Newspaper Clips

December 3, 2010

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In a year, India will have nuclear triad: Navy chief

Rajat Pandit | TNN

New Delhi: Only three countries, US, Russia and China, can be said to have fully-operational nuclear weapon triads — the capability to fire nuclear-tipped missiles from land, air and sea. India will gatecrash into this highly-exclusive club by 2012.

Navy chief Admiral Nirmal Verma, not given to making dramatic statements, said the triad will be complete once its crucial underwater leg, the country's first indigenous nuclear submarine aptly named INS Arihant or the "destroyer of enemies", is commissioned towards late-2011 or early-2012.

The land and air legs are already in place with the Agni family of road and rail-mobile ballistic missiles as well as fighter jets like Mirage-2000s and Sukhoi-30MKIs jury-rigged to deliver nuclear weapons. "When INS Arihant goes to sea, it will be on a deterrent patrol (read armed with nucelar-tipped missiles). The triad will then be in place... the aim is to make it as effective as possible," Admiral Verma said on Thursday, in the run-up to Navy Day on December 4.

This comes barely a day after WikiLeaks revealed that American and European diplomats were greatly alarmed about Pakistan's feverish production of nuclear weapons. Estimates show Pakistan already has around 70 to 90 warheads, higher than India's 60 to 80. China, of course, is way ahead with around 240 warheads. While Pakistan is nowhere near getting a nuclear submarine, China has 10 of them in its 62-submarine fleet, with three of them being SSBNs (armed with long-range strategic missiles). India, in contrast, has just 15 conventional and ageing diesel-electric submarines.

IN ELITE CLUB SOON: Navy chief Admiral Nirmal Verma

Consequently, INS Arihant is crucial to India's nuclear deterrence doctrine, which revolves around a clear "no-first use" policy. A robust and survivable second-strike capability is hugely dependent on having nuclear-powered submarines, armed with SLBMs (submarine-launched ballistic missiles), which can operate silently underwater for several months at a time.

Admiral Verma said INS Arihant, which was "launched" at Vizag in July 2009, would have potent SLBM capabilities to complete the triad. With INS Arihant's miniature 83 mw pressurised light-water reactor slated to go "critical" within a month or two for sea-acceptance trials, Navy also seems quite confident about ongoing undersea tests of the 700-km K-15 and 3,500-km K-4 SLBMs.

The 6,000-tonne INS Arihant, which has four silos on its hump to carry 12 K-15s or four extended range K-4s, is to be followed by another two nuclear submarines under the secretive Rs 30,000 crore Advanced Technology Vessel (ATV) project. Navy, on its part, wants to have three SSBNs and six SSNs (nuclear-powered attack submarines) in the years ahead. The force will also finally induct the K-152 Nerpa submarine, on a 10-year lease from Russia, towards April-May 2011 after several delays. While the 12,000-tonne Nerpa will not come armed with long-range missiles due to international treaties, it will help train Indian sailors in the complex art of operating nuclear submarines. It will also be a lethal hunter of enemy submarines and warships, armed with torpedoes and 300-km Klub-S cruise missiles.

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Ban on baby food cos sponsoring medico meets?

Rema Nagarajan
TIMES INSIGHT GROUP

The health ministry and the women and child development ministry have sought a ban on sponsorship by baby food manufacturers or their front organizations of health workers, doctors or meetings of their associations. One of the most prominent institutions to violate this instruction is the prestigious PGI, Chandigarh which is holding an annual conference on nutrition along with the Nestle Nutrition Institute from December 10 to 12.

In a joint letter dated August 17 this year, the secretaries of the two ministries had pointed out that recently, there were several instances of baby food manufacturers through their own research/education or other front organisations indulging in sponsorship of doctors' meetings or even acting as the host of these meetings. The letter sought a ban on such activities as they violated the Infant Milk Substitute, Feeding Bottles and Infant Foods (Regulation of production, supply and distribution) Act or the IMS Act, 1992.

"Most recently, we have come to know that one of them is offering to set up libraries in medical colleges. Another is approaching paediatricians and providing them with gifts and also distributing infant feeding booklets with misleading information on infant feeding in several hospitals," stated the letter. It added that there were other examples of baby food manufacturers sponsoring doctors' conferences using other brands meant for children over two years.

CONFLICT OF INTEREST

The conference at PGI, which is supposed to be on clinical nutrition, has surgeons, gastroenterologists, dieticians and paediatricians participating. Dr Sunit Singhi, the organising chairman, is the head of the department of paediatrics. Clearly, the ministry's warning against doctors in general, and paediatricians in particular, not collaborating with baby food companies is being ignored. When contacted, Dr Gurpreet Singh, organising secretary of the conference refused to comment. The ministries urged the concerned state departments to check and ban such sponsorships and to take all steps necessary to implement the IMA Act.

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Arsenic: Poison for humans is food for deep-sea bacteria

Washington: Lurking in the depths of a California lake, researchers found a bacteria that can thrive on arsenic, an explosive discovery that could expand the search for other life on Earth and beyond.

The Nasa-funded findings redefines what science considers the necessary elements for life, currently viewed as: carbon, hydrogen, nitrogen, oxygen, phosphorous and sulfur. Not only does the bacteria survive on arsenic, it also grows by incorporating the element into its DNA and cell membranes, said the study.

"What is new here is arsenic is being used as a building block for the organism," explained Ariel Anbar, co-author of the study which appears in the online journal Science Express. "We have had this idea that life requires these six elements with no exceptions and here it turns out, well maybe there is an exception," he said.

