

ANDY COMMENTARY ON BACK.



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# I n s c i g h t

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Prof G Padmanaban, Mr Ratan Tata and Mr Malwad at the inauguration of the Digital Library (l to r).

## DIGITAL LIBRARY

The J R D Tata Memorial Library at the Institute is one of the best scientific and technical libraries in India and caters to the information needs of organisations throughout the country. In keeping pace with the information age, a state of the art, digital library was inaugurated by Mr Ratan N Tata, Chairman, Tata Group of companies. The Tatas have contributed Rs 1 crore to the annexe housing the library. The annexe is being equipped with the Digital Information Services Centre (DISC), that will hold a collection of CD-ROMs of chemical

abstracts, current contents, science citation Index, full text of many journal articles, a collection of Indian music and encyclopedias.

The Institute itself is a source of contemporary information on science and technology. It publishes over 1500 articles in journals of international repute, and over 100 Ph D thesis a year. It handles over 200 sponsored and consultancy projects whose outcome is disseminated through reports. All this information is amenable for digital dissemination. IBM's digital library software used in some of the world's best libraries including the Vatican Library will be used to handle this voluminous information. The software package has been donated by the Tata-IBM. The software can also handle multimedia information which will make it possible to capture lectures by eminent scientists, Institute colloquia and conferences.

The Institute has some of the best known teachers and it is envisioned that over a period of time, the Digital Library will include some of the Education On Demand Services making quality education available to students anywhere, any time across the country in the near future.

In 1997, through the Online Public Access Catalogue (OPAC) and the Current Awareness Services (CAS), the library made a modest entry into the digital world. Today, the digital library can act as a role model for future digital libraries in India. With the increased thrust towards the creation of the National Information Infrastructure, the digital library will become accessible from every nook and corner of the nation and will be a national asset.

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**Sridhar Santhanam**

*Being a visiting scientist in the Department of Mechanical Engineering has been a very satisfying experience for me. Coming from an institution where teaching consumes a significant fraction of one's time and is predominantly undergraduate in nature, I have found it a welcome change to teach just one course a term to postgraduate students.*

*To a visitor, it is apparent that the strength of the Department and the Institute lies in its research activity. Faculty and research students here are engaged in solving some very interesting and difficult problems at the cutting edge of science and technology. Another positive aspect is the excellent camaraderie among the faculty in the Department, a situation that is rather rare to see in academic institutions these days.*

*Living on campus has allowed my family to experience campus life and make some good friends. We have liked the sedate atmosphere and pleasant surroundings. On the whole, it has been a fruitful visit and I hope I get another opportunity to spend a sabbatical at the Institute.*

**My visit to the Indian Institute of Science - Andy Ruina**

*For six weeks this past late winter I visited my friend and colleague Rudra Pratap (RP) in the Mechanical Engineering Department at IISc. We are bit by bit, if not byte by byte writing a book together. I had a great time. I liked, as I always do, the company of RP and his family. But that is not IISc per se. I enjoyed all his colleagues, the ever-so-humble graduate students, the department staff, the tea board, the coffee board, the faculty club, the guest house annexe, the unused air-strip, the carum board, the unstoppably great weather, the 50 meter pool, and the monkeys on campus. Due to an infected toe, I also got to enjoy the health centre too many times.*

*By reputation, India is a place for Americans to get sick. I didn't get sick. In fact I got more and more peppy as my visit progressed, and I found India, and IISc in particular, to be especially friendly to foreigners, at least to me in particular. The Institute is an inspiring and pleasant place to work. There are of course minor things that were annoying - the intrusion of cars and two wheelers, the plethora of bureaucratic problems and the evening mosquitoes. But there were only two things which really bothered me which I will summarise as 1) traffic, and 2) Traffic.*

*The traffic on Raman Avenue was a complete terror to me. To have a campus split by such a fearful and dangerous zone is really too bad. I know that tunnels are planned to improve things and if priorities are right, there will be tunnels that put the road under a level connected campus. I noticed on a wall that IISc is rated above Harvard University in some University ranking. Harvard paid to put a busy street underground to keep its campus well connected and IISc should match or better that!*

*The Internet traffic jam at IISc is crippling. For a researcher in a technical topic to interact productively and keep up with the world, good Internet connections are essential. At IISc, at least as of this past March, files of 1 megabyte or larger could be transmitted only with very low reliability with very large cost in time, and a very slow transmission rate of up to several days. For my work with Dr Pratap I would like to be able to send within a day and with 99.5% reliability, files of up to several megabytes. Here in Finland where I am visiting now, I, one person in a large Institute have more band width than all of IISc put together. I have, say, on average, 1000 times the data transmission rate I had at IISc. I can thus practically, and without spending hours of my time, send and receive co-authored papers in progress, quickly look up research sites download papers from around the world and so on.*

*Similarly, people can download my papers from my WWW site and see what I am doing without dedicating an afternoon to the project. I believe that the long term research productivity as well as international visibility of IISc researchers would be greatly enhanced by immediately and dramatically improving the international internet bandwidth and reliability. A quick factor of 100 improvement would be a modest goal though it will still leave the Institute a factor of 10 behind its peer institutions abroad. As an outsider, perhaps the opinions are out of place. So let me conclude more simply. The Indian Institute of Science is a great place to visit and work and even though it has too many cars and too few bytes passing through, I already feel nostalgic about my visit and want to go back.*