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hindustantimes

Fri, 18 Nov, 2016

IAF plans to map data on first 3 female fighter pilots

New Delhi: The Indian Air Force is examining a proposal to gather data on the performance of its first female fighter pilots, potential difficulties due to physiological attributes and cultural issues in the male-dominated military, HT has learnt. The proposal, made by a leading woman aviation psychologist and accident investigator in the IAF, is under consideration of the force's crucial inspection and safety wing, sources said.

Three women are currently taking a shot at becoming fighter pilots after the government approved a plan in October last year. "We propose to carry out a longitudinal study capturing every aspect of fighter flying," said Kuhu Ganguly, a senior scientist in the inspection and safety directorate. "The idea is to track how well they are progressing as they break into a male bastion," she said. Such studies can stretch for years as subjects are repeatedly observed on specific parameters. The three women are in the final stage of their training on British Hawk advanced jet trainers at an IAF facility in Bidar, Karnataka. The trailblazers — Bhawana Kanth, Mohana Singh and Avani Chaturvedi — will begin flying supersonic fighter planes from June 2017, considered a watershed in the IAF's 84-year history.

Several IAF officers said the performance of the women during their training was on a par with their male colleagues. Such gender-specific studies are not uncommon. Aviation medicine wings of international air forces, including the US and Australia, have researched women pilot programmes. Research has been done in areas such tolerance to gravitational forces, disorientation and motion sickness, pregnancy, use of "piddle packs" and ejection safety. Ganguly, whose rank is equivalent to an air commodore's, said, "The fighter jet doesn't know gender and it will behave as it will. The study could also help the IAF resolve problems, if any, for future women fighter pilots." The IAF has advised the women trainees to put off motherhood for at least four years after they are commissioned as fighter pilots so that their flying schedule is not disrupted. No woman trainee from the next batch has opted for the fighter stream.

"Fitness norms for flying duties are clearly laid down and both men and women will have to maintain those standards," said Air Marshal Pawan Kapoor, who heads the IAF's medical wing.

THE HINDU

Fri, 18 Nov, 2016

India, U.S. review military projects

India and the U.S. on Thursday reviewed the entire gamut of projects under the Foreign Military Sales route as both sides look at closing key projects, including the purchase of M777 howitzers, the first deal for artillery guns since the Bofors scandal in 1980s.

Defence sources said the deal for 145 American Ultra-Light Howitzers had been cleared recently by the Cabinet Committee on Security.

Vice-Admiral Joseph Rixey, Director of Defense Security Cooperation Agency, met with his counterpart here at the Defence Ministry.

Sources said a number of key projects, including the one for 22 Predator Guardian drones, were discussed, besides other projects that have already been signed.

THE ASIAN AGE

Fri, 18 Nov, 2016

US howitzer deal to be inked soon

The visit comes ahead of a scheduled trip by outgoing US defence secretary Ashton Carter next month.

New Delhi: India and the United States may soon sign a Rs 5,500-crore deal for 145 M777 ultra-light howitzers that was cleared by the Defence Acquisition Council on June 25. This deal was among the major projects under the Foreign Military Sales (FMS) route reviewed by India and the US on Thursday at the meeting of US Vice-Adm. Joseph Rixey, director of the Defence Security Cooperation Agency, with his counterpart in India's defence ministry. Defence sources said the Cabinet Committee on Security had already approved the deal, the first for artillery guns since the 1980s' Bofors scandal. The first two howitzers will reach India within six months of the contract being signed, while the rest will be delivered at the rate of two per month.

Sources said a number of key projects, including one for 22 Predator Guardian drones, that is at an advanced stage of negotiations, were discussed, besides other projects that have already been signed.

The visit comes ahead of a scheduled trip by outgoing US defence secretary Ashton Carter next month.

Adm. Rixey's visit was for the annual meeting to review defence acquisition and defence trade matters. On the issue of M777, sources said India had sent a Letter of Request to the US government showing interest in buying the guns, which will be deployed in high altitude areas in Arunachal Pradesh and Ladakh, bordering China.

