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CBSE schools can set their own term-end papers

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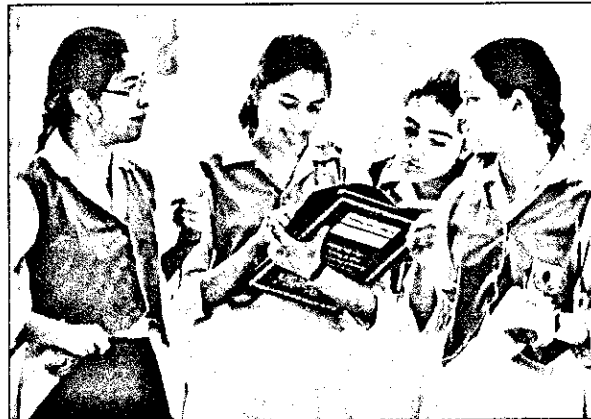
NEW DELHI: Schools affiliated to the Central Board of Secondary Education can now set their own question papers for the term-end test instead of having to use Board papers. This concession comes after opposition from top schools.

The CBSE has written to affiliated schools informing them that they need not use question papers provided by the Board for the summative assessment (SA) for the term ending this month, top government officials have told *HT*.

The move follows feedback received by the CBSE on the comprehensive and continuous evaluation (CCE) introduced in class IX from last September and in class X from this academic year. Under the CCE, the class X Board examination is optional. Instead of one year-end examination, the academic year is divided into two terms.

Students in classes IX and X are evaluated through two formative assessments (FAs) and one SA in each term. Till now, the CBSE was setting question papers for each SA and schools were required to use these.

But top private schools opposed this policy, arguing that by imposing its "external" ques-



■ CBSE has written to affiliated schools that they need not use question papers provided by the Board for the term ending this month

FILE PHOTO

tion papers, the CBSE was in effect forcing students to take four Board examinations — two each in class IX and X.

Several schools also questioned the quality of the CBSE papers. Some top government schools however said they wanted question papers set by the Board to ensure uniformity in quality of evaluation, amid fears that weaker schools might grade their students more liberally to show good results.

The Board in its letter has tried to draw a balance between these conflicting views — the desire of some schools to set

their own question papers and the plea from others for Board papers. The CBSE has given schools three options in its letter. Schools can choose to continue to use question papers sent by the Board.

Or they can use the multiple sets of question papers sent by the Board to mix and match questions and form their own papers.

The third option will allow schools to set question papers on their own without using any Board questions. They will have to send their question papers to the Board.

HINDUSTAN TIMES, NEW DELHI
TUESDAY, SEPTEMBER 07, 2010

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UN praise for rural job plan in Rajasthan

WATER MANAGEMENT Tamil Nadu also commended for water storage work

Chetan Chauhan

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NEW DELHI: A global report, which warned governments of major threat to food security because of erratic rainfall, has cited rejuvenation of groundwater under Mahatma Gandhi National Employment Guarantee Scheme as a success story for other countries to follow but warned against construction of big dams.

A UN affiliated body, International Water Management Institute released the report on Monday, 'Water Storage in Era of Climate Change' and has examined the recent trends of heavy rainfall and drought — terming them as a result of climate change.

Some of the solutions to adverse impact of water availability in future have come from India. One success story reported is from Rajasthan, where 10,000 water harvesting structures were built under MGNREGA to re-charge groundwater.

"It has resulted in possibility to irrigate 14,000 hectares of agriculture and benefiting over 70,000 people," the report said. These small investments have brought a big change. The villagers are now growing vegetables and other cash crops in addition to normal grains.

Tamil Nadu had achieved similar success through a different path. Several water storage tanks, which were earlier used for water storage in arid and semi-arid tracts, were converted into re-charge ponds for underground water.

The report also said that 499 million people in Africa and India can benefit by improved water management but did not advocate construction of big dams for irrigation purpose.

"Man of the 50,000 large dams but worldwide since the



■ Under the scheme 10,000 water harvesting structures were built to re-charge groundwater in Rajasthan. HT

1950s are intended to store water for irrigation... There are the adverse social and environmental impacts, including displacement of up to 80 million people from their homes and disruption of the livelihoods of some 470 million people living downstream from dams as a result of altered river flows," the report said.

The report instead proposes an integrated approach that combines large- and small-scale storage options, including the use of water from natural wetlands, water stored in the soil, groundwater and water collected in ponds, tanks and reservoirs.

"Just as modern consumers diversify their financial holdings to reduce risk, smallholder farmers need a wide array of 'water accounts' to provide a buffer against climate change impacts," said Matthew McCartney, the report's lead author and a hydrologist at IWMI. "That way, if one water source goes dry, they'll have others to fall back on."

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'Keep education out of strikes'

VALLEY IN TURMOIL Kashmir's head priest tells Geelani 'freedom' struggle shouldn't affect studies

HT Correspondent
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SRINAGAR: Pressure is mounting on Kashmiri separatist hawk Syed Ali Shah Geelani to keep education out of the purview of the continuous shutdowns and protests, which entered the 87th day on Monday.

After United Jihad Council chairman Syed Salahuddin, based in Pakistan-Occupied Kashmir and Kashmir's largest politico-religious organization, the Jamaat-e-Islami, now the Grand Mufti (Head Priest) of Kashmir, Mufti Bashiruddin has openly questioned the logic of keeping education subservient to the ongoing protests.

"The strikes have severely affected the education of our future generations. The struggle for freedom is alright in its own place but it should not hamper the education of our children," the Mufti told *HT* on Monday.

"Every nation struggling for freedom has suffered when the resistance had an impact on education. So, it is necessary that the struggle be separated from education," he said.

"Such is the importance of education that the first verse which was revealed by our Prophet was to 'read'," he said.

But Geelani is in no mood to relent. He told *HT* that though education was a concern, students have to observe strikes whenever they are called.

"I don't know what to do. Geelani says sacrifice is a must and the government shows no leniency towards students. We are squeezed by both sides," said Srinagar school who didn't want to be named.

ADVANI MEETS PM

A BJP delegation comprising L.K. Advani, Sushma Swaraj, Arun Jaitley, and S.S. Ahluwalia met the Prime Minister and Home Minister on Monday and submitted memorandum on the Kashmir situation.



■ Young boys throw stones at a security personnel during a clash following a protest in Srinagar on Monday. PTI PHOTO

The memorandum said that "there is a need to strengthen the security scenario in the state". The BJP's argument is that the touchstone of the centre's Kashmir policy should be to ensure its full integration with India and do nothing to help separatists.

It read: "If you analyse the nature of the present demands, they are all intended to weaken India's sovereignty. Dilution of Army's presence in the valley, dilution of the provisions of

the Armed Forces (Special Powers) Act, dilution of the Line of Control and allowing legitimacy to infiltration are only some examples of this kind."

"We said nothing should be done to increase the separatists' morale. The whole talk of a political package raises the fear that a package demoralizing for the armed forces may be given under pressure," Advani said.

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Tips for a new boss

Coping with new responsibilities and being a leader will require some initiative on your part

So you have finally got the promotion you were waiting for. Congratulations! All the hard work and efforts you put in your job have paid off, and you are set to climb up to the next level in your organisation.

Apart from the new designation and work responsibilities, other changes that will come your way. Coping with those and being a new leader will require some initiative on your part. Here are some tips to give you a head start in your new role:

Adjusting to your new position: Your initial days will be consumed by the need to understand your work responsibilities. Use this period to gauge the expectations your bosses have from you and the dynamics that govern the team.

Get comfortable in your new role by learning as much as



you can — your team-members, too, can provide valuable insights. The first step is to earn your team's trust, and the best way to do so is by demonstrating your commitment towards your job and willing-

ness to work hard.

When peers become juniors and former bosses your peers: A promotion in the same job will call for adjustment in relationships at the workplace. You might find

yourself in a situation where you are leading a team of employees who were previously your peers. You will also have a changed equation with your boss, with you having acquired seniority. Questions

like "Do I remain friends with my peers or act as the boss?" are bound to occur, testing the level of professional distance you should maintain.

It is best to maintain an unbiased professional approach in such a situation. No matter what, an effective boss cannot be a buddy to his or her employees.

Update your skills: Your boss found you the perfect choice to take on this role because you proved yourself through your performance and skills. Your learning and skills got you here, and to keep the good work going, identify what new capabilities you need to succeed in your new post, and keep the learning curve heading north.

Take advice: Adopt a proactive approach in understanding your new job's requirements. Talk to your boss and fellow managers to see the big picture — be clear on the expectations that your superiors have of you and your team, and the overall goals of your organisation. This will help you effectively lead your team towards success.

Lead effectively: Success will take a new definition for you as a leader. From individual achievement, your success meter will now be more a measure of your team's accomplishment. You will need to juggle effective delegation, taking action on the basis of feedback you receive and leading by example. ■

— Nimrata Grewal

Hindustan Times ND 07-Sep-10

P-02(SEC II)

RECRUITER'S FILE

The manufacturing sector is growing

Surya Roshni plans to recruit about 4000 people in the near future

What is your outlook on the manufacturing sector in India today vis-a-vis the global market?

The overall outlook for the manufacturing sector in India is positive and on an upward swing. I am optimistic that the sector will continue to be in the "growth stream" in the coming months, primarily due to a strong domestic consumption. Capacity utilisation is picking up in this sector.

On the other hand, developed countries like the US, the UK and other European countries are showing a depressing trend, due to a sharp decline in their key manufacturing sectors. The resultant effect has been a major positive shift in the manufacturing sector towards China and India.

What are the employee satisfaction initiatives taken by Surya Roshni?

The company has a wide range of initiatives to ensure employee satisfaction.

Models have been developed by management experts to ensure constant upgrading of training levels to ensure personal and group satisfaction. Various training and extra-curricular modules followed by the company are:

- (a) Three months intensive Management Training Camp or MTC.
- (b) Personality development camps for children.
- (c) Fauji training camps to inculcate a sense of patriotism, teamwork, discipline and hard work in the group.
- (d) Naturopathy, health

and Vipasana camps for employees and their families.

(e) Regular seminars, and lectures at all levels.

(f) Visits to various plants.

(g) Visits to places of cultural and historic importance in India by the staff and their families, dealers and retailers.

(h) Celebrating all major festivals and important national days together.

How would you define the work culture in your group? Surya Group's work culture follows the Japanese pattern of management, which is undoubtedly the best work culture in the world today. Everyone has the freedom to express their views and ideas, which helps the organisation excel in all spheres of its activities.

Ours is a positive work culture, one that is vibrant and dynamic, and where the leader is approachable for



J P AGARWAL,
Chairman & Managing
Director
Surya Roshni Ltd

one and all. This helps inculcate a sense of dedication among all employees.

It has been my experience that, over the last three decades, a large percentage of our employees who joined us, have stayed on with us, primarily because of our work culture.

Would your organisation hire in the next three to six months? If yes, then at what levels and functions? The spectrum of recruitment covers engineers,

MBA's, graduates, diploma holders, non-graduates and vocational cadre for our plants in different states, as also for our marketing offices all over India and the corporate office in Delhi. In the last six months, we have employed more than 4000 people. In view of our expansion plans, an equal number are expected to be employed in the next six months.

How do you recruit? What are the skills and qualities you seek in candidates?

Recruitment procedures in Surya Roshni Ltd encompass campus recruitment, advertisements in national and local newspapers as well as on job portals.

Advertisements for various job profiles are comprehensive. They specify the key skills, specialisation, job function, qualification, level and experience required for any particular job.

As far as skill and qualities are concerned we stress on excellent interpersonal communication, decision-making skills with strong and honest work ethics and personal habits. During the recruitment process, we conduct a training-cum-interview programme of about five to 15 days or longer. Even those who are not selected can use this management training certificate elsewhere.

What are the group's plans?

The group is expanding in different states. It is planning new units in Karnataka and elsewhere. These new ventures would be in the name of associate companies of the Surya Group. These companies are expected to provide employment to more than 15,000 people in the near future. We target crossing the ₹5,000 crore mark in terms of turnover in the next two years. ■

Interviewed by Shailja Shah Purohit

VITAL STATS

Starting in 1973 as a steel tube-making unit at Bahadurgarh, Haryana, Surya Roshni Ltd has emerged as a vast conglomerate in the steel and lighting manufacturing industry in India, with a turnover of over ₹2,000 crore. It has facilities in different parts of the country and a vast network of branches, dealerships and retailers across India coupled with a worldwide presence. It has the largest ERW pipe manufacturing plant in India. Its latest steel unit is coming up in Shimoga, Karnataka. The company also has a Corporate Social Responsibility programme to uplift rural India, "Adarsh Gram Yojna" in more than 2000 villages countrywide.

No credit guarantee fund to back education loans

Alarmed by rising defaults, banks had asked govt for support

SARBAJEET K SEN
New Delhi

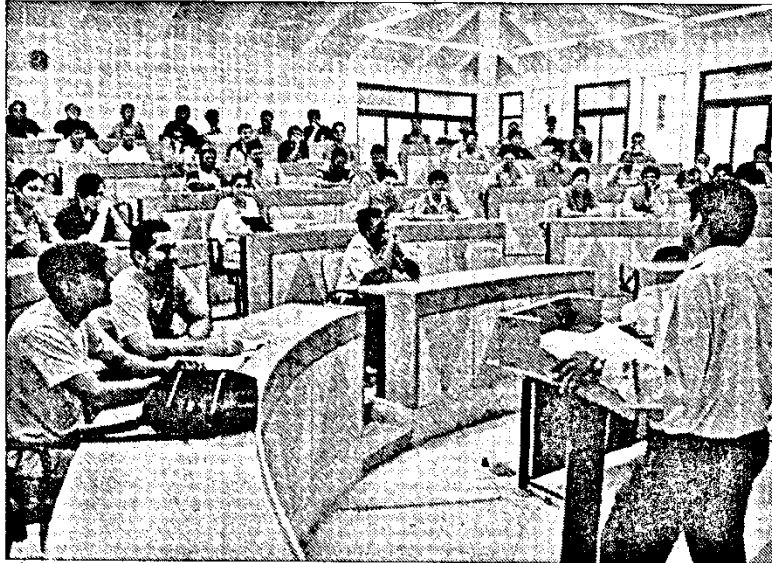
BRUSHING aside concerns raised by public sector banks on defaults on their education loan portfolio, the ministry of finance has ruled out any immediate need for setting up a credit guarantee fund as proposed by the Indian Banks' Association (IBA).

"We are not convinced that a fund needs to be created at this point. The aggregate figures that we have do not give us any cause for concern," an official of the banking division of the finance ministry told *Financial Chronicle*. The ministry feels the banks' fears are misplaced since the gross defaults are below 3 per cent, which, it feels, is 'manageable'.

The ministry has called for detailed data from individual banks to assess the actual position on default. "The banks had not come at the meeting with the finance minister with adequate data to justify their demand. We want more details before we move forward on the matter," the official said.

At the meeting of chief executives of PSU banks with the finance minister, Pranab Mukherjee, held on August 14, the IBA had suggested creation of a fund to support banks on their education loan portfolio on ground that there was increasing delinquency on the front.

Talking to *FC* after the meeting, K Ramakrishnan, chief executive officer, IBA, had said that the discussions on a credit guarantee fund for education loans



UNDER SCANNER: Finance ministry has asked banks to submit break-up defaults in education loans under various categories to assess the actual position

were at a preliminary stage. "The proposal is in an initial stage," he said. The IBA had not suggested a specific size of the fund.

The finance ministry has asked banks to submit a break-up the defaults under various categories, including loans up to Rs 4 lakhs, above Rs 4 lakh and up to Rs 7.5 lakhs and those above Rs 7.5 lakhs.

While education loans up to Rs 4 lakhs are extended without any security or co-obligation of parents, the banks ask for co-obligation of parents along with collateral security in the form of suitable third party guarantee for loans up to above Rs 4 lakhs to Rs 7.5 lakhs. For loans above Rs 7.5 lakhs banks seek co-obligation of parents along with tangible collateral security for suitable value along with the assignment

of future income of the student for payment of instalments.

