

# Star Computer Special

## Multimedia:

### The Next Computer Revolution

by Faisal Hoque

**M**ULTIMEDIA... a technology that is dramatically altering the human communication experience. It adds a new dimension to the way people retrieve and deliver information with text, graphics, motion, sound and video. For some time now information has been encapsulated in various formats, each requiring different tools for storing and presenting the material. A new class of hardware and software is emerging that can integrate these various formats. Now, information in virtually any format can be combined into multimedia presentations. With these new tools, information can be presented in a more engaging and informative manner, and 1993 is the year of this new technology as Multimedia is now in full swing in every aspect of computing.

Human retention can be dramatically increased by involving multiple senses; people are twice as likely to remember what they've both seen and heard. Hence, by appealing to more senses multimedia technology offers innovative options in presenting information, thus even further increasing the impact of the message. The effect multimedia technology is having in fields as diverse as business, education, art, and entertainment is nothing short of revolutionary.

For the first time, multimedia capabilities are now being built-in at the system level. Operating systems such as Microsoft Windows, OS/2, Apple Macintosh and X Windows are now shipped with multimedia extensions that allow users to play sound, animation and video on standard hardware. Along with the operating systems, the number of superior, affordable hardware components such as CD-ROM, video and audio boards are growing proportionally.

#### Presentation with Sound and Video

Today, multimedia applications can be created for as little hardware as an Intel 386SX PC or its equivalent hardware platform. Software products such as Macromind Action or American Works Interactive, which cost as low as dollar 400, let the user create animated presentations with sound and video.

Profitable ideas in multimedia applications are endless. In 1992, while working for Pitney Bowes, I developed a multimedia kiosk with touch-screen interface for industry trade shows which enables the Pitney Bowes customers visiting the trade shows to learn about the company and its product lines via live video, audio, and data displayed at the same time in order to capture the customer's interest. In Japan, the Matsushita Electronic Company has created a system that lets the company display thousands of kitchen products in a computer-generated environment. Through multimedia, the shopper enters the computer-generated kitchens, chooses appliances, and arranges and rearranges them. Hence, the shopper experiences the direct implication of product. Stop and Shop Cos. Inc., a Quincy, Massachusetts-based supermarket chain just added multimedia kiosk-based ordering systems to 25 stores featuring a video

introduction, pictures of items for sale and touch screen ordering capabilities for its shoppers so that shoppers can place the order on their own rather than waiting for an attendant. The shopper then picks up the goods from the attendant when the order is ready. A sophisticated multimedia center that can display a dozen categories, including local restaurants, hotels, and attractions. Tourists can select a hotel, for example, by geographic location, price and facilities by simply touching a screen.