The US had responded with a Letter of Acceptance, and the defence ministry had in June examined the terms and conditions and approved them. The offsets, under which BAE Systems, manufacturers of the gun, will invest about $200 million, will be pursued independently.

While 25 guns will come to India in flyaway condition, the rest will be assembled at the proposed Assembly Integration and Test facility for the weapons system in India in partnership with Mahindra.

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MAIL TODAY

Fri, 18 Nov, 2016

Freak mishap dents Navy's missile boat

An Indian Navy missile warship met with a freak accident inside a naval harbour, causing damage to its front portion and making it operationally unworthy for next few weeks. "The missile boat INS Nashak was moving in the harbour when its GT engines failed midway and it collided in the flow with the jetty and the front portion of the boat was damaged," sources in the Naval dockyard Mumbai told MAIL TODAY. Navy officials confirmed the incident saying the accident was a minor one and the warship was standing aside the jetty.

RECENT ACCIDENTS

- June 2016: Two people, a sailor and a civilian contractor, were killed by a toxic gas leak that occurred during maintenance work in the sewage treatment plant compartment during the first refit of the aircraft carrier INS Vikramaditya
- April 2016: A sailor lost his leg while two others were injured in an oxygen cylinder explosion on board INS Neerikshak
- March 2016: A fire broke out on the soon-to-be decommissioned aircraft carrier INS Virat which resulted in the death of one and the injury of three others

INS Nashak is a Veer Class missile boat and dockyard officials said the vessel would be under repairs for three weeks at least as the damage will take some time for repairs. The Navy has also informed the Defence Ministry about the incident and it is expected that the maritime force would form a board of inquiry to probe the incident. The Veer class corvettes of the Indian Navy are a customised Indian variant of the Soviet Tarantul Class vessels. They form the 22nd Killer Missile Vessel Squadron in Mumbai.

INS Nashak was built by the Goa Shipyard Limited in 1996 and has been taking part in almost all the important operations and exercises in the force. Almost couple of years ago, the Navy was badly hit by a spate of accidents which started with a minor fire incident on decommissioned aircraft carrier INS Virat and continued till the death of two officers on a Kilo Class submarine leading to the then Navy chief Admiral DK Joshi taking voluntary retirement. With intervention from the top brass and application of standard operating procedures, the Navy has managed to cut down on accidents in the recent times. But two people lost their lives onboard the aircraft carrier INS Vikramaditya a few months back when toxic gas leaked from the sewage compartment of the vessel apparently due to non-complaince of safety measures.

In yet another freak mishap, the periscope of the submarine INS Sindhughosh had also suffered damage during an exercise when it rammed into fishing boats operating close to the coastal area. During the spate of mishaps, the Navy had been warned by the Ministry against frittering away expensive national assets. The incidents had also created a feeling where officers and sailors had become over-cautious while operating warships.

Business Standard

Fri, 18 Nov, 2016

Only America can help India build fifth-generation fighters: Boeing

By Ajai Shukla

Boeing's plan involves first setting up an Indian factory and the aerospace ecosystem to build the Block II Super Hornet

Following the lead of Swedish company, Saab, Boeing has linked its offer to build a fighter aircraft in India with the promise of assistance in designing and building an Indian fifth-generation (Gen-5) fighter. In a presentation to the Indian media in St Louis, Missouri, where Boeing builds the F/A-18E/F Super Hornet

fighter, Boeing's Dan Gillian, outlined a detailed road map from the Super Hornet to India's Advanced Medium Combat Aircraft (AMCA), the Gen-5 fighter that the Defence R&D Organisation (DRDO) hopes to build. Boeing's plan involves first setting up an Indian factory and the aerospace ecosystem to build the Block II Super Hornet, which will then be improved into the "Advanced Super Hornet". That infrastructure and design capability would give Indian designers the instruments to build the AMCA.