While the student is required to repay the loan within 5-7 years of commencement of repayment, the repayment itself starts one year after completion of the course or 6 months after getting a job, whichever is earlier.

Bankers feel that the education loan, especially those extended without security, could emerge as a major source of defaults in days to come. At the meeting the FM bankers pointed out that the defaults might rise since loans are extended to students joining institutes from where getting a job might be difficult. "Education has now become a big business. All sorts of institutes have come up and banks cannot deny loans to students and there are fears

that students might not get job or not a commensurate job to pay back loan. If denied, applicants put pressure on banks from government and elsewhere," an official of Punjab National Bank said.

According to figures available with the finance ministry, the total outstanding education loans of the 27 public sector banks at the end of March 31, 2010, stood at Rs 34,192 crore in 18,51,106 accounts. State Bank of India lead the pack with total loans of Rs 8,907 crore, while Indian Bank (Rs 2,308 crore), Punjab National Bank (Rs Rs 2,272 crore), Bank of India (Rs 1,719 crore) and Andhra Bank (Rs 1,647 crore) among the top five in terms of outstanding loans.

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Grim talent position in PSU banks: BCG study

Per employee revenue in nationalised banks is Rs 20 lakh

SNEHA SHAH

Mumbai

PAUCITY of talent at entry and mid-level will come to haunt public sector banks in the next five to ten years, a study done by Boston Consultancy Group (BCG) has said. The study, done in association with Indian Banks Association (IBA), says public sector banks will need to hire around half a million employees over the next decade to maintain their competitive edge over private banks.

According to Saurabh Tripathi, partner and director, BCG India, the report has found that the per employee revenue (productivity) of a PSU bank is as low as Rs 20 lakh compared to Rs 44 lakh per employee in ICICI Bank and Rs 41 lakh per employee in Axis Bank.

"The PSU banks can no more ignore human resource (HR) issues and they will have to address the gap soon to maintain their competitiveness," Tripathi said at a conference in Mumbai to release the report.

The report, however, found that the revenue per employee for banks like



BLEAK PICTURE: In the next five years only 9 per cent of top officials will remain in nationalised banks

Bank of Baroda, Union Bank, Punjab National Bank, Bank of India and Canara Bank has almost doubled in the last three years (2007-10).

The report highlights that owing to the retirement factor, in the next five years only 9 per cent of top officials will remain in a

nationalised bank. "Crucial know-how will be lost with the departing executives," the report said.

MV Nair, chairman and managing director of Union Bank of India, said, "We are going to recruit more people in sales to push revenues while the senior staff will be integrat-

ed into the centralised process hub of the bank." He also said that though the entry-level salaries are the same in public sector banks, the real difference is seen in the mid and top-level remunerations. For Union Bank, around 7 per cent of the branch staff is involved in sales activities. "We aim to step this up to around 25-30 per cent," Nair said on the sidelines of the press conference.

According to the report, compared to private and foreign banks, PSU banks are not able to attract or retain talent. "There is a huge generation gap between the freshers and the immediate bosses, which lead to lots of problems in talent management," Tripathi said. For most public sector banks, the attrition rate is around 15-20 per cent (excluding the staff retiring every year).

"We are looking at adding around 3,500 people in the current financial year and will also be looking at compensating good performers separately to retain talent," MD Mallya, chairman and managing director of Bank of Baroda said.

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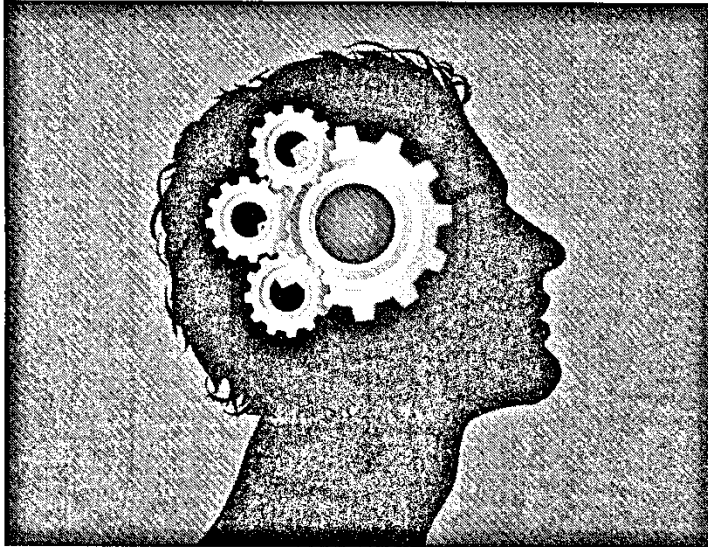
Fresh business models needed

DURING our college days, we used to think loudly about ideally 'earning in the West and spending in India'. Huge price and salary differentials existed then. Some of our relatives bought cotton shirts in dozens and got tailors to stitch their suits on their short visits to India. This is no longer valid. Now, one finds that the household basket of goods is as costly as in Germany and the US (converting euros and dollars into rupees at exchange rates!), while comparative salaries are still just a fraction. Even where India is supposed to be the largest producer in the world (such as milk products, leather goods and cotton fabrics), the prices within the country are as expensive as anywhere else in the West. Though India is one of the biggest emerging markets for automobiles, the price of a car is more here than in the US (just check the US and Indian websites of Honda for Accord and Toyota for Corolla). Not to mention the huge differences in quality (and cheating aside, for example, pushing non-leather goods as genuine leather and non-cotton fabrics as 100 per cent pure cotton!).

The examples highlight the immediate dual challenges that Indian business faces to sustain even their domestic productivity competitiveness. One, they need to improve the top line growth in a highly cluttered market (numerator management). Second, and a far bigger challenge, is to meet the bottom line impact due to high input costs (denominator management).

The top line growth can be achieved through a combination of several strategic choices, including cross-border expansion, improving product usage intensity and augment-

Arun Kumar Jain



LEARNING CURVE: The ability to quickly and constantly learn from competition, customers, and suppliers, as well as keeping a regular tab on developments across the globe, would be crucial to growth

ing complementary services portfolio. These choices would lead to further set of choices — such as, should growth come through strategic partnerships (versus go-it-alone approach), or should it be through related or unrelated diversification? We have excellent examples of Mahindra and Mahindra, Tata Motors, and Bharti Airtel augmenting their product and geographic portfolios through a series of big-ticket acquisitions.

The key to their set of growth choices is focus on their core business and investments in 'adjacent' industries that provide their homegrown competences a wider test and applications. Their efforts also maximise the value-content to the existing pool of talent and services. Reliance Industries (RIL) is another kind of exam-

ple of growth through geographic and mostly unrelated diversification. While it scouts for deep-water oil assets in Africa and elsewhere, RIL has become a strategic partner in Oberoi's chain of luxury hotels. The company is already in retail, and has strategic investment plans in ICT, nuclear, and infrastructure space.

A critical test for Indian business presently is cost competitiveness. The galloping inflation rates and consequent price increase across the board have severely hampered especially those firms located within India with global ambitions. This category of industries includes IT (BPO and ITeS), engineering, infrastructure and real estate, automobiles, and all the major dependent industries, such as cement, fer-

tiliser, steel, tyres, chemicals and sugar, among others. An analysis of top 500 firms on BSE shows that for the April-June quarter, the salary bill jumped by 16 per cent and the cost of raw materials surged by 37 per cent (from 49 per cent in the previous year to 56 per cent). Their combined profitability came down by 13.8 per cent (year-on-year basis) as a result, although the overall sales were higher. Food prices have been soaring at more than 10 per cent rates.

The only industries that escaped the wrath of inflation are the knowledge-driven industries such as pharmaceuticals and R&D centres, or banking and financial institutions that provide loans to industries: Banks asset turnover (because of inflation in down-

stream industries) shows a rise and a healthy upward swing in profits. However, these gains would be purely of transitional nature since the wages and industry non-competitiveness would affect banking operations as well.

This new emergent situation (during the past two years or so) of opportunities and challenges means that companies have to make a mix of proactive and reactive strategies. Cornerstones of newer responses would be flexibility and adaptability, with focus on innovative solutions, especially to costs containment. Ability to quickly and constantly learn from competition, customers, and suppliers, as well as keeping a regular tab on developments across the globe, would be crucial.

Without sounding alarmist, this is a situation that calls for drastic policy measures and strategy re-workings. The usual HR 'solutions' such as 'downsizing', manpower reduction and asset sales, among others, will not work. What is required is a wholesale new approach to costs containment including new business models, inventiveness and innovation, investments in productivity raising technologies, and even outsourcing.

Much of the Indian grand growth story of this decade will become a mirage and an eyewash unless industry supported by the RBI and the government, come up with innovative solutions. As mentioned earlier, this is not just an issue of efficiency but something much deeper, wider and fundamental.

(The writer is chairman of Center for Accelerated Learning, Innovation and Competitiveness, Germany, and professor of strategy and corporate governance, IIM-Lucknow)

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Services on rent

Giving software prowess financial muscle not without risks

IT COMPANIES such as Infosys tend to rediscover themselves once every decade or so to find avenues for fast growth. Following the recession last year in the US, the largest single market for Indian software services, vendor firms, especially those with built-up cash reserves, seem to be evolving a business model of hooking on clients with a “pay-as-you go” sort of facility. In building platforms for services such as management of payrolls or employee attendance that can be used by multiple clients and then charging individual clients on the basis of their transactions is still at a nascent stage in the Indian IT industry. It is too early to say if it poses a threat or opportunity. But “rent-a-IT service” is a quite a novel concept, at least for Indian vendors, as opposed to rent-a-car or equipment leasing or pure and simple supplier’s credit facilities that come dime a dozen. Now, at least some of the top Indian IT firms have the cash to use in pursuing this fresh avenue. According to latest data available, Infosys is sitting on cash of \$ 3.1 billion, Wipro has cash pile of \$ 737 million and Cognizant has \$ 1.65 billion in cash reserves. These cash reserves, surely provide the companies comfort against business downsides, but don’t earn anywhere near the return on capital employed in the software services business. It makes sense in case a part of the money can be deployed to win more business from clients who may be reluctant or incapable of spending money upfront on outsourcing. The client in such a situation is likely to ask the vendor to show him the cash — the savings promised from day one itself. The IT firm gets back the money as revenues accrue each year. There is cash flow through this but no impact on profit and loss. In the process, vendors providing outsourcing services essentially cut client costs. For some clients, the problem today is deciding whether to outsource now or later. Vendor financing happens in the IT product space in a big way. Firms like HP, IBM, Cisco and EMC offer funding to customers for their products and equipment. These IT companies sometimes tie up with banks for this financing, which is more like a loan. This is not very different from suppliers’ credit or equipment leasing in other industries. But the “pay-per-use” facility seems more like a software services version of cloud computing. In accounting terms, the investment in the service platform will be capital expenditure and the pay-per-use charges the vendor gets from clients will be its revenues. Like most capex, the investment will be amortised over a period of a few years. Infosys has a banking software solution called Infinity that they first built for one client and then started selling it to other users. While the pay-per-use model may have been an innovation in the face of the realities of a recession-hit export market, it has a potential of catching on in the domestic market as well, especially in sectors such as telecom with large IT services budget. A call centre project from Indian Railways is one of the first to have gone that way. But one swallow does not make a summer. The Indian IT services sector has a \$ 50 billion revenue. The industry’s cash needs would be enormous if this model of first building the service platform and then billing customers for their use gets established as a long-term trend.

Semiconductor technology can change our world

GANESH GURUSWAMY

INDIA has made a mark on the global platform with its technological contribution but much of this is just a fraction of what this country is capable of.

All it takes is just one small innovation to change our world. Since the 1950s, when the first integrated circuit was invented, the role of electronics in myriad and innovative applications across a wide range of sectors has increased manifold. The Indian ICT sector has evolved and we are in urgent need of similar innovations in other critical areas like renewable energy, power and healthcare.

However, the technology is concentrated in certain pockets. This disparity is driven further by a cost-sensitive market. But latest innovations in embedded technologies can not only bring down the cost but also bridge the digital divide.

The intelligence embedded in devices has a potential to make our infrastructure better and is the key to environmental sustainability.

enabling the world to adopt cleaner technologies. For instance, solar lighting that uses solar cells to convert energy directly to electricity has taken off in a big way. Available at a low cost, the solar lighting device holds great potential. Campaigns like Lighting a Billion Lives have only ignited the spark that can remove darkness from our lives. Smartbooks/netbooks are absolute examples of how embedded technologies can bring down the cost of devices and reduce the form factor. Programmes such as one laptop per child and such initiatives aim at propagating the computing and internet experience and to a larger cause of aiding lesser privileged students in education. The programme calls for corporate involvement as well to succeed.

Keeping in view the ambitious aim of the government to connect 20 million Indians through broadband by end-2010, the fundamental requirements need to be addressed first, the topmost being a device that can connect you. The new devices can come in handy here, because they cost less than traditional desktops and come with little or no difference in providing the same user experience.

These benefits are not limited to education. It can enable a farmer easy access to information on lat-



est prices in the market to sectors like banking, ITES and government departments. Smartbooks/netbooks can be adopted across verticals since the requirements entail basic computing tasks. These devices cater well to our young generation that needs high-speed internet browsing experience.

Similarly, eBooks can revolutionise the sector and help take education to rural area. India is moving towards great cellular and broadband infrastructure. Government can use this infrastructure to modernise our education

system. The combination of online textbooks and web-based classes will only deepen the reach of education. Not only are the eBooks a boon for frequent travellers but, when applied to education, it can also help evolve the concept of paperless school. Though the present cost of eBooks in India is a big deterrent, but the volume can surely help address this issue.

Technology can address another critical area — the power sector, which is plagued by huge transmission and distribution (T&D) losses. According to the World Resources

Institute, India's electricity grid has the highest T&D losses in the world. The figures published by government agencies put that number at 30-40 per cent and even greater in some areas. This is attributed to technical losses (grid's inefficiencies) and theft. Apart from these losses, we have to cope with billing irregularities due to manual meter reading.

Technology is slated to revolutionise the sector. Once deployed, the smart metres will reduce energy distribution losses, reduce cost to the consumer and increase reliability. The smart metering technology, built on advanced micro-controllers and transceivers, enables automated metre reading, on-the-spot bill printing and home area networking. Smart metres can curb power theft.

In fact, smart metering is gaining momentum globally as it overhauls outdated power grids and builds smart grids that maximise system efficiency by reducing energy consumption by continuously monitoring and analysing the grid capacity. Once functional, smart grids and metering systems hold a vision to change the way electricity is consumed.

While many countries are working on this technology, in India it will take participation from both the government and the corporate sector to adopt it. The third area where embedded intelligence has a role to play is medical electronics.

Rise in geriatric population and cost of healthcare have led to the need for affordable medical care without compromising on quality. Several semiconductor companies involved in developing chips for medical electronics have been able to reduce the size of several medical equipment and trimmed down its cost in order to make it more accessible to the masses.

Advances in medical electronics have made significant contribution towards development of portable home diagnostic solutions such as BP, ECG and blood sugar monitors and other diagnostics such as CT, MRI, angiogram and ultrasound, which are increasingly becoming popular in developing countries like India. Semiconductors and embedded technologies can change the world.

The writer is vice-president and country manager, Freescale Semiconductor India

Sibal announces education finance plans for students, institutes

Our Bureau
Bangalore, Sept 6

The Human Resource Development Minister, Mr Kapil Sibal, today announced two education initiatives that are still in the pipeline, but once brought into effect, would give India's youth easier access to higher education and, therefore, increase the country's pool of educated youth.

The Centre is planning to set up an Education Finance Corporation where students could access education loans at an interest rate of around 4 per cent and the Government would stand guarantee to every loan sanctioned to ease the pressure off the parents and the banks. "This would also mean there would be no fee restrictions and, therefore, institutions can offer better facilities and teachers," said Mr Sibal.

Another initiative is for institutions interested in investing in education. He said that the Government would ensure



Mr Kapil Sibal, Minister for Human Resource Development, delivering his guest lecture at the Indian Institute of Science in Bangalore on Monday.