The discovery was made by Felisa Wolfe-Simon, a former scientist in Anbar's research group at Arizona State University's School of Earth and Space Exploration. AFP

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India ranks second in mfg competitiveness: Study

TIMES NEWS NETWORK

New Delhi: There is a growing evidence of India slowly emerging as the new destination for global manufacturing. A study conducted by Deloitte and the US Council on Competitiveness has revealed that India is ranked second behind China in manufacturing competitiveness and will only narrow the gap over the next few years.

The Global Manufacturing Competitiveness Index, based on the views of more than 400 senior manufacturing executives worldwide, has rated the overall manufacturing competitiveness of 26 countries.

More surprising (than China's rise to the top) is that India is now positioned at number two and expected to gain an even stronger foothold over the next five years. "India's rich talent pool of scientists, researchers, and engineers as well as its large, well-educated English-speaking workforce and democratic regime make it an attractive destination for manufacturers," the study said.

Pecking Order

2010	2015
China	China
India	India
South Korea	South Korea
United States	Brazil
Brazil	United States
Japan	Mexico
Mexico	Japan
Germany	Germany
Singapore	Poland
Poland	Thailand

Source: Deloitte, US Council on Competitiveness

Executives surveyed said that research and development capabilities paired with engineering, software, and technology integration abilities were essential ingredients for manufacturing enterprises. "They also view India as a place where they can design, develop and manufacture innovative products for sale in local as well as in global markets," the study said.

These factors explain, in part, India's rise from a low-cost, back-office location to a country that is well-positioned to be an active participant in the entire value chain as well as it now being viewed by many executives as an integral part of their global manufacturing enterprise and location strategy, it added.

While China, India and South Korea, the three most manufacturing competitive economies would retain their position, Brazil is projected to replace US from the fourth slot. The US, where concerns of losing competitiveness are already causing some concern, is expected to slip to the fifth slot.

According to the senior manufacturing leaders who participated in the study, the most important drivers of global manufacturing competitiveness are the classic factors of production labour, materials and energy.

Times of India ND 3/12/2010 P-21

How many stars are there? 3 followed by 23 zeros

Washington: The universe may glitter with far more stars than even Carl Sagan imagined when he rhapsodized about billions upon billions. A new study suggests there are a mind-blowing 300 sextillion of them, or three times as many as scientists previously calculated. That is a 3 followed by 23 zeros. Or 3 trillion times 100 billion.

The estimate, contained in a study published online Wednesday in the journal Nature, is based on findings that there are many more red dwarf stars "the most common star in the universe" than once thought. But the research goes deeper than that. The study by Yale University astronomer Pieter van Dokkum and Harvard astrophysicist Charlie Conroy questions a key assumption that astronomers often use: that most galaxies have the same properties as our Milky Way. And that conclusion is deeply unsettling to astronomers who want a more orderly cosmos.

A new study says there are 3 times more stars than earlier estimated

Generally scientists believe there are 100 billion to a trillion galaxies in the universe. And each galaxy was thought to have 100 billion to a trillion stars. AP

'Super-Earth could be a waterworld'

A 'super-Earth' discovered recently 40 light years away could be covered with either water vapour or a thick haze, scientists have said. The planet, which is 2.6 times bigger than Earth, has given scientists their first chance to analyse the atmosphere of a world outside the solar system. Atronomers say they have found possible evidence of water in the form of steam shrouding the planet. PTI

Times of India ND 3/12/2010 P-26

IIT placements start with a bang

D Suresh Kumar | TNN

Chennai: Campus placements across seven IITs and several other prominent engineering and management colleges have started in full swing this season with companies vying for the best students. The highlight of the season at IIT Madras was the presence of the popular social networking site Facebook, which conducted interviews for short-listed students via Skype, the Internet voice protocol service.

The students answered through computer screens in the campus, while questions were asked from US. The candidates had qualified for interviews after clearing tough written examinations conducted earlier. Facebook was among the Day One recruiters. The interview for some of the 13 short-listed students was conducted on Thursday because of time gap between the US and here," said professor N Ramesh Babu, advisor (training and placement), IIT Madras. Facebook has offered a huge compensation package (exact amount withheld) for the job positions, which are US based.

The quick and steady recovery of the economy has clearly buoyed up sentiment in campuses across the south.

VYING FOR TOP TALENT

After getting TCS to recruit students from his university, SRM University vice-chancellor P Sathyanarayanan said, "We are hopeful of getting 100% placement this year." Already, 1,538 of 2,400 SRM students have been placed within a week, with TCS alone picking up 1,091 graduates.

Officials in charge of placements are, sort of, puzzled because they have too many companies waiting in queue. Nearly 250 recruiters, comprising old and new economy companies, have lined up for slots till end-January 2011. Day One saw international names such as Deutsche Bank, Goldman Sachs, IBM Research, Morgan Stanley, ITC and McKinsey. "We are in a position where, say, after 20 days you may not have enough students for recruitment. We have not been able to give dates for some companies. Most companies will also go to the other IITs after hiring here," said Ramesh Babu.

Last year, initially, only around 120 companies had registered for the placements at IIT Madras, though the number had touched 250 by the end of the season. This season, however, the placement office continues to receive requests for better slots from companies. The Indian Navy and Air Force are also interested in hiring IITians.

The bulk of the hiring is being done by core companies as well as the IT majors. Some colleges like Sathyabama deemed university has in fact given core companies the first pick of their candidates, with IT following later. Only three companies have so far visited its campus, but the university has achieved nearly 50% of its target of placing 1,400 students. However the pay packages are nothing to be excited about. Most IT companies are sticking to the Rs 3.1 lakh to Rs 3.5 lakh range, while core companies are quoting slightly higher by offering candidates Rs 4.2 lakh to Rs 5.2 lakh a year.

