

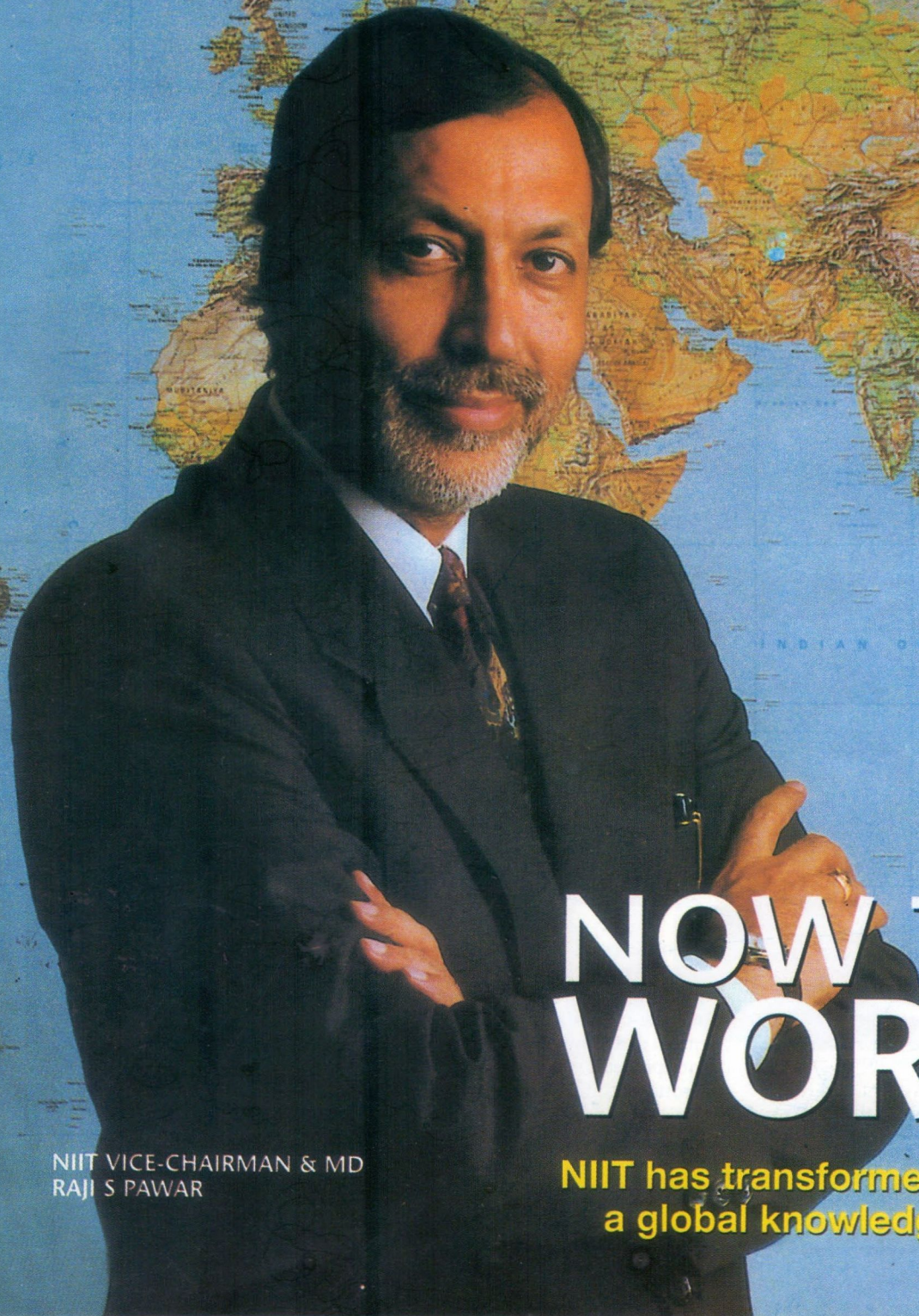
Business India

THE MAGAZINE OF THE CORPORATE WORLD

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NOW THE WORLD

NIIT VICE-CHAIRMAN & MD
RAJI S PAWAR

**NIIT has transformed itself into
a global knowledge player**

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Training outside the groves of academe has not enjoyed a particularly savoury reputation in India. The local equivalent of the crammers in the UK has been the coaching class — a system designed not to impart any modicum of knowledge but with the specific purpose of "cracking" a particular examination.