#### Medium for Training

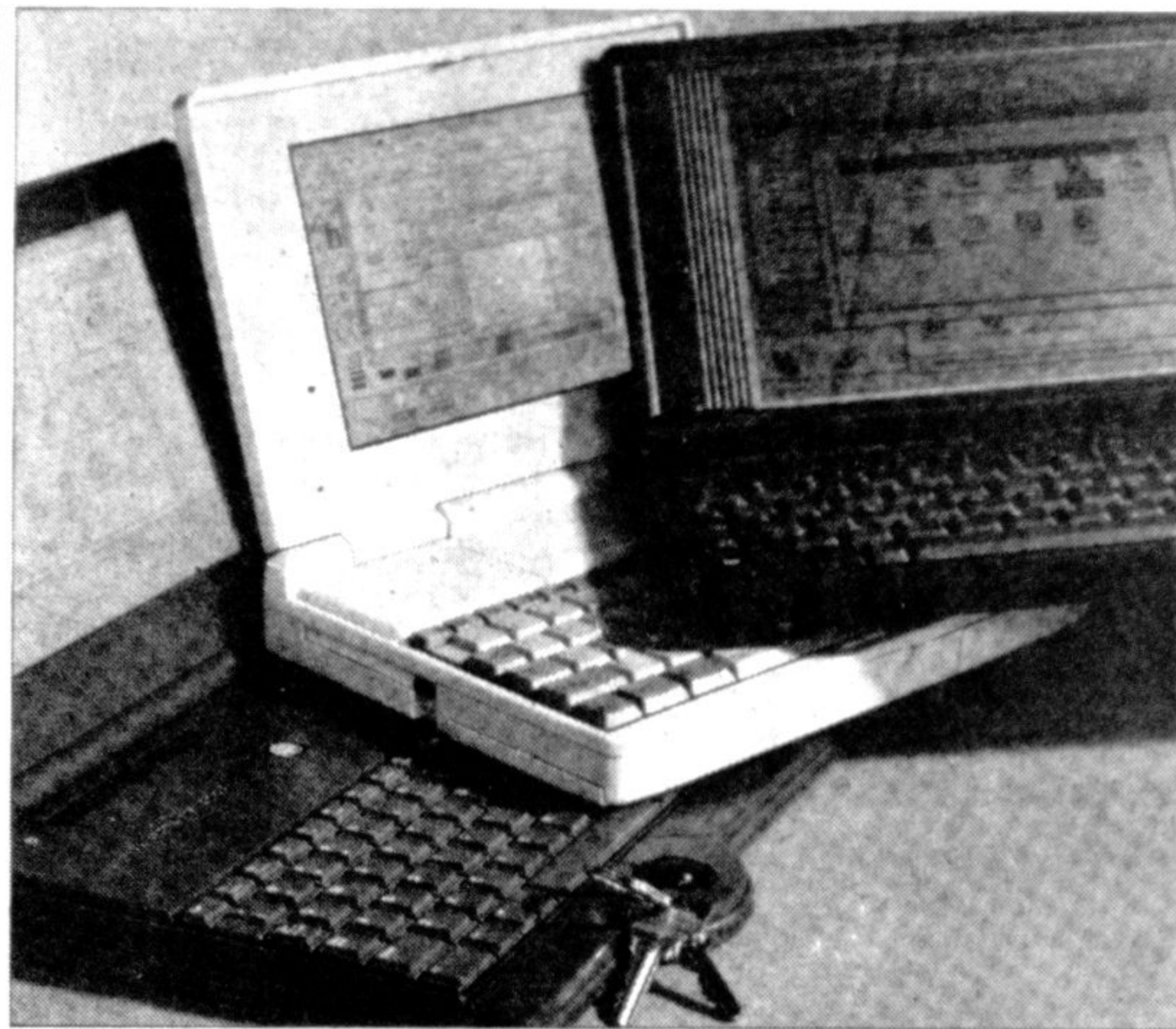
One of the primary uses of multimedia to date has been training. Because multimedia provides a level of interaction and feedback that is not possible with a paper based medium, multimedia is a natural medium for training. Hence, the market is seeing a growing number of development tools dedicated to the creation of interactive multimedia training courses. At the beginning of this year, I designed a prototype application for a hospital that displays case studies on the latest surgery techniques. As a result, doctors can keep up with industry advances.

For example, a local school district is worried about computer literacy. An interactive kiosk can show students different elements of computing. A company is losing business because complaints aren't being handled properly. An interactive multimedia training course for sales and service people could save the day. One of the key factors in multimedia training is that people can receive training on demand and any time-unlike a traditional training course given by trainer. Therefore, corporations are turning to multimedia training applications for flexibility and cost effectiveness.

Multimedia finally brings the electronic book upon us...not so much the novel, but the reference books, catalogs, certain business publications and even magazines. The new revolution in how information is presented through multimedia has forced a re-definition of the term document. Documents that contain a combination of text, graphics, audio, video, and animation can express more ideas more clearly than text-only documents. For example, music reviews can include audio excerpts of compositions being discussed. Repair manuals can demonstrate the correct repair maneuvers via video. Hence, we see a flood of new multimedia documents in the market such as encyclopedias, dictionaries, children's books, and reference articles.

Multimedia promises to be nothing less than a paradigm shift. As this industry is going forward experts are already talking about things like interactive TV, video conferencing from the regular PC, high resolution video integrated with E-Mail, and much more. One may wonder about the practical aspects of multimedia technology in a country like Bangladesh, but I see a great opportunity in this field. Multimedia could change the way we feel about higher education, technology transfer, business presentation, advertising, and entertainment.

Faisal Hoque is the President and Chief Technology Officer of KnowledgeBase, USA.



The littlest new Subnotebooks from ZDS, Comp USA, and HP (left to right) HP weighing under 1.5 kg and with a profile smaller than that of most three-ring binders

## Software Export: Where Do We Stand!

by Abu Y M Ahmed

This article addresses the issues related to Bangladesh's attempt to enter into the international software market on the basis of practical experience of a private sector exporter of information technology (IT) services. The relevant issues have been looked at from a business prospective and not from a technology prospective. Findings from two separate studies conducted by Robert Schwere of World Bank, Washington DC and Carel A van Houten of MATRIX of the Netherlands have been used to establish the size and trend of the world market.