Boeing's India chief, Pratyush Kumar, hardly disguises his scepticism of Saab's promise to help India in designing the AMCA. "America is the only country that has actually designed and manufactured stealthy, Gen-5 fighters", points out Kumar. "Stealth design is not a science, it is an art that is developed only after years of trial and error. Boeing has actually mastered that art while co-designing the F-22 fighter." Boeing is not in direct competition with Saab, which is pitching to build 100-200 single-engine fighters in India. Instead, Boeing will compete with European manufacturers, Dassault, and Eurofighter, to establish a factory that will churn out a similar number of twin-engine fighters.

The Indian Air Force (IAF) has already solicited interest from global aerospace vendors in the single-engine category, and a similar request is expected soon for building twin-engine fighters. Kumar claims the F/A-18E/F, which was designed in the 1990s, is a decade more contemporary than its rivals like the Rafale and the Eurofighter Typhoon, which started being designed in the 1980s.

"The Super Hornet is sometimes confused with the older F/A-18A/B Hornet fighter, which dates back to the 1970s. While they are superficially similar, the Super Hornet's brand new design incorporates a high degree of stealth. For America, the Super Hornet was a stepping stone to the F-35, and it can be a stepping stone to the AMCA for India," argues Kumar. Boeing's new Super Hornet factory in St Louis is churning out two Super Hornets each month for the US Navy, which will continue inducting the fighter well into the 2020s.

Each of America's 9-12 aircraft carriers (the final number will depend upon President Donald Trump's defence policy) will embark four squadrons of Super Hornets until 2028, when the F-35 Lightning II starts being inducted in significant numbers.

By 2028, each carrier will have one squadron of the F-35, and by 2035 there will be two squadrons each of the Super Hornet and the F-35. "But the fighter will remain in service out to the 2040s and, until then, we will be developing upgrades every two years as part of a continuous development programme", says Gillian. The first improvement on the cards is an advanced cockpit system in 2018-19.

Also being developed, even without US Navy sanction and funding, are "conformal fuel tanks" that will extend the fighter's 1,000-km strike range by 200 km; and a more powerful and fuel-economical F-414 engine that will increase the thrust by 18 per cent. He says the Super Hornet is highly regarded by the US Navy not just because it is a capable and easy-to-maintain fighter, but also because it is the cheapest to operate in the entire US fighter fleet, even cheaper than the single-engine F-16. "The US Government Accountability Office (GAO) rates the F/A-18E/F as the most economical fighter to operate on a cost per hour basis," says Gillian.

The challenge for Boeing will be to build a supplier chain in India, like the one that feeds into the Super Hornet line at St Louis. This consists of 800 vendors in 44 states, which employ 60,000 people.Boeing's current Super Hornet vendors in India include Bharat Electronics Ltd (BEL), which builds electrical panels; while Hindustan Aeronautics Ltd (HAL) is building wire bundles and gun bay doors. Smaller companies are also joining the supply chain, including Rossell and SASMOS, which supply electrical equipment.

THE HINDU

Fri, 18 Nov, 2016

Red Arrows- straight to your heart

The first-ever display of aerobatics team of Royal Air Force stunned everyone at Air Force Academy

The high-pitched whine of Rolls Royce engines in the nine BAE Systems, dual-control Hawk T 1 aircraft of the Red Arrows, the aerobatics team of the Royal Air Force, filled the air on Thursday.

But what was equally loud was the squeals of joy from children and the 'Oohs' and 'Wows' from the adults too. That was the scene at the first-ever display of the elite Red Arrows in the vast expanse of the Air Force Academy (AFA) in Dundigal near here. "This is one of our longest tours that will end on December 1 when we touch down at Scampton Base back home. In all, we have had 18 displays and landed in 17 countries from September 1," said 39-year-old Squadron Leader David Montenegro, who is into his second year as leader of the formation as Red One. He has flown earlier as a team member for three years.