Even the relatively new area of computer training has had more than its fair share of fly-by-night operators. It is not unusual to read advertisements from organisations that offer to "familiarise" you with, say, Web designing in a two-day course. Numerous mom-and-pop outfits have sprung up to woo the gullible into parting with their money for what they believe is a passport to the latest El Dorado — a career in software. On a more organised level, there has been the recent scandal over Enterprise Resource Planning (ERP) courses which were run using pirated software and by people of doubtful credentials. Individuals paid lakhs for the "training" programme only to discover later that they were taken for a ride.

In this environment, it is evidently difficult for a company to not only make it big but also acquire a sterling reputation. NIIT is one of the few that has managed to do it.

This was achieved in the first place by focusing on developing credibility and quality. Achieving credibility is not as simple as it may seem, for it encompasses maintaining a presence and also ensuring that courses run to schedule, no easy matter in an industry fraught with attrition. The principle of success for NIIT has, however, been its emphasis on research and development, not just in software but the very basics of human understanding, the science of cognition.

Building from a sound foundation, NIIT has capitalised its position, vaulting upwards in both education and software. As its 18th birthday approaches, the company is readying to take another couple of leaps forward, launching itself into the world of branded software on the one hand, and of growth through acquisition on the other. Although the company is still largely held by entrepreneur Shiv Nadar and his close associates, this has not fazed founder and vice-chairman Rajendra (Raji) Pawar.

NIIT's success to date and the obvious faith in its future plans is reflected in the stockmarket rating of the company. The share is today priced at Rs2,055, rubbing shoulders with the other infotech high-fliers. These are the companies that have the potential to be the star performers even among the best in the world.

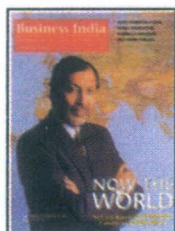
The other point to note about NIIT is that it has grown out of its geographical roots. Its senior staff are based all over the world and, in these networked days, it does not matter where they are. Its business too will be even more Internet-centric with the passage of time. In some sense, it is India's premier virtual company. It serves as an inspiration to the thousands of Indian entrepreneurs who are riding technology and the Internet to get out of the throttling clutches of a command economy and a Big Brother government.

Ashok H. Advani

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**Learning
knowledge**

What appeared to be merely a canny business opportunity at first glance has developed into an enterprise of breathtaking scope and dimension



Cover photograph
PALASHRANJAN BHAUMICK



PALASHRANJAN BHAUMICK

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Thorium is the word

Often criticised for being covered in a shroud of security and secrecy, Bhabha Atomic Research Centre has been the incubator of a number of strategically important technologies. Today the focus is on Thorium technology



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Whether rural India is really the far-flung villages or C-class towns and their surrounding areas remains a matter of conjecture



Lear

What appeared to be merely a canny business opportunity at first glance has developed into an enterprise of breathtaking scope and dimension

ning knowledge

Visionary Rajendra S. Pawar, backed by a team of dedicated disciples and the continuing support of infotech entrepreneur Shiv Nadar, has acted enterprisingly with NIIT Ltd, the first purely human-asset-based company ever to be included in the august BSE Sensitive Index.

Today NIIT is definitely moving out of the kiddies' league. It has expanded out of its training niche into education, and turned its in-house software production into a global business. More importantly, all this has been done with a continuous and stern eye on operating profits, yet the company has not skimped on research and development. Even more remarkably, it has found the spare cash to invest in basic research, something few of its counterparts in Indian industry have ever done, and certainly none in the field of information technology have done so to any substantial extent.

Now NIIT is poised to establish itself in a far wider sphere, unleashing its internally accrued \$100-million war chest on a series of acquisitions abroad during the next few months. This will consolidate its leadership position as the first commercial enterprise that has exhaustively researched and applied technology to the business of imparting knowledge.

"Moving up the value chain is everyone's *mantra* these days," says Rajendra (Raji) S. Pawar, vice-chairman and founder of NIIT Ltd, the company he started with seed capital from then boss Shiv Nadar way back in 1981. "For NIIT, moving up the value chain has been a way of life ever since we started."

Pawar and Vijay K. Thadani (now

president and chief executive officer), employees No 1 and No 2 respectively of what has grown today into a diversified Rs648-crore company (as per last year's closing, September 1998), started operations in Nariman Point, Bombay (now Mumbai) in February 1982, at the company's first training centre. By April that year they had signed up 99 students for the very first computer courses conducted in India by a vendor-independent private agency.

Reliving those tense times, Thadani remembers NIIT's very first customer. "We announced an unconditional offer that signees could complete their course whenever they wanted. Our first customer was a shippie [merchant seaman] who had to take off even before the course began and never came back. We managed to trace him to Chandigarh once, but could not contact him. Wherever he is today, he is still welcome to complete our course!"