Since mid-1980 computer professionals, hardware and software vendors and professional journals have been doing a lot of upbeat talking about the huge potential of software export from Bangladesh. However, so far, there has not been any major success. A number of studies have been carried out by both local and foreign consultants to develop a national strategy for software export. On a number of occasions Bangladesh Export Promotion Bureau, in collaboration with ITC of UNCTAD/GATT, has sent representatives of local software houses to attend international computer trade shows. But none of these activities have yielded any tangible benefit and the band wagon of software export is yet to roll. Furthermore, according to a reliable source, UNIDO is about to commission yet another factfinding study on this sector to be carried out by a foreign consultant.

Most recently Bangladesh Export Promotion Bureau in collaboration with ITC of UNCTAD/GATT has sent another delegation to Softworld '93 conference in Canada followed by a fact finding tour to USA. The delegation went out on their mission to achieve the following objectives:

- \* To identify the North American software market.
- \* To identify software and hardware platforms for which there is an international demand.
- \* To identify the type and level of skill required to get entry into the international market.
- \* To make initial contacts with key software players in the North American market so that strategic alliances can be forged in the future.

The visit was led by a leading IT consultant who has successfully carried out similar missions for Philippines, Russia, South America and India. The mission's findings were very much similar to Robert Schwere's findings from his case studies on India and Brazil. The purpose of this article is to highlight the findings of this mission and earlier World Bank studies and to suggest a plan of action which will help Bangladesh to enter into the international software market.

#### The Market

Computer software is a global industry. Computer software and services sector is highly competitive. A skill based and technology driven industry which is growing faster than most sectors. The world software market was approximately US 110 billion dollar in 1988 and is expected to be more than US 220 billion dollar in 1993 and is expected to grow at the rate of 15 per cent per year for the next five years. Under the present world recession this is one of the few growth sectors. Computer software and services industry can be broadly classified into four categories i.e. system integration, packages, professional services and data processing services. In 1993 the share of the market segment is as follows:

System Integration : 9 per cent (US 20 billion dollar). Annual growth rate 22 per cent

Packages : 36 per cent (US 80 billion dollar). Annual growth rate 20 per cent

Professional : 34 per cent

(US 76 billion dollar). Annual growth rate 15 per cent

Data Processing : 21 per cent (US 47 billion dollar). Annual growth rate 8 per cent

Average annual industry growth rate is 15 per cent

Source: Robert Schwere, World Bank, Washington (DC)

#### Package Segment

Though packages is the biggest segment, it is also leading edge technology. To get into this segment one needs to identify a niche market, acquire relevant business knowledge and software skill and develop the product within a very short period of time. This is a very high risk and highly rewarding segment. United States has got the biggest share of this segment (ie 39.7 per cent worth US 32 billion dollar). A thriving local software market is a precondition to the successful in this segment. One can either develop its own package and market it through shrink wrap software distributors in the developed world or one can get sub-contract work from international software/hardware vendors (eg Microsoft, Oracle, IBM, dec, sun Microsystems, unisys, etc). In both cases a thriving local market is essential. For example, no international vendor will be interested to give any sub-contract to a country where there is no market for their products. At the same time without a local market it is not possible to do the required research and development work which is needed to develop new packages for the mass market.

#### Professional Services

This is the second largest segment. In spite of increasing standardization certain end user sectors are becoming more and more specialised. For example, financial services, manufacturing, public utilities, government, defense and telecommunication.

#### System Integration Services

This segment includes project management, requirement analysis, systems design, contract programming, subsystem integration, education and training and ongoing systems support and maintenance. Though systems integration accounts for only 9 per cent of the world market, this is the fastest growing segment (22 per cent

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This segment includes traditional data processing services e.g. bureau service, facility management, client specific turn-key systems development, etc.

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## Interview of the Month

### Computer Council Gets a New Boss

by Zakaria Swapan

The Bangladesh Computer Council (BCC), formed in 1987, has gone through many ups and downs. It has often been at the centre of controversies. The people whom the council was set up to help have often expressed their frustration at its performance. Critics say that the BCC has not done anything significant to make the usefulness of the Council evident to the computer enthusiasts. It is to be noted that both the BCC and Singapore Computer Council started on the same day. One needs only to compare their respective performance to find out how the two councils performed.

Last month, Md. Abdus Salam, a former General Manager of the Telephone and Telegraph Board, took over as the new Executive Director of BCC. An Electrical Engineer with wide-ranging experience in the electronic and computer fields, he takes charge of the Council at a critical time when dramatic changes, accompanied with fantastic opportunities, is engulfing the country's computer industry.

