasurer— Mr. Mustafa Jabbar of Ananda Computers

Member EC— 1. Mr. M. Sabir Ahmed of Computer Services Ltd. 2. Mr. M.H. Rana of Access Pvt. Ltd.

New Distribution of UNISYS

Multilink International Co. Ltd. gladly inform their valued clients for World famous UNISYS Computer for marketing in Bangladesh. Recently Multilink Ltd. **has been** appointed as **Authorised Dealer** for UNISYS Computer and its Peripherals.

Multilink Co-ordially invite UNISYS Users for Support and Services.

LAN Software

Topware offers a powerful software package for implementing a local area network (LAN) operating system designed for IBM PCs or compatibles.

It cooperates with and extends IBM PC-DOS, MS-DOS and DR-DOS function to implement a distributive LAN. Topware is a registered trademark of Grand Computer Corp.

The Topware operating system equips the users with a centralised database management program which has been proven to be highly dependable, reliable and very user friendly.

Topware is designed to operate on a 10 megabit per second Ethernet card (Novell NE-1000, NE-2000, NE/ 2 or compatible, or western digital 8003 or compatibles), on the 2.5 megabit per second ARCnet (SMC ARCnet card of compatible). Topware includes software utilities for sharing an assortment of database and a complete spectrum of other software programs.

It also provides total office or classroom communication which includes functions for sending messages to remote workstation user on the system, screen file broadcasting, monitoring workstations, and taking control or functioning telex server and overseeing complete network activities.

Topware guarantees system and data integrity by providing three levels of security system : User Login Passwords, File/Sub-Directory protection attributes, and DOS share record lock/unlock support. And unlike the product from Novell, additional servers can be added to Topware networks at no extra cost.

Topware is distributed in the UAE by American Computer Systems, P.O. Box 3265, Sharjah. Tel 06-356575, Fax 06-368964.

New Dealing Room System

Kapiti has introduced Market Watch, a new PC-based version of its FIST dealing room system, which makes the sophisticated features of FIST available to users on a PC platform and provided them with a wider choice of low-cost trading systems.

Market Watch is intended to complement the existing family of FIST dealing room products and incorporates all the features of FIST's powerful data delivery platform, ensuring that dealers always have access to reliable, resilient data.

The integrity of the data, either real-time or 'snapshot', is guaranteed by the load balancing, failover and automatic recovery mechanisms residing within the FIST architecture.

Market Watch will be suited for use in dealing rooms handling a wide range of traded instruments, as well as by off-flor managers, analysts and operations staff.

For further information contact Kapiti Ltd, P.O. Box 4326, Dubai, Tel 237901, Fax 283430.

Great market for writable-CD media

The Middle East is set to become a major market for writable-CD media, due to gradual increase of users.

According to general manager of Kodak Inc. Andre Nahas it is to mention that CD-ROM drive users will more than double in the next two years.

Market sources indicate that some 13 million users will have access to CD-ROM drives by 1995. Presently, an estimated six million users have access to a CD reader.

"We feel the growth potential for the Middle East is encouraging," said **Jon Barber**, Kodak's manager for marketing support operations. The company believes that a high percentage of users with access to CD-ROM drives will turn to Writable-CD as the solution to safe and economic data storage. "The need to access stored information quickly and to share it broadly will spark a consider a considerable demand for high capacity, cost-effective storage facilities," he added.

Special Course On Computer Assembly

A special computer training course on Basic Hardware (CKD) and Computer Assembly (SKD) has begun on 23rd December, 1993 aimed at creating job opportunities in export-oriented assembly sector in the city.

According to the company sources it is the first of its kind in Bangladesh which could enlighten to a person for gathering practical experience in this field. This type of training can play a vital role in building skilled assemblers in the new range.

Inaugurating the 1st batch, Engineer **Zahir Raihan**, Chief Con-

sultant of the project said that this training would bring a unique scope for the self-motivated people.

This course was introduced by **Bangladesh Advance Computers** and Networking at main office of Green Road, Dhaka.

2nd batch will start first week of February (both SKD and CKD).

New Products from Best Power Technology

BEST has unveiled new product to its product range the fifth generation of its award wining FERRUPS uninterruptible power system (UPS) product line. The new FE series featuring major enhancements in performance, reliability, and intelligence.

Jhon Hickey, Senior Vice President, sales and marketing, says, "BEST has always been known for its innovative engineering and responsiveness to users needs. The new FE series is no exception. We've used our expertise and knowledge of real world power conditions to produce the most reliable power protection yet. When customers purchase an FE series FERRUPS, they can be sure they're getting the best system on the Market", emphasizes Hickey.

In late January, BEST will introduce Patriot a low-cost, high-performance standby unit that competes with APC Back UPS, especially in terms of price. For just a slightly more than the cost of a good surge strip, PC and LAN's users can have the best Price/performance backup power protection on the market. The Patriot series will initially be made available in 250 VA and 400 VA size.

Patriot offers 70 percent more battery routine than other backup power sources in this size range for a lower price. For example, Compaq Prolinea users receive 36 minutes backup routine from 250 VA patriot and 45 minutes from 400 VA Patriot.

New Hard Disk Drives From Toshiba

Toshiba has developed a 2.5 inch 520 megabyte hard disk drive weighing only 220 g. It represents the world's largest memory storage for this size of disk. Toshiba has also developed a very thin type of hard disk drive, IBM's recently announced 2.5 inch hard disk has a 344MB memory.

Toshiba's drive has a thin layer magnetic head and high density glass-board magnetic disks.

The thin hard disk drive is only 12.7 mm thick and able to store up to 213 MB of data. It weighs only 160g.

These hard disk drives are being used in various computers including notebook PCs.

Movies on Philips CD-I Discs

Paramount Pictures and **Philips** Interactive Media of America signed an agreement under which Paramount will distribute theatrical length movies on CD-I discs. The CD-I player is like a VCR that connects to a TV set and offers a remote control. However, the CD-I player's remote control is the interface which allows users to interact with CD-I titles, acting like a joystick for games and a control to point to menu selections for other titles. To date over 100 titles are available for the CD-I player.

To play the movies of Paramount CD-I users will need to add a FMV cartridge to their players which inserts into the back of the unit. This will enable the movies to run in real time.