It is precisely that credibility and willingness to stand behind the company's commitments that has taken them far beyond the simple concept of a company running computer training courses to an enterprise that is seeking to understand and implement the concept of knowledge across the gamut of information-technology-led human activity.

Clearly, from the sheer business point of view, it has been a successful gambit. The company's revenues have already grown 35 per cent on an annualised basis this year, with the turnover for the first nine months already at Rs633 crore. Net profits have crossed 44 per cent to just under Rs89.5 crore for the first nine months, giving an indication of substantially more

addition to reserves, which already stand at Rs260 crore. The equity base of the company expanded by 50 per cent this year to Rs38.65 crore following a bonus issue, so dividends could probably hold fairly steady without affecting capital accretion in the reserves account. Just about half the revenue comes from overseas, taking NIIT to the position of 4th largest IT company in the country.

From the point of view of professional management, the reduction in interest costs is one of the most crucial factors. The figure, an astonishingly low Rs2.1 crore for the first nine months, has actually reduced, while revenues of NIIT and its subsidiaries grew by 35 per cent to Rs 633 crore. While revenues will show a seasonal increase during the last quarter as borne out by the impact of the third quarter on annual sales (year on year for the past year), overall the usage of money is clearly being handled very well.

Credibility has been a key issue for the company right from its fledgling days. In the beginning it had to contend with the fact that the only private courses were tutorials run by college teachers in their spare time, some of which had grown into fairly noticeable, but, not necessarily respectable, enterprises.

Today, with universities reaching out to accept collaboration with the private sector in order to ensure professional-quality computer education on campus, the emphasis must lie on leadership in effective knowledge transfer. "Knowledge is the issue," Pawar points out. "It is the only thing that a person can give away without loss, only gain for both the giver and the given."

"To understand where we are reaching, you must stop looking only at the computer courses where we started, and where we still play a critical role. Our efforts to build quality into our teaching skills have led us far beyond value-chain concepts to cutting-edge research into cognitive systems on the one hand, and into pure e-commerce technology and deployment skills on the other. This enables us to create and constantly improve learning technologies that can be deployed anywhere, using multimedia, and then to actually deploy them, through our initiatives on the Net and on the ground, through our offices in 17 countries across the world," explains Pawar.

The cognitive approach

According to the *Oxford Dictionary*, cognitive ('kognitiv/adj) means of or relating to the action or process of acquiring knowledge, by reasoning or by intuition or through the senses.

"In the very early days," recalls chief operating officer P Rajendran, "we started developing standardised teaching modules using commercial authoring tools. However, when these were applied in the field, different course conductors would add variants, drawing on their personal understanding or ability to explain the content."



Nadar (l) has consistently supported the NIIT team led by Thadani

Very quickly, matters would get out of hand, with courseware rapidly losing its reproducibility in different centres. The problem was clearly that intuition was being allowed to overtake reason in the process of transferring information. Instead of improving methods of helping students to acquire knowledge, the process was getting unmeasurable and therefore unreliable.

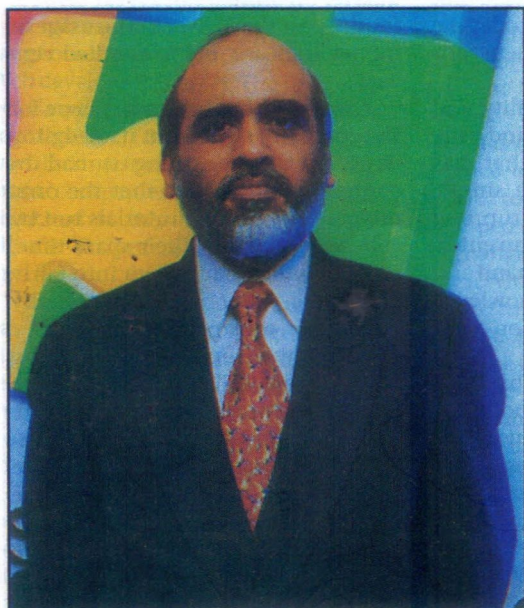
Former banker K.K. Bhardwaj, who today heads the STRIDE (strategic initiatives in development of education) group at Synergy, NIIT's spanking new research and development facility at IIT Delhi (which also happens to be the *alma mater* of at least three top NIIT directors – Pawar, Thadani, and Rajendran – as also R&D chief Sugata Mitra and Bhardwaj himself), saw the weaknesses of the commercially available authoring tools. He pioneered the initiatives that led to the development of in-house authoring tools. Today these are used to create startlingly better ways of

helping students solve real-life problems rather than merely discovering the complexities of new knowledge.