In a recent interview with The Daily Star, Abdus Salam talked about the role of the BCC in developing the Computer Industry in the country, the existing problems and about the future prospects.

**The Daily Star:** What is the role of the BCC in developing the computer industry in Bangladesh?

**MS:** The purposes behind the formation of the BCC were to formulate policy guidelines, to build up a national institutional structure; to take up promotional activities; and to provide training for an efficient and coordinated development of the country's computer industry.

As for example, at the moment Information Technology (IT) is a very profitable business all over the world. It is the responsibility of the BCC to promote and facilitate the setting up of this business.

**DS:** What is the current state of the computerization process in Bangladesh?

**MS:** Not as good as we had hoped for. If the current picture of the computerization in government organization is very bad. But some private organizations are doing well. In the government offices, it is most often used as a prestige symbol. Most of them remain unused. It is disappointing to see such misuse of computers.

It may be a very nice show piece—but it should not be used like that. Most of the government offices do not know how to use this machine, how to operate this powerful tool. For example, there is a computer in front of my desk and I am not using this machine. So, what is the justification of

buying this machine for my desk? This is happening all over the country. A lot of computer terminals remain unused.

**DS:** What are, according to you, some of the most important challenges facing the computer industry in Bangladesh?

**MS:** I have analysed the market over the last few years. I think there are two important factors which are making the computerization process more difficult. One thing is the price of a computer is higher than the buying capacity of our people. The government should reduce the import tax so that more people can afford to buy a computer.

The other thing is the lack of knowledge about computers and its utility. A question may be asked—why should I buy a computer? If we can prove that the computer can do a better job than a human being or if we can prove that using computer is more profitable than employing a clerk, then a businessman should go ahead and buy a computer. The people here do not seem to know much about the power or proper use of a computer. We should help the public to become more aware of the

wonderful uses of this magnificent invention. If the price range of a computer comes down to within Tk 8,000 to 15,000 then more people will buy computers.

**DS:** What are your immediate plans in making BCC more effective?

**MS:** I want to popularise computers among our people. To popularise it, BCC is already offering training on information need analysing and systems design. And also provides application packages and programming, programming in C/C++ Unix Oracle etc. and hardware maintenance.

In our country, people think that, if I get a computer, then computer will do everything automatically. But it is not true. To get an output or result, you need a programme, data, and

big companies sub-contract systems development work to off-shore software houses.

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per annum). In future, system integration will be the mechanism for introduction of new technologies in all major sectors of business e.g. telecommunication, education, government, financial services, manufacturing, multi-media, etc.

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In Bangladesh, people do not usually use the original software. But now that the prices of the software are coming down, our people can easily afford the original software packages. To promote the software business and get the 2000 dollar billion software market, Bangladesh should get into the habit of using the original software.

In the September quarter, Microsoft's revenues rose 20 per cent to 983 million dollar and earnings were up just 14 per

## The New Generation

### Teenager develops anti-virus software

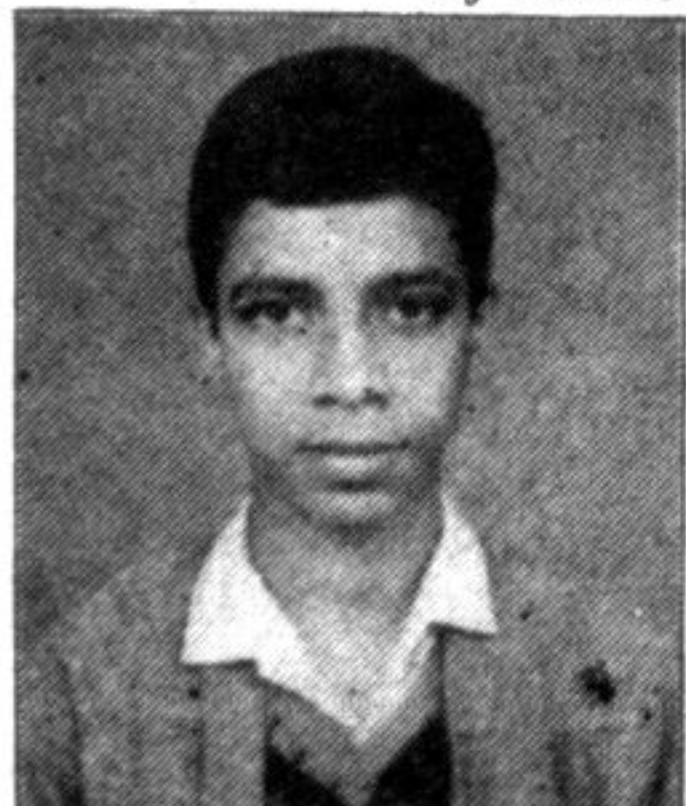
By Staff Correspondent

**A** 16-year-old A-levels student of Microland, Dhaka has recently developed an anti-virus or 'virus killer' software programme.