— G.R.N. Somashekar

that easier credit is available to these organisations.

"Under this plan, institutes can borrow at less than the prime lending rate and the loan would be repayable in 25 years."

Delivering the Vithal N Chandavarkar Memorial Lecture at the Indian Institute of Science on 'Empowerment through education,' Mr Sibal

said that the country needs to reach a critical mass of more than 50 per cent young people pursuing university education (currently it's around 12 per cent), to achieve its dream of double digit growth. "Nothing will be realised unless we invest in education and empowerment."

Financial Chronicle ND 07/09/2010

LIVING WITH TECHNOLOGY

Open source games: Born free, living free

PAYAL DHAR

GAMING enthusiasts often bemoan that PC games are not only becoming increasingly expensive, but it is quite a task to keep up with climbing hardware requirements. However, if one is more concerned about the experience of gaming rather than having the latest and shiniest toy on the shelves, there is an embarrassment of riches to be explored in the open source segment.

If you've been a fan of Sid Meier's Civilization games, you probably don't want to pass by Freeciv (freeciv.org), an open source turn-based empire-building strategy game. You start off as a tribal chief around 4,000 BC, and lead your people along the path to development. You build villages, towns and cities, develop technologies, discover new lands, forge diplomatic relationships and wage wars, and so on.

Game rules are configurable, with dozens of maps, scenarios, playable units and nations to choose from. The game ends when your civilisation reaches space age or wipes out all other civilisations; alternatively, one can also play with a specified deadline. Freeciv is multiplayer-compatible, and works on a variety of platforms, including Windows, Mac, Linux, Solaris, etc. There is also a version that is playable online from a browser.

If you'd rather be battling aliens than rewriting history as a tribal lord, take a look at Alien Arena (icculus.org/alienarena/rpa/), a first-person shooter very reminiscent of Doom and Quake, but with some stunning graphics. Alien Arena uses an advanced rendering engine based on source code from id Software, makers of the aforementioned classics. Dynamic lighting, soft shadows, weather effects, real-time per-pixel lighting on meshes and liquids, in addition to carefully crafted gameplay aspects make it rival any commercial title.

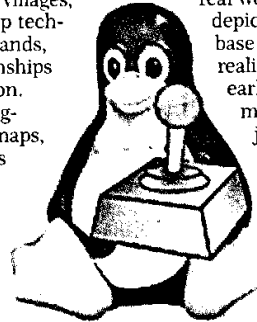
Alien Arena's "retro sci-fi" atmos-

phere lends itself perfectly to a relentless, action-packed fragfest. But it also benefits from being out there in the open source community as numerous users have added much by way of maps, models and other items to enhance its already striking atmosphere and add unique elements to the gameplay. Alien Arena is available for Windows and Linux, as well as an unofficial patch to play the Linux version on Mac OS. It can be played in multiplayer format, with a number of running tournaments available; users are free to arrange their own games at TournamentFront.com as well.

Those coveting Microsoft's Flight Simulator will be heartened to know of a free, open source option in the form of FlightGear (flightgear.org). Game features include realistic scenery and maps, with over 20,000 real world airports accurately depicted. It also has a large database of aircraft, letting you "fly" realistic models ranging from early 20th-century planes to modern A320s to military jets. Built-in networking options allow gamers to communicate with other instances of the application, GPS receivers, external flight dynamics modules, external autopilot or control modules, as well as other software such as the Open Glass Cockpit project and the Atlas mapping utility. FlightGear's hardware requirements are relatively modest, and it is available for Windows, Mac, Linux, Solaris and other platforms.

There are dozens of other open source games to try out. And while it is true that many are merely clones of long-ago classics, with questionable graphics and outmoded gameplay, this is not always the case. A freely available source code enables gamers and game developers to improve upon existing code, including creating mods and additional features. This often results in making classic games available for modern-day computers—games that we wouldn't have been able to run on our machines today. ■

Payal Dhar is a freelance technology writer



Business Line ND 07/09/2010 P-5

UK to crackdown on non-EU student visas

Vidya Ram

London, Sept. 6

Just months after Britain placed a temporary halt on Indian student visa applications, the country's Immigration Minister has pledged a further crackdown on non-European Union applications for such visas.

"It is clear that the Government needs to look at all routes into the UK and set new rules that allow it to bring in the migrants needed who represent the brightest and the best," said Mr Damian Green, Britain's Minister for Immigration. In a speech at the Commonwealth Club on Monday, delivered after this paper goes to print, the Minister is expected to focus in particular on clamping down on student visas.

Government figures published at the end of August revealed a 35 per cent rise in non-EU student visas in the year to June. In a separate study published on Monday, the Home Office revealed that

► *UK Government figures published at the end of August revealed a 35 per cent rise in non-EU student visas in the year to June.*

a fifth of people arriving on a student visa had overstayed the period allowed by that document.

Speaking on BBC Radio 4's closely-followed 'Today' programme on Monday morning, Mr Green pledged that the coalition government would "bear down" and ensure that "every student is a legitimate student doing a legitimate course." While the clamp-down would not apply to those doing university degrees, the Government would be taking a close look at applications for non-university courses, which make up around half of the total annual student visa applications - or around 150,000.

In addition to cracking down on "bogus" courses, Mr Green said the Government

would pay close attention to the non university degrees and examine whether the students who came via that process had talent and skills of use to Britain. Making particular reference to his recent visit to India, Mr Green said, "It was perfectly clear that students are getting courses and qualifications that do them no good whatsoever, India doesn't recognise those courses," he said, adding that New Delhi was as eager as London to tackle the issue.

The issue is likely to stoke new tensions within the coalition government. Business minister and member of the Liberal Democrat party, Dr Vincent Cable, has on several occasions highlighted his discomfort with the Conservative Party's focus on clamping

down on non-EU immigration. In its election manifesto, the Conservative Party pledged to reduce annual net immigration from the "hundreds of thousands" to the "tens of thousands," prompting warnings from business groups, including the Confederation of Indian Industry.

IMMIGRATION

Across Europe, the issue of immigration has risen to prominence once again, sometimes in troubling form. In Germany Mr Thilo Sarrazin, a prominent economist and member of the central bank's board, has courted controversy through his strong attack on immigration in a recently published book *Germany Does Away With Itself*. Despite a strong attack on his views by the likes of the Chancellor, Ms Angela Merkel, and accusations of racism, the book has proved exceptionally popular, rising to be a top seller on Amazon's German Web site.

Economic Times ND 07/09/2010 P 1

Expats take rural road for new ventures



Archana Rai
BANGALORE

HIGH on the Uttarakhand mountains, a group of networking engineers are hunched over Google Maps on their computer monitors. They are looking for an appropriate site to position a rural internet broadband system that will pipe banking services to customers in the state's Tehri Garhwal region.

"This is a very difficult terrain and we had to make site visits, rent land for solar-powered relays on the top of some mountains, and hire local labour to weld small masts and carry them to the relay sites," says Jim Forster, an American entrepreneur, who is building low-cost broadband connectivity in the hills of northern India. Forster is a former Cisco professional who came to India in 2006 as a networking engineer. During one of his trips to Dharamshala, he met a non-profit initiative called Air Jaldi, and became a quick convert to the idea of rural broadband. Two years later, he quit Cisco and returned to India leading the move to turn Air Jaldi into a for-profit business that has just launched a commercial broadband service for consumers in areas such as the Kangra Valley in Himachal Pradesh, Mussoorie and Uttarakhand.

"Rural does not imply poor, rural people have motorbikes, cars, trucks. If we can supply good, affordable internet access then they will also have some number of PCs," says Forster, who has invested several hundreds of thousands of dollars into the venture that is now being launched as airjaldi.net. "We are looking for additional angel investment of up to \$500,000 to \$1 million by the end of the year," he added.

Elsewhere in Tamil Nadu, DripTech, a start-up founded by Stanford graduate Peter Frykman, tested a drip irrigation system across 15 farms over five months. Following the pilot, the company has started marketing the product in China, where there is a potential market of 300 million customers, according to Frykman. DripTech has raised over \$1 million from angel investors to get the product off the ground. "We needed \$50,000 to fund six months of operations and our initial pilot study in India, which I raised from a successful entrepreneur, Scott Perry," says Frykman, who travels to India every eight to 10 weeks.

Opportunity across sectors

► From Page 1

LISTED amongst the Most Intriguing Product Start-ups by Business Week, DripTech has notched up sales of 200 irrigation systems in China since its launch this year. "It can be challenging for certain people to accept that foreigners could gain expertise and insight into the needs of rural farmers in India," says Frykman, who believes his biggest challenge will be in building a distributed local manufacturing system that will make it possible to reduce costs.

Forster and Frykman are a new brand entrants into India's burgeoning entrepreneurial landscape. Lured by the country's economic boom, a number of expatriate entrepreneurs are flocking to India to set up new businesses ranging from rural broadband, solar lighting and drip irrigation systems to incubators that nurture very small enterprises and consulting firms. These professionals are tapping into segments that offer an inherent "India" advantage - untapped rural markets and a talented workforce. "Overseas entrepreneurs are looking for a warmer climate to try out new things as the economic climate in

the US has not yet recovered and the buzz about India as an entrepreneurial destination is pretty good," says Rishikesh T. Krishnan, professor of corporate strategy and Jamuna Raghavan chair professor of entrepreneurship, IIM-Bangalore. "China and India are seen as the next big opportunity

and while China and to some extent Brazil are not open economies, India is seen as a place that supports good entrepreneurship," he added.

A unique combination of factors has helped support this perception of India. Skilled human capital with colleges such as the Indian Institutes of Technology and Management and technology companies with combined revenues in excess of \$10 billion. A strong flow of capital and a well developed legal system; the opportunity to try out new challenges and take them to other emerging markets.

In contrast, physical infrastructure is poor specifically in sectors such as lighting and power, healthcare, roads, irrigation and rural data communication, all of

which offer opportunities for skilled entrepreneurs to build on. Industry watchers estimate that nearly 90% of Indians live within 40km of fiber optics, owned or operated by telecom companies, including BSNL, Airtel and Reliance Communications, but large numbers do not have access to broadband communication at speeds of 256kbps. "The fiber backbone supports pretty good internet access at very low prices in all the tier 1, 2, and even tier 3 cities but all of those technologies have issues in the rural areas," says Forster, who finds progressive licensing policies for internet service providers, a huge boost in building a rural broadband business.

Sam Goldman, founder of D.Light, a start-up that has raised venture capital from a clutch of investors such as Draper Fisher Jurvetson and Nexus Venture, is cracking a similar challenge like Forster. "India and Indians are entrepreneurial and there is hunger for new business but there isn't a mature distribution system to serve rural markets," says Goldman, who grew up in India and completed his high school here. But it wasn't until he graduated from Stanford, did a stint with the Peace Corps in Africa that the idea of building a business for social good took concrete shape. He came to India in 2008 and started a company that would offer affordable lighting solutions to rural and low income consumers. It helped that the idea got picked up by the Draper Fisher Jurvetson-Cisco Business Plan competition.

"There is a definitely mature ecosystem for young start-ups here with almost all investor such as DEJ and Acumen having an office here," says Goldman who has since leaned on investor networks to build his team of 80 people of whom 35 are in India. The rest are spread across East Africa, Hong Kong and China where D.Light also sells its products. "India is a highly competitive market and it took us nearly three years to get the right product and price mix here," says Goldman who feels building products for India has made it easier to enter other emerging markets.

Fighting for a share of the solar pie is another expat entrepreneur, John Howard a former consultant at McKinsey & Co who quit his post at the firm's Seattle Office for the rough and tumble of business in rural India. Earlier this year, his firm Duron Energy, started sales of solar powered plug and play devices for lighting and battery recharges in villages across Karnataka and Uttar Pradesh with sale of few thousand units until now. Howard, a graduate from the California Institute of Technology, or Caltech, discovered that he wanted to sell affordable power solutions to Indian villagers during a fun-trip to the

country some four years ago, and launched his company Duron Energy in 2008. The start-up was incubated by Bill Gross, founder of Ide Labs and a Caltech graduate himself and has received investments from Solgenix LLC and David Gelbaum's Quercus Trust, a family trust.

"Our big breakthrough has been in tying up financing for customers with banks such as Kashi Gomi Grameen Bank," says Howard who has in place a system where customers can pay as little as Rs 100 a month for a solar light priced at Rs 6,000. "We are actually displacing the Rs 100 a family pays for kerosene every month," says Howard.

It is innovation of this sort that will be needed to take-off in the Indian market according to IM-B's Krishnan who reckons long term staying power and constant innovation will be the twin tests for expat entrepreneurs in India. In fact, staying power is something that Freeman Murray lists as his calling card as he builds a technology incubator for very young start-ups in Bangalore. Upstart.in set up by him in partnership with Satish Dharmaraj, a VC from Silicon Valley-based Red Point Ventures, supports half-a-dozen tech start-ups in the city.

Murray, who worked with tech major Sun Microsystems in the early 90s before he quit to set up his own company with a friend, Pavni Diwanji, found a profitable exit from it in 2000. "After that I got into angel investing," he says and found himself in India looking for interesting ideas in areas such as voice over internet and IPTV.

He began by investing in start-ups that topped the iAccelerator Business Plan Competition run by the Indian Institute of Ahmedabad putting in about Rs 5 lakh in 10 companies, upstart.in now has a corpus of \$ 100,000. "I am looking to raise more capital to support very early stage technology and in the meantime I am providing physical space that mimics high-tech incubators in the US that young companies can use," says Murray who has set up Jaaga, an open format structure that provides internet communications and defined work areas for entrepreneurs looking for an ecosystem in which to build new tech businesses. As the Indian economy expands there will clearly be more such expats who will dive into the world of Indian business. "I remember an early Cisco customer talking about how they would 'get one million people on the broadband internet, and at the time, I was amazed at their vision and audacity. Now one million customers in the US is nothing, but I believe we could get 1-10 million people in rural India online, that would be a great accomplishment," says Forster.

► Opportunity across sectors: P 22

Economic Times ND 07/09/2010
P6

ABN Amro set to renew \$1-b IT contracts

IBM, TCS & Infosys Likely To Gain



Pankaj Mishra & N Shivapriya
BANGALORE | MUMBAI

INWHAT could potentially bring outsourcing projects worth \$1 billion to India over the next five years, Dutch banking major ABN Amro is set to renew its contracts for managing the bank's software applications and computer hardware systems with IBM, Tata Consultancy Services (TCS) and Infosys Technologies.

The original contract signed by ABN Amro in 2005 was worth \$2 billion, spread over five years, and had five vendors—IBM, Accenture, TCS, Infosys and Patni. The bank had then aimed to save nearly \$250 million every year by working with fewer vendors and consolidating its IT infrastructure. Now, having gone through several restructuring itself, including its merger with Fortis Bank and nationalisation, the bank plans to cut the vendor base further, and drive the integration of different banking systems through outsourcing.

According to at least three people familiar with ABN Amro's outsourcing decision, the bank has retained IBM for managing communication networks, desktops and computer servers, and plans to reduce the number of software application outsourcing vendors from three currently to two.

"TCS has already started handling incremental, new projects and Infosys too has deep relationship with the bank, especially with Finacle. This leaves Patni and Accenture in a tight spot," said one of the persons familiar with ABN Amro's outsourcing. He requested anonymity because the bank has not yet officially announced the renewal of contracts. He added that around 300 Fortis employees would get transferred to IBM's payroll as part of this transaction.

IBM is also working on an integration plan for ABN Amro and Fortis, and aims to consolidate the IT systems by 2012, another person familiar with the process added.

Officials at TCS and Infosys de-

clined to offer any specific comments on Monday. ABN Amro officials had not responded to an email query sent by ET.

In a year when top outsourcing firms are hoping that customers would revive their tech spending, this could be the beginning of a series of such renewal opportunities being pursued by almost every vendor.

Outsourcing experts from research firms, such as Ovum, said around 500 contracts worth nearly \$37.5 billion are set to expire by September this year, ranging anywhere between \$1 million and \$1 billion each.