In the case of Microsoft's WindowsNT, the five-day systems management course has been reduced to just four days, dropping to 80 per cent in terms of time. But time to train is not the most critical improvement, although it does reduce the total cost to client organisations. Computer Associates, the \$4.7 billion software agglomerate, has an enterprise management software Unicenter TNG, which is used to track the real-time status of the enterprise's computer systems, down to the actual software and hardware installed on individual desktops.

This can be remotely installed and configured, with diagnostics that allow a centrally located system manager to administer the entire system, even when it is made up of completely different vendor products, such as personal computer hardware and software, Unix boxes, mainframes, network components, and so on. Properly used, large enterprises can save crores in staffing costs and time to recover from stoppages. Competitive software systems include Tivoli from IBM.

However, system managers need to



For Rajendran, curricular evolution is the key

be able to very quickly take decisions based on the information thrown up by the Unicenter TNG console. When NIIT explored the CA training system, it found that the courseware could be redesigned effectively, not only reducing the time and cost of training but also improving the ability of system managers, the trainees, to take good decisions quickly. This is because the courseware creates a real-life environment for implementing a Unicenter TNG solution.

Using the internally engineered model-centred learning architecture (MCLA), NIIT stores the content as objects, builds a standardised layer of middleware (format- and platform-independent) templates, and can therefore instantly generate or update output designed for any medium, be it print, multimedia, or the Web. The beauty of this methodology is that knowledge experts can control the process, instead of depending on arms-length software specialists.

Treating the content as objects means that the databases can be updated whenever need arises, and the courseware that draws on that content will automatically and necessarily reflect the very latest version. With the middle layer, which is platform- and format-independent, containing the templates, designing and implementing forms to suit local tastes can be done entirely without affecting the quality of the content itself. Finally, with the middle layer incorporating the necessary hooks to drive any form of output, it ceases to matter whether the system is needed in print, multimedia, or the Internet, since it will contain the correct content allied with a well-designed form factor.

"We regularly conduct customer satisfaction surveys, both for users and for their system supervisors to determine that we are imparting the problem-solving ethos effectively," Bhardwaj points out. A very long time back, NIIT found that average students were being sent into industry without an essential ingredient of their makeover — the ability to take effective decisions on their own, rather than wait for orders. This has triggered a constant search for ways and means



Bhardwaj pioneered the initiatives that led to the development of in-house authoring tools

to encourage students to take charge of their knowledge accrual process.

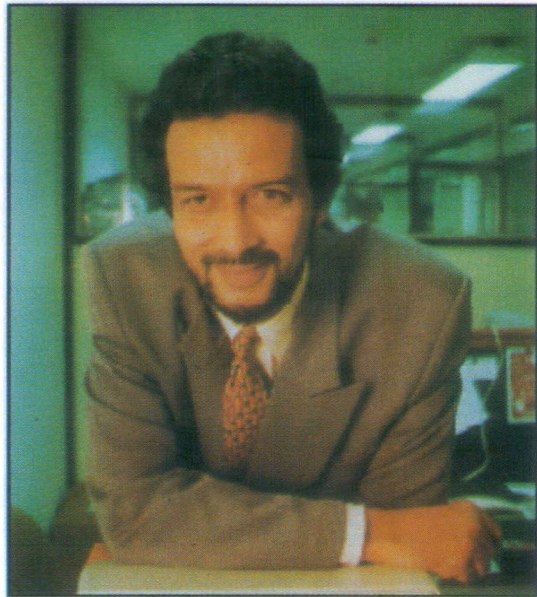
P. Rajendran recalls the evolution of curricula at NIIT from 1982, when the first course was designed, to 1986, when instructional design was consciously incorporated. The process of improving content transfer continued, so that in 1989 the integrated higher education curriculum was introduced. This was followed by a seminal change in concept in 1992, branded as Future Focus, where non-computer classrooms were deliberately added in order to expose students to emerging computing concepts over and above the technologies being studied. For the first time, courseware also included guaranteed exposure to industry through an internship. The industry collaboration programme, administered by S.N. Uma, has expanded NIIT's own relationships in industry to the point where 1,200 companies (300 are software exporters) accept NIIT students during their internships. Specialists in every branch nurture these relationships.

