A Daily Current Awareness Service
Parrikar’s proposed defence procurement policy breaks new ground
Almost fourteen months after becoming defence minister, and after missing numerous self-imposed deadlines, Manohar Parrikar on Monday announced the contours of the Defence Procurement Policy of 2016 (DPP-2016), which will guide military acquisitions after it is promulgated in another two months. The policy will include imaginative and far-reaching changes, including a first-time emphasis on indigenous design, reduction of export content in weaponry, a boost to the "Make" programme in which the government subsidises equipment development and encouragement to small-scale industry. Design, not just make. In future, vendors offering equipment designed and built in India - termed Indian Designed, Developed and Manufactured (IDDM) products - will be preferred to vendors offering equipment designed abroad. The defence ministry is incentivising defence industry, so far focused on licensed manufacture, into the higher-tech realm of designing and developing Indian weaponry. The current procurement policy, DPP-2013, explicitly promotes manufacture in India. It gives top priority to the "Buy (Indian)" category; followed by "Buy and Make (Indian)" and "Make" categories, which mandate high levels of indigenisation. Lower priority was given to "Buy (Global)" and "Buy and Make" categories, which allow a greater role to foreign production. Yet, while these categories promoted Indian manufacture, giving top priority to the new IDDM category explicitly boosts Indian design and development. "This category will be the most preferred acquisition category, above the existing 'Buy (Indian)' category", said a defence ministry statement. Besides being designed and developed in India, at least 40 per cent of a product must be manufactured in India for it to qualify for the IDDM category. "This changes everything. The impact will be far-reaching and will have cascading effect. This will change India from being a destination for low-cost manufacturing, to being a starting place for cutting-edge innovation", says Ashok Atluri, managing director of Zen Technologies, a leader in designing and building training simulators for the military. "We welcome the move to introduce the IDDM category in the DPP as it will back companies like us who have proven competencies in indigenous design, development and manufacturing", says Puneet Kaura of Samtel Avionics. On the other hand, other defence industry innovators highlight the difficulty of identifying where a product was designed. "DPP-2013 clearly defined how India's manufacturing content would be measured. Now DPP-2016 must specify how it would be gauged whether a product is of indigenous design. Today a system could be designed in several countries; how would you calculate India's share? If not clarified, this could open up a Pandora's Box of misuse", says Rahul Chaudhry, head of Tata Power (Strategic Engineering Division). In addition to indigenously designed kit, equipment containing 60 per cent or more of indigenous content will also make it to the highest procurement priority. There are far-reaching changes in the "Make" procedure, which currently involves the government funding 80 per cent of the design and development cost of indigenous weapons platforms, with vendors paying 20 per cent. In DPP-2015, the "Make" procedure will be expanded into three types. In the first type, termed Make I, the government will fund 90 per cent of the development cost, instead of just 80 per cent. Further, if after successfully developing a prototype, the vendor does not get an order within 24 months, his 10 per cent expenditure would be refunded. This indirectly addresses an oft-expressed concern of the defence industry: the high cost of capital, which effectively raised its 20 per cent share to 40-45 per cent by the time the government reimbursed its expenditure. Now, say industry leaders, their 10 per cent expenditure would rise to 20 per cent. The second type, Make II, involves industry funding, rather than government funding, for prototype development. If a tender is not issued within two years of the successful prototype development, the defence ministry would refund the entire development cost to the duly selected vendor. The third type, Make III, seeks to galvanise innovation in micro, small and medium enterprises (MSMEs). While procedurally similar to Make II (industry-funded Make), this is reserved for projects with a development cost of less than Rs 3 crore, which will be exclusively reserved for MSMEs. For the first time, the army, navy and air force will each have dedicated "Project Management Units", headed by two-star general rank officers. They will drive all Make projects relating to their respective services. To participate in a Make contract, a firm must have a majority Indian stake and be controlled by resident Indians. The company must be registered for at least five years; three years for MSMEs. It must have a minimum rating of B++ from a
Parrikar's proposed defence procurement policy breaks new ground

The new Defence Procurement Policy (DPP) cleared by the Defence Acquisition Council (DAC) would ensure that the modernisation of the defence forces remain unaffected, emphasised defence minister Manohar Parrikar while affirming that the new policy would not, like previous government's policies, "become a gate" to stall projects. The DPP will also have a new category of Indigenously Designed, Developed and Manufactured (IDMM) as the most preferred category for procurements. The three sub-procedures under the "Make" category aim to boost domestic private and small scale industry. With the government keen on encouraging not only private participation in the Defence sector but also wanting to boost small and medium industries, Mr Parrikar said the government will provide a level-playing field so that medium and small-scale firms will not be left high and dry. He sought to allay fears expressed by domestic and foreign defence firms that only big companies might get benefit from the proposed strategic partnership move of the government in critical segments like submarines, aircraft and missiles. Former Defence Research and Development Organisation (DRDO) chief VK Aatre is scheduled to submit this week a key report to the Defence Ministry recommending guidelines for selecting domestic private firms for strategic partnership. The feeling among the private industry players is that only the big firms will benefit out of this. However, even the large firms are not open to the idea since they feel that they would be restricted to just specific fields and, therefore, their overall investment and plans will get affected. However, Mr Parrikar said the ministry will ensure that all projects are not cornered by strategic partners. Once the Aatre committee submits its report, the ministry will go in for a detailed review and see which points have to accepted, and which kept aside, he said. The Aatre report will deal with strategic partnerships in sectors related to aircraft, helicopters, submarines, armoured vehicles, in Group one and ammunition in Group two. The draft Defence Procurement Procedure 2015 report, submitted by the Dhirendra Singh committee had recommended that for 'Make in India' initiative to become wider in the defence sector, the government should adopt a strategic partnership model, whereby a private firm is chosen for the development of a specific identified platform.
Indian industry has given a mixed response to the new guidelines approved by the Defence Acquisition Council (DAC) as part of the Defence Procurement Procedure (DPP) 2016. While some in the industry welcomed the greater role for the private sector and the focus on Micro, Small and Medium Enterprises (MSME), some major industry players seemed disappointed with the guidelines. The DAC, headed by Defence Minister Manohar Parrikar, on Monday approved some key changes to the Defence Procurement Procedure while deferring decisions on other issues such as strategic partnerships and procedures for blacklisting companies. "Overall, the sense one gets from the announcement is that the government intended to push forward 'Make in India'. However, one has to see the fine print. We will have to wait for the DPP to come out," said Amit Cowshish, former Financial Advisor (Acquisition) in the Defence Ministry and Distinguished Fellow at the Institute for Defence Studies and Analysis. Anurag Garg, director of PwC’s strategy and defence vertical, said that the new DPP was significantly better off than the last DPP, given the positive shifts meant to ensure movement at a good pace by putting timelines of 24 months between the prototype developed and the Request For Proposal (RFP) stage.

