From page 9 not wait to take the chance of meeting some more people like ourselves for the first time with whom we could discuss and share computer knowl edge. That very evening we went to their place and from then on began to visit them from time to time. Our actual interest was to get some hands-on experience on the only computer they possessed and could not be successful un til a few months later when they asked us if we could make a BASIC program for them to draw electronic circuit diagrams. The program had to work on their machine. Our hearts glittered and with great satisfaction, we devoted our souls into work. Three months later we came up with the very

first real product of ours

IXORA, a name we chose for

our first graphics software almost a year before that. At the time of developing IXORA and even after that, the two of us taught in several training courses including BASIC, Pascal and C. We also served the young company in many other respects also; meeting people, advising on software. We even created the development tools for their R&D's like 8085 microprocessor cross assembler and simulator. We did all these in return for using their computer. We could do anything on the PC according to our will. This was all we would ask for. But we never thought of any financial gain in return because we were totally hobbyist at that time and money was not that necessary at all. There was an unspoken mutual understand ing between them and us.

#### **DEVELOPING BARNA**

It was the year 1990 when we decided on creating something serious. May be 'commercial' would be a more appropriate word to use instead of 'serious', but SELLING software into market and gaining MONEY was even then not the prime issue to us. We wanted something really useful for the general people out there and Bangla implementation on IBM compatible PCs clearly appeared to be very much necessary as well as challenging. I were were already two other Bangia solutions on the PC. ACCSEES asse-

ssed the possible market for the product and heavily inspired us to start up the development. Thus we started the most prominent ventures of our lives so far - developing a commercial full-fledged word processor package for Bangla. It was April 5, 1990

We learned a lot, a real lot, We got many lessons not having any prior experience in real world software development. And we were absolutely helpless. Not, a single person we knew who could advise us on word processors, on C language (the programming language we were using for this project) or on anything. We knew (a little) about the many steps involved in software development - requirement analvsis, specification, design, coding and all that. But we just couldn't manage to visualize our problems wholly, let alone the ultimate product. As an obvious result, we made mistakes

## Software Entrepreneurship

studies on programming). That

a lot of those. One of the worsts was when, after designing a major data structure and working on it for two months, we found it to be wrongly implemented. We had to recode everything after a two-week hibernation period during which we brain-stormed and reinvented a wheel - the solution. The bottom line is, life was tough during the project. There were times when we seriously doubted the feasibility of our success. We had to accept many constrains in terms of resources; we used to work on a single PC-XT and could use only a nine-pin

printer, both of them being shared by all sorts of official



It was February 21, 1991 when we first demonstrated our half done software in public at a local exhibition. The response augmented our inspiration. Another five months later, on July 25, we finally released the first version of the product, by that time named BARNA, in the market. The arrangement with ACCSEES was. they would remain the only distributor of all versions of the software prior to second major version of it, namely. version 2.0. The profit was supposed to be divided equally between them and us. BARNA started to sell in very few numbers at first. We continued our development after the release also and it took only half a year for the average number of copies sold per month to reach 25. Several upgraded versions were supplied to the market as we integrated new features into the product and removed previous mistakes. BARNA seemed to become popular for one important reasons among others - continuous development that enabled us to meet many users' various needs at different times. The incremental development of BARNA, the addition of more power is continued even today.

#### THE BREAK

The two of us are basically book-worm type. No, we are not great students, we never had been. But it was a definite vision of both of us that we would go for higher studies in the Computer Science arena. Although we obviously do not think it is impossible for anyone to do great without any formal studies, our major interests were in theory. As al ready spoken, none of us had a academic carrier good enough to get admission at any locally available Computer Science or related subjects (we lost it in expense for our non-formal