Monirul Islam Sharif's programme—the 'Monir Virus Killer (MVK)'—can efficiently kill the so-called 'Dhaka Virus' without destroying the affected files.

A number of computer viruses have cropped up in Dhaka recently. These appear to have been developed locally and the anti-virus software programmes imported from abroad cannot quite deal with these satisfactorily because they can only destroy these viruses through destroying the affected files, said a local computer expert.

For instance, last week at



Monirul Islam Sharif  
The Daily Star, we had focused on the Q-soft Anti-Virus (QAV) which was locally developed. Another interesting feature of Monir's 'MVK' is that it has a

copy-protected software,—normally difficult on floppy disk—which cannot be duplicated by anybody unless one has an authoritative programming skill.

Besides, the environment of this software is very much user-friendly and professional. The screen design and its decoration are better than Norton's. Indeed, the MVK is quite impressive in its looks and its usage.

"I first came to know about the Dhaka Virus at the Microland, a problem to which they had no solution," Monir, who is rather shy, said. "After a few days, my PC was also attacked by the Dhaka Virus and as a result, my files were crammed with the garbage-data and the files had increased in their sizes astonishingly."

"Feeling disturbed, I started to analyze the affected files soon afterwards," he pointed out. "At last, I was able to detect the nature of the virus."

"My observation is that it multiplies the file size from 1857 bytes to (1857+16) bytes. After a week's work, I got the solution," he added.

Monir, the eldest son of Prof Rafiqul Islam Sharif of Dhaka University, has done a great job. "I have used the software and my opinion is, in some aspects, it is much better than similar international software," said a local user.

Monir's work once again proves that we have the ability to enter the world software market and the government should pay attention to this sector immediately.

**L**AST year, we witnessed a global price war in PC hardware. This year price war in software market has begun. Every software company is going to cut their price. When Borland International Inc. announced a new version of its spreadsheet programme, QuattroPro, for the cut-rate price of 50 dollar last August, computers were not impressed. An audience of industry executive was asked at a conference whether they thought the move was brilliant or desperate. Eighty two said desperate. If this is true, much of the software industry seems to be approaching desperation.

The price war that has infected the PC hardware business for the last few years is now entrenched in software. Now, the software of 300 dollar are available for 100 dollar. Shipments grew by more than 25 per cent in the second quarter, but the revenues were up

## Price War in Software

By Staff Correspondent

only 14 per cent.

There are lots of reasons for price war. One of the reason is the declining price of PC hardware. According to International data corp, the rate was 32 per cent last year. So it is hard to sell a 500 dollar word-processing program for a 1,000 dollar computer. Now the company offers groups of programs sold in bundles that list for 50 per cent off the retail price of the individual packages—and retail for 45 per cent to 70 per cent off that. Another reason is—there are the price wars in various categories, often sparked by a competitor thirsting for market share or entering a new area. Say, Microsoft offered its 495 dollar Access (a database package) for 99 dollar during a three month promotion

and sold 750,000 copies.

The funny thing is—promotional prices tend to become permanent—or close to it. That's because they are followed by so-called competitive upgrades, discounts offered to owners of competing products.

For example, the 100 dollar list price that Borland now light on its boxes, was the special promotional price it offered to users of Lotus 1-2-3 a few years back. And in the case of Microsoft, even though the promotion for Access has expired, the price has only inched up to 129 dollar.

In the September quarter, Microsoft's revenues rose 20 per cent to 983 million dollar and earnings were up just 14 per

cent to 239 dollar million. Worse, revenues actually declined 5 per cent from the previous quarter, and earnings were down 10 per cent. Net margins dropped 1.2 points to 24.3 per cent still a level of Profitability rivals would ill for. For many Microsoft rivals, profits are simply vanishing. Borland's sank 43 per cent to 2.8 million dollar, on revenues down 16 per cent to 107 million dollar. Analysts believe that an initial public offering by Wordperfect Corp. is being postponed because of depressed earnings.

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