'Protracted processes' - However, the CEO of one of the largest private industrial groups of the country launched a scathing attack on the policy, stating that the DPP seemed to be the product of "babus and some retired babus," and there was very little reflection of the problems faced by the industry. A senior executive of another Indian company concurred with it, stating, "The problem is not of new procedures. It is about processes. They are too protracted." On the other hand, there was a positive response to the proposed new category of Indigenous Design Development Manufacturing (IDDM) and government funding for design and development. "We welcome the IDDM category in the DPP as it will back companies like us who have proven competencies in indigenous design, development and manufacturing," said Puneet Kaura, MD and CEO, Samtel Avionics. The new guidelines have put a major focus on the MSME sector to stimulate domestic innovation. The DPP talks about creating a new category for MSMEs as well as funding of up to Rs. 10 crore for design and development. G.Raj Narayan, Founder and MD, Radel Group, said the funding mechanism proposed for the MSMEs and the ranking system were excellent moves.
India, France scramble to ink Rafale deal during prez visit

"Final Contract Has Still Some Distance To Go" - Indian and French defence establishments are scrambling to seal the over $4 billion deal for 36 Rafale multi-role fighter jets in time for French President Francois Hollande's visit as chief guest for the Republic Day parade down the majestic Rajpath. But defence ministry sources said there was "still some distance to go" before the final Rafale contract -under which delivery of 36 twin-engine fighters in a "flyaway condition" will begin after two years -could actually be inked. This comes after the Manohar Parrikar-led defence acquisitions council on Monday reviewed progress of the final negotiations for the government-to-government fighter deal. "It's unlikely the actual contract will be inked during Hollande's visit. Though all the complex technical and contractual issues have virtually been settled now, the commercial negotiations will take at least another 2-3 weeks. Then, it will require clearance from the finance ministry , and the final nod from the Cabinet Committee on Security ," a source said. Interestingly , after some hard-nosed negotiations, France has now apparently agreed to 30% offsets in the Rafale deal. This means French companies like Dassault will have to plough 30% of the contract value back into India as offsets. India had specified 50% offsets in the original $20 billion MMRCA (medium multi-role combat aircraft) project for 126 fighters, under which the first 18 Rafales were to be imported from France, with the remaining 108 being made by defence PSU Hindustan Aeronautics after transfer of technology. But the MMRCA project was scrapped last year after persisting deadlock over Dassault's refusal to take "full responsibility" for the 108 jets to be made by HAL as well as the stiff hike in its production costs here. Concurrently , the NDA government decided to go in for direct purchase of 36 Rafales during the Modi-Hollande summit in Paris on April 10 last year, citing the IAF's "critical operational necessity" and the need to cut time and costs.
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Rafale deal in last lap, may cost Rs 60,000 crore for 36 fighters

NEW DELHI: India is closing in on the final details of the Rafale fighter deal ahead of French President Francois Hollande's visit, with the cost of the contract for 36 fighters expected to cross Rs 60,000 crore, authoritative sources told ET. A high-powered delegation, which includes National Security Advisor Ajit Doval, is currently in Paris. Doval was instrumental in India's decision to opt for the purchase of the French fighters last year. Most of the trickier parts of the deal— including offsets and the weapons package— are said to have been resolved. While the final cost of the contract will be revealed after an inter-governmental agreement is signed, officials involved in the process pegged it at more than Rs 60,000 crore. It's not clear whether this will include the weapons package for the fighter deal. To put things in perspective, when the process to find a new fighter jet started in 2007, IAF estimate was that for 126 aircraft it would have to shell out Rs 60,000 cr. However, the technical evaluation by the Air Force knocked out cheaper jets, including the Swedish Gripen as well as the American F16, leaving the most expensive fighter jets offered in the fray. The final price will depend on the support package that is finally negotiated. The Air Force wants the French to guarantee that at any given point, at least 90% of the fleet should be fit for combat. This is against the 55% availability rate of the Russian Su 30 MKI fighter. The price would depend on the support package and the length for which the Air Force wants it. For a 10-year package, the cost will be higher as more spares will need to be sourced. India wants the same availability rate for the fighter that the French Air Force has, an official told ET. Sources have told ET that several industry leaders are also in Paris as discussions are on to ensure that the inter-governmental agreement is signed. As reported by ET, India's largest foreign military deal is likely to bring in big business for the private sector with the French side looking to set up a production centre for the Rafale as well as a low-cost executive jet in India, besides sharing vital technology for Tejas project.