Even people who have earlier had the joy of seeing the Suryakirans of the Indian Air Force (Indian name for the originally British-built Hawks) shook their heads in admiration at the aerobatics by the Red Arrows. "I am glad that India now manufactures the Hawks with its very own name Suryakiran and has built about a 100 of them," said the team leader, interacting with AFA Commandant G.P. Singh later.

The metal birds flew at a speed of Mach 1.2 as the twin-shaft turbofan engines took them to a thrust of 5,200 pounds and at as low a height as 100 metres. There were breath-taking moments in the almost 50-minute display when Red Ten, Wing Commander Mike Ling, took the audience on a detailed presentation of the intricate manoeuvres of the Hawks in the sky, sometimes with the distance between the wings of two aircraft being just six feet. Some of the aerobatic moves with which the Red Arrows thrilled the crowd included the 'Wall to Short Diamond Arrival', 'Shuttle Roll', 'Hammerhead Break' that sees the aircraft peeling off in different directions before coming together, 'Tornado', 'Typhoon' and 'Apollo'.

Earlier, as the Hawks prepared for flight, instructors at the AFA - squadron leaders Sidhesh Karthik and Ankush Tomar - flew the Pilatus PC 7 MK-II aircraft in sorties of 20 minutes duration each. Sidhesh Karthik modestly admitted that he was yet to graduate to the Suryakirans and that the British pilots were excellent. "After all, I did not have to fly in formation but only solo right," he quipped.

MAIL TODAY

Fri, 18 Nov, 2016

Now, strict scrutiny for disability claims in Army

Amid cases of senior Generals reportedly availing disability pensions as they approach retirement, the Defence Ministry has asked Army doctors to let through such officers only after strict examination. "Doctors of the Army Medical Corps have been advised to be strict with officers who show themselves to be medically fit for promotions throughout their career and then apply for disability pension to get additional monetary benefits close to retirement," a Defence Ministry official told Mail Today.

If a military officer is designated in the lower medical category early in his career, he or she is not eligible to be promoted in the force. Therefore, there have been cases where officers have hidden their medical condition till the time they see the scope of progressing further in the services. Sources said that after the ministry diktat, the number of such cases have come down drastically. However, they made it clear that doctors have been told to ensure that no deserving officer or jawan is denied his rightful disability pension as the nation owes it to them. Defence Minister Manohar Parrikar had recently increased the disability pension of almost 90 per cent of the armed force personnel ranging from 14-30 per cent among jawans and Junior Commissioned Officers.

One of the last senior Lt Gens who received disability pension from the government was Rajiv Bhalla, who retired as Military Secretary and realised that he was short of hearing due to his Army service at the fag end of his career. It is learnt that this disability would earn him an extra pension of around `20-25,000 per month.

The most famous case of a senior officer seeking disability pension was that of former Army chief Gen Deepak Kapoor who in 2010 had asked for an enhanced disbaility pension but had to refuse it when the matter was revealed by the media.

Kapoor had claimed that he suffered impairment in his left ear after exposure to the booming sound of artillery guns during a demonstration on antiterror operations in the US during an official visit. Another officer in this category was Lt Gen SR Ghosh, who first got himself declared disabled near retirement but then declared himself fit when he realised that he could lose the chance of becoming chief in case Gen VK Singh resigned from service.

the pioneer

Fri, 18 Nov, 2016

No Longer Closet Ties

India-Israel relationship is on the upswing

The current visit of Israeli President Reuven Rivlin to India highlights how both the nations are emerging from the closet to become natural allies. Long- held balancing acts in India-Israel relations have gone now. With the coming of Prime Minister Narendra Modi, the era of India's staid diplomatic establishment was replaced by active engagement of nations, cutting across ideological barriers of the Cold War days. It is now crystal clear that Modi has placed national interest first, while making friends and, cornering enemies. At such a crucial juncture, the arrival of President Rivlin on a six-day visit to India, reflects how pragmatism is guiding bilateral ties, banishing the lull that overshadowed it, for nearly a decade during the UPA rule.