Among them, while China Mobile plans to adopt a total outsourcing model by giving away computer hardware and application devel-

opment activities to a set of vendors, Verizon is looking to lower its operational costs by sending out some work overseas.

Larger off-shore vendors, which now include the likes of HP, IBM and Ac-

centure, are likely to bid for a number of contractual opportunities. Jens Butler, principal analyst at Ovum, said in a recent interview with ET. "Cost-cutting is not the only theme, it is a component of client requirements," added Mr Butler, who is based in Sydney, Australia.

For vendors seeking to renew an existing outsourcing contract, the pressures of doing more with less is a perennial challenge, experts say.

"Right now, suppliers' leverage is weak in the market, and in general the supplier doesn't gain as much in renewals as when signing the deal for the first time," said Armeet Singh, vice-president, global delivery, at outsourcing advisory firm Everest. "Billing rates are likely to remain same or go up slightly in most renewals given the soft environment. Buyers will look to drive more efficiency, which could be in terms of increased scope of work and better productivity," he added.

DEAL DIGEST

According to sources, ABN Amro has retained IBM for managing communication networks, desktops and computer servers. It is likely to renew contracts with TCS and Infosys and select one from Patni and Accenture

Economic Times ND 07/09/2010 P10

Super chips can make PCs vanish

Scientists have started the quest for ultra small switches called 'memristors'

John Markoff

THE PERSONAL COMPUTER IS vanishing. Computers once filled entire rooms, then sat in the closet, moved to our desks, and now nestle in our pockets. Soon, the computer may become invisible to us, hiding away in everyday objects.

A Silicon Valley announcement last week hinted at the way computing technology will transform the world in the coming decade. Hewlett-Packard scientists said they had begun commercialising a Lilliputian switch that is a simpler — and potentially smaller — alternative to the transistor that has been the Valley's basic building block for the last half-century.

That means the number of 1's and 0's that can be stored on each microchip could continue to increase at an accelerating rate. As a consequence, each new generation of chip would continue to give designers of electronics the equivalent of a brand new canvas to paint on.

This is the fulfillment of Moore's Law, first described in the 1960s by Douglas Engelbart and Gordon Moore, which posits that computer power increases exponentially while cost falls just as quickly. That's been the history of computing so far. Thirty-five years ago, Steve Jobs was one of the first to seize on the microprocessor chip to build personal computers. It was an idea that had been pioneered several years earlier by a group of researchers working with Alan Kay at Xerox's Palo Alto Research Center in the early 1970s.

At the time it was a radical idea that was almost unthinkable: one person, one computer.

In the 1980s, another group of Xerox scientists proposed an even more radical idea: the personal computer was destined, like its predecessor the mainframe computer, for obsolescence.

They called its successor "ubiquitous computing." The computer would simply

melt away like the Cheshire Cat, and become imbedded in all the objects that make up daily life.

That is coming true: Our pens, pads of paper, cars, indeed virtually everything we use are becoming computer smart. And

last week, Mr Jobs introduced the new versions of already embedded technology, the iPod and Apple TV.

At HP, the scientist who has led the quest for the new generation of ultra-small switches, known as memristors, said

that their arrival foretells a computing age of discovery that will parallel the productivity increases first brought about by the

microprocessor.

"Right now, we are drowning in data," said Stan Williams, director of HP's Information and Quantum Systems Lab. "The amount of data is increasing at an absolutely ferocious pace, and unless we can catch up it will remain useless."

If he is right, and the memristor makes possible superdense computing memories — one computer chip will hold as much data as an entire disk drive holds today.

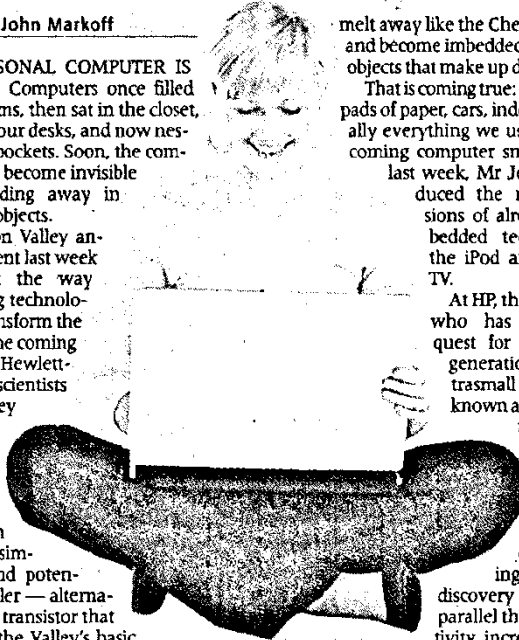
Forecasting what this next-order-of-magnitude increase will mean is impossible, but it's easy to see what the last one created: entire new product categories — digital music players, cameras and cellphones.

For Mr Williams, the speed at which vast amounts of data will be accessed is as important as the amount of storage itself. An example of what's possible is a project called Central Nervous System for the Earth, or CENSE, he said.

Based on a million sensors, CENSE will make it possible to create a clearer picture of oil and gas reservoirs than previously possible.

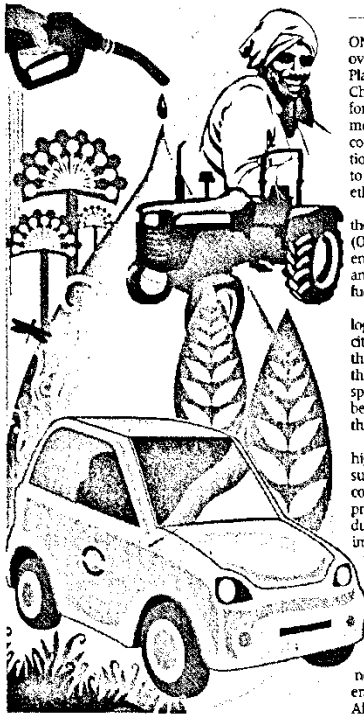
In other words, the only thing that will change about computing is the shape of the tail fins.

NYTNS



Who gains from blending?

RICH DIVIDENDS FOR OMCs, NO REAL BENEFIT FOR CONSUMERS & FARMERS



PRABHA JAGANNATHAN

ONE FUNDAMENTAL QUESTION TO ASK over ethanol pricing even as a panel chaired by Planning Commission member Saumitra Chaudhuri examines a "fair" long-term price for the commodity is — who benefits the most? Secondly, how does the end user, the consumer, benefit? The answer to that question, at this juncture, could well be a signpost to the sustained progress of the much-vaunted ethanol-blending programme (EBP).

The stakeholders are the sugarcane farmer, the sugar industry, the oil marketing companies (OMCs), the state governments, the central government, the alcohol-based chemical industry and the potable alcohol industry, the blended fuel consumers and the public at large.

A basic premise of the EBP is that being ecologically friendly, it would benefit the ordinary citizen in terms of environmental health. Two, the EBP would benefit the consumer as well the country in terms of foreign exchange spends on pricey crude imports. Three, it will benefit the sugar industry and the farmer through additional income.

In Brazil, where the ethanol industry is highly developed, market competition among sugar/ethanol companies has meant that the consumer has largely been insulated from price shocks, even in times when ethanol production was low and the commodity had to be imported to keep demand for the flexi fuel well catered for. Steady supply of ethanol apart, if the EBP has to be a sustainable long-term programme, it needs to be widely accepted as beneficial by the end users and the cane producers, making both willing stakeholders in the programme.

The OMCs clearly benefit, at least for now. The interim ethanol price of ₹27 a litre, endorsed by Cabinet Committee on Economic Affairs in August, was equal to the refinery

gate price of petrol. So it became worthwhile for OMCs to buy ethanol. But if the refinery gate price of crude fell below the interim ethanol price of ₹27 a litre, that incentive would disappear. Crude price being volatile, locking ethanol price at ₹27 a litre for three years is unfair and should not be mandatory, the OMCs. Ideally, ethanol price should be determined commercially and not by the food ministry, which may be more interested in protecting the interest of the sugar industry. But commercial determination of prices appear unlikely when the Centre is keen on a countrywide EBP given the savings it can make on the import bill.

It is curious that neither the govt nor the OMCs have spent out benefit to the consumer from EBP beyond its wider and rather fuzzy ecological benefits

While the interim price is an improvement over the October 2007 price of ₹21.50 a litre, the sugar industry maintains that price was fixed when both crude and cane support price were relatively much lower. With both up significantly now, it is only fair that ethanol price should commensurately rise, the sugar companies contend. Even so, the sugar industry agrees that the OMCs could pass on the difference in price between ethanol and petrol to the consumer. The OMCs may gain as much as ₹640 crore at 5% blending of 80 crore litres and ₹1,280 crore at 10% blending, according to sugar companies estimates. Yet, there is no word that some of that savings would be shared with the consumer.

Conversely, the OMCs contend that the price charged to the consumer at the petrol pump is

inclusive of all taxes. But the consumer is rightfully concerned about the price she pays for petrol. Therefore it is imperative to ask, especially since the EBP is mandatory, as to why even a fraction of the difference between petrol pump price and ethanol price is not being passed to the consumer.

In fact, it is curious that neither the government nor the OMCs have spent out, by way of policy, any benefit that the consumer may derive out of the EBP, beyond its wider and rather fuzzy ecological benefits. Not even if the refinery gate price of petrol goes up compared to ethanol price within the next three years, making it glaringly beneficial for OMCs.

Again, ethanol has 35% less calorific (energy parity) value than petrol. The 104 crore litres of ethanol needed for 5% blending is equivalent to only 68 crore litres of petrol. Crucially, there has been no disclosure of this to either the end user, or its impact on the mileage of the vehicle. It is imperative to spell out whether the consumer has a choice between ethanol-doped petrol and pure petrol.

Again, OMCs gain several crores as sugar companies pay lower excise on ethanol than that paid by them on petrol.

The sugarcane farmer wants the mills to factor the profits from ethanol into the price paid to him. That would encourage him to be a steady producer. Sugar companies rebut that since ethanol is a value added product, they should share the profits with farmers only as much as a liquor company or a chemicals major would share its profits with them for value adding molasses.

That may not, however, be a convincing enough argument in the long term for the farmer. As for the consumer for whose environmental health the programme is ostensibly safeguarding, poor or negative economic logic for him may well prove to be the EBP's biggest undoing.

prabha.jagannathan@timesgroup.com

MindTree focuses on SI for govt projects

Goutam Das

Bangalore, Sep 6: IT player MindTree is building system integration (SI) capabilities in the domestic market to go after large government projects. About Rs 1,296 crore, which is about 6.3% of the firm's FY10 revenues, came from the India market. Now, the firm is targeting to up the share to 10% in the next three to four years, president & CEO of the firm's IT services business Anjan Lahiri said.

Many of the government projects requires SI expertise and working with a large consortium of partners. "We have

hired some very senior people recently to build the SI ecosystem. The Aadhaar win has made many partners wanting to work with us. We are aggressively embracing that opportunity," he said.

Earlier this year, MindTree had won the application development and maintenance (ADM) services contract of the Nandan

Nilekani-headed Unique Identification (UID) project, named Aadhaar. The project involves

services across the application lifecycle—from designing, developing, testing, maintaining and supporting the Aadhaar application to providing help desk services.

We have hired some very senior people to build the SI ecosystem. The Aadhaar win has made many partners wanting to work with us

— Anjan Lahiri, president & CEO (IT services), MindTree

"We need to put in a team of architects, analysts and consultants to create, structure and deliver the SI opportunities,"

Lahiri said, adding that the Aadhaar win was now opening up lots of new avenues for the firm. It has placed MindTree in the consideration page for many large transforma-

tional deals. "Our presence in the Indian government is actually not large. This gives us the ticket to the party," the CEO said. "India is exploding in government investments — not only in revenue, but in the quality of the projects that are being given out."

The firm's foray into SI is just a quarter old and may take a year before tangible results can be seen. MindTree currently does a lot of ADM work, even for private deals. It recently closed a deal with a large auto organisation to build their country-wide dealer management system and has been working with an MNC building IT systems for its India factories.

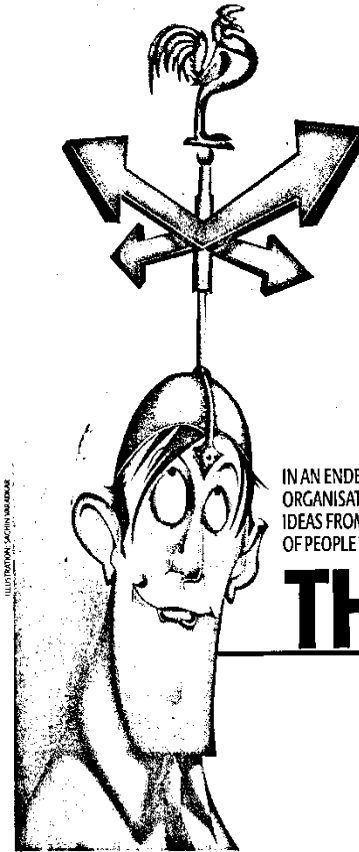
IDEA CENTRAL

Sushant Gupta is a senior year dual degree (Bachelor's and Master's) student at IIT Kharagpur with a background in computer science and engineering. Debapriya Chakraborty is a PhD student in the department of mechanical engineering at IIT Kharagpur and Dr Suman Chakraborty is a professor in the same department. This trio participated and were among the six runner-ups at the DEJ Cisco Global Business Plan Competition, which is an annual global business plan competition for students aimed at fostering innovation and entrepreneurship. "Debapriya and I met in a lab about one and a half years ago and have been working on a common research area of microfluidics. Working with Dads all the time, somewhere down the line, we decided that we wanted to concentrate on diagnostics. That is when we came up with MicroMed, a technology that assists towards making innovative diagnostic tools for pathological laboratories. It requires minimal human intervention and reduces costs. The experience was incredible. This has put our company on a global platform. We got an opportunity to pitch our idea to some of the most successful VCs in the world. We were the only Indian team among the 16 finalists and fought our way to be among the six runner-ups in the competition," expresses Gupta while sharing his experience of participating in a global competition and coming out with flying colours.

It's never that easy to sell a unique concept. So, what were the obstacles and roadblocks on the way? How difficult was it to convince people that the idea can be turned into a viable business venture? "From the beginning, we concentrated a lot on the practicality of the concept and design and modified it suitably to make it a perfect tool for pathological laboratories. Prof Suman Chakraborty has played a very important role in deciding the direction of MicroMed and providing technical expertise. Also, Debapriya and I enjoy a very healthy family support system. Our families have not only encouraged us in this endeavour, but also helped us in the best possible ways. We have a very promising market in India and hope to revolutionise the concept of pathological testing," Gupta shares.

IDEAS IN ABUNDANCE

Amrit Jamwal completed his B-Tech in me-



chanical from Chakara Institute of Engg and Tech. "It was the love for cars that made my friends and I dream about innovating and designing a concept car and we eventually began our hunt to find the perfect platform. Based on Autodesk Inventor, our team designed Stealth 2, the concept car and we participated in the 'race' for sustainable mobility at the Shell Eco Marathon in Kuala Lumpur, which was a platform for student teams from the Asia Pacific region to design, build and test energy efficient vehicles. With annual events in America, Europe and Asia, the winner is the team that goes the furthest distance using the least amount of energy. Last

challenges with regards to financial and technical support and we had to squeeze out the maximum from the available resources. However, our seniors and teachers helped us to make this a feasible project," shares Jamwal. Talking of futuristic aspects, Jamwal expresses that he personally wishes to go along and support the nation through small but unique ways by not only going green, but also spreading the spirit of what 'green' signifies.

THE IDEA HUB

K Aravind, team lead, Team Ecoitians, VIT University is currently pursuing B.Tech mechanical engineering (3rd

He expresses that being a part of this global competition was a once in a lifetime experience for them, wherein they got opportunities to interact with teams from China, Singapore, Japan, Indonesia and Thailand and discuss both technical and cultural issues. "As far as talent is concerned, Indians are at par with the best minds in the world. We made it to the top five in the final round in the innovative design category and narrowly lost the 1st place to NUS, Singapore," he informs.