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In wake of Pathankot attack, government to upgrade border surveillance technology

PATHANKOT: The government has decided to upgrade the technology used for border surveillance, something that has become a pressing need with the recent terror attack on the Pathankot air base. The Ministry of Home Affairs (MHA) has accorded in principle approval to a pilot study covering 30 km in the Sunderbans, Sir Creek region, Punjab Frontier and Tripura sectors to roll out the latest technology to enhance border security. The estimated cost for this pilot is about Rs 90 crore. Demand to start the study has been submitted to the MHA and is awaiting approval. The government has given extra importance to the use of technological solutions for better and effective surveillance, government sources said. The Centre has decided on a few long- and short-term measures to improve border surveillance. Among the long-term measures are concrete pavement, replacement of barbed wire and concertina coil, and building of lateral and axial roads. As per available information, the MHA has taken up the issue over lateral and axial roads with the finance ministry, sources said. Another longterm measure identified is upgrading of floodlights. We have sufficient floodlights. But every now and then they stop functioning and have to be sent for repair, a senior BSF official said. The BSF has also submitted a phase-wise proposal to the MHA for setting up permanent check points for the eastern and western border, including Punjab. The project will entail an expenditure of nearly Rs 540 crore. As far as the short-term measures are concerned, the BSF wants more sniffer dogs and drug detection equipment. An immediate need for "better coordination" with other enforcement agencies in "intelligence-based operations" has also been identified by the government, said an official. It is considering holding drug awareness programmes in border areas.
US Congress stalls sale of F-16s to Pak: Report

Islamabad/Washington, Jan 12 - In a setback for Pakistan, Republican-controlled US Congress has stalled sale of eight F-16 fighter jets to Islamabad, amid growing anti-Pakistan sentiments on Capitol Hill over its reluctance in taking action against terrorist groups. Citing diplomatic and congressional sources, the Dawn said US lawmakers had placed a "hold" on the proposed sale. "The hold reflects the growing anti-Pakistan sentiments on Capitol Hill where it is now a routine to see strong attacks on Pakistan and its policies during congressional hearings," the paper said. Quoting the diplomatic sources, the paper said the Obama administration "informally" notified Congress of its intention to sell eight F-16s to Pakistan during Prime Minister Nawaz Sharif's recent visit to Washington last October. But the lawmakers used clarification and information notices to delay the sale. "The administration also received a 'hold' notice from the Senate, using this legislative process to delay floor action on the proposed sale to Pakistan," the paper said. US officials had earlier said that it would become very difficult for the US Government to convince the Congress to approve the sale of F-16s to Pakistan if Islamabad is seen as reluctant in taking action against these terrorist groups. None of the officials in Pakistan was ready to comment on the reported hold on sale of the aircraft which forms the backbone of Pakistan Air Force. The hold, however, does not kill the measure and it can still go through if the Obama administration continues to push for the sale, the paper said. "Sources on the Hill say that since the Obama administration is keen on selling these aircraft to Pakistan, it may ultimately succeed in undoing the hold," it added. At recent congressional hearings, key US lawmakers raised a host of questions about the end use of the F-16 aircraft and about the US relationship with Pakistan. "Those F-16s and the military equipment that we are providing Pakistan are being used against their own people, just like they did against the people over there in Bangladesh," said Congressman Dan Rohrabacher. Both lawmakers belong to a growing lobby in Congress which not only oppose arms sales to Pakistan but often urge the US to sever its ties with the country, the paper added.

Pakistan has been selling weapons to the United States and the United Kingdom, the Parliament was told. Speaking in the National Assembly, minister for defence production Rana Tanveer Hussain said during 2013, UK bought 69 Pakistan-made sub-machine guns (SMG MP5) and 250 G-3 rifles. Giving details of the arms transactions in the last three years, the minister said the US bought 371 G-3 rifles, during 2013, while it bought 520 SMGs during 2014, along with 350 SMGs. US also purchased 185 SMGs during the previous year. Kenya bought 3000 G3 rifles during 2014, and 600 same combat rifles during previous year. Luxembourg remained the major buyer of Pakistani rifles. During 2015, Luxembourg bought 3000 G3 rifles. Presently, deals of supplying 65 SMGs to US, while 200 machine guns to Saudi Arabia were in progress, the minister said.
Iran to sell us 40 tonnes water to US

Tehran, 12 January: Iran will sell part of its stock of heavy water to the United States under its nuclear deal with world powers, its deputy atomic chief said today. Ali Asghar Zarean also denied reports Iran had dismantled the core of its Arak nuclear reactor, a key step in the deal that will see sanctions lifted in exchange for limits on Tehran's nuclear programme. "Iran will sell 40 tonnes of its excess heavy water to the United States through a third country," Zarean, deputy head of Iran's Atomic Energy Organisation, was quoted as saying by the official IRNA news agency. "Six tonnes of the exported heavy water will be used in nuclear facilities and the rest in American research centres," he said. Iran has a heavy water production plant in its Arak nuclear site, which has been operating for several years. Under its July deal with the P5+1 group - the United States, Britain, China, France, Russia and Germany - Iran has agreed to replace the core of the Arak heavy water reactor and take other steps to ensure it cannot be used to make nuclear weapons. Reports emerged yesterday that Iran had removed the core at Arak, but Zarean said this was not the case and that Tehran was still working on an agreement for a replacement being redesigned with the help of China and the United States. "We must have a solid agreement with the foreign side, including China...The documents of the agreement will be officially exchanged at the end of next week or this week," Zarean said.