In 1995 the curriculum again expanded towards the global market. The global net program was designed to encourage students to prepare to work in any environment, strengthening their self-confidence to take responsibility. This year the curriculum has undergone another revamp.

The Web-centric curriculum comprises four semesters — Web programming, object-orientation, visual code development, and Web application development — of 28 weeks each. Professional certifications for the successful students include Java, Microsoft Visual Basic, Microsoft professional architecture solution design, and (for those who have cleared all the Microsoft certifications), the umbrella Microsoft-certified solution developer (MCSD). The complete GNIIT programme also includes a year in professional practice. These programmes have been standardised and stabilised effectively across the globe and through the use of different media, including the Internet, mainly because of the company's proprietary MCLA. This multiplies the productivity of the set of best practices developed within the company as it is being deployed outside.

Hardly soft

For a company like NIIT, its investment in R&D and software development is an integral part of its ability to grow in its apparent sphere of education. In fact, a glance at the last four years shows that software has gradually grown its share of total revenues, to over 40 per cent now. The company has become the world's largest vendor of multimedia titles, introducing over 100 new titles every year.



NIIT's software has evolved with the changes in the industry in general, says Thakur

It plans to introduce a stunning range of software solutions aimed at the Web developer's market. The first product, EasyPay, was developed as part of a contract for CheckFree, one of the world's largest electronic bill presentation companies, and commercially launched at the end of June at the Biller's '99 Conference at San Diego in the US.

"Our evolution in software design has grown with the changes taking place in the software industry in general," feels Arvind Thakur, director and president of the software business group. "In the 1970s, the emphasis was on automating the back office. With the introduction of distributed computing in the 1980s, software moved towards automation of the front office. Products in this area are at a fairly mature level today, but an entirely new paradigm in the world of computing is the introduction and development of the World Wide Web, both as a medium and as a delivery mechanism. E-commerce is our response to this phenomenon."

Thakur, who set up NIIT's software business in Chennai (Madras at the time) in the 1980s and has seen the company's growth in software services mushroom to nearly equal its education business, now lives in Delhi.

Pawar explains that at some point it was necessary for the top team to be together in the same place, which is why Thadani also moved to Delhi from Mumbai. Today the company has grown to a point where geography is no longer a bound. Gopal Chakravarti, heading the European business group, lives in London. Thadani, who also leads the finance function and who is focusing on the company's next foray, growth through acquisition, has just moved to the company's US headquarters at Atlanta, Georgia.

"For us the solutions business has migrated vertically in 12 years, up from the plain vanilla software business," senior vice-president Shrikant Inamdar, head of software development, comments. "This has contributed to our physical presence in 21 countries, which can expand to 26 easily, with business developed in 31 countries today." NIIT has changed its focus over the years, from services (projects and manpower support) to solutions and products. The target for both is the burgeoning e-commerce market, not just for third parties but for NIIT itself.

"The critical quality factors in software development are defect levels and cycle times," explains Thakur. The company, which achieved the SEI-CMM Level 3 (the Software Engineering Institute, part of Carnegie Mellon University in the US, has developed a Capability Maturity Model for software code development) in 1997, and has its sights set on attaining the highest Level 5 by

December this year. Every NIIT-ian carries a signed certificate of intent from vice-chairman Pawar in their filofaxes to this effect. SEI-CMM-5 takes care of the company's ability to reduce defect levels, which are eliminated in the process of development itself, hence do not load the company with incremental costs of checking and fixing bad code.

While software defect level reduction is important, it is achieved by improving development processes. Cycle time reduction is more interesting really for the future, because NIIT has made great strides in this area by creating software tools that actually make it possible to write good software much faster and more accurately. "I have never seen anything like the concepts that NIIT has actualised," avows Inamdar, who moved just six months back from Motorola. He was responsible for setting up that company's software centre in Bangalore, which follows Motorola's 6-Sigma quality procedure, and spent a lot of time and effort benchmarking software development systems around the world. Pawar persuaded him to return to India after he moved to Australia last year. "NIIT has perfected the capture of knowledge from historical data, using this to generate optimal code to develop entirely new



Inamdar: "Never seen anything like it!"