Talking about the difficulties he faced during the entire journey, Aravind shares, "Yes, it was very difficult for us to procure funding for our project; people sometimes

IN AN ENDEAVOUR TO ENCOURAGE AND FOSTER THE ENTREPRENEURIAL SPIRIT OF YOUNG MINDS, MANY ORGANISATIONS HAVE INITIATED GLOBAL BUSINESS COMPETITIONS TO BRING TOGETHER TALENT AND IDEAS FROM ACROSS THE GLOBE ON A COMMON PLATFORM. YASMIN TAJ SCRIPTS THREE SUCH STORIES OF PEOPLE WHO DISPLAYED THEIR INNOVATIVE BUSINESS IDEAS AT GLOBAL COMPETITIONS

THE IDEA FACTORY

year, we participated in The Shell Eco-marathon, America and won first prize in the perseverance category," informs Jamwal.

Talking about how they came up with the innovative idea, Jamwal expresses, "With fuel prices rising and fuel consumption soaring high due to lavish lifestyles, we need a check on fuel resources, so as to use them in the future. We thought of fabricating a prototype for a vehicle that can deliver more miles per litre." So, how difficult was it to sell a unique concept like this? "There were plenty of

year) and his team recently participated in the Shell Eco-marathon 2010, Malaysia. "We participated in the prototype category, wherein we tried to increase the mileage by aerodynamically designing the car to reduce frontal pressure and rear vacuum and building it through the usage of light and durable materials like glass fibre (this reduces the overall weight of the car). The design has been inspired by the streamlined body of a fish, thus a small frontal area and a narrow tail," Aravind shares his entrepreneurial idea.

just don't buy our idea and they also brush it off. But on the other hand, there are people who are interested in investing like our premier sponsors. I believe that if the concept is strong and unique, then it isn't that difficult to sell it."

The times we are living in are highly competitive and one needs to have an extra edge over others to carve your own niche. Such competitions not only encourage people to ideate and innovate, but also help many to fulfill their entrepreneurial dreams.

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Magazine segment to write a 10% growth story

by Bureau

Mumbai, Sep 6: Driven by new market entrants, the magazine segment in the media industry is expected to grow around 10% in three years, say magazine publishers. It's not only Indian players who find a growth story in the segment, even international brands prefer India to launch new products due to a favourable demography that drives higher readership in this niche segment. Says Nicholas Brett, editor-in-chief and deputy managing director - BBC Worldwide Magazines,

"India is an interesting market with a high youth component. In India, our plans are much bigger. We are investing in the future here. We are trying to fully understand the nature of the business here."

He further said some of the forthcoming plans he has for India include more titles on food, home-making, and young and energetic Indian youth subjects.

"Well, the magazine market in India is still growing. I don't think the Indian consumer has yet fully enjoyed a genuinely high-class magazine experi-

AN E&Y REPORT SAYS THE INDIAN MAGAZINE SEGMENT'S SHARE IN THE OVERALL AD MARKET VARIES FROM 3%-4%, AND IS CURRENTLY ESTIMATED AROUND RS 1,100 CRORE. THIS IS FAR LOWER AS COMPARED TO THE GLOBAL MARKETS, WHERE THE SEGMENT COMPRISES AROUND 15%

ence," he added. Meanwhile, a report released by Ernst & Young states that the advertising revenues which currently comprises 74% of the magazine

industry's total revenue, declined by 4.9% in 2009 as advertisers faced the pressure to reduce marketing spends during the slowdown. Going forward,

while ad revenues are expected to increase, alternative revenue streams such as events and digital delivery are expected to account for 20-50% of the total revenues within the next three years.

The report further says that the Indian magazine segment's share in the overall ad market varies from 3%-4%, and is currently estimated at around Rs 1,100 crore.

This is far lower as compared to the global markets, where the segment comprises around 15% of the overall ad spending. With increasing consumer income in

India and the resultant focus by advertisers on India markets, the magazine segment clearly demonstrates its potential for significant growth.

Ashish Pherwani, associate director, media and entertainment at Ernst & Young, said, "Of the leading 20 most read magazine in India, only three are in English, while Hindi and regional language magazines comprise the rest."

"This is clearly aligned to the trend that regional markets, particularly the non-metros, are driving consumption in India."

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Leadership at Infosys

A more global top management is a likely option

Infosys Technologies is a unique Indian success story in many ways, so its internal process of chalking out its future leadership scenario would naturally generate wide interest. The more immediate, if less important a challenge, is finding a new chairman to succeed N R Narayana Murthy who gives up his non-executive leadership of the company next year when he turns 65. The bigger task is outlining the leadership stakes in the medium to longer term, say in the next five to ten years by when the supply of founders will have run out. The two issues are foreigners versus Indians and insiders versus outsiders. Significantly, Infosys is effectively majority foreign-owned, if you add the 35.8 per cent holding of foreign institutional investors (FIIs) to the 18.6 per cent share of equity held in American depository receipts. Also, the FII holding is more than double the founders' or promoters' holding of 16 per cent.

To take up the issue of chairman, Mr Murthy has said that there is no problem in having a foreigner holding the position. He has also indicated that a member of the executive council should become the next CEO. We can, therefore, visualise a situation where the CEO is from the present crop of top leaders and a non-Indian is the non-executive chairman. However, there is a popular perception that the current chief operating officer, S D Shibulal, one of the founders, will also spend some time in the corner office. But as both the current CEO, S Gopalakrishnan, and Mr Shibulal are around 55-56, how

both of them will serve out their remaining years remains open. There could be an interregnum with a CEO and an executive chairman. However, this is really not what matters. The bottom line is that no one is likely to come in from outside to take up executive leadership of the company in the foreseeable future. Continuity and stability at the top in Infosys are, in fact, delivered by its collegial form of leadership which both evolves a consensus and implements it.

However, Infosys needs to change and this is likely to come, sooner or later, through the symbolic induction of a non-Indian as chairman. An Indian management, or one anchored in India where most of the employees will continue to be positioned, with a more global board led by a non-Indian chairman can turn out to be the right combination. In order to keep growing healthily, Infosys needs to become more global in terms of both its people and culture. The backlash in developed countries against jobs disappearing as a result of IT offshoring has highlighted the need for leading Indian software vendors to look less Indian and more global. Infosys needs to sharply raise the ratio of not just its non-Indian employees but also have very many more non-Indians among its top managers. This can take place through a rapid growth of delivery centres all round the world so that the offshore and offsite delivery model remains but not necessarily services are delivered out of India or by Indians alone. This will yield not just sufficient numbers of non-Indian employees but managers too.

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[BS PEOPLE]

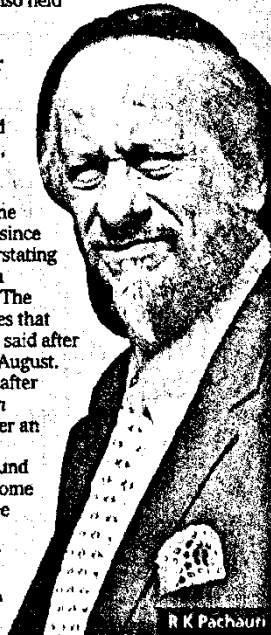
Clean green

For Rajendra K Pachauri, last week brought a ray of sunshine through the thick smog of controversy clouding both his office and him personally. Last week, the Intergovernmental Panel on Climate Change (IPCC), of which Pachauri is chairman, received a clean chit from the InterAcademy Council. It also held Pachauri personally not guilty of misconduct.

That was good news for the 70-year-old Pachauri, who is also Director-General of The Energy and Resources Institute (TERI), a part-time romantic novelist and an avid cricketer. He has been in the eye of a global storm ever since IPCC was accusing of overstating concerns about Himalayan glaciers melting by 2035. "The scientific community agrees that climate change is real," he said after the council's report on 30 August.

That came barely days after Britain's *Sunday Telegraph* apologised to Pachauri after an audit of his finances by accounting firm KPMG found that he had made little income from outside dealings since 2008. Looks like the skies may be finally clearing for the beleaguered Pachauri.

KIRTIKA SUNEJA



R K Pachauri

Son rise

For this music buff, the sound of last week's announcement by soap-to-software conglomerate Wipro couldn't have been sweeter. Clearly part of the grooming of Harvard-educated Rishad Premji, the group appointed the elder son of Chairman Azim Premji as chief strategy officer (CSO) for its flagship IT business.

Those familiar with the chairman said Premji senior is putting his son through the paces. Rishad has been general manager in the company's treasury and investor relations department for three years before his latest promotion, for which he had to go through a battery of tests and secure shareholder approval. Of course, when your father owns nearly 80

per cent of the company, that approval isn't necessarily hard to get.

"Rishad will now drive strategy for the IT business in terms of market focus, new vertical focus and service offerings directly working under the Joint CEOs of Wipro's IT business," said Saurabh Govil, senior vice-president, HR, Wipro Technologies.

However, Rishad will oversee only the strategy part of the role that previous incumbent K R Lakshminarayana used to play as CSO — the M&A function will have a new structure. Even so, as the chosen son, Rishad knows the media glare will only grow more intense in the years ahead.

BIBHU RANJAN MISHRA

'Education cess not chargeable on total value of Customs duties'



CHAT ROOM

TNC RAJAGOPALAN

Our excise consultant says we need not pay education cess and secondary higher education cess on clearances from Export Oriented Units (EOU) to the Domestic Tariff Area (DTA), if the excise duty is based on the Customs duty leviable on like goods, if imported. Our excise officials say cess must be paid because the calculation of equivalent Customs duty is only for arriving at the

excise duty and cess must be paid on the excise duty. What is the correct position?

As per the Ahmedabad Tribunal judgment in the case of Sarla Performance Fibres Ltd. [2010 (253) ELT 203 (Tri. Ahmedabad)] once education cess is added to the Customs duties to arrive at aggregate value of Customs duties, the question of charging education cess does not arise. What is required for the purpose of the proviso to Section 3 of the Central Excise Act, 1944 is to arrive at the aggregate of Customs duties and, once we take a view that education cess is part of the Customs duty and is an enhancement, the question of adding it again does not arise.

Under the one per cent Status Holder Incentive Scrip (SHIS) scheme, it is mentioned in Para 3.10.7 of the Handbook of Procedures, Vol. 1 (HBP) that

Para 3.11.8 of this HBP shall not apply to this scheme.

Para 3.11.8 deals with declaration of intent to claim Chapter 3 benefits on the shipping bill. I do not understand the connection. Can you clarify?

Para 3.11.8 of HBP says no claim under Chapter 3 shall be admissible without the said declaration of intent. Para 3.10.7 of HBP says this provision is not applicable to the SHIS scheme. What it means is although SHIS is also a Chapter 3 benefit, for the purpose of grant of the SHIS benefit, even shipping bills that do not bear the said declaration of intent will be considered. This is by way of exception to the general rule.

We had imported certain capital goods on duty payment before our service became taxable and so we did not take Cenvat Credit. Can we take the

credit of such duty now?

According to the Central Board of Excise and Customs (CBEC), you cannot take Cenvat Credit now, because at the time you procured the duty-paid capital goods, you were not rendering taxable services and so, were not eligible to take Cenvat Credit. In this connection, you may refer to the Madurai Central Excise Commissioner Trade Notice no. 42/2008 (Service Tax no. 15/2008), dated 11.09.2008, which is based on CBEC letter F. No. 137/120/2008-CX.4 dated 24-6-2008. I am of the opinion that you should put this view to test at the judicial forums.

What is the annual limit for exporting goods free of charge for status holders?

The limit is ₹10 lakh or two per cent of average annual export realisation during the preceding three licensing years, whichever is higher (HBP, Para 2.52).

Business Standard invites readers' SME queries related to excise, VAT and exim policy. You can write to us at smechat@business-standard.com

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Children lord it over adults at this incubator

PRAVDA GODBOLE
Pune

Whoever said only adults can be entrepreneurs? SIES Clinic, founded by two professors, is out to prove them wrong. SIES Clinic, which stands for Start-up, Innovation, Entrepreneurship and Strategy Clinic, encourages children to throw up ideas that can be turned into successful business ventures.

"Children are more creative than adults and can come up with revolutionary ideas that have potential to be converted into sound business plans," said Manoj Joshi, co-founder of SIES Clinic. "We encourage kids to be free in thinking and to suggest whatever they feel like." Joshi is a professor of strategy, entrepreneurship and innovation at a private educational institution in Lucknow.

Close to 15 ideas have already been identified by different entrepreneurs and listed on the website of the clinic, among them retail chains selling organic vegetables, branded fresh-cut fruit and the like.

Adults are also encouraged to contribute ideas. The website is an open domain where anyone can log on, post ideas and track them.

SIES Clinic welcomes two types of ideas — those from children below 18, called 'kids' ideas', and those from the rest of the



SIES Clinic encourages children to log on to their website and throw up ideas that can be turned into successful business ventures

population ('mature ideas'). Once an idea is thrown up, the clinic either approves or rejects it, depending on its economic feasibility. A search for entrepreneurs is then conducted to take up approved ideas, with the clinic extending a helping hand.

"We aim to aid budding entrepreneurs to pick up our ideas and help them by finding investors and mentoring them," co-founder Anil Sharma, who is professor of financial engineering at the same institute, said.

Joshi and Sharma have two children aged seven

and 14 respectively, and it all started two years ago when they were taken aback by some ideas that the children tossed up, such as creation of a food pool to be later distributed among under-privileged sections.

The duo is clear about how they wish to run the enterprise. "We will provide entrepreneurs with complete solutions around their activity, but money is a pre-requisite for running it. SIES Clinic will raise the required money through consultancy services, executive training and general training

programmes. Profit will not be the main criteria but any incoming finance will come in handy," says Sharma.

The website lists many novel ideas given by children — online ordering of school books and recording of everyday class proceedings in schools to be made available on demand, among other things.

SIES Clinic, which started out in Lucknow, now plans to expand to Delhi, NCR and Uttar Pradesh in six more months. It will later look eastwards to Bihar and Orissa.

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'MIRACLE COMPOUND' FOR ARMY RESCUES CWG

AJAI SHUKLA
New Delhi, 6 September

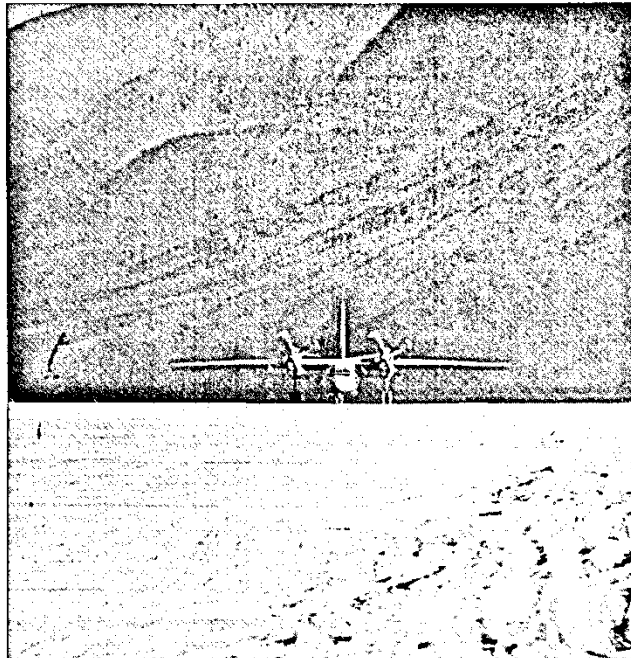
At dawn on September 18, 2009, Group Captain S C Chafekar lined up his An-32 transport aircraft for a landing approach to the spectacular, 13,300-foot high Nyoma airstrip in Ladakh, sending a herd of local Khyang (Tibetan wild asses) fleeing in panic. This first ever fixed wing aircraft landing at Nyoma, the army's newest Advanced Landing Ground (ALG), close to the frontline with China, was made possible by a new "miracle compound" called RBI-81.