North Korea threat to 'wipe out' US

North Korea said Tuesday its nuclear test was not intended to be a provocation or threat, as it laid out plans for a weapons system capable of obliterating the entire United States. A lengthy commentary by the official KCNA news agency underlined the North's claim that last Wednesday's test was of a powerful miniaturised hydrogen bomb which marked a "new high stage" in the country's search for a credible nuclear deterrent. The KCNA commentary said the test was an indispensable stage on the "normal course" which other countries have taken to the development of a two-stage fission-fusion H-bomb. "The test was neither to 'threaten' anyone, nor to 'provoke' someone for a certain purpose," KCNA said, insisting that the main focus was on providing a "sure guarantee" of the North's immunity from attack by hostile forces. Prime among those forces was the United States, it said, offering an apocalyptic vision of how it would respond to US aggression. North Korean scientists and technicians "are in high spirit to detonate H-bombs of hundreds of kilotons and megatons, capable of wiping out the whole territory of the US all at once," it said. Meanwhile, the US House of Representatives pushed ahead on legislation that seeks to punish North Korea for its latest nuclear test by expanding sanctions on Pyongyang, a move with strong bipartisan support despite questions over how effective the new restrictions can be. Lawmakers are scheduled to vote today on the North Korea Sanctions Enforcement Act, which proposes to deny North Korea the hard currency they say it needs for its weapons programmes. Holding the vote Wednesday puts it on the same day as President Barack Obama's final State of the Union address.

Film on Indian soldiers at Siachen

Discovery TV Channel will telecast on Republic Day an hour-long special programme on Indian soldiers on the Siachen Glacier titled Revealed: Siachen. "It is dedicated to every Indian soldier for their valour and sacrifice for the motherland. The programme will offer viewers first-hand testimonies from the soldiers who have been at the battlefront," Rahul Johri, executive vice-president and general manager, South Asia, Discovery Networks Asia Pacific, said. The show will take viewers through the extreme frontline and the highest battleground in the world and what it takes to keep the Siachen Glacier secure and peaceful. It will present chronicles of the soldiers and their challenges to manage the battlefield where the temperatures often reach 600C below freezing point. "Siachen Glacier will always be one of the most compelling experiences for me and to my mind for all the Indian soldiers who have served tours of duty there," said Col Narendra Kumar, first surveyor of Siachen for the Indian Army.
The enigma of talks with Pakistan

UNPREDICTABLE, unconventional and highly personalised: pretty much sums up Prime Minister Narendra Modi's style of diplomacy. Not surprisingly, his foreign policy initiatives contain an element of 'shock and awe' as he pulls one trick after another from his hat and tries to control the narrative in the diplomatic sphere. Nowhere is this more apparent than in his dealings with Pakistan. Equally, no other place has been as impervious to his go-getting attitude as Pakistan. Clearly, after the Pathankot terrorist attack, which came within a week of Modi’s extremely bold move of 'dropping in' on his Pakistani counterpart in Lahore, even Modi would have been left scratching his head over how to handle a country like Pakistan with which nothing - neither estrangement nor engagement, neither aggression nor amicability - seems to work. Gambit All of Modi’s predecessors were confronted with the same enigma, and bowed out of office without finding an answer to India's Pakistan problem. And if recent events are anything to go by, Modi’s Pakistan gambit is unlikely to fare any better. Since assuming office, Modi has demonstrated that he is not afraid to swim against the tide, of not just expectations but also conventional wisdom. Everyone expected him to be resentful of the West which had treated him as a pariah, but he went out of his way to befriend the West; everyone thought he will be soft on Nepal, but he played hardball when the Nepalese tried to play too clever by half on the issue of the constitution; and everyone thought he will take a very hard line on Pakistan, but he has gone out of his way to reach out to Pakistan. The blow-hot-blow-cold state of ties between India and Pakistan has come under severe criticism for inconsistency, even lack of clarity and coherence, in policy. And yet, Modi has persevered. He hasn't let either the pressure of media or even that of public opinion and the political opposition detract him from whatever he is trying to do with Pakistan. Of course, what by Sushant Sareen exactly he is trying to do remains fuzzy, because once you cut through the cosmetics (which are new), the sum and substance of his effort is no different from that of his predecessors. To be sure, Modi has managed to wrest control of the narrative by doing the unpredictable - calling up Nawaz Sharif when least expected and calling on him when it was beyond anyone’s imagination. But controlling the optics is only part of the equation and doesn't quite address the question of addressing the substantive and apparently intractable issues that bedevil relations between the two countries. This is important because there is nothing in the public domain to indicate how these issues are proposed to be tackled. Problem The other problem is that while Modi can manage things on the Indian side, there isn't much he has in his store to influence Pakistan in the way he wants. This means that while Modi might believe that optics is substance and if the optics can be managed long enough, the substantive issues will become irrelevant and therefore amenable to solution, the Pakistani side might be on a totally different wavelength and would want to keep giving rude reminders to India that it continues to wield a gun and occasionally isn't averse to firing it on India. In other words, while Modi might have felt that the optics - Lahore visit - will bind Pakistan's hands and make it difficult for them to spoil the atmospherics, the Pakistanis might come to the conclusion that Modi's optics strategy has in fact tied his hands and will make it difficult and deeply embarrassing for him to go into a sulk if they do what they do - Pathankot. In a sense, this is precisely what happened in Kargil: India assumed that after both countries went nuclear and war wasn't an exercisable option, the path for peace and a grand reconciliation was open; Pakistan came to the conclusion that because there could be no war, it opened up space for a Kargil-type operation. Ergo, for Pakistan perversity isn't an irrational response, but a default response to any Indian initiative. This lesson of history appears to have been ignored by Modi in his bold outreach, and inexplicable keenness, to engage with Pakistan. Modi must have known that reaching out to Pakistan was a high-risk gamble. If he had succeeded, he would be hailed globally for his statesmanship; but there was far higher probability that he would fail, in which case he would be condemned and dragged over hot coals by both his opponents and many of his supporters, more so because his political rhetoric on Pakistan was at total variance with his ........