Times of India ND
3/12/2010 P-21

Healthiest BMI is 22.5-24.9, no room for plump

Washington: What is the healthiest weight to be? People hoping for a little jiggle room may be disappointed—it is the weight already identified by public health experts using body mass index or BMI.

There had been some suggestion that it may be healthier to be pleasantly plump, but the team at the US National Cancer Institute crushed any such idea with a study of 1.5 million adults. The healthiest BMI is 22.5 to 24.9, they found — at the upper end of where the World Health Organization, Centers for Disease Control and Prevention and other groups have said people should be.

Body-mass index is the weight in kilograms divided by the square of the height in meters. A BMI of between 25 and 30 is overweight and a BMI of 30 or over is obese. A person 5 feet 5 inches tall is classified as overweight at 68kg and obese at 82kg. A 5-foot-10 inch tall person who weighs 95kg has a BMI of 30 and is obese.

Being overweight or obese raises the risk of heart disease, diabetes, some cancers and arthritis. The study, published in the New England Journal of Medicine, confirms that having a BMI of 25 or more also makes a person more likely to die than someone the same age who is slimmer. "There is a small increased risk of all-cause mortality associated with being overweight — about 10% compared to having a normal BMI," Amy Berrington de Gonzalez of the National Cancer Institute, who led the study, said in a telephone interview.

WEIGHT & WATCH

But the severely obese — those with a BMI of 40 or more — have 2.5 times the risk of dying than people of a healthy weight who are the same age. The original BMI guidelines were set using some data on health, but Berrington said several recent studies had suggested that people considered overweight may be less likely to die of cancer and other conditions. So she and an international team of experts took another look at the data.

WHO guidelines say the lowest "normal" BMI is 18.5 but Berrington's team found it is not healthy to be too thin. "What we found was that a low BMI—below 20—was also associated with an increased risk of death," Berrington said. This could be because people that thin already have disease, she said, and added her team will check. REUTERS

Times of India ND 3/12/2010 P-21

Flying cars to boost military might

Can Dodge Attacks By Gliding Over War Zone; Don't Need Pilots

London: US troops in war-torn Afghanistan may soon get a new mode of transportation as top military bosses are considering procuring advanced vehicles that can also fly over the battlefield to avoid enemy attacks.

When on ground, the vehicle would function just like a big four-wheel-drive Humvee. But it would also be able to take off like a helicopter and fly away from trouble or to avoid enemy road blocks, the Telegraph reported. About £41 million have already been given to US firm Terrafugia which is developing the world's first flying car, said the report.

According to the report, the Pentagon's Defense Advanced Research Projects Agency wants to develop a four person flyable and road worthy vehicle. Terrafugia, which has developed the Transition Flying Car, is the largest subcontractor to one of two winning teams. The vehicle, known as the Transformer, or TX, would have what the project bosses describe as "unprecedented capability to avoid traditional and asymmetrical threats while avoiding road obstructions."

THE GAME-CHANGER

Intended missions would include medical evacuation, avoiding improvised explosive devices, remote resupply and taking special forces into the battle zone. The vehicle will be able to travel 280 miles by land and air, using vertical take-off and landing to increase access to difficult terrain. It will also have automatic flight controls so it can be flown by non-pilots.

Phase one of the five year, three-phase programme will focus on conceptual design of both a prototype and a production vehicle. Phases two and three will focus on the design and manufacture of the prototype, which could be ready as early as first quarter 2015. PTI

Times of India ND 3/12/2010
P-4

IIT prof helped cops in studying CCTV footage

TIMES NEWS NETWORK

New Delhi: Delhi Police on Thursday arrested Shamshad alias Khutkan (25) and Usman alias Kale (25) from the Mewat region of Haryana for the gangrape of a 30-year-old BPO staffer in a moving vehicle near Dhaula Kuan. The absconding accused are Kamru alias 'Mobile' and Iqbal alias Badi Billi, both 25 years old. All five belong to Dhauj village.

"It was a blind case. The culprits left no clues; even their vehicle bore no number," said Delhi Police Commissioner B K Gupta. Police said the accused spotted the women in the call-centre cab around Dhaula Kuan and started trailing them. "The moment they saw the cab dropping the women and leaving the spot, they thought it was an opportunity and abducted the victim. Giving details about the investigations, Joint Commissioner (Southern Range) and Deputy Commissioner H G S Dhaliwal said a constable and a head constable camped in Mewat for the past five days to develop intelligence.

The week long investigations involved over 300 policemen. Technical support was taken from an IIT professor who had earlier worked on Al Qaeda tapes besides and a transport expert who identified the make of the vehicle used in the crime by rummaging through CCTV footage.

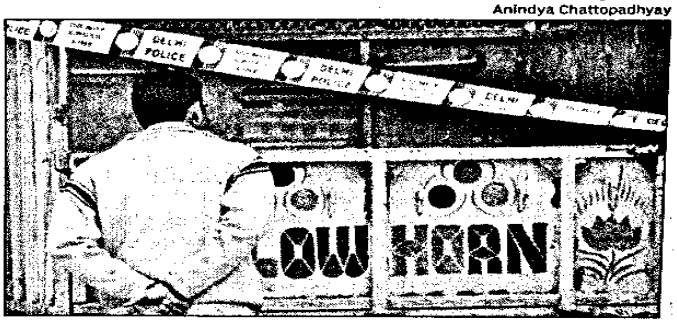
Despite undergoing trauma, Gupta said, the victim provided "unique features" about the vehicle used in the crime like a Hindi word in English starting with 'M' was written in a slanting manner on the window panes. "After various permutations and combinations, the most probable word came out to be 'Muskan'," Dhaliwal said.