The Ministry of Defence (MoD), always secretive, merely stated that a "new advanced compound" had gone into building Nyoma ALG. But the army was pleased — as a document with *Business Standard* reveals — at this infrastructure coup. The 2.7-kilometre airstrip was built in just 90 days by jawans who had never worked with RBI-81. All they had to do was to mix RBI-81 with local mud, sprinkle water over the surface and then run a road roller over the mixture. Hardening instantly, the surface easily withstands repeated landings by the 20-tonne An-32.

Now RBI-81 is helping ease the chaos of Delhi's preparations for next month's Commonwealth Games (CWG). Here's what just happened last week at the Siri Fort Sports Complex in South Delhi, the squash and badminton venue, to which shuttler Saina Nehwal will carry the hopes of a billion Indians. On the morning of August 28, a flabbergasted CWG Organising Committee team discovered that the Siri Fort parking area and the roads inside the complex were still knee-deep bogs of churned mud. With the Games five weeks away, the contractor threw up his arms. Laying a concrete surface would take a week; and then 28 days would be needed for the concrete to set. If it rained, said the contractor, it would take longer.

Enter RBI-81. Ashwini Mundra, of contracting firm Salasar Marketing, undertook to prepare Siri Fort's 1,500-square metre parking area, in 48 hours using RBI-81. Work commenced at 1 pm on the afternoon of August 30; fourteen hours later, at 3 am on August 31, the job was completed. That morning, says Mundra, 100 buses were parked on the newly surfaced area.

The Delhi Development Authority's Superintending Engi-



THE FIRST AN-32 LANDING AT NYOMA AIRSTRIP LAST SEPTEMBER.
Built in just 90 days with the help of an advanced material called RBI-81, this technology is now being used to ready facilities in Delhi for the Commonwealth Games

neer, R K Gupta, who inspected the finished work, gave an unambiguous thumbs-up to RBI-81: "The Siri Fort Sports Complex is ready for use. This product is much faster than anything we have ever used before and the results are excellent. It is now in our sights for other projects."

But RBI-81 is originally a military product and Alchemist Touchnology, which holds the licence to manufacture and sell RBI-81 in India, covets the Indian Army's ongoing programme to construct 3,429 kilometres of border roads in Himalayan altitudes, temperatures and weather conditions. Already the Border Roads Organisation (BRO) is testing a road segment in Jammu and Kashmir, constructed with RBI-81, to verify the company's claims that the surface is waterproof, weatherproof and unaffected by temperatures from minus 40 to plus 60 degrees Centigrade.

"The most attractive feature of this product is the economics," says Gautam Gulati, a group director with Alchemist, "An RBI-81 based road is almost

40 per cent cheaper than a conventional tarmac or concrete road. Instead of multiple layers of stones, bricks and gravel, all you need is 2-3 layers of RBI-81 and the tarmac can be slapped on over that. A rural road, conforming to Pradhan Mantri Gram Sadak Yojana (PMGSY) standards, costs Rs 28.23 lakh per kilometre built conventionally. If we use RBI-81 instead, the cost drops to Rs 18.52 lakh, a saving of 36.87 per cent."

Even more important than the price advantage, say BRO officials, is the eco-friendliness of RBI-81, given the growing difficulty in obtaining environmental clearance for road projects. First, building with RBI-81 reduces manual labour by more than 50 per cent and, therefore, the administrative and security problems of moving hundreds of labourers for projects in sensitive areas. Further, building with RBI-81 minimises stone quarrying and crushing, and transporting tonnes of stones to the project area.

Says the BRO official, "RBI-81 dramatically reduces the en-

vironmental and carbon footprint of road-building."

Alchemist Touchnology plans to leverage this environmental advantage to market RBI-81 to India's Ministry of Road Transport and Highways. Josy Cohen, the chairman of Holland-registered RBI Global, which patented RBI-81 worldwide and licensed Alchemist Touchnology to produce and market the product in India, claims, "India's highway building programme uses 175 million cubic metres of gravel annually. By using RBI-81, this can be reduced to just 20 million cubic metres per year."

RBI-81 was originally developed in South Africa to build roads along that country's troubled borders and increase the army's mobility. Today, the Israeli Defence Forces (IDF) are major users of RBI-81. IDF has rapidly constructed a network of roads from major towns and cities to border areas, permitting the rapid deployment of troops. Invisible from the air, these road surfaces are hard enough to prevent enemies from digging them up and planting mines.

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**Govt mulls renaming
Department of IT**

KIRTIKA SUNEJA

New Delhi, 6 September

In an effort to redefine the priority given to manufacturing of electronic hardware, the government is planning to rename the Department of Information Technology (DIT) as the Department of Information Technology and Electronics (DITE).

This is based on the proposals given by a task force set by the government a year before to suggest measures to stimulate the growth of IT, IT-enabled services (ITeS) and the electronics hardware manufacturing industry. Electronics hardware production rose from ₹84,410 crore in 2007-08 to ₹94,690 crore in 2008-09, a growth of 12.1 per cent.

"We are thinking of renaming the department, as it does not adequately reflect the priority attached with electronics manufacturing. This is being taken up by the department and advanced action is taking place in this area. This should happen in the next six months to one year," said a DIT official.

Says the DIT's five-year strategy for electronics: "It is felt that the electronics and telecom industry requires a dedicated set-up that understands the complicated technical nuances of this industry, as also the rapidly changing world trends and capital movements linked to it. Therefore, in order to give the above focus, a National Electronics Mission with adequate powers should be set up, so as to give a fillip to the manufacturing of electronic hardware in India in a mission mode."

The task force was headed by Ajai Chowdhry, Chairman and CEO, HCL Infosystems and had Nasscom president Som Mittal as a members.

"Although the rechristening of the Department of Electronics (DoE) was done and DIT was formed, it was interpreted as if the government had stopped its focus on the electronics industry. The new name is communicating that very well," said Vinnie Mehta, former executive director, Manufacturers Association for Information Technology and member-secretary of the task force.

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**LAW ON FREE EDUCATION UNDER
JUDICIAL SCRUTINY**

The law providing free and compulsory education to children has come under judicial scrutiny with the Supreme Court today deciding that its Constitutional validity be examined by a five-judge bench. The apex court noted that since the amendment to the Constitution which led to the enactment of the Right to Education Act has been challenged, the matter would be placed before a larger Bench to decide its legal validity. "The matter has to be placed before a five-judge Constitution bench for directions," a three-judge Bench comprising Chief Justice S H Kapadia and Justices K S Radhakrishnan and Swatanter Kumar said. **PTI**

When security needs and innovation collide

INDIRA KANNAN
New York, 6 September

The Indian government's demands that telecom providers such as BlackBerry, Google and Skype allow access to their data on national security grounds has brought to the forefront warnings voiced by some experts in recent months that this issue could affect businesses that provide these services, as well as their customers.

While Research in Motion (RIM), the Canada-based maker of BlackBerry, negotiated a two-month reprieve to develop a solution complying with the Indian government's demands, Indian officials have said companies such as Google and Skype would also be asked to comply with the government's directives or close their networks.

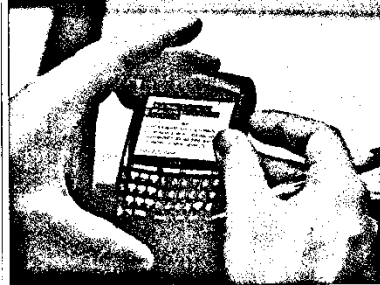
When asked for a response, a Google spokesperson at their headquarters in California told Business Standard: "We have not received any communication on this issue from the government. If and when we do, we will review and respond." A spokesperson for Skype in the Asia-Pacific region replied with a similar

statement: "We have not yet received any notification from the local authorities and are not able to comment."

SECURITY & ACCESS

Experts say the growing ease of use of encryption in products ranging from email to software and advances in encryption technology have led to more businesses making use of encryption, but has also thrown up fresh challenges to governments worldwide. "It's an interesting confluence created by the increase in high technology applications, global trade and national security," says Sanjay Mullick, a Washington, DC-based attorney with the Pillsbury law firm which recently sent out an advisory to clients on compliance with laws relating to encryption and security in various countries, even before India's demands on BlackBerry hit the news.

Mullick points out that frequent reports of breach or theft of data have prompted new laws in the US and the European Union, specifically requiring the addition of encryption to any media holding confidential data. "Businesses are being forced to deploy encryption widely to meet government mandates, even as governments are



RESEARCH IN MOTION, THE MAKERS OF BLACKBERRY, negotiated a two-month reprieve to develop a solution complying with the government's demands. Officials have said companies like Google and Skype would also be asked to comply with the government's directives or close their networks

simultaneously trying to restrict the same technology's reach," according to Mullick.

While RIM has not disclosed how it deals with individual governments, industry experts believe the company has arrangements in place to provide access to certain communications to governments in countries such as the US, the UK, France and Canada. "Most large countries have a natural desire from a security standpoint to intercept certain electronic communications; it's been going on for years," says Andrew Jaquith, a Senior Analyst for Security and Risk at the Boston-based technology research firm Forrester.

TECHNOLOGY ISSUE

Since RIM uses a centralised model to encrypt traffic to and from consumer devices, these governments have a single point of accountability, from where they could demand access to data under laws such as the United States' CALEA statute or Communications Assistance for Law Enforcement Act. In the case of enterprise customers, however, companies rather than RIM hold the encryption keys, and similar interception would not be possible.

In the case of Google and Skype, experts believe it's easier for these companies than for RIM to co-operate with governments solely on technical grounds. But Jaquith dismisses a reported

demand from India for Google and Skype to also locate their servers in India as unreasonable. "There are lots of ways to legally access contents of emails or messages exchanged by parties of interest when needed, without requiring servers in India," he says, calling the demand a likely "job preservation requirement".

Even in cases where service providers have the ability to cooperate, this could trigger concerns about the security of data and communications among their customers. An increase in obstacles would also mean less of an incentive to operate in a market, says Jaquith, but adds that the size of a market and its growth potential

could prove a big lure for companies who would be willing to put up with the inconvenience. China and Russia, for instance, are known to apply rigorous controls on encryption technology and require prior approvals of specific products. India is widely considered a fast growing and promising market for global telecom providers.

Forrester Research calls BlackBerry the "gold standard" for secure corporate devices, and Jaquith says the recent controversy in India shows how important traffic and content analysis has become for national governments. And, how strong encryption will continue to be an important tool for those who wish to evade these controls.

Advances in technology have also changed the way governments approach controls. Mullick points out that many nations have historically placed export controls on "outbound" encryption technologies produced by their domestic industries, whereas governments are now placing "inbound" controls on encryption. And for companies such as RIM, Jaquith warns that it could lead to "death by a thousand cuts" from every government that wants to intercept BlackBerry traffic.

NATURAL ILLUMINATION

Solar lamps light up rural lives, dim use of oil lanterns

By DIVYA GUHA
divya.g@livemint.com

NEW DELHI

Not much changes within 10 months in the Indian countryside. But when Patrick Walsh, a 21-year-old Irish-American, visited Badakmandara village in Orissa's Keonjhar district for a second time in January 2006, he was taken by surprise.

The previous year Walsh, an engineering graduate from University of Illinois, US, had installed a biodiesel generator for agricultural works in the village along with a team of engineering students.

The idea was to mechanize laborious tasks such as rice husking to lessen the physical strain on farmers. But a resourceful local electrician had repurposed the generator using miles of wire to light up homes with electric bulbs.

He had lighted up Walsh's imagination too. The engineer realized that villagers want well-lit homes more than they want to escape manual labour, and he quickly returned to his university lab with a new idea.

For the next two years, Walsh worked continuously on designing a solar lamp that would be cheap enough for the villagers to afford, and clean enough to rid them of the flickering and smoky kerosene lanterns that have been the bane of India's rural healthcare.

He wasn't alone. His lab was just a few doors down from the office of Nick Holonyak, the inventor of the light-emitting diode (LED) lamp, who often advised Walsh on the solar lamp's design.

At the business end of the fledgling venture were Anish Thakkar and Mayank Sekhsaria, in charge of arranging the money needed to manufacture the lamps on a large scale once the design was perfected.

In March 2008, Walsh was ready with a prototype and had bought a ticket to Shenzhen, China, to find manufacturers. By December, the final design was also ready.

That year, Walsh, Thakkar and Sekhsaria, all aged 23, launched a company called Greenlight Planet "to deliver honest, long-lasting, affordable products to emerging-



Brighter future: A man weaving a basket near a solar-powered lamp. An estimated 400 million Indians have no access to electricity, and that means a market potentially worth ₹400 crore for solar lamps.

market families".

Cheap and clean

The first of these products is the Sun King solar lamp—which promises 16 hours of light, enough even for the long winter nights, after being left to charge under the sun for a full day. The trio priced it at ₹850 apiece.

"Villagers today spend about ₹150 every month on kerosene to fuel their dim kerosene lanterns," says Thakkar. "With Sun King, households stop spending on kerosene fuel entirely. Six months after purchasing the solar lantern, most families recoup its entire cost."

But that is only half the reason why they want people to buy Sun King, Thakkar says users see the difference as soon as they switch from kerosene to solar lamps. There is no soot on the walls, children can study late into the night, and the light keeps snakes out of their homes.

"We have designed them in such a way," says Thakkar, "that if they need (to use) the toilet at night, they can have it with them while they squat and it won't fall over on slightly uneven ground."

Thakkar, an American-born Indian, worked on sales strategy as a consultant at ZS Associates in Chicago, while Sekhsaria worked at Google Inc.'s office in Mountainview,

California. Together, they brought professional management skills to rural development.

They initially continued in their jobs and worked for the solar lamp project at night and on weekends, but when they were ready to begin production, both quit their day jobs to focus on Greenlight's launch.

When looking for funds, Thakkar did not target a venture capital fund or another professional investor, but instead went to his former employer. "I crashed the company's anniversary party in downtown Chicago," he recalls, "and cornered its founder, my former boss Prabha Sinha, to offer a 30-second pitch which managed to land me a meeting with him later to discuss the business."

Sinha, a graduate from the Indian Institute of Technology, Kharagpur, grew up in Bihar and had often relied on kerosene lanterns to study. When he heard about Sun King, he knew that with no recurring costs, a three-year battery life, water-sealed construction and a one-year warranty, the lamps would sell.

After roping in two more Indian partners of ZS Associates, Sinha agreed to fund the bulk of the seed capital and also asked his sales team to advise Greenlight on how to take the business forward.

The firm was launched after

financial year and we're projecting ₹75 crore in FY2012."

Greenlight's success has opened a debate on whether sustainable development should remain a non-profit, donor-driven space, or should it be led by profit-driven and professionally run businesses.

Solar lighting for homes is a large market for entrepreneurs, says Sanjoy Sanyal, country director at the green consultancy New Ventures India (NVI).

There are an estimated 400 million Indians who have no access to electricity, and that means a market potentially worth ₹400 crore for solar lamps. And there is the possibility the winner could take all. The space gets interesting when a company reaches the ₹10 crore milestone," he adds.

The market is already crowded with products from The Energy and Research Institute (TERI), Panasonic and D.Light International, and social entrepreneurs such as Harish Hande, who runs SELCO India. But the Greenlight trio says the biggest competitors are the government's ration stores that offer subsidized kerosene.

Igniting a debate

"This equates 200,000 villagers using the lamps to light their homes," says Thakkar. "We've entered our growth path now. We are on track to cross ₹10 crore in revenue this

penetrated villages nearly impossible to break into, is another reason for its success.

This network is comprised of "Sun King Sathis", a team of 45 village-level entrepreneurs, who go from door to door demonstrating how to use the solar lamps and how it scores over the traditional kerosene lanterns. They also provide the lamps word of mouth publicity, crucial in villages that are still untouched by mass media.

"Our customers, given their limited disposable income, are cautious spenders and want a basis of trust, someone they know, to demonstrate the product to them," says Sekhsaria, explaining the direct sales strategy.

"Sathis can earn up to ₹10,000 as additional income, which includes a fixed pay of ₹5,500 with commissions on top," Thakkar adds.