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diplomatic initiatives. In this sense, Pathankot is not just a litmus test to check Pakistan's sincerity and seriousness on wanting a dialogue with India, but also a test for Modi's policy on Pakistan. Perfidy A lot will now depend on whether the Pakistanis act on the information and intelligence that have been shared with them. If they do, Modi's gamble would have paid off and Pakistani action against terrorists operating against India would effect a change in the paradigm between the two countries. But given how unlikely it is that we will see any serious action by Pakistan, even then Modi's gamble would have paid off, at least in a small way. He can use Pakistan's perfidy to good effect with the international community and try and rebuild international pressure on Islamabad on the issue of terrorism. Of course, in the event things come to such a pass, the India-Pakistan track would be back to square one. But given Modi's proclivity to surprise, he might once again do something no one expects. What that will be is anyone's guess.

Business Standard

Governments urged to support scrambling digital data

An open letter has been posted by Internet freedom advocates who called on governments to back tough encryption of digital data to keep people's information private. The letter quickly gathered nearly 200 online signatures, including renowned computer security specialist Bruce Schneier and groups such as the Internet Association and the Electronic Privacy Information Center, after it was posted yesterday at the website securetheinternet.Org. "The ability to freely develop and use encryption provides the cornerstone for today's global economy," the letter said. "Economic growth in the digital age is powered by the ability to trust and authenticate our interactions and communicate and conduct business securely, both within and across borders." The letter called on governments around the world to reject any policies or secret deals that limit people's access to powerful data encryption tools that could even shield information from intelligence gathering agencies. Governments were urged to spurn any idea of making companies build "backdoors" that they could use to get private data and to not ask for software "keys" for unscrambling encrypted information. "There's no middle ground on encryption," TechFreedom's policy counsel Tom Struble said in a statement announcing that the group signed the letter. "Any vulnerability imposed for government use can be exploited by those who seek to do harm." Countries considering proposals to undermine data encryption included Britain, China, India, France and the United States, according to TechFreedom. "Encryption and other anonymizing tools and technologies enable lawyers, journalists, whistleblowers and organizers to communicate freely across borders and to work to better their communities," the letter said. "We encourage you to support the safety and security of users by strengthening the integrity of communications and systems."
The safety of banking apps on smartphones has come under the scanner after a gang was arrested by the cyber crime wing of the Karnataka Police on charges of hacking Axis Bank's mobile app "LIME" and using it for withdrawing money from Axis Bank ATMs. The gang, according to the police, have also hacked SBI's app "Buddy" and have stolen money of customers living in Telangana and Andhra Pradesh. Axis Bank has stopped operations of "Lime" after the activities of the gang have been brought to their notice. Importantly, the gang members arrested by the police in connection with the case included a 30-year old deputy manager of the bank. Gopikrishna, alias Gopi, deputy manager of Axis Bank branch at Peddapalli at Karimnagar near Hyderabad, has been arrested for conspiring with other accused persons and providing them with the account details of such customers of the bank in Karnataka who are having huge balances in their accounts. The gang was caught when SR Narasimhan, who retired as chairman-cum-MD of NHPC, filed a complaint with the Cyber Crime Police Station in Bengaluru. The complainant stated that on December 4, 2015, the service of his pre-paid Vodafone mobile stopped all of a sudden. He later found that Rs 1,80,375 had disappeared from his savings account in the Axis Bank during the intervening night of December 4 and December 5. Narasimhan also learnt that his pre-paid SIM stopped working since the connection had been changed into a post-paid one while retaining the same number. While investigating the case, the police arrested one Nageswara Reddy, the kingpin and his associates, and found that they had obtained duplicate SIM card of the complainant's mobile number registered with the bank from a Vodafone store by submitting fake documents and changed the plan from pre-paid to post-paid plan. "Later, the accused transferred the amount (stolen from Narasimhan's account) to various mobile numbers using mobile banking and the LIME wallet option of Axis Bank and withdrew the amount from Axis Bank ATMs", MD Sharath, DSP, who headed the investigation in the case, said.
Nod to universal HIV screening of all pregnant women