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is why we had to think of going abroad and study. And for the huge amount required for this. we relied upon our estimated royalty from BARNA which, we did not care to collect little by little over time. When we finally passed HSC in 1991 dropping a year, we were too busy with BARNA and almost a year later in late 1992, we started slowly to move toward our plan and was willing to have the money that was deposited for such a long time. Our first surprise was the money amounting to be substantially low when calculated according to the accounts. We understood that a real business might have many 'invisible' expenses as we were told by many experienced business people. But the whole world turned out to be shaky in front of us when ACCSEES expressed their disability to pay us off at that point and moreover wanted to have source code and more rights on the product. They wanted us to get off the picture of marketing and said it would have to be totally their business to market the product. If we couldn't agree, according to them, we would have to find some other distributor or we would have to begin our own company which would have 'all sorts of help' from them. They were no

of BARNA was then officially called off on January 01, 1993. Our hearts broke. We were seriously depressed and did not know what to do. Our vision of future shattered. We eventually devised out that without money, we could not move and staying at home, we would better start our own company. Still we possessed the belief that we would someday be paid our royalties; after all, those people had always been like our elder brothers and may be it was the circumstances that forced them to the denial. But many times we wonder that our most successful product in turn indirectly caused our most adored dreams to collapse.

longer interested in continu-

ing the existing deal. The sale

#### THE NEW COMPANY

We were fully aware of the

fact that running a company would require us to become full-time business personnel and that would definitely deviate us from studies. In spite of that we just did not have any other way. So we began preparing for a new company. In our earlier days, when we were kids and used to dream of a company of our own, we had decided on a name, 'the SAfeworks' to represent the incorporation of the two of us. We had this name included, as a signature, in all the software we made. It came out naturally that we wanted our registered company to bear the same name. When thinking of how we would proceed, we found that we would need a strong marketing team right at the beginning. Because our word processor package needed to be installed by our personnel rather than the user himself for copy protection purposes. Installed in this way, the soft-

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4 Mil characters

200 Mil characters

or 400 Mil dot per

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user installable

colour Kit.

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6000 HRS

ware could be copied by anyone but would run only on the very machine that was used for first time installation. For our marketing side, we chose to offer Mahboobul Alam who was then an employee to ACCSEES previously in charge of BARNA installation but was looking for better job. He was already familiar with what he needed to do at our firm. This young man had become sort of friend to us as we had worked in many projects together including those in a science club. Eventually, right before registering the company, we decided to make him a partner in the firm realizing that we would need a permanent marketing side. Thus the three of us finally started our new venture on March 01, 1993.

The most positive help a sales business can get during its rising era is when its starting product somehow appears to be already exposed to the market. In our case, the product was not only known to people but also was popular. But even then we were surprised facing the market for the first time when we found that the market was no longer absorbing our product like before. The reason as we found out was, the unavailability of

BARNA for two months seriously injured the product's position in the market and consumers' confidence in it. We did not have enough capital to continuously advertise ourselves at that time. It took us months to reestablish the software's value through excessive support and limited advertising and ultimately the number of sales slowly increased.

All these development efforts were previously being hampered due to our involvement in marketing. We reinforced our efforts on these software and eventually in December 1993, we reached the primary step of finishing the systems.

Now the SAfeworks has got nine full time personnel working devotedly for the firm. Plus there are some part-time 'friends' who help us in our R&D. Our future plans include couple of new products for the local market. We are also working on end-user software for the international market. Once upon a time, we dreamed of creating a product, a product of our own, to be marketed in this country. That dream came true. It is our firm belief that our next dream will come true one day.

The authors are the inventors of the Bangla software package BARNA..



#### Native C++ for the Mac

Symantec C++ 6.0 for Macintosh (\$499) provides a development environment with a native C++ compiler and an incremental linker, which the company says reduces development time by linking only new or modified code to a program. The open environment from Symantec lets you integrate preferred code editors and resource tools.

> Speed up commercial forecasting

SmartForecasts 32-bit Batch Edition (\$5995) helps you take on massive forecasting problems, such as estimating customer demand for large inventories or projecting cash flow for financial institutions. The Smart Software program uses 386IDOS-Extender technology. providing greater internal data capacity and faster calculations.