But, thanks to former Prime Minister PV Narasimha Rao, who first established full diplomatic ties with Israel in 1992, today, the country is reaping the benefits of an ally, which is so vital for our key advancements in defence and technology, to name a few. India-Israel partnership had witnessed rejuvenation during former Prime Minister Atal Bihari Vajpayee's tenure. Indeed, Israel's immediate supply of high-powered equipment was one of the major supports our Armed Forces received to make significant gains in the Kargil conflict with Pakistan. Thus, the India-Israel bond is not just a seasonal one; it has deep roots as well. There was a time when the coming closer for both the nations was stalled by India's growing proximity to Israel's enemies in the region. It seems, under Modi, India is ready to reap the rewards of its friendship with the Jewish state in crucial areas like weapons and military equipment, technology, agriculture and also in diamonds and many more.

For Israel, beyond buttressing the traditional links, it is re-setting its relationship with an emerging superpower, when its betrothment with age-old allies is fading away. India-Israel relationship came into focus once again, when Israel's Prime Minister Benjamin Netanyahu met his Indian counterpart in New York in September 2014, and aptly described that “sky is the limit” for both the countries, while forging ahead. Then, it was followed by the first ever visit of Israeli Defence Minister Moshe Ya'alon, since the establishment of diplomatic ties, to India in February 2015. By late 2015, President Pranab Mukherjee paid a visit to Israel, which was the first ever such tour by an Indian President. His visit underscored the interest in ratcheting up the level of bilateral cooperation, despite India's long support for the Palestinian cause. Besides, External Affairs Minister Sushma Swaraj's high profile visit to the Jewish country in the beginning of 2016, gave further credence to the relationship. And now, Rivlin’s arrival and, Modi's expected visit to Israel next year, to celebrate the silver jubilee of our diplomatic relationship, will surely strengthen cooperation between the two nations.

With the change in Government at the Centre, it must be said that there is much more visibility and less shyness about India's relationship with Israel. India does not need to be cautious about its growing nearness to Israel, just for fear of offending its Arab allies in the West Asia. After all, India's connectivity with the Arab nations in the region has blossomed under Modi's leadership.

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Confusion is risky

After Manohar Parrikar's comments on no-first-use policy, a prime ministerial clarification is called for.

Since 1998, a key pillar of India's nuclear policy has been a pledge not to use nuclear weapons first. After considering the utility of individually negotiated bilateral or multilateral agreements committing to no-first-use (NFU) of nuclear weapons, by August 1998, the then prime minister, Atal Bihari Vajpayee, opted to unilaterally announce that India would "not be the first to use nuclear weapons". In 1999, the draft nuclear doctrine proposed by the National Security Advisory Board reiterated that "India will not be the first to initiate a nuclear strike" and went so far as to assert that "the very existence of offensive doctrine pertaining to the first use of nuclear weapons constitute[s] a threat to peace, stability and sovereignty of states". In 2003, the cabinet committee on security reaffirmed that the official doctrine included a "posture of no first use". Since then, NFU has been the official policy of the government.

India has gravitated to NFU because of its relative conventional strength. India's non-nuclear military forces are superior to Pakistan's, and there is very low risk of a major ground war with China given Indian conventional deterrence buttressed by the defensive stopping power of the Himalayas. There are no plausible scenarios for which the first use of nuclear weapons might be useful. India's nuclear forces are strictly to deter a WMD attack, and can, therefore, be oriented entirely for retaliation.

India's public commitment to NFU has two advantages. First, doing so makes crises more stable because adversaries do not have to fear that India will initiate nuclear use and threaten the survivability of their own nuclear forces, which might tempt them to use nuclear weapons early and massively against India (the classic use-it-or-lose-it dilemma). NFU, therefore, injects a critical buffer in the decision-making cycle so that a state like Pakistan does not have an even more dangerous itchy finger on the trigger, and has the time and space to consider the catastrophic consequences of using nuclear weapons and facing the full brunt of India's nuclear retaliation. Second, a posture of no-first-use substantially eases India's peacetime management of nuclear weapons because they can be maintained in a relatively recessed state oriented strictly for strategic retaliation.