By Aditi Tandon

In the first-of-its-kind move that will boost India's chances of eliminating HIV/AIDS by 2020, the government will universalise HIV screening for pregnant women across the country. To make the process easy, the government has amended the guidelines for seeking consent of pregnant women for screening. "Instead of a written permission, a verbal consent will now suffice," the new guidelines say. The move of the Health Ministry came following the high risk of HIV transmission to the unborn child from an HIV positive mother. Studies show that without any intervention, the risk of HIV transmission from an infected pregnant woman to her newborn is between 20 and 45 per cent. This can be reduced to 1 per cent through the early screening of a positive mother and her immediate initiation on an anti-retroviral therapy (ART). Sources in the Health Ministry today said of the 30 million annual pregnancies in India, only about half (52.7 per cent) avail of health services from skilled professionals during childbirth in India. Of these who avail of the services, only 12 million pregnant women received HIV counselling and testing as of March 2014, which means 60 per cent women are not being screened. As per government estimates, 0.26 per cent adult population in the country is reported HIV positive, including 35,000 pregnant women, annually. A source said, "This is the first time, we are universalising HIV testing for pregnant women. We will write to Principal Secretaries (Health) of all states to apply for funds and testing kits for screening under the annual National Health Mission. The kits are designed to test pregnant women for both HIV and congenital syphilis. India has committed itself to eliminating HIV/AIDS by 2020 and universalising testing to at least 90 per cent." The WHO is helping the government in implementing the decision and test kits are being procured. India has an estimated 2.1 million population living with HIV. Of these, 39 per cent are women. "Auxiliary Nurses and Midwives will be trained across India to administer the HIV and syphilis test to pregnant women," said an official of the ministry.

Centre to market low-cost medical innovations soon

The government is ready to market several low-cost medical innovations, including home kits or measuring blood glucose, haemoglobin levels and real-time diagnosis of malaria and dengue, which have been developed by the department of biotechnology (DBT) in association with start-ups supported by the Centre. One of the kits is 'AINA' which can be fixed to a mobile phone and one can know the blood glucose, lipids, creatinine and haemoglobin levels. It will be marketed by a company which will get support from government institutions. "One just needs to insert a strip to the device, which costs around Rs 10. The company has received orders for 25,000 such strips," said Renu Swarup, senior adviser to the DBT and managing director of Biotechnology Industry Research Assistance Council (BIRAC). Besides AINA, the department on Tuesday showcased many innovative kits that would be marketed in the coming months. Science and technology minister Harsh Vardhan said India's medical industry was the fourth largest in Asia and it would be worth $20 billion by 2025. "Innovation in healthcare is especially of paramount importance and can accelerate the country's social and economic growth," he said. DBT secretary Vijay Raghvan said BIRAC has supported nearly 300 start-ups and 150 young entrepreneurs for innovation, research and product development.
Start Up India schemes to finally take off
By Vikas Dhoot

The funds deployment were cleared after 10 months of spadework. The government can finally start deploying funds from the Self-Employment and Talent Utilisation (SETU) scheme and the Atal Innovation Mission (AIM) announced in the Union Budget for 2015-16 to promote startups and scientific research, after over ten months of spadework. While the AIM would focus on inviting aspiring entrepreneurs to solve India's contemporary socio-economic problems via 'grand challenges' that offer substantial awards to incubate and scale up winning ideas, the SETU scheme's resources would be devoted to strengthening incubators and setting up 'tinkering labs' where ideas can be shaped into prototypes before they are ripe for funding. An overarching supervisory body with about ten members is being formed to oversee the allocation of funds under the schemes to line ministries. Finance Minister Arun Jaitley had allocated Rs 1,000 crore to the SETU scheme and Rs 150 crore for AIM. Likely to be chaired by Niti Aayog vice chairman Arvind Panagariya, the panel would include secretaries from the departments of science and technology, biotechnology, industrial policy and promotion as well as the ministry of micro, small and medium enterprises. Professor Tarun Khanna, director of the South Asia Institute at Harvard University, is also likely to be part of the panel as an external expert. He was earlier appointed by the Aayog as chairperson of an expert panel on innovation and entrepreneurship, that was also asked to advise on the 'detailed contours' of AIM and SETU. A senior government official told The Hindu that the Niti Aayog, entrusted with executing the two programs, has worked out the broad modalities at a meeting between top officials from the Aayog and line ministries last Friday. "The pace of rolling out these schemes has been slow and ideally, we should have disbursed some funds from them by now. We hope to allocate funds for some projects before March," the official said on condition of anonymity. Half of the funds under SETU would be earmarked for strengthening existing incubators in the country, backed by different departments, so that the support mechanism for budding entrepreneurs is more robust. "The rest, Rs 500 crore, would be used for setting up tinkering labs, where students can literally potter about and create prototypes and models of their ideas with the ability to demonstrate basic functions," the official said, adding a similar lab already exists at the Indian Institute of Technology in Kanpur. The idea of posing social problems as a 'grand challenge' for aspiring startups under the AIM, is to engage young graduates eyeing the startup space into thinking beyond the internet, e-commerce and mobile applications space.
Guiding scissors to cut DNA

THE METHOD THAT BACTERIA USE TO KEEP VIRUSES IN THEIR PLACE WILL NOW HELP US TO TIDY THE HUMAN GENOME, WRITES S ANANTHANARAYANAN

The human genome is a library of more than 20,000 genes that code for components of some two million proteins and are located over the length of the DNA, which has over three billion basic units. This genetic blueprint, which we carry in each of our 100 trillion cells, is a complex document and, in some parts, it directs the body to disease instead of health. We now know how to detect these problem genes, but doing anything about it is a different matter. A solution has turned up based on something that was seen to be going on in the cells of bacteria. The solution has been refined into a technology to cut a DNA just where desired and then also to replace the portion that is cut with a modified segment when the DNA rejoins. The result is a flurry of research publications that report developments in DNA repair, over 100 papers in 2013, just after the method was discovered in the previous year, over 250 papers in 2014, and the numbers are increasing.