#### **OCR Software** for Windows

TextBridge (\$99) from Xerox Imaging Systems lets you convert hard copies of documents into leading word processing. spreadsheet, and database formats while working in Windows. The OCR software accepts TIFF files from most fax modern software, and the Lexifier enhanced technology improves the software's handling of degraded and non-word-based docu-

#### **Plan Your Projects** in Windows

Prisma Software has introduced GanttChart (\$89), a business graphics program that you run under windows. The program organizes projects on worksheets and schedules them on time-line charts. You can tailor your screen display to focus on important aspects of a project. GanttChart allows you to create and print presentationquality charts and switch their time frame among daily, weekly or monthly increments with the click of a mouse.

#### Crystal Balls for Investors

Money Maker for Windows (\$99) from Q-West Associates graphically builds securities and portfolio analyses. After you define the type of investment that you're working on, a storyboard is assembled, showing the potential gains and losses and the projected rate of return under various market conditions. A financial toolbox assembles and tracks investments, profits, and costs.

With The Yellow Pad (\$49 95), you can experiment with a variety of investment scenarios, examining the effects of different assumptions on your assets and income. The fi-

nancial calculator from Orinda Software can enter data on your total assets and perform one computation, or it can work with data for individual assets and income groups, computing a report for each one.

#### Bridging Communications **Protocols**

Zoomit's X .400 & SMTP Dual Stack (from US\$8000) enables those using the SMTP and X .400 protocols on a Banyan Vines network to exchange mail. The software automatically configures message-transfer agents and routing tables to simplify direct connectivity. It also features audit trails and message logging and tracking.

#### PEN PCS

#### **IBM Upgrades** Pen Line IBM's second-generat

pen device, the ThinkPad 710T, is smaller, lighter, and less expensive than the earlier 20-MHz 386SX-based ThinkPad 700T.

The ThinkPad 710T comes with IBM's 25-MHz 486SLC CPU and 4MB of RAM, expandable upto 12MB. The 700T supported only GO Corp's PenPoint; this unit supports both PenPoint and CIC Corp's PenDOS.

Two versions are available: a File model for use with IC memory cards, and a H D model. The \$2,999 ThinkPad 710T File model can use 5MB, 10MB, and 15MB memory file cards (\$649, \$1,099, and \$1,499, respectively), but no cards are included in the list price. The File model has three type 2 PCMCIA slots, two of which can hold one type 3 card.

#### **Backlit Panel**

The 9.4-inch monochrome passive matrix LCD panel (640by-480 resolution) has an etched glass cover, which provides a fairly natural feel when you write with the cordless digitizer pen. This surface treatment is the same as the 700T's and is superior to that of most other pen systems, which feel slippery in contrast. The pen fits conveniently into its own pen garage on the side of the pen computer.

Though the screen is backlit, using the system in its reflective mode will conserve some power. You should expect a bit more than 3 hours of battery life with backlighting turned on, or close to 4 hours without. Brightness and contrast are adjusted by tapping buttons on the edge of the screen; the backlighting control is in the same place.

You can also plug an external monitor into a standard VGA port on the side of the 710T. Other ports accommodate an external floppy drive (not included), parallel printer, serial device, and PS/2 keyboard and mouse.

### More Product News

#### Marc with New Ink **Jet Printer**

After successfully launching its microLaser and microWriter families of printers. Texas Instruments has announced that it will enter the rapidly growing ink jet market with its new microMarc ink jet printer. The microMarc uses a 128nozzle drop-on-demand thermal print engine to produce 300° dots per inch at a rate of 300 characters per second. It includes PCL 3 printer emulation, three resident font families (Courier, Dutch SWC, and Letter Gothic), and a 100-sheet automatic paper feeder.