While discussing their success at the Maurya Sheraton hotel in New Delhi, Sekhsaria pulls out a first prize trophy the team won at the Solar For All competition, part of the World Bank's Lighting Africa Initiative.

The trophy is designed to look like a photovoltaic plate, a key component of solar appliances that Sun King also uses.

Sekhsaria's eyes light up as he describes the scale of the competition: 29 participants slugging it out for the \$250,000 (₹1.16 crore) prize and the trophy, not to mention the global publicity that comes with it.

Statesman ND 07/09/2010 P-7

Open-ended education

Matthew Gutmann of Brown University enlightens payal shah of the benefits of a liberal curriculum that allows freedom of choice

A LARGE chunk of India's student community these days aspires to pursue higher studies in the USA. If you randomly select 10, at least five students will confess to harbouring dreams of making it to US universities, irrespective of whether they eventually fulfill their cherished goal. But have you ever wondered why most people want to go America for further studies? Actually, the American education system offers a plethora of choices: the course are job-centric and in tune with latest developments in management and technology, mainly because the USA is still the global leader in both. According to a recent report by International Student.com, America has the world's largest International student population with nearly 600,000 students and nearly four per cent of all students enrolled in higher education in the USA are international students.

With the financial meltdown having raised doubts about the viability of offshore options, Matthew Gutmann, faculty of Brown University, says many of them are unfounded. In an interview with *The Statesman* he talks about the emerging avenues in the West for both domestic and international students. Excerpts:

Are many Indian students applying to Ivy League universities?

When we speak in terms of Brown University we can say that the applicant pool from India has increased steadily since 2004. The students are bright, inquisitive and engaged learners. They contribute greatly to the Brown community. Anecdotally, we hear from our peer

institutions that interest from Indian students is also very high.

Has the number of applications fallen post-recession?

The USA is still facing a turbulent economic climate, but it hasn't shown a marked impact on our application numbers, domestically or

internationally. We had a record number of applicants overall last year — out of 30,136 249 were from India. So the good news about what Brown has to offer is out — both here and abroad.

How would you define the US education scenario? How different is it from the Indian one?

There are over 4,000 institutions of higher learning in the USA. These differ in size, philosophy and the programmes they offer. There are options for everyone to move with their interests.



What are the areas the Indian education system needs to work on?

We are continually impressed with the quality and preparedness of our Indian applicants. For the most part, those who matriculate to Brown excel here and go on to varied and fulfilling careers.

What do you think are the positive aspects of the Indian system?

The rigour of the system is one aspect that is very impressive; it's quite evident in the applicant pool we see and the Indian students who matriculate to us.

How best should a Brown University aspirant prepare herself/himself?

Applicants have to have acquaintance with the educational system of the country they live in. They should focus on mathematics, sciences, languages and history. The promising applicant should demonstrate a keen interest in the world of ideas and a sense of wonder.

Given the embarrassing incidents in Australia, do you think such episodes are unavoidable?

Testing agencies have developed and will continue to do so. Methods to detect fraud or cheating are also evolving. However, those concerned can best answer this question.

Is Brown University's curriculum different compared to the one followed in India? If so, how?

A modern liberal arts education is still defined in terms of a core curriculum comprised of several areas of knowledge. At Brown, rather than specifying these areas, we challenge students to develop their own core. Our open curriculum ensures students freedom in directing the course of their education, but it also expects them to remain open to people, ideas and experiences that may be entirely new. By cultivating such openness, our students will learn to make the most of the freedom they have and to chart the broadest possible intellectual journey.

Mint ND P-9
07/09/2010

NATION

Education law sent to SC constitution bench

New Delhi: A law providing free and compulsory education to children has come under judicial scrutiny with the Supreme Court (SC) on Monday deciding that its constitutional validity be examined by a five-judge bench.

The apex court noted that since the amendment to the constitution that led to the enactment of the Right to Education Act has been challenged, the matter will be placed before a larger bench to decide its legal validity.

The court was hearing a batch of petitions that claimed that the Act violated the rights of private educational institutions. ■

Statesman ND 07/09/2010 P-7

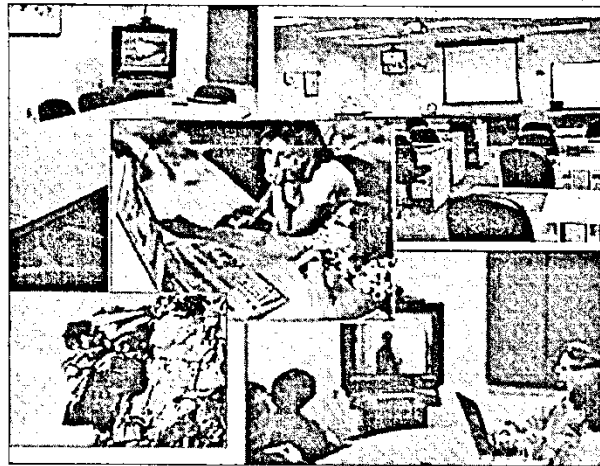
The viable option

It is true that benefits available in the software industry ~ like trips abroad, quick promotions and the like ~ are shrinking by the day, but the working conditions are still the envy of many who join other core sectors. gautam banerjea explains

FOR students joining engineering courses across the country, the counselling seasons in recent years have been an all-too-familiar dilemma. At the beginning of this millennium, there had been a mad rush for seats in computer science engineering and Information Technology but the chain reaction set off by the 9/11 tragedy in the USA resulted in students developing an aversion for IT in particular. Indeed, 2003 was possibly the worst year because IT seats in better known colleges in India hardly managed to attract students. However, the demand for computer science seats was not affected as much, though a strong trend in demand for core engineering disciplines began picking up from this time.

The demand for electronics and communication engineering had been steady for some decades. Save and except for a few years around 2000, the demand for this stream was topmost. However, the demand for traditional core disciplines like electrical, mechanical and civil engineering took a hit with the inroads made by the software industry in the job market.

A similar demand situation continued for some more time for these streams till the recession of 2007 hit the job market once again. From the entry batch of 2008, a new trend was noticed. Finding that studying computer science or IT could entail problems for getting jobs depending on future software market conditions, many students and their parents felt that opting for a core discipline could give them the best of both worlds. That if the software market continued to boom, an opening would arise even for students in core engineering. Otherwise, the possibility of getting a job in the respective core industry



could still be alive.

It would be interesting to learn about the hiring policy of software companies for core engineering students. There is a popular belief that these companies require people with knowledge in different platforms and computer languages and, therefore, students from other areas need to train according to the near future market demand. Every year, a large section of students from pre-final and final years is lured to take up courses just with the hope that it could increase their marketability in the software industry.

Interestingly, some of the companies involved for commercial reasons in the education business exploit this myth with strong advertisements and lure students to enroll for their courses for hefty fees. Some of these companies even go a step further by luring passing-out students with the added promise of providing offers for jobs to

projects. True, advance knowledge in some areas could be of advantage for a candidate engaged in the process of learning but that, in most cases, is hardly mandatory, at most earning one extra credit from recruiting companies.

The software industry needs trained manpower. And when the requirement is in bulk, the streams of the students — core or otherwise — are of no concern. In many cases, it is not mandatory to hire engineers because students with good mathematical ability and reasonable communication skills are adequate enough to work in software after training. Even a student of high school level could be acceptable. Again, when the software industry could afford much higher salaries than other sectors, the best talents from engineering colleges flocked to get in. But with global factors having changed rapidly, the pay offered by the industry is almost stagnant when compared to other industries. In a sharp reversal, many students who joined software recently are now switching over to public sector companies whenever the opportunity crops up.

In fact, many leading software companies are now hiring students from general colleges through campus drives. The reason is simple: these companies need to be competitive to get orders and for that they need to compete with players from different parts of the globe. So to cutting costs in the search for recruits is a necessity. But engineering students need not unduly worry about this new trend. Jobs in software will not shrink, even if creamy days may no longer be around for the short run.

To avoid this situation, those who opted for core branches may not consider them safe. First, job opportunities in core industry are too limited when compared with opportunities in the software industry. Only a fragment of students passing out in core disciplines can expect to be absorbed in their core areas. For the rest, especially for girls, software is still the more viable option.

It is true that benefits available in the software industry — like trips abroad, quick promotions and the like — are shrinking by the day, but the working conditions are still the envy of many who join other core sectors. So software will be the dream destination for many aspiring jobseekers in the coming years. And with preparation and awareness of the market, one could be far better placed to face any crunch situation that may be forthcoming.

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LUCRATIVE MARKET

Apple has many rivals for streaming content to TV

Cable operators and content firms that want to protect their interests pose a major challenge for the company

By MIGUEL HUEFT
feedback@lucrimint.com
SAN FRANCISCO

When Steven P. Jobs introduced Apple Inc.'s first iPod in 2001, it held more music and was easier to use than the handful of rival products already in the market. But it had a big shortcoming: It worked only with Macintosh computers, then less than 3% of the personal computer (PC) market.

A few upgrades later and with the creation of the iTunes Store, the iPod emerged as the dominant digital music player, eclipsing its rivals and turning Apple into the world's largest distributor of digital music.

So last week when Jobs unveiled the second version of Apple TV, a product with limited capabilities and content, many in the consumer electronics industry wondered whether history would repeat itself in the market to deliver content to the TV from the Internet.

Most consumers are either unaware of or confused about how to use an Internet-connected TV. There are no strong brand names, but a growing number of competitors. And it is a lucrative market ripe for a company that understands consumers.

"They are getting more aggressive in the living room, and that's the last big market that can move the needle for Apple," said Gene Munster, an analyst with Piper Jaffray.

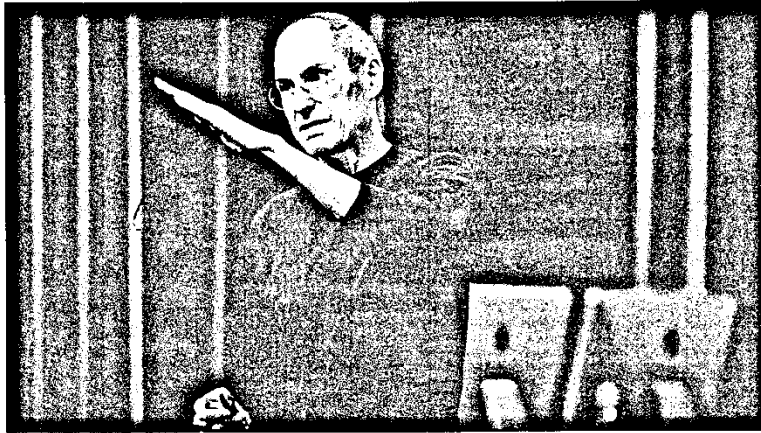
The Apple TV box, which fits in the palm of a hand, is elegant and easy to use to rent television shows for 99 cents, though for now only from ABC and Fox. Owners of iPads, iPhones and top-of-the-line iPods will be able to transmit videos, photos and other media from their mobile devices to the television. It will also allow Netflix Inc.'s subscribers to stream thousands of movies and television shows without an additional fee.

But more than 100 other devices can stream Netflix movies, including game machines, Blu-ray players and Internet-connected TVs. Indeed, Apple faces an increasing number of competitors that include upstarts such as Roku and Boxee, powerful rivals such as Google Inc., and established players like Sony Corp. and Samsung Electronics Co.

And its revamped Apple TV box is, as Munster put it, "an elementary effort."

Steve Perlman, a former Apple executive and a pioneer in efforts to merge the Internet and television, described Apple TV's features as "underwhelming." "Apple is still in a holding pattern when it comes to television," said Perlman, now the chief executive of OnLive, an online gaming company.

Perlman and others suggested that Apple TV suffered from shortcomings such as limited programming choices and an in-



Tough task: Apple CEO Steven P. Jobs may be hoping his latest attempt at Apple TV will catch on, as the iPod did.

ability to use the kinds of applications and games that made the iPhone so popular. They say it is a box that provides some nice additional features for TV watchers, but not a replacement for the products and services consumers now rely on.

Many of the current generation of HDTVs come with Internet capability to stream movies, YouTube videos, Twitter feeds and music. They do not cost much more than TVs without that capability. John Revie, senior vice president for home entertainment marketing at Samsung Electronics, estimates the industry will sell 5.5 million "smart TVs" in 2010.

If Jobs had bolder ambitions for Apple TV, they were thwarted, in part, by the same challenges faced by most of its competitors: the established cable operators and content companies that want to protect their businesses even as they tiptoe into the world of Internet television.

CBS Broadcasting Inc. and National Broadcasting Co., for example, have refused to make television shows available to Apple at 99 cents, and even Fox suggested that it views its agreement with Apple as an experiment.

Jobs, a master marketer, tried to ease the device's simplicity as a virtue, saying that Apple TV delivers many of the things consumers want. "They want Hollywood movies and TV shows whenever they want," he said. "They want to pay lower prices for content. They don't want a computer on their TV. They have computers." He added: "They don't want to manage storage."

Apple has other advantages as well. The most significant improvement Apple made to the device was the price. It dropped it to \$99 (\$4,601.52), or \$200 cheaper than its predecessor model. Given Apple's substantial advertising budget, many consumers who have never heard of Boxee or the movie-streaming abilities of the Xbox 360 will certainly learn about Apple TV as the holidays ap-

proach. Analysts say that with Apple TV, the company is well positioned to take a bolder step into Internet television in the next year or two.

And they say that its most significant impact, at least in the short term, is likely to be not on the established television industry's incumbents, but rather on new players such as Roku, Boxee or Google.

Google has yet to enter the market but is expected to release in November its first version of Google TV.

The company's approach is more ambitious, more complex and notably different from Apple's.

Google wants its software to be at the centre of the television viewing experience. The software system will be built into televisions and will let people access any website and Web video, and easily search for programming. Prices for Google TV devices has not been announced.

Boxee is also trying to marry much of the Web with the television set, as well as stream programming from Netflix and other

sources. The company's box is expected to go on sale in the fall for \$199.

"It is really aimed at a different consumer," said Avner Konen, chief executive of Boxee. While Apple TV will be great for accessing some media, he said, "people want to be able to watch any video they see on the Internet on the TV."

Analysts say that Apple TV's closest match in the market is Roku, whose box has been available for two years and also offers streaming from Netflix and other services.

Anthony Wood, the chief executive of Roku, said he was not worried about competition from Apple. He said sales of the Roku boxes, which start at \$60, are growing fast, and the company expects to have sold a million devices by the end of the year.

"We try hard to offer a better product for a lower cost," Wood said. "They'll be a competitor for us, but I don't think they have an Apple-sized success on their hands."

Apple will have another important advantage over many rivals: the ability to demonstrate Apple's TV capabilities in its stores. "I can't walk into Best Buy and ask to see how Roku works," said Tim Bajarin, an analyst with Creative Strategies. Roku is sold only online.

But Apple's biggest challenge may be the same one facing all the new entrants in the market: an established industry that gives television consumers much of what they want and that it is itself inching toward the Internet.

"When Apple introduced the iPod, the music player was broken," said Munster, the Piper Jaffray analyst. The software to connect to music players was clumsy and seemed more suited to technophiles than average consumers, Munster said, creating an opening for Apple. "Now the television works well," he added, "and a lot of people don't realize that they need Internet TV."

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Why God did not create the universe

BY STEPHEN HAWKING & LEONARD MLODINOW

WSJ BOOK EXCERPT

According to Viking mythology, eclipses occur when two wolves, Skoll and Hati, catch the sun or moon. At the onset of an eclipse people would make lots of noise, hoping to scare the wolves away. After some time, people must have noticed that the eclipses ended regardless of whether they ran around banging on pots.

Ignorance of nature's ways led people in ancient times to postulate many myths in an effort to make sense of their world. But eventually, people turned to philosophy, that is, to the use of reason—with a good dose of intuition—to decipher their universe. Today we use reason, mathematics and experimental test—in other words, modern science.

