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### **The quest for a better, IT-driven life**

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BANGALORE's first-ever exhibition at the world-class international tech park (ITPL) was a bit of a disappointment for IT professionals, but for school children and the general public, it was something to write home about. Crowds invaded the stunningly built ITPL - estimates are about 70,000 odd visitors came every day. Bangalore IT.Com 98 may have promised to bring IT to the people - instead it brought the people to IT.

They saw the latest offerings by Siemens Nixdorf - a notebook computer in a magnesium body costing Rs 3 lakh plus. They saw, for the first time, Apple Computer's iMac on display. Compaq, Wipro Acer, Texas Instruments, BPL were all displaying their latest products.

But food for thought was provided at another venue - the seminar series called the Global Village. Many speakers drove home the the fact that India - and Bangalore - cannot take growth for granted.

In a live video-conference, Raj Reddy (dean, computer science), Carnegie Mellon University, USA, pointed out that the next 50 years will see even more dramatic changes in the way we use technology than the past 100 years.

According to him, there are three factors that are propelling this exponential growth. The size of the features on a chip have gone from 10 microns to 1/4 micron over the last 25 years and the fundamental limits of material science and physics are not expected to be reached for another 15 years.

At the same time, the size of the chips have gone from 1/2 cm square to 2 cm square. The number of components per chip is expected to exceed 100 million by the year 2020.

This will greatly impact the way we learn, the way we work and interact with each other. He predicted that over the next 40 years, we can expect:

- Computers that talk.
- TVs that hear and phones that show pictures. These will cost just a few hundred dollars.
- Invisible computers and intelligent agents. These will be accessible to anyone, anywhere and at anytime. They will permit instantaneous access to movies, music and books.
- Embedded computers in appliances. This will result in computers that will cost a few pennies and require milli-watts of power.

How will all this affect India? "It is sometimes said that the last thing developing economies like India need is the most advanced technology created by the human race. I beg to disagree. The have-nots need the benefits of IT more," said Reddy.

Reddy pointed out that technology can be used to save lives, provide education and entertainment on a personalised basis, and thus improve the quality of life. Virtual libraries, laboratories and lectures can be reached to the most remote locations in the country. But for this, we need localisation and translingual translation software.

The possibilities for effective use of IT within the Indian context appear to be limitless, he said. We have the opportunity to transform our society.

- From a nation of illiterates and semiliterates to a nation with lifelong learning skills capable of accessing knowledge and knowhow-on-demand from global databases.
- From a nation suffering from malnutrition and poor hygiene to a nation with universal affordable healthcare.
- From a nation squabbling about how to overcome the language barriers into a nation which has transcended the language barrier.
- From a nation of clerks pushing paper to a nation of productive problem solvers, and
- From a nation who looks to the government to provide jobs to a nation of entrepreneurs who create jobs.

While Reddy's view of information technology to solve social ills in India may sound too idealistic, but agreeing with him was the Bangalore Declaration on Information Technology, adopted by the delegates to Bangalore IT.Com '98.

The declaration will be endorsed by Unido. Among other things, the Declaration recognised that IT has the potential for socio-economic transformation unprecedented in history.

The Declaration also urged the proponents of IT to realise that:

- The latent intellectual talent in the developing world be harnessed to create monetised intellectual property in IT, as this leads to rapid generation of national wealth.
- The priority areas for application of IT are agriculture, primary and improved access to health care, access to data for planning and administration and low-cost communication.

Vinay Deshpande, chairman and CEO, Ncore Technology, regretted that for many Indian companies the dependence on external knowhow for design and technology is very high.

"This is perhaps because we have focussed too much and for too long on how to become low-cost producers," he said.

It was time to take some calculated risks and view innovation as the Bank of Tomorrow, said Deshpande.

Innovation is the single best way to leapfrog competition, move ahead of the industry pack and, most important, create new ways to bolster profit margins and fuel future earnings streams, he emphasised. Indian entrepreneurs must provide alternatives to what is available in the developed countries, he said.

Taking the example of CHOIS (Cable-based Home and Office Interactive System) technology, he said that it was an excellent example of a uniquely local solution for uniquely local needs. This technology facilitates a whole series of interactive infotainment services using the existing Indian cable-TV infrastructure, including video-on-request, interactive shopping, information on a variety of topics, interactive advertising, etc at a very low cost to the Indian cable viewer.

It is innovation that will take the Indian software industry far. Even the projected export levels of \$10 billion by 2002 and \$28 bn by 2008 can be surpassed by encouraging entrepreneurship. In the long term though there is one element which should make us feel concerned, he said.

"Can this boom of software export and application last for decades, merely based on software developed in other advanced countries which is operated by our people, as application support personnel, data analysts and market developers, or as programmers who supply code under someone else's direction?" he asked.

On the same note, though more passionate, was the barrage of questions posed by Peter D O'Neill, founder editor of Third World EEC News Features. "Datagrab is the gold rush of the 21st century. To gain data-control of and run the 21st century engines.

Alliances of multinational companies, globally operating banks, all want this glittering prize - and it springs from the almost virgin, individualised data services in the social sector of developing countries.

If the poorer are to become richer in IT, how does one ensure that they do not end up being paid in coupons and chits which can only be redeemed in the multinational company store?" he asked.

Such queries almost never arise in IT exhibitions and seminars. Bangalore IT.Com was raising issues that the corporate sector tends to ignore or postpone for a rainy day, all in the immediate interests of profitability.