The market view

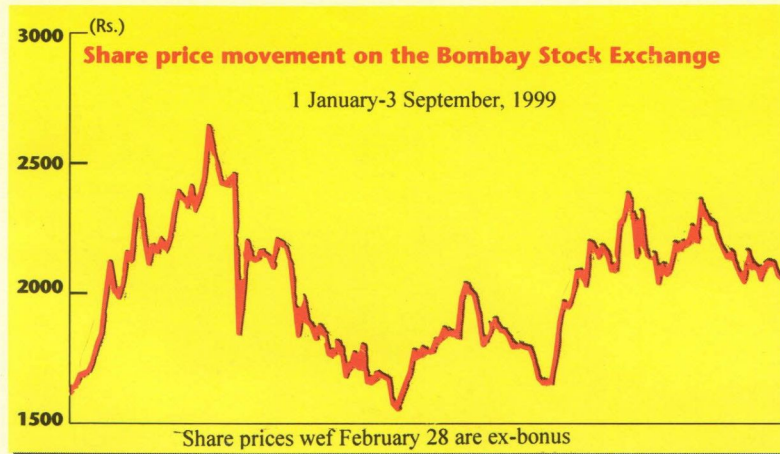
Five years back nobody would have imagined that NIIT would be a part of the Sensex, the country's stockmarket barometer. But a year back this is precisely what happened. Here is a company operating in an industry whose growth prospects, according to the pundits, are immense. This, coupled with the fact that NIIT is a growing company, has helped its share price move up exponentially. At the start of 1997 the stock was changing hands at Rs263 on the Bombay Stock Exchange. By August the same year it had touched Rs500, then doubled in April 1998, and in the current year again doubled at around mid-January. In other words, the share's value has doubled thrice in less than three years and is currently traded at Rs2,055 after bonus. Of late the stock appears to be showing signs of weariness. At present the price-earnings multiple based on annualised earnings of fiscal 1998-99 is around 66. Is it overpriced?

Rasesh Maniar, chief dealer at NSE broking house Mukesh Babu Securities, says: "NIIT still has the potential to appreciate by another 30 per cent within six months to a year depending on market conditions." This means that NIIT should

applications. I can personally vouch that the code generated by the NIIT solution is extremely optimal."

NIIT has developed some nine-odd tools which Inamdar is planning to commercialise, but this may not happen till the applications product launch takes place. Aside from NIIT EasyPay, the bill presentation solution, which also has a server solution called NIIT EasyPay Server, products ready for release include electronic storefront EasyMart, e-commerce development framework EasyCommerce, interactive voice response system EasyVoice, and electronic service delivery solution EasyService. The brand finalisation exercise will be legally complete shortly.

The development tools, which are likely to create a stir in the software industry when they are made commercially available, include the software engineering tool set (SETS) and a test case generator (TECGEN), which automatically simulates an environment



settle around Rs2,700. Some brokers are even more bullish — they believe it should range between Rs3,000 and Rs3,500 before the end of this calendar year. NIIT's valuation is similar to that of Satyam, well above the likes of Tata Infotech, Aptech, and Pentafour Software but well below the reigning king of IT stocks, Infosys.

Maniar disapproves of such comparison. He says, "NIIT cannot be compared with Aptech, Infosys, Satyam, or Pentafour." The reason is that this company is not a pure training company any longer but is clearly positioned in software prod-

ucts and services. Its global presence provides a strong network for marketing. This in itself is a clear differentiator from other Indian quoted companies.

Be that as it may, NIIT now has to bring out results which should catapult it in the league of Infosys or else it will always be called the poor man's Infosys. The latter, even after a one-to-one bonus, is traded at around Rs5,500, while NIIT's price is less than half that. And, mind you, after a bonus with a ratio (one share for every two shares) that by no means can be considered liberal.

♦ KRISHNA KUMAR C.N.

for testing the code. There is Promon, a project monitor (which can be deployed both as client/server and Web-centric models), RRS, a remote review system that allows both peer and expert review of projects, NetCare, a Web-based tool that enables customers to stay in touch with project execution teams, and VSCE, a virtual software construction exchange, using which software teams can work together across geographical and temporal boundaries. Other tools include TTS, a time-tracking solution, RMS for resource management, and SPD, a process database.