Added Joint CP (southern range) Amulya Patnaik, "The victim told the police that the rear side of the suspected vehicle was decorated with a flower painting. She also told us that she had been given 15 Rs 10 currency notes folded vertically wrapped with a rubber band." Gupta said these peculiarities and the "audacious way and professionalism" in committing crime and the time of incident suggested that a Mewati gangs could be involved.

"Particularly, the Rs 10 notes vertically folded with a rubber band pointed toward a few particular type of criminals. It was ascertained that currency notes of Rs 10 denominations are normally kept in bundles by Mewati criminals to pay toll tax," said Dhaliwal.

"The location and movements of each and every member of these gangs were verified. Meanwhile, it was found that a member of one of gangs had surrendered in a Faridabad court a day after the incident in an old case, which aroused doubt," Dhaliwal said.

Anindya Chattopadhyay



During interrogation the duo reportedly told the police that they were under the influence of alcohol and seeing that the girls were walking alone from the Ring Road, they decided to abduct them. "The accused persons were not on prowl. They saw an opportunity and seized it. They used to roam around Delhi and when they found they was an opportunity to commit a crime, they would use it like breaking open shutters and decamping with articles," Patnaik said.

They gave her some money to go back home and drove back to Mewat, police said. The five men had purchased the Mahindra Pick up for Rs 1.4 lakh recently from one Jacob, a resident of Utavad in Faridabad.

Hindustan Times, ND 03-Dec-10 p-9

NCERT eyes upgrade to central university

PROPOSAL Panel to advise govt on education body offering degrees

ht SPECIAL

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NEW DELHI: The National Council of Educational Research and Training (NCERT) may soon offer degrees as a centrally-funded university under a proposal to upgrade India's apex school education policy agency half a century after its birth.

The human resource development ministry has set up a panel of academic experts to advise the government on the proposal to convert the NCERT into a university, top government sources have confirmed to HT. The NCERT could alternatively be awarded deemed university status, the sources said.

The expert panel is headed by professor Goverdhan Mehta, former director of the Indian Institute of Science, Bangalore, and currently a national research fellow. Former Indian Council of Philosophical Research head Mrinal Miri is also on the panel, which will evaluate the proposal and feasibility of the project, sources said.

"The NCERT has the potential to become a top research university. If the plan takes off, this could be a perfect golden jubilee gift for the NCERT," a source said. The NCERT was started in 1961 and has since then been the country's top policy-making agency on school education, research and pedagogy.

It produces the National Curriculum Framework (NCF) that outlines the direction of school education to be followed across the country. A similar NCF for teacher education is the Bible that teacher training schools must follow. The NCERT also conducts research across education subjects. NCERT regional centres offer B.Ed and M.Ed courses.

But the NCERT cannot itself offer degrees for these courses. It relies on partnerships with state government universities at present to offer degrees. Only institutions established under acts of Parliament or state legislatures, and deemed universities can offer degrees. The NCERT is merely a registered society.

This inability to award degrees has hampered the NCERT's growth, several academicians have argued over the past few years. The idea of converting the NCERT into a university was discussed within the Council at least twice before, during the tenure of past Directors JS Rajput and Krishna Kumar, sources said. It has however never before been taken up by the HRD ministry.

NCERT sources argue that the absence of a university tag also hurts their ability to collaborate with top global universities and research centres.

WIDENING SCOPE

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- The HRD has set up a panel of academic experts to advise the government on the proposal to convert the NCERT into a university.
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- The NCERT cannot itself offer degrees for courses. It relies on partnerships with state government universities at present to offer degrees.
- This inability to award degrees has hampered the NCERT's growth, several academicians have argued.

Hindustan Times, ND
03-Dec-10 p-9

'MEDICAL STUDY NEEDS TO BE REVAMPED'

HT Correspondent
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NEW DELHI: Medical education in India needs an urgent revamp to equip doctors with life-long learning skills so they can keep up with the exponential expansion in knowledge in healthcare.

Traditional medical college curriculum offers a vast body of knowledge on basic science that is not integrated to the clinical context. "New learnings are rapidly being translated into treatment... Instead of using the current lecture format, the curriculum should limit teaching to basic sciences and equip students with tools for self-learning to help them harness new knowledge," said Dr Vinay Kumar, professor and chairman of the Department of Pathology, and executive vice-dean of the Division of Biologic Sciences, University of Chicago.

"Instead of overburdening the student with content information, medical students should be given a roadmap of learning objectives and its clinical application," said Dr Kumar, who was in Delhi to make a presentation on evolving curriculum in medical schools across the world.

"The Medical Council of India is actively working to include integrated competencies in the basic science and clinical modules in medical education," said an MCI official.

Hindustan Times, ND 03-Dec-10 p-11

Banks, take note

VILLAGE VAULT Making low-cost ATMs that can beat power cuts, an IIT graduate is helping bring rural India under the umbrella of organised financial services

ruralteller

Samanth Subramanian
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In January, when the State Bank of India (SBI) brought its 100,000th village under its gargantuan banking umbrella, it chose Sannyasidanga, a village that lies, not without coincidence, near Jangipur, finance minister Pranab Mukherjee's parliamentary seat. Mukherjee agreed to inaugurate not only SBI's customer service point in Sannyasidanga, but also a new ATM in a village named Barala nearby.

A week before the big day, however, parts of the plan started to fray. "They discovered that the lanes in the village were too small for conventional ATMs, and there was no three-phrase power anywhere in the vicinity," says L Kannan, founder and chief technology officer of Vortex Engineering Pvt. Ltd.

"So an emergency call was placed to my CEO (chief executive officer) to ship one of our rural ATMs there double quick."