The discovery started with the observation that the chromosome, which is mostly DNA, of many bacteria contains a series of sequences that are repeated, interspersed with sequences that are derived from viruses. These repeats in the bacterial DNA, however, did not make much sense, till it was noticed that they usually occurred in the vicinity of another set of genes, of a kind that seemed to be involved in the process of DNA repair. It was then thought that the repeats were perhaps some kind of template acquired from encounters with viruses and later used for resisting the same viruses. The repeats were named CRISPR, a short form for Clusters of Regularly Interspaced Short Palindromic Repeats, and the associated genes were called CAS genes, for CRISPR Associated genes. While the DNA are the construction formula of all the proteins that the organism would need, the whole DNA is never active at once. Instead, it is portions that represent the code for just a set of proteins that are extracted and utilised at each occasion of expression of genes and the creation of the different proteins that define the nature of a cell. The medium to transmit the partial code to the cells' engines that carry out the protein formation is the RNA, a variation of the DNA molecule structure. Now, when a virus attacks a bacterium the identifying sequences of the virus get copied on to scraps of RNA that form during the encounter with the virus and these get stored in the CRISPR sequences. When the virus attacks again, it is not a passive action of taking and storing copies of parts of the virus DNA that happens, but the existing patterns of the virus DNA are copied quickly on to RNA, which then combine with proteins, or enzymes, that are formed from the CAS genes portion, enzymes of which an important group have been called CAS9. CAS9, equipped with the template for a portion of the virus, is then able to zero in on just the portion of the virus DNA that CRISPR has recorded and CAS9 does its wonderful thing of snipping the DNA just at that place. The virus, which consists mainly of its own DNA, is then destroyed and the bacterium stays healthy. In 2012, scientist Jennifer Doudna of the University of California at Berkeley and her colleague, Emmanuelle Carpentier, and their team studied the process of this action and identified CAS9 as the enzyme that could cause a rupture in the two strands of the DNA molecule at the portion marked by the pattern of the RNA, called the guide RNA. When they had got down to how this happened in the bacteria, they wondered if the process could be mimicked with a given RNA to serve as the guide RNA to create a system that could sever the DNA at the place specified by the guide RNA that they had used. The team went on to do just this and then they devised a simple test to see if the target DNA had actually been cleaved at the point they wanted. They first generated a pair of guide RNA that matched specific parts of a known DNA molecule and then formed the cleaving enzymes by letting the RNA attach to CAS9. The target DNA was then incubated with the cleaving enzymes and then the DNA was examined with the help of a gel in which segments of DNA move with different speeds. The gel was able to separate two parts of the DNA and the sizes of the portions showed that the original DNA had been cut just where the cleavage was programmed by the guide RNA. This discovery, Doudna says, was exciting as studies had shown for

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Some time that cells had ways of repairing DNA damage. In such cases, when a DNA was separated, the two portions rejoined, either just as they had broken or with a small section added, or there could be the addition of a whole part of DNA that matched the two broken ends. Where the DNA rejoined in the ordinary way, there was often damage to the gene involved, which had its value in studying the properties or function of that gene. Where a portion was added, the genome now had additional genes, with their value in research. These features of DNA repair tempted scientists to hope for a way to break DNA at a place where there was an interest for repair, so that the introduction of a predetermined section could become possible. The CRISPR and CAS9 system amounted to just that, and the DNA molecules could be divided accurately at the place where there was interest in carrying out a modification. After the nature of the DNA, as a chain built up of just four kinds of links, groups of atoms called A, G, T and C, in sequences that code for the production of all the proteins the body needs, was worked out by Crick and Watson in 1953, methods have been devised to navigate over the length of the chain and agents that are able to affect specific parts of the chain have been developed, etc. Specific genes that are implicated in specific diseases have been identified and there are methods to breed animals that lack that gene, or have a variation, to check whether this leads to remission of symptoms. The field is one of great promise, to treat genetic disease, generate crop varieties with greater yield or resistance to pests, bacteria that can change waste into useful substances, etc, but the processes to make modifications in the genome are painstaking and time consuming. In this context, the CRISPR/CAS9 system, which provides the scientist and the industry the means to intervene directly at the DNA level, takes the possibilities of genetic engineering to another plane. It is now feasible to modify the genome of just any creature to any extent within a reasonably short period of time. This has its own dangers if used without care, but it could also enable bringing about very fast ecological changes to help the world cope with the challenges of warming in the coming decades.