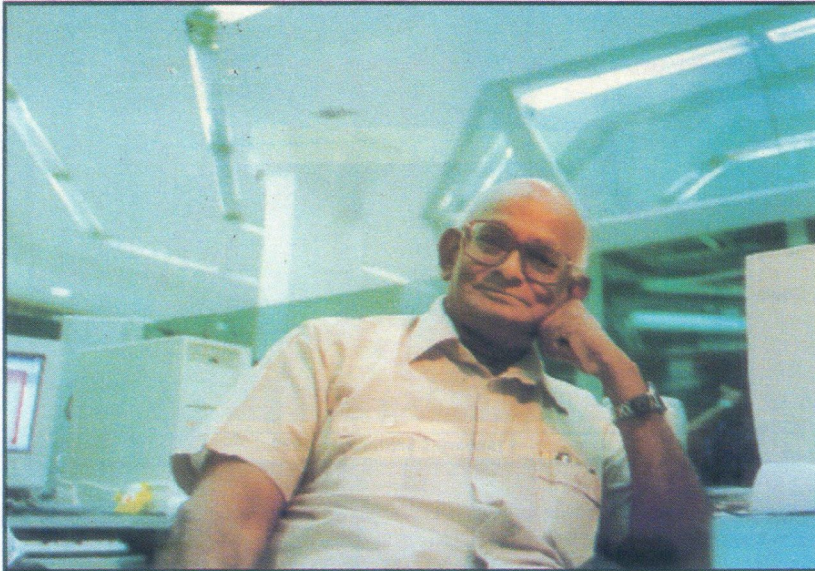
SETS, TECGEN, and similar tools allow customers and project partners to work together remotely from start to finish of the project. This should result in a considerable improvement in the quality of projects being executed in the software industry if the company does decide to make them commercially available. The other set of tools manages product development,

forming the conceptual framework within which the model-centred learning architecture has grown. But the company intends to continue setting itself goals for business growth through process improvements in the development business.

"We have set realistic but hard targets for ourselves," says Inamdar, "which include building six centres of excellence employing near to a 1,000 developers each, ensuring 30 per cent code reuse and achieving project cycle times not exceeding three months."

Core competence

"We are learning to make the transformation from data to information and finally to knowledge happen," says professor J.R. Isaac, former head of IT at IIT Bombay, who is today an advisor to NIIT at Synergy. His job has been to chart the essence of cognition, helping NIIT to understand the learning process so that the data transfer at the core of a session can be contextually



Isaac says NIIT's focus is on making information skills available vertically across enterprises

received as information and processed into knowledge with the minimum of disruption and loss. This efficiency gain, deployed across diverse topics, will achieve enormous effectiveness, which could lead to exponential gain for NIIT. Importantly, this efficiency will transcend the present focus on computer-oriented subjects, the process that began when NIIT started NIS, its sales and marketing training group, now spun off as a separate venture.

"In responding to the change inherent in the shift from the industrial age to the age of information, our focus is on making information skills available vertically across the enterprise, to top management, middle management, and workers, unlike the old paradigm where only top management held the keys to information," says Isaac. While efficiency in helping people to understand data as information is relatively well-known and is in fact the basis of traditional education models, the final conversion to knowledge is not, and this has placed NIIT in a premier position among software companies worldwide. NIIT undertakes basic research in education, with scientific papers published in fora as far apart as the Institute of Electrical and Electronic Engineers (IEEE) and Educational

Technology Research and Development (ETR&D).

According to R&D chief Sugata Mitra, who spearheaded the shift in focus from applied technology to basic research, "The successful use of the Internet ensures that cognitive systems will happen. Therefore, in order to continue to lead, it is essential that we know what these things actually are."

One such effort was a self-learning FAQ (frequently asked questions) compiler that searches for answers to queries by itself from the Website database. It began to be populated with a few responses created by Mitra himself. Inevitably, his fellow researchers, who had access to the trial version, commented that the engine displayed Mitra's 'character'. He then allowed others to create responses, and notes that since some time has passed, the engine now has a personality of its own. It has, in effect, become a self-actualising cognitive system.

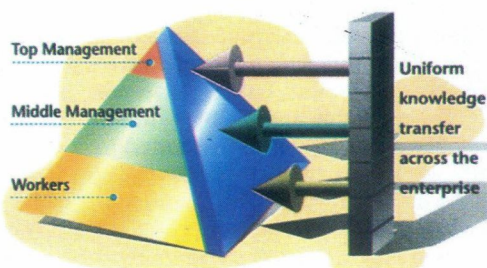
Another approach tried by Mitra

was the 'Hole in the Wall' experiment. This was carried out at NIIT's Kalkaji (in Delhi) headquarters, which abuts a low-income area. A hole was made in the brick compound wall, and a computer with a touch screen was installed there, connected with a leased line to the Internet. No effort was made to instruct the children of the area how to use the computer, but a camera monitored their response.

After some time several children became adept at surfing the Net, finding sites that displayed information in Hindi that were meaningful to more of their fellows. The adepts taught others, and soon a large number of children were using the Net, all without any help from NIIT-ians. NIIT researchers monitoring the activity found that the children taught themselves to use many of the computer's features, such as cut and paste, to pick up information from Websites and create documents and art.