There have been multiple internal reviews of NFU by both BJP-led and Congress-led governments. Each of these reviews has concluded that retaining the NFU pledge is in India's security interest. Some of these private deliberations have been provoked by more public incidents where current or former officials — such as former National Security Advisor Shivshankar Menon, or former head of the Strategic Forces Command Lt General B.S. Nagal — have unintentionally or intentionally implied changes to the carefully crafted language that articulates the NFU policy. Most recently, prior to the 2014 election, the BJP manifesto pledged to "revise and update" the nuclear doctrine, which many observers took to mean re-evaluating, among other things, NFU. This was put to rest when candidate Narendra Modi publicly settled the issue, stating that "No first use was a great initiative of Vajpayee — there is no compromise on that. We are very clear".

Enter the minister of defence, Manohar Parrikar. At a public function last week, he stated that his "personal opinion" was that India should not bind itself into refraining from using nuclear weapons first and that it should only pledge to be a "responsible nuclear state," leaving the issue of first use ambiguous. Make no mistake, this was the sitting defence minister unequivocally stating that in his opinion, India should abandon the NFU policy. If this is, in fact, India's new nuclear policy, it should be reflected in a revised official nuclear doctrine that is publicly released. If it is not official nuclear policy, then Parrikar has a duty to the nation to keep any personal opinions that differ from official policy to himself. After all, China and Pakistan, who

already doubted the veracity of India's NFU will now rightly be able to point to a sitting defence minister as having disavowed it.

But why does this matter? Ambiguity in nuclear doctrine is not necessarily a bad thing — it can enhance deterrence. Plenty of nuclear states, including the United States, introduce ambiguity into their nuclear doctrines as to when and under what conditions they may employ nuclear weapons in order to improve deterrence. In fact, India introduced such ambiguity in its 2003 doctrine by stating that it reserved the right to respond to chemical or biological weapons use with nuclear retaliation, but did not bind itself to doing so. Technically, using nuclear weapons in retaliation for chemical or biological attacks constitutes the first use of nuclear weapons. But in this case, the calculated ambiguity went through a systematic process, and the doctrine deployed carefully calibrated language to reflect the revision. Injecting any further ambiguity about the conditions under which India might use nuclear weapons should go through a similar process, speaking with a single, transparent and carefully deliberate voice. Indian nuclear posture could then be aligned with the doctrine, and adversaries would adjust accordingly.

Parrikar's off-the-cuff remarks, however, did not introduce ambiguity into Indian nuclear doctrine. Instead, they injected confusion. The two are distinct, and the difference matters. The confusion arises when statements by various government officials, in this case, no less than the defence minister, contradict stated government policy, leading to confusion about India's nuclear policy — both at home and abroad. Cacophony and contradiction lead to confusion, and confusion has rarely served a nation's security interests.

What are the risks of confusion? Crisis stability between nuclear states depends critically on a mutual understanding of where each state's nuclear red lines lie, and confusion or discrepancies about this can result in catastrophic consequences. A clear NFU policy has the advantages noted above, while officially abandoning NFU would at least allow Indian posture to adjust accordingly and all states in a future crisis to anticipate potential Indian first use. But confusion on this issue is neither here nor there. A confused NFU policy would force Pakistan (and China) to have no choice but to believe the worst case: That India's NFU is a myth regardless of official doctrine and, therefore, any imminent conflict may force them to use their nuclear weapons early and massively, or risk losing them.

Is the government now officially abandoning NFU? There are reasonable national security arguments for why India may wish to abandon NFU, though we believe that the stabilising benefits of NFU outweigh them and that it is a critical pillar of India's claim to being a responsible nuclear power. If such ambiguity about NFU were to be injected into the official doctrine through a deliberate and systematic process and stated with a single disciplined voice in the doctrine, so be it. Though make no mistake, repealing NFU at this point — as opposed to never having one in the first place — would be a highly aggressive shift, suggesting that India prefers to use nuclear weapons first in a conflict: It would be tantamount to declaring a first use doctrine.