#### Personal Information Managers

Arabesque Software's ECCO Professional represents a new frontier in Windows-based personal information managers (PIMs). The group at Arabesque has taken the benefits of a database-oriented PIM and combined them with an outlineoriented thought processor/decision facilitator. Now your data is cross-referenced and integrated so you can see any and all of your information. from your appointment schedule to your contact histories, in a context of your choosing. Arabesque calls ECCO a SuperPIM, because in addition to everything you'd expect in a PIM - calendar, phonebook, todo lists, import/export capabilities, and DDE, OLE, and email Support — it includes a universal outliner for putting all your information in a variety of views; a proprietary database technology for organizing information and displaying relationships among data; and a feature called Shooter, which makes it easy to move information into ECCO from other applications. Across networks you can have shared folders and outlines (later this year, a workgroup version will include group scheduling and shared calendars), and for laptop users, it's RAM-based so it accesses the hard disk less often and saves battery power.

#### **Cool Tools from Binar** Graphics

Binar Graphics, creators of WinSpeed, the first softwareonly graphics accelerator, has announced two unique Windows utilities. The first product, AnyView, changes Windows video resolutions and pixel depths on the fly so you never need to enter Setup, change drivers, and restart Windows. You can also assign resolutions to Windows applications so that when you're in Word for Windows, for example, the resolution is 640-by-480, but when you switch to Excel, it's 1,024- by-768. AnyView also has a zoom feature for enlarging part of a screen, a virtual desktop feature for making your workspace larger than your display, and a display calibration feature so that your screen output matches your print out-The second product,

Fantastic Recall, acts like the suspend and resume feature on notebook PC's by saving your Windows session to disk-appli-

cations and all - and starting where you left off the next time you boot up. Both AnyView and Fantastic Recall are currently available at introductory prices of \$69.95 and \$49.95, respec-

#### **Monitor Rotates for** Windows

plays. Radius is retreating to the Macintosh platform, and Portrait Display Labs, which has a strategic relationship with Radius, is filling the void. Its new Portrait/15 Plus monitor rotates so you can view Windows in landscape mode (for spreadsheet programmes) or portrait mode (for desktop publishing or word processing programmes). The included softto match the physical orientamakes no performance compromises; it supports 1,024-by-OS/2 are in the future.

Software Upgrades

Norton Backup 2.2 for \$69.

In the arena of pivot dis-

ware remaps the screen display tion. The 15-inch Portrait/15 768 resolution at noninterlaced refresh rates above 70Hz, has a .28-mm dot pitch, and meets MPR II standards for reduced emissions. Drivers that support

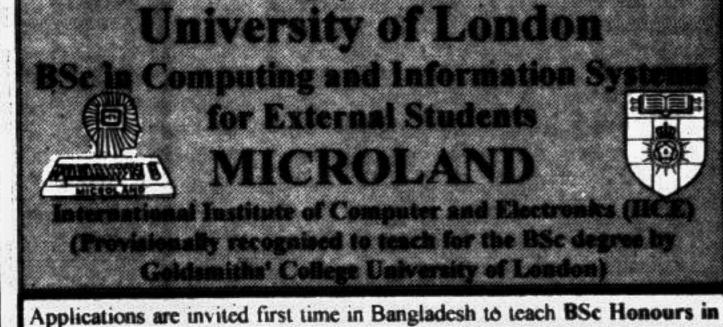
Symantec Corp. continues its response to Microsoft DOS 6.0 with the release of The Norton Backup for DOS. Version 2.2 (\$149). The Norton Backup is a superset of DOS 6.0's utility, and is able to read and restore DOS 6.0 backups. Registered users of previous versions of The Norton Backup can upgrade for \$39, while buyers of DOS 6.0 can get The ACT ! for Windows from

Contact Software International is now in Version 1.1(\$395), with merge features for reconciling data between versions of ACT!, a data link to ACT! for the HP 95LX palmtop, and new filters for importing data from other contact managers and PIMs. Version 1.1 provides DDE links to Windows programmes, and has optional auto-rollover of uncompleted activities and a quick-dial phone list. Registered ACT! for Windows users will receive the new version free.