Mitra concludes that traditional approaches to teaching computer skills will not be the only method of getting India's vast numbers to use the Internet, and in fact cannot be. With a total user base of around 900,000 students after nearly 18 years of existence, a number that probably represents close to half of corporate India's skills transfer (most observers agree that NIIT and Aptech, the two largest companies in the computer education business, have the lion's share of the industry), obviously less than 0.2 per cent of the country has yet been exposed formally to computers. That leaves an absolutely massive task ahead for India, yet one that may be tackled far more effectively if Mitra's research has positive results.

To get such innovation out of the company's staffers Pawar, Thadani, and Rajendran have evolved several interesting approaches. These add both motivation and reward in return for fresh thinking. One of these is the Managing Director's Quality Club, a very exclusive province of top-quality performers. Selected for their ability to 'stand for quality', they undertake an additional responsibility for a year to work closely with Pawar. Membership of MDQC is today the most significant recognition



in the company Two initiatives spurred by this forum were quality improvement projects and a special programme, "I in Quality", aimed at developing the concept of personal quality.

The company's first ISO 9000 certification came about through the initiative of MDQC member Ashish Basu. Today Basu heads the spun-off company Institute for Quality Ltd (IQL), which consults on quality process improvement.

Another major "spinnovation" was the concept of amalgamating speed with innovation. This was spearheaded by The President's Club (PC), begun in 1994. For instance, one of the major changes that has come about as a result of PC activities is NetVarsity (www.niit-netvarsity.com), a Web-oriented distance learning programme. In fact, the present thrust on e-commerce, exemplified by the ENIT program (www.eniit.com), also came out of this movement. Incidentally, one way of awarding recognition to PC members is to allow club alumni the right to sport the suffix *-ji* to their names.

Such innovative approaches are not the exclusive preserve of NIIT's Kalkaji (a Delhi suburb) headquarters. Mitra has been running a completely anarchic open-house session, the Cognitive Engineering Forum, every second Saturday since 1997. Researchers can shoot the breeze over a long, unstructured morning session that features an exotic lunch paid for by Mitra himself. Ideation that catches attention can result in projects taking off. The Centre for Research into Cognitive Systems at Synergy, in IITD, is one of the ideas that Pawar heard about and immediately endorsed.

Another project that has taken off rapidly is the company's decision to implement an enterprise resource



NIVALA

Mitra spearheaded the shift in focus from applied technology to basic research

planning system, R/3 from SAP, which is scheduled to go completely live across the organisation a year from now. This initiative follows the conceptual focus discovered by Pawar's team in the EVA concept pioneered by Stern, Stewart, a US-based financial consultancy. The economic value added of any activity is defined as the net operating profit after tax, which is the operating profit generated after allowing for expenses (taxes adjusted for the savings on interest costs) less the capital charge, calculated as the capital employed multiplied by a value defined as the weighted average cost of capital (WACC). NIIT uses it today to measure output of all processes, including individual merit.

As the table of the last three year's figures shows, ever since EVA has been used to motivate and focus employees on the real cost of doing business, the company has improved its effective bottomline nearly four times. The WACC has fallen to 19 per cent from its original level of 21. It is this attention to results that finally defines the team

that Pawar has built in the past 18 years. Although the company started life as a computer skills training enterprise, it has evolved beyond that to posing a strong possibility of emerging a software superpower with a stable of products and services that add value for customers in almost every sphere and activity. They are built around a rock-solid core of basic research into the very nature of knowledge acquisition, which is then made a part of every product offering, be it education or commerce.

Throughout its exemplary growth NIIT has spawned successful offshoots. However, when it moves into the next phase of growth through acquisition and merger, slated to begin by the end of this year, it will be faced by yet another fresh challenge — that of managing significant and rapid culture dissemination. While there is little in the background to indicate any fundamental difficulties in the ability to face this challenge, the fact remains that the company has not yet had to learn this skill. Whether it will succeed, and move on to generate exponential and continuous growth through the next decade of its existence will depend on the thus-far-proven skills of Pawar and his team-mates to continue to innovate and deliver.

♦ VICKRAM CRISHNA

Economic value added		Figures in US\$ million		
	1996	1997	1998	
Operating Profit	14.39	21.02	30.73	
Less: Economic Taxes	1.46	2.14	1.82	
NOPAT	12.93	18.88	28.90	
Less: Capital Charge (Av. Capital employed x WACC)	9.57	13.01	16.32	
Economic Value Added	3.36	5.87	12.58	