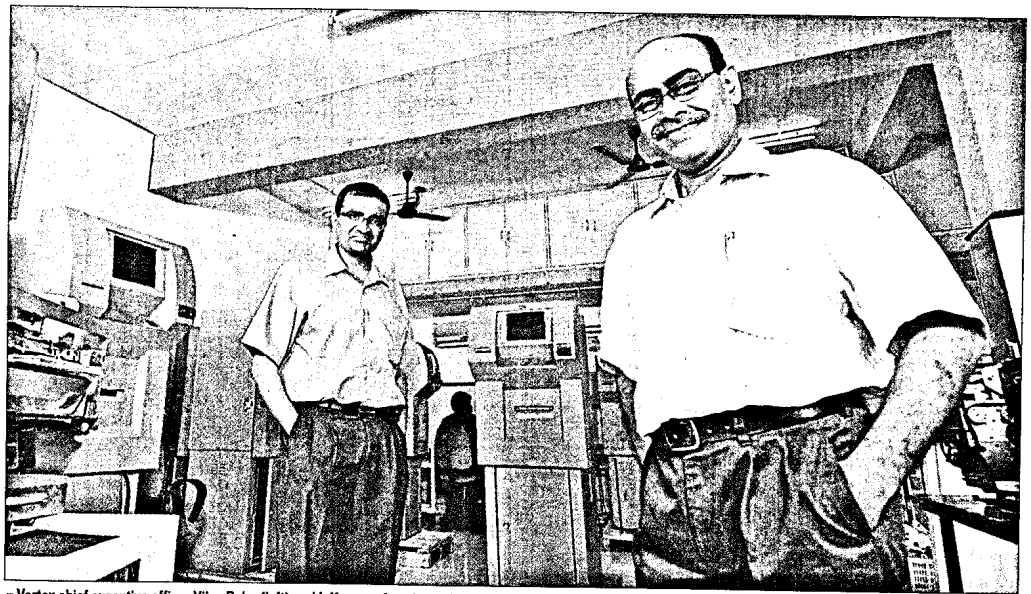
An hour before Mukherjee arrived, Kannan goes on, "there was a complete power cut. Fortunately we had a four-hour power backup, so the inauguration could go ahead as planned".

This chain of events appears almost to have been scripted to illustrate the reason for Vortex's existence, and that doesn't escape Kannan. He doesn't spell it out explicitly, but he pauses to let the significance of the incident sink in. The pitfalls surrounding this particular ATM are really the pitfalls surrounding all ATMs in rural India, and also surrounding the mission of rural banking — of bringing more of India's vast, scattered populace under the umbrella of organised financial services.

Vortex's ATM, engineered to be a low-cost, low-maintenance device, has not been in the market long, but it has already accumulated a stack of plaudits. Earlier this year, Vortex was one of the 12 finalists for the Wall Street Journal Asia Innovation awards. In September, Time magazine named Vortex one of the '10 Start-Ups That Will Change Your Life'.

Kannan studied mechanical engineering at the Indian Institute of Technology, Madras (IIT-M), but his career began in a decidedly un-IITian way. Following his interest in textiles and artisanal weaving, Kannan started to design, in 1998, technology to help artisans convert their cotton into yarn.

To further develop this technology, Kannan founded Vortex in 2001. Three years later, however, Vortex found itself starting down a different part, when Kannan participated in an IIT project that was exploring how communication devices could deliver financial services. In 2004, 80% of rural India remained outside the coverage of traditional banks, and the Reserve Bank of India (RBI) estimates that "informal" rural borrowing forms an $80 billion (₹3.63 trillion today) market.



■ Vortex chief executive officer Vijay Bahu (left) and L Kannan, founder and chief technology officer.

HEMANT MISHRA/ MINT

"Initially, IIT tried using Internet kiosks as points of sale for insurance or loans, but it wasn't very scalable," Kannan says.

As a corollary experiment, however, the team had installed a couple of ATMs in villages near Madurai, only to find that they were heavily and easily used; the supposed technology gap was either non-existent or easily vaulted. The sole problem, in fact, was the cost, and realising that, the head of the IIT project, a professor named Ashok Jhunjhunwala, sought Kannan out.

"Can you build me a cheap ATM?" Kannan recalls Jhunjhunwala asking him. "For around ₹1 lakh?"

Kannan thought ₹1 lakh was plenty for a machine that just counted notes and dispersed them. "Why?" he asked Jhunjhunwala. "How much does it cost in the market now?"

"At least ₹8 lakh," Jhunjhunwala replied.

For the next three months, Kannan and his colleagues cut paper into currency-sized slips and counted them endlessly, "to understand how to pick notes one by one".

"We couldn't exactly rework the entire ecosystem," Kannan says.

In 2007, Kannan started from scratch, and his engineers came up with the prototype of the rural ATM that Vortex sells today. Its most basic model costs — as Jhunjhunwala had desired — less than ₹1 lakh, and none of the models consumes more than 20% of the power that conventional ATMs require.

The Gramateller, as Vortex's ATM is known, inverts many long-established — and blindly accepted, Kannan argues — principles of ATM design.

The ATM's rural environment posed other challenges. The Gramateller has capacious reserves of power backups, and one model is solar-powered. It uses Wireless in Local Loop for connectivity, instead of relying on physical communication cables that are expensive to lay and to repair. Oddly, the ATMs also had to be adept at dealing with soiled notes. "We found, in villages, that people trust used notes much more than they trust crisp new ones," Kannan says.

Thus far, Vortex has subsisted largely on funding — a total of roughly $6 million till date — from venture capitalists and investors such as Venture East, Aavishkar and Bamboo Finance. Its first, and so far only, commercial order — for 600 ATMs — came from SBI last year.