Albert Einstein said, "The most incomprehensible thing about the universe is that it is comprehensible." He meant that, unlike our homes on a bad day, the universe is not just a conglomeration of objects each going its own way.

Everything in the universe follows laws, without exception.

Newton believed that our strangely habitable solar system did not "arise out of chaos by the mere laws of nature." Instead, he maintained that the order in the universe was "created by God at first and conserved by him to this Day in the same state and condition." The discovery recently of the extreme fine-tuning of so many laws of nature could lead some back to the idea that this grand design is the work of some grand Designer. Yet the latest advances in cosmology explain why the laws of the universe seem tailor-made for humans, without the need for a benevolent creator.

Many improbable occurrences conspired to create Earth's human-friendly design, and they would indeed be puzzling if ours were the only solar system in the universe. But today we know of hundreds of other solar systems, and few doubt that there exist countless more among the bil-



Nature's ways: Stephen Hawking.

lions of stars in our galaxy. Planets of all sorts exist, and obviously, when the beings on a planet that supports life examine the world around, they are bound to find that their environment satisfies the conditions they require to exist.

It is possible to turn that last statement into a scientific principle: The fact of our being restricts the characteristics of the kind of environment in which we find ourselves. For example, if we did not know the distance from the Earth to

the sun, the fact that beings like us exist would allow us to put bounds on how small or great the Earth-sun separation could be. We need liquid water to exist, and if the Earth were too close, it would all boil off; if it were too far, it would freeze. That principle is called the "weak" anthropic principle.

The weak anthropic principle is not very controversial. But there is a stronger form that is regarded with disdain among some physicists. The strong anthropic principle suggests that the fact that we exist imposes constraints, not just on our environment, but on the possible form and content of the laws of nature themselves.

The idea arose because it is not only the peculiar characteristics of our solar system that seem oddly conducive to the development of human life, but also the characteristics of our entire universe—and its laws. They appear to have a design that is both tailor-made to support us and, if we are to

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Why God did not create the universe

► FROM PAGE 27

exist, leaves little room for alteration. That is much more difficult to explain.

The tale of how the primordial universe of hydrogen, helium and a bit of lithium evolved to a universe harboring at least one world with intelligent life like us is a tale of many chapters. The forces of nature had to be such that heavier elements—especially carbon—could be produced from the primordial elements, and remain stable for at least billions of years. Those heavy elements were formed in the furnaces we call stars, so the forces first had to allow stars and galaxies to form. Those in turn grew from the seeds of tiny inhomogeneities in the early universe.

Even all that is not enough: The dynamics of the stars had to be such that some would eventually explode, precisely in a way that could disperse the heavier elements through space. In addition, the laws of nature had to dictate that these remnants could recondense into a new generation of stars, these surrounded by planets incorporating the newly formed heavy elements.

By examining the model universes we generate when the theories of physics are altered in certain ways, one can study the effect of changes to physical law in a methodical manner. Such calculations show that a change of as little as 0.5% in the strength of the strong nuclear force, or 4% in the electric force, would destroy either nearly all carbon or all oxygen in every star, and hence the possibility of life as we know it. Also, most of the fundamental constants appearing in our theories appear fine-tuned in the sense that if they were altered by only modest amounts, the universe would be qualitatively different, and in many cases unsuitable for the development of life. For example, if protons were 0.2% heavier, they would decay into neutrons, destabilizing atoms.

If one assumes that a few hundred million years in stable orbit is necessary for planetary life to evolve, the number of space dimensions is also fixed by our existence. That is because, according to the laws of gravity, it is only in three dimensions that stable elliptical orbits are possible. In any but three dimensions even a small disturbance, such as that produced by the pull of the other planets, would send a planet off its circular orbit, and cause

it to spiral either into or away from the sun.

The emergence of the complex structures capable of supporting intelligent observers seems to be very fragile. The laws of nature form a system that is extremely fine-tuned. What can we make of these coincidences? Luck in the precise form and nature of fundamental physical law is a different kind of luck from the luck we find in environmental factors. It raises the natural question of why it is that way.

Many people would like us to use these coincidences as evidence of the work of God. The idea that the universe was designed to accommodate mankind appears in theologies and mythologies dating from thousands of years ago. In Western culture the Old Testament contains the idea of providential design, but the traditional Christian viewpoint was also greatly influenced by Aristotle, who believed "in an intelligent natural world that functions according to some deliberate Design."

That is not the answer of modern science. As recent advances in cosmology suggest, the laws of gravity and quantum theory allow universes to appear spontaneously from nothing. Spontaneous creation is the reason there is something rather than nothing, why the universe exists, why we exist. It is not necessary to invoke God to light the blue touch paper and set the universe going.

Our universe seems to be one of many, each with different laws. That multiverse idea is not a notion invented to account for the miracle of fine tuning. It is a consequence predicted by many theories in modern cosmology. If it is true it reduces the strong anthropic principle to the weak one, putting the fine tunings of physical law on the same footing as the environmental factors, for it means that our cosmic habitat—now the entire observable universe—is just one of many.

Each universe has many possible histories and many possible states. Only a very few would allow creatures like us to exist. Although we are puny and insignificant on the scale of the cosmos, this makes us in a sense the lords of creation.

Stephen Hawking is a professor at the University of Cambridge. Leonard Mlodinow is a physicist who teaches at Caltech. Adapted from *The Grand Design* by Stephen Hawking and Leonard Mlodinow, to be published by Bantam Books on September 7.

—wsj@livemint.com

Times of India, ND
07/09/2010 p-6

21 Indians earn laurels in Cambridge school exam

TIMES NEWS NETWORK

New Delhi: Last year, seven Indian students had topped the world in individual subjects in Cambridge International Examinations. The feat has continued in surprising proportions with this year's results. As many as 21 students from different Indian cities have become the world toppers in International General Certificate of Secondary Education (IGCSE — class X) and Advance Subsidiary (AS - class XI) exams held across 160 countries in June 2010. Nearly 1.4 million students appeared in the exams all over the world.

CIE is an international board for school education and is conducted in around 250 schools in India. Gurgaon boy, Rajit Kinri from G D Goenka World School, has topped the world in mathematics in IGCSE with six others from Ahmedabad, Bangalore, Mumbai and Pune. "I never expected to top the world in mathematics. My parents still do not believe it. I studied mathematics as a routine like reading a newspaper every day. I have done pretty well in other subjects too," said Rajit.

He had nine subjects in all and he has scored an A* in eight of them. He has already taken up mathematics as a subject besides physics and chemistry in International Baccalaureate (IB) curriculum from the same school.

toireporter@timesgroup.com

Mole alert: MoD, services to review use of digital storage

Rajat Pandit | TNN

New Delhi: Even as Chinese and Pakistani online espionage agents continue their attempts to hack into Indian computer systems, hostile intelligence agencies are also trying to steal defence secrets through use of computer storage media (CSM) devices like pen drives, removable hard disks, CDs, DVDs and the like.

The Intelligence Bureau has sounded a red alert about "intelligence officers of a hostile country" encouraging their "assets" working in Indian defence establishments to use CSM devices to pilfer classified information from computer networks.

"There have been reports of increasing number of incidents of leakage of data/documents in defence establishments through the use of pen drives and other digital storage devices," says the



IB has sounded a red alert about intelligence officers of a hostile country encouraging their assets working in Indian defence establishments to use CSM devices to pilfer classified information from computer networks

security alert, issued to the defence ministry as well as the Army, Navy and IAF HQs.

Consequently, MoD has ordered a thorough review of the entire policy on "the entitlement and usage of CSM devices" in its different establishments, said sources.

While acknowledging the functional necessity to allow some officers to use such devices, MoD has asked for a comprehensive directorate-wise list of pen drives, laptops and internet connections being used in its different offices. This comes even as the Army is conducting a court

of inquiry against a major posted in the strategically-located Andaman and Nicobar Command, who had stored over 2,000 classified and sensitive documents on his personal computer which was "hacked" from Pakistan earlier this year.

While the major has been cleared of espionage charges, the probe dwells upon how he was in the "unauthorised" possession of so many secret documents, normally handled by much senior officers, and why he violated cyber-security guidelines, which expressly prohibit such

files from being stored on a computer with internet connectivity.

With cyber-warfare being a top military priority for China, its online espionage agents frequently break into sensitive Indian computer networks. A group of Canadian and American cyber-security researchers in their recent report 'Shadows in the Cloud', in fact, held China-based hackers were regularly accessing classified documents from several Indian defence and security establishments, as reported by TOI earlier.

MoD, however, says "only certain internet-facing computers, which had no sensitive defence data, were compromised" by the Chinese hackers. To prevent such incidents from recurring, "a crisis management plan" has been worked out "for measured response in case of any untoward incident".

Asian Age , ND 07-Sep-10 P-3

Nuclear scientist Homi Sethna dies at 86

Mumbai, Sept. 6: Former Atomic Energy Commission (AEC) chairman and the guiding force behind India's first nuclear test, Homi Nusserwanji Sethna, died at his Malabar Hills residence here after a prolonged illness, family members said.

He was 86 and is survived by a daughter and son.

Sethna passed away on Sunday at around 11.15 pm. His funeral will take place on Tuesday at Doongerwadi

Tower of Silence. Sethna, a nuclear scientist and chemical engineer, was responsible for setting up of India's first plutonium plant at Trombay in 1959. He was also the director of Indian Rare Earth in Kerala before moving to Mumbai.

He retired as AEC chairman in 1984 and served as chairman of Tata Power from 1989-2000. He also was a director in the Board of Tata Sons, Bombay Dye-

Sethna was the guiding force behind the first peaceful nuclear explosion project, 'Smiling Buddha', at Pokhran on May 18, 1974

ing and few more companies. An energetic engineer and a quick decision maker,

Sethna, the then Atomic Energy Commission chairman, was the guiding force behind the first peaceful nuclear explosion project "Smiling Buddha" at Pokhran on May 18, 1974.

He was a recipient of the country's second highest civilian award — Padma Vibhushan.

The Uranium Mill at Jaduguda in Bihar was also set up under his guidance in 1967.

He was also the Project Manager of 40 MW Canada-India Reactor (CIRUS) in 1956-58.

"Sethna was a good and energetic engineer, always willing to take risks and built India's first re-processing plant in Trombay. He had a dare devil attitude and never waited for bureaucratic processes to get the establishment work done," P.K. Lycngar, former AEC chairman, said.

—PTI

Times of India, ND

07/09/2010

p-9

Now, it's legitimate to take leave to mourn loss of kin

Sujit John &
Mini Joseph Tejaswi | TNN

Bangalore: India Inc might soon see a new category of legitimate time off from work, bereavement leave. Desi corporates seem to be thinking progressively, on par with their global counterparts, and adopting bereavement policies.

Some 90% of the enterprises in the US do grant bereavement leave, allowing employees to take time off on the loss of a loved one. In most cases, employees are given three days off with pay, a few places of work might give five days as time off with pay, while some companies grant additional time off without pay. IT companies in India are in the forefront in adopting this compassionate HR practice, which in the Indian context finds great resonance with employees.

TCS already has bereavement leave facility for its employees on a global basis. "It's not just a day, we allow our employees to take adequate leave to handle the family trauma in case of death of an immediate family member. Case to case, the number of days of leave required by employees vary, it could be multiple days, up to five days or more. This is given in addition to the existing, scheduled leave quota," said a TCS spokesperson.

Last month, Infosys Technologies introduced bereavement leave that will allow its employees to take off for a day, on the demise of their spouse, any of their parents, siblings or children. "This was introduced a month ago at Infosys. It is a one-day additional leave facility given to employees who suffer loss of any of their immediate fam-



A STEP FORWARD

ily members. Many global companies already have such leave facilities," said TV Mohandas Pai, head, education, training and HR, Infosys Technologies. Apparently, Infosys employees are not happy with the one-day bereavement leave scheme and are asking for at least three days.

Many MNCs including Cisco (four days) and Adobe (multiple days) already offer such leave facility in India. In most cases, companies follow a narrow definition of who a close family member is and only if one of the following — spouse, child, parent, grandparent, brother, sister — die can an employee be considered for time off with pay.

"Such policies make more sense in the Indian context where death-related rituals, religious practices and formalities are very time-consuming and take several days to complete," said a senior employee at a tech firm. Post-death issues include arranging a funeral or memorial service and burial, dealing with personal belongings, property and settling of wills. When a family member dies, in addition to coping with the loss of the person, the family left behind is left to deal with many of these issues.

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Study to trace uranium in water

ASIT JOLLY

CHANDIGARH

Punjab

Sept. 6: Environment minister Jairam Ramesh has ordered a comprehensive study to assess the impact of radioactive uranium traces in drinking water on human health across southwestern Punjab.

"The Indian Council for Medical Research has been asked to initiate a special study and their report should be available within the next three to four months," the minister said responding to reports that radioactivity in water and food could the

cause of the higher-than-normal incidence of cancers and other ailments amidst villagers in Bathinda and neighbouring districts.

Notably, the presence of uranium in human tissue was first noticed when a German laboratory communicated "toxic concentrations" of the radioactive element in hair samples taken from 149 children suffering from cerebral palsy. Assays carried out by Trace Minerals in April 2009 disturbingly revealed that "nearly 90

per cent of the young patients (all under 13 years) at Faridkot city's Baba Farid Centre for Special Children have pathological levels of uranium in their bodies."

Investigations prompted by the shocking revelations showed that besides water, common items of food also contained unacceptable concentrations of the radioactive metal. Buffalo and cow milk samples collected in the affected areas contained up to 3.33 micrograms per liter; pulses 47 micrograms and wheat up to 115 micrograms of uranium.

"The total average daily

intake of uranium, including from water, is nearly 140 micrograms per person which is completely unacceptable given that the global dietary intake standard is around just five micrograms," said geophysist and seismologist Dr Surinder Singh whose researchers at Amritsar's Guru Naanak Dev University have been trying to trace the source of the uranium for the past decade.

Now the ICMR investigation ordered by Mr Ramesh could well help establish what health experts have long suggested.

Hindu Nd 07.09.10 p-4

AIIMS faculty protests against 'selective' promotion interviews

'Will leave out several faculty members who are due for promotion'

Staff Reporter

NEW DELHI: The All-India Institute of Medical Sciences' Faculty Association has expressed concern over "selective" assessment promotion scheme interviews that the hospital administration is proposing to hold. This, it said, would leave out several faculty members who are due for promotion.

At the Association's general body meeting held this weekend, several members expressed their displeasure at the latest move. "Faculty members also noted that the hospital administration was making a mockery of the Cabinet order on the Sixth Pay Commission which should have been effective from January 1, 2006. It is being distorted by an arbitrary order issued on August 13, 2010, de-

• **'Making a mockery of the Cabinet order on the Sixth Pay Commission'**

• **'Interviews should be conducted as per the new rules'**

priving the faculty members of the full benefits of the Pay Commission," said AIIMS Faculty Association president Dr. Manoj Singh.

Association members said the assessment promotion scheme interviews which the hospital administration is proposing to conduct should have been done in a manner that does not adversely affect "inter se" seniority.

"Interviews should be conducted as per the new rules, i.e. those who have completed three, four and four years at the levels of assistant, associate and additional professor

respectively as per the Government of India order dated January 12, 2010, should be considered for promotion," said the Association.

"All those who are eligible for promotion as on July 2010 should also be called for the interviews. Also, we want the benefits of the Sixth Pay Commission made available to us without any compromise," added Dr. Singh.

The general body also discussed the issue of appointing faculty on contract stating that the Association was disturbed at the way the hospital administration was spoiling

the character of the Institute.

"By appointing contract faculty despite the Union Health Ministry's objections the hospital administration will hamper the continuity of patient care, research and education at the Institute. We demand that proper selection be made at the level of assistant professors and that the appointments be made immediately," said Dr. Singh.

"To press for these issues, a joint action committee has been formed with members from various other Central institutes like Post-Graduate Institute of Medical Education and Research, Chandigarh; National Institute of Mental Health and Neuro Sciences, Bangalore; and Jawaharlal Institute of Post-Graduate Medical Education and Research, Puducherry, among others," he added.