Version 5.1 of PC-Kwik Crop's Super PC-Kwik (\$79.95) disk cache software includes cache support for CD-ROM drives using read-ahead technology. Version 3.1 of PC-Kwik Power Pak (\$129.95) is fully compatible with DOS 6.0 and is made up of disk cache, disk optimization, multiple boot configuration, and other utilities. If you're an existing Super PC-Kwik or Power Pak 3.0 user, you can upgrade for \$19.95 and \$39.95, respectively.

Above Software has upgraded its Windows document manager, Golden Retriever 2.0b(\$99). New "File Save" and "File Open" commands intercept the same commands in other Windows applications and bring up Golden Retriever over the application. A "File Record" command creates an audit trail of document revisions, and an Uninstall option removes the programme from Windows and from your hard disk.

Compiled by Rathin Sanyal



Computing and Information Systems for External Students of the University of London. Period of study is 3 years for a full-time student and 4 years for a part-time student. Exemption up to one year may be granted for a special entry qualification. Study cost is almost 1/10th to that to be spent in UK. One can obtain international degree staying right at home. Prospective jobs in home & abroad are for you. Examinations of every level will be held at the British Council, Dhaka in mid-May each year. Standard of degree awarded to both Internal and External students of the University is the same.

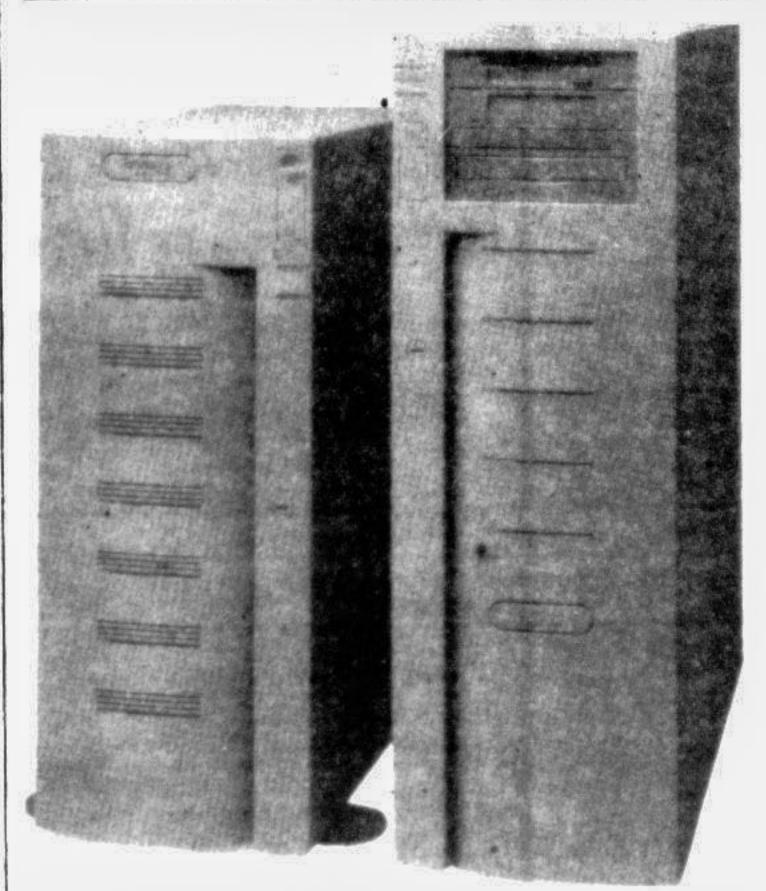
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Class starts for level 1: 1 June 1994 for the session 1994-95 Last date for submission of application: 30 March 1994. Study costs: £650 for London and Tk.48,000 for Microland per year

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