"So far only a small number of these ATMs have been operationalised," said RK Saraf, chief general manager of information technology at SBI, in an email. He went on to write, however, that "at this stage, it would be rather premature to comment on the benefits or contribution of these ATMs in our financial inclusion agenda".

"People think that cutting the cost of a product means taking what's already there, snipping here, snipping there — and maybe that works sometimes," Kannan says.

"But if you want a drastically different price point, you need to do it differently. Our lack of ATM experience kept me away from established wisdom. For a long time, in fact, I even stayed away from seeing how an ATM functions. We tried to do it as if we were the first people to build an ATM. That was why it worked."

YES WE CAN

■ A money dispenser being tested at the Vortex headquarters in Chennai.

■ Vortex Engineering Pvt. Ltd Started: 2001

■ Made in India: Gramateller low-cost ATM

Business Line ND 03/12/2010 p-10

Rs 8,800-cr boost for education

Azim Premji University aims to be operational next year

Our Bureau

Bangalore, Dec.2

The Rs 8,846-crore endowment that comes from Mr Azim Premji's share transfer to an "irrevocable" trust will be used to fund various social, not-for-profit initiatives, including the Azim Premji University.

Mr Azim Premji, Chairman of the Azim Premji Foundation, on Wednesday announced that he would transfer 2.13 crore equity shares (an 8.6 per cent stake) of Wipro Ltd held by certain entities controlled by him to a trust. The transfer will be effected by December 7. The trust is controlled by Mr Premji and he will continue to retain the voting rights of the transferred shares.

Commenting on the development, Mr Karthik Ananth, Director-Market Expansion, Zinnov Management Consulting, said, "Since Mr Premji still holds voting rights, the share transfer has no correlation with the SEBI shareholding norms. This is more of a charitable act. Globally, people like Warren Buffett and Bill Gates do such charity. In India, corporates do at a small level. Very few family run businesses or big successful entrepreneurs do it in a big scale, the exceptions being the Mittals and now Mr Premji. And the areas the endowment will fund, be it education or teacher training, they will all feed into the ecosystem. This will perhaps set the precedent for other leaders to follow."

We want to contribute significantly towards improvement of education in India, and through that towards building a better society.
– Mr Azim Premji, Chairman of Wipro

As on September 30, Mr Premji and his family owned 79.36 per cent stake. Mr Premji personally owned 3.81 per stake and the Azim Premji Foundation has 0.44 per cent stake.

The Azim Premji Foundation was set up in 2001 and since then it has worked primarily in rural India, in partnership with various State Governments, to improve the quality of education. The foundation's programmes across 25,000 schools have benefitted over 2.5 million children.

The efforts also include the Azim Premji University, which was recently approved by the Karnataka Government under a special legislative Act.

OBJECTIVE

According to a statement, the University's objective is to create education and development professionals of high calibre, with a "deep commitment to social causes and a desire to work in disadvantaged communities." The university also aims create "deep knowledge in education and development through high quality research that is relevant to India."

The University will be in Bangalore and aims to be operational in 2011. The University hopes to be "multidisciplinary" in its approach, offering a range of programmes in Education Policy, Teaching and Learning, Education Psychology, Educational Leadership and Management, Education Technology, Education Research and Development Studies.

Mr Premji said, "We believe good education is crucial to building a just, equitable, humane and sustainable society. We want to contribute significantly towards improvement of education in India, and through that towards building a better society. The Foundation's significant increase in scale and its clear focus on social purposes will require a substantial long-term financial commitment, which is the purpose this endowment will serve."

RESOURCE CENTRES

The foundation will also "significantly" increase the number of its field level programmes and establish several State and district resource centres.

These centres will have "high quality" education and development professionals and other relevant resources to support schools, NGOs, district Institutes of education and training and other educational institutions in the district and at the State level, said a statement.

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IIM-A steps out of campus to woo global recruiters

Role Reversal: Institute To Hardsell Talent Pool At S'pore Conclave

Parag Dave & Avinash Nair
AHMEDABAD

CALL IT image-building or a hard-core marketing strategy. For the first time in its history, the country's top B-school, the Indian Institute of Management-Ahmedabad (IIM-A), has decided to step out of the campus and go overseas for wooing recruiters. The B-school which is celebrating its golden jubilee later this month will be orgainising a recruiters' conclave in Singapore on December 6.

After becoming the first B-School in the country to change the placement system from day-based to a Cohort-based process giving prominence to roles over salaries, experts say, the latest move by IIM-A is an attempt to take placements to the next level in a globalised world.

The conclave aims to bring together over 60 global firms who either have headquarters in the state-city or have operations there. Through the event, the institute in not only trying to hard-sell its talent pool to global recruiters but is also aiming at lucrative opportunities for its students. The island-state that has clocked an impressive 18.1% GDP