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`Anti-HIV drugs can be used to treat Ebola'

Drugs normally used to treat HIV may also be effective at inhibiting the Ebola virus that is transmitted from human to human by infectious body fluids, a new study has claimed. Researchers used a mini-genome system to evaluate candidate drugs that could inhibit Ebola virus. Interferons and anti-HIV drugs showed antiviral activity against the Ebola virus in the studies. "Using this technology, scientists will be able to measure the inhibitory effects of their experimental drugs on the replication of Ebola virus. This approach will also decrease the possibility of the emergence of drug resistance," said Eleanor Fish, study's lead author. Interferon beta, the most potent inhibitor of Ebola, is now part of a clinical trial of individuals who were infected with Ebola during the recent outbreak in Guinea.
Guilt-free sugary treats in the offing

Scientists Discover Enzyme That Reverses Toxic Effects Of Sugar In Body

Guilt-free sugary treats may be on the horizon after scientists, including one of Indian-origin, have discovered an enzyme that can stop the toxic effects of sugar in various organs of the body. The finding could lead to the development of therapeutics for obesity and type 2 diabetes, researchers said. The enzyme, named glycerol 3-phosphate phosphatase (G3PP), plays a central role in controlling glucose and fat utilisation. Led by doctors Marc Prentki and Murthy Madiraju, the research team has demonstrated that G3PP is able to detoxify excess sugar from the cells. "When glucose is abnormally elevated in the body, glucose-derived glycerol-3 phosphate reaches excessive levels in cells, and exaggerated G3PP metabolism can damage various tissues," said Prentki. "G3PP is able to breakdown a great proportion of this excess glycerol phosphate to glycerol and divert it outside the cell, thus protecting the insulin producing beta cells of pancreas and various organs from toxic effects of high glucose levels," he added. Mammalian cells use glucose and fatty acids as the main nutrients, which governs many physiological processes such as insulin secretion by beta cells, production of glucose in liver, storage of fat in adipose tissue and breakdown of nutrients for energy production. Derangement of these processes leads to obesity, type 2 diabetes and cardiovascular diseases. The beta cells sense changes in blood glucose levels and produce insulin according to body demand. However, when beta cells are presented with excess glucose and fatty acids, the same nutrients become toxic and damage them, leading to their dysfunction and diabetes. "By diverting glucose as glycerol, G3PP prevents excessive formation and storage of fat and it also lowers excessive production of glucose in liver," said Madiraju. "It is extremely rare since the 1960s that a novel enzyme is discovered at the heart of metabolism of nutrients," he said.
An annual celebration of science

There is no reason to discontinue the Indian Science Congress which has faced some controversy in recent years. Instead, if the Government is serious about improving the quality of Indian science, it should focus on universities. Nobel laureate Venkatraman Ramakrishnan has kicked up a storm by calling the Indian Science Congress a "circus". He said there is very little science that is discussed at the Congress, and that he will never attend one. But Fields Medalist Manjul Bhargava has pointed to the motivational and inspirational role the Congress has played for the youth. As one who had the opportunity to host the 97th edition of the Congress at the University of Kerala, the ISC all about celebrating science. In a country where there are so many festivals and celebrations, the ISC is an occasion for scientists to celebrate their profession. It gives them an opportunity to visit an exotic place, meet exotic people and quixotic scientists, to borrow a phrase from Prof CNR Rao who lamented about the dearth of quixotic youth choosing science as a career. The Indian Science Congress is also about making the right contacts and connections, since both are important for upward mobility in the scientific profession in India. Doing science alone is not enough in a country like India, as the Nobelist would like us to believe. Motivational speakers like Mr Bhargava and former President APJ Abdul Kalam play a role in inspiring the young. When Kalam addressed school students in Thiruvananthapuram, the hall was jam-packed and one could observe the glee in the eyes of many. The Congress is also is an opportunity to listen to none other than the Prime Minister about what the policies of the Government are for furthering science. The present Congress ended in Mysuru with Prime Minister Narendra Modi calling for a framework for the scientific audit of science departments and institutions supported by the Government. If the Modi Government is serious, then many of our state-funded laboratories will be in serious trouble. Universities are venues for most editions of the Congress arguably because they are considered to be epicentres of basic research and innovation. The pre-independence era witnessed the flowering of modern science in India through great minds like SN Bose, PC Ray, JC Bose and CV Raman to name a few. However, post-independence, none of our universities are known for any pathbreaking research in science. One of the major errors of our science planners was the creation of parallel institutions of research (the Council of Scientific and Industrial Research for instance) at the expense of universities. Universities got the leftovers - hence, the dilapidated buildings, antiquated equipment, and uninspiring faculty. Basic research became the casualty. Yet, universities are where young minds are awakened, trained and moulded. Parallel institutions of research were narrow in their objectives: No teaching, no students to be trained as the fountainhead of future science and technology. Many failed to deliver their goals. When German physicist Arnold JW Sommerfeld visited India in the 1930s, soon after CV Raman had won the Nobel for physics, he noted that the level of theoretical physics in India and Europe was the same. But what is the situation today? Policy planners seem to shy away from debating the far reaching reforms that are badly needed to rejuvenate the university system. Over 90 per cent of our skilled man power that runs the country, not only in the realm of science and technology, but also in other domains, come from State universities - not the institutions of national importance or Central Universities. Instead of strengthening our university system by providing world-class infrastructure and facilities, recruiting the best faculty and implementing robust governance, policy planners seem to have written off universities, arguing that they cannot be reformed for political reasons. The very same mistake of creating new institutions dedicated to scientific research, such as the recently launched Indian Institute of Science Education and Research, is projected as a panacea for the ills plaguing fundamental research in the universities. With less than one per cent of the GDP channelled into research, miracles cannot be expected. Red tape and bureaucracy also stifle the high degree of creativity required for research and innovation. Science congresses over the years have addressed the myriad of issues throttling research and innovation in the country as their annual reports testify. It is a different matter that policy makers have not taken note of many of its recommendations. But, that is no reason for the ISC to be discontinued. At least the celebrations should go on.