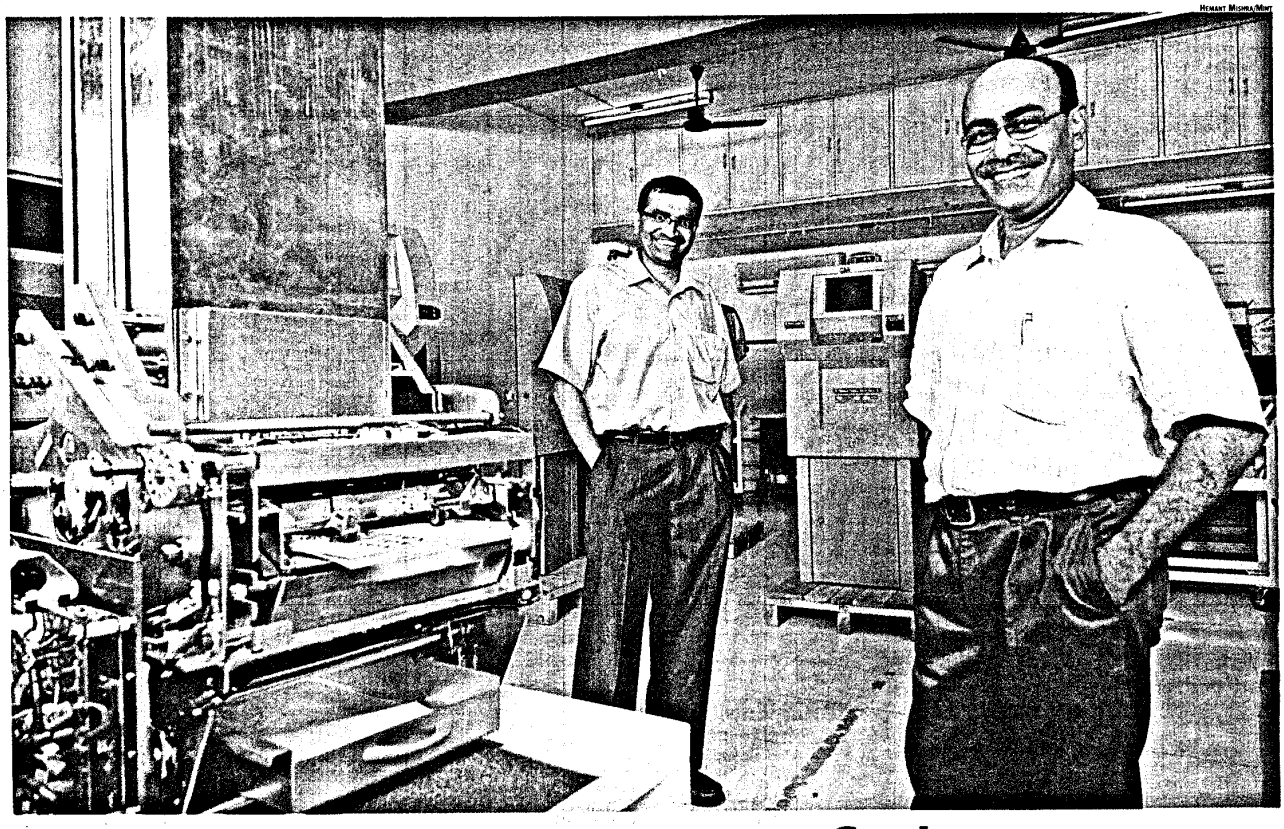
growth in the first half of 2010, outperforming the likes of China, India and Brazil is thus a big draw. That's not all. This year, Singapore's currency has already gained about 8% against the US dollar and the International Monetary Fund estimates that the island's 15% forecast growth rate this year would be the fastest in the world after Qatar.

No wonder top B-schools like IIM-A are going all out to lure recruiters from the world's hottest economy. "Till now, recruiters have always discovered IIM-A. We have never projected ourselves to recruiters. However, now we want to change this scenario," says Professor Saral Mukherjee, chairperson of IIM-A placement committee that handles students' placements at the institute.

"Many recruiters like DBS, Temasek and Olam International have ocassionally hired students from IIM-A. Through this conclave, we want to make some of them regular visitors at our campus. We also be looking at other potential firms who could visit our campus," Mr Mukherjee told ET.

"Secondly, through this conclave we also want to understand their needs and listen to their concerns about hiring from India, if they have any," said Mr Mukherjee adding that a number of finance, marketing, logistic and supply chain firms and logistic companies having their headquarters or regional offices in Singapore will be participating in the event. "We expect more than 60 companies in the conclave. Many of them will be potential recruiters, who have never come to IIM-A or even India for recruitment. We will be projecting India, IIMs and IIM-A," Mr Mukherjee added. IIM-A already has a strong presence in Singapore. Thanks to a deal with French B-School Essec about five years ago, IIM-A conducts management and research programmes in Singapore. IIM-A also has a strong alumni-base in Singapore and a day before the conclave, it will be organising an alumni meet as well.

LOW-COST ATM | VORTEX ENGINEERING



Cash at a fraction of the cost

Chennai-based firm's Gramateller models consume less than 20% of the power that conventional ATMs need; they don't need three-phase power or air-conditioned cabins

By Samanth Subramanian
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CHENNAI

In January, when the State Bank of India (SBI) brought its 100,000th village under its gargantuan banking umbrella, it chose Sannyasidanga, a village that lies, not without coincidence, near Jangipur, finance minister Pranab Mukherjee's parliamentary seat. Mukherjee agreed to inaugurate not only SBI's customer service point in Sannyasidanga, but also a new ATM in a village named Barala nearby.

A week before the big day, however, parts of the plan started to fray. "They discovered that the lanes in the village were too small for conventional ATMs, and there was no three-phase power anywhere in the vicinity," says L. Kannan, founder and chief technology officer (CTO) of **Vortex Engineering Pvt. Ltd**. "So an emergency call was placed to my CEO (chief executive officer) to ship one of our rural ATMs there double quick."

MADE IN INDIA

An hour before Mukherjee arrived, Kannan goes on, "there was a complete power cut. Fortunately we had a four-hour power backup, so the inauguration could go ahead as planned".

This chain of events appears almost to have been scripted to illustrate the reason for Vortex's existence, and that doesn't escape Kannan. He doesn't spell it out explicitly, but he pauses to let the significance of the incident sink in. The pitfalls surrounding this particular ATM are really the pitfalls surrounding all ATMs in rural India, and also surrounding the mission of rural banking—of bringing more of India's vast, scattered populace under the umbrella of organized financial services.

Vortex's ATM, engineered to be a low-cost, low-maintenance device, has not been in the market long, but it has already accumulated a stack of plaudits. Earlier this year, Vortex was one of the 12 finalists for the *Wall Street Journal*'s Asian Innovation Awards. (*Mint* has an exclusive content partnership with the *Wall Street Journal*.) In September, *Time* magazine named Vortex one of the "10 Start-Ups That Will Change Your Life".

Kannan studied mechanical engineering at the Indian Institute of Technology, Madras (IIT-M), but his career began in a decidedly un-IITian way. Following his interest in textiles and artisanal weaving, Kannan started to design, in 1998, technology to help artisans convert their cotton into yarn. "It wasn't a terribly original thought. After all, Gandhi thought of the same thing," he says. "But somehow the *charkha* stuck only as a symbol and it wasn't really followed up."

To further develop this technology, Kannan founded Vortex in 2001. Three years later, however, Vortex found itself starting down a different part, when Kannan participated in an IIT project that was exploring how communication devices could deliver financial services. In 2004, 80% of rural India remained outside the coverage of traditional banks, and the Reserve Bank of India (RBI) estimates that "informal" rural borrowing forms an $80 billion (₹3.63 trillion today) market.

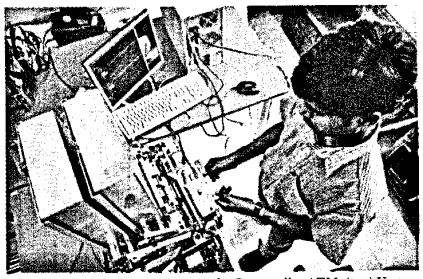
"Initially, IIT tried using Internet kiosks as points of sale for insurance or loans, but it wasn't very scalable," Kannan says. As a corollary experiment, however, the team had installed a couple of ATMs in villages near Madurai, only to find that they were heavily and easily used; the supposed technology gap was either non-existent or easily vaulted. The sole problem, in fact, was the cost, and realizing that, the head of the IIT project, a professor named Ashok Jhunjhunwala, sought Kannan out.

"Can you build me a cheap ATM?" Kannan recalls Jhunjhunwala asking him. "For around ₹1 lakh?"

Kannan thought ₹1 lakh was plenty for a machine that just counted notes and dispensed them. "Why?" he asked Jhunjhunwala. "How much does it cost in the market now?"

"At least ₹8 lakh," Jhunjhunwala replied.

For the next three months, Kannan and his colleagues cut paper into currency-sized slips and counted them endlessly, "to understand how to pick notes one by one". A first, hand-cranked model sprayed notes at uneven angles. A currency dispenser hooked up to a personal computer (PC) worked better, but the PC had to be secure—not always a given in rural Internet booths. The ATM also had to plug into a larger network, which the PC dispenser couldn't do. "We couldn't exactly rework the entire ecosystem," Kannan says.



Indigenous design: *An engineer tests the Gramateller ATM; (top) Vortex CEO Vijay Babu (left) and L. Kannan, founder and CTO.*

YES WE CAN

Vortex Engineering Pvt. Ltd
Started: 2001
Made in India: Gramateller low-cost ATM

In 2007, Kannan started from scratch, and his engineers came up with the prototype of the rural ATM that Vortex sells today. Its most basic model costs—as Jhunjhunwala had desired—less than ₹1 lakh, and none of the models consumes more than 20% of the power that conventional ATMs require. They don't need to sit in air-conditioned cabins, and they don't need three-phase power. Even their appearance, with their rugged shells and their workman-like biometric keypads, suggests the hardiness of village life.

The Gramateller, as Vortex's ATM is known, inverts many long-established—and blindly accepted, Kannan argues—principles of ATM design. In older ATMs, cash often has to be transported upwards, from the level of the floor to the dispensing slot; Vortex patented a gravity-assisted friction pick that allows money to fall towards the slot instead. Kannan's team also eliminated the two full-fledged PCs that run perennially within every ATM—one as an interface for the customer and one for the bank employee who loads the ATM with cash.

"Then, unbelievably, every ATM has an A4 printer in there, doing a sort of ball-by-ball commentary of every single transaction. Even if you just put your card in, decide you don't want to do anything, and cancel the transaction, that is recorded on paper," Kannan says. "We got rid of that. We record the data electronically, so that it can just be pulled by the bank remotely."

The ATM's rural environment posed other challenges. The Gramateller has capacious reserves of power backups, and one model is solar-powered. It uses Wireless in Local Loop for connectivity, instead of relying on physical communication cables that are expensive to lay and to repair. Oddly, the ATMs also had to be adept at dealing with soiled notes. "We found, in villages, that people trust used notes much more than they trust crisp new ones," Kannan says.

Thus far, Vortex has subsisted largely on funding—a total of roughly $6 million till date—from venture capitalists and investors such as Venture East, Aavishkar and Bamboo Finance. Its first, and so far only, commercial order—for 600 ATMs—came from SBI last year.

"So far only a small number...of these ATMs have been operationalized," said R.K. Saraf, chief general manager of information technology at SBI, in an email. He went on to write, however, that "at this stage, it would be rather premature to comment on the benefits or contribution of these ATMs in our financial inclusion agenda".

"People think that cutting the cost of a product means taking what's already there, snipping here, snipping there—and maybe that works sometimes," Kannan says. "But if you want a drastically different price point, you need to do it differently. Our lack of ATM experience kept me away from established wisdom. For a long time, in fact, I even stayed away from seeing how an ATM functions. We tried to do it as if we were the first people to build an ATM. That was why it worked."

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