If not, however, PM Modi must publicly reaffirm India's NFU pledge, and prevent members of his government from contradicting official policy whenever they feel like it. The clarification cannot be issued by a foreign secretary or foreign minister since that will only muddy the issue. Enough of reading tea leaves with something as serious as nuclear doctrine. India finds itself in the worst possible situation now — confusion about what India's official policy and posture on NFU is. It is imperative that the issue is unambiguously settled by the prime minister himself.

THE ASIAN AGE

Fri, 18 Nov, 2016

Envoy: China, U.S. must avoid excessive mutual suspicion

China and the United States must avoid being overly suspicious of each other's strategic intentions, China's ambassador to the United States said on Wednesday while looking ahead to the Presidency of Donald Trump.

Trump lambasted China throughout the U.S. election campaign, drumming up headlines with his pledges to slap 45 percent tariffs on imported Chinese goods and to label the country a currency manipulator on his first

day in office. He has also vowed to build up the U.S. Navy in what advisers say will be a strategy to reassure countries in the Asia-Pacific worried about China's assertive pursuit of territorial claims.

China's Washington envoy, Cui Tiankai, told a film screening to commemorate the 1979 normalization of U.S.-China ties that after "a most unusual political season," it was important to build consensus and identify common ground. He said both countries were already cooperating on many issues, but added: "We have to make greater efforts to promote better mutual understanding." -- *Reuters*

THE ASIAN AGE

Fri, 18 Nov, 2016

Tracking: Study reveals millennials exhibit surprisingly slack online security habits Cybercrime victims continue unsafe practices

New Delhi: Device users, who fell victim to cybercrime within the past one year, often continue with their unsafe behaviour oblivious of the risks like sharing passwords or leaving their devices unprotected, a report by software security firm Norton says. The annual Norton Cyber Security Insights Report found about 18 per cent respondents from India saying they have at least one unprotected device, leaving their other devices vulnerable to ransomware, malicious websites, zero days and phishing attacks.

About 79 per cent respondents said they know they must actively protect their information online, but they still share passwords and engage in other risky behaviour.

"While quoting various reasons for not protecting their devices, 36 per cent said they don't do anything 'risky' online, and 23 per cent believed security measures would slow them down," Ritesh Chopra, Country Manager at Norton by Symantec, said. He added that while people are increasingly growing aware of the need to protect their personal information online, they aren't motivated yet to take adequate precautions to stay safe, he added.

"While consumers remain complacent, hackers are refining their skills and adapting their scams to further take advantage of people, making the need for consumers to take some action increasingly important," he said.

The report is based on an online survey of 20,907 device users aged over 18, across 21 markets. This includes input from 1,028 Indians. About 64 per cent of the respondents admitted that it has become harder to stay safe online over the past five years. However, millennials exhibit surprisingly slack online security habits and are happy to share passwords that compromise their online safety (34 per cent). Many consumers are still willing to click on links from senders they don't know or open malicious attachments. "This is likely why they remain the most common victims of cybercrime, with 55 per cent having experienced cybercrime in the past year," it said.

DECCAN Chronicle

Fri, 18 Nov, 2016

Some US Androids have a backdoor, sends data to China servers: Report

Many experts argued that the ADUPS has deliberately designed the software to serve Chinese phone manufacturers

People buy smartphones to make use of various services, which significantly involves making calls, sending texts, browsing the internet, sending emails and searching for locations. But many people use smartphones,

unaware of the fact that some of these services are actually being used to siphon off customers' data, every 72 hours, all the way to servers in China. One such smartphone platform that is being used for data mining is Android.

A US security firm Kryptowire recently discovered a 'flaw' in some Android phones. The research conducted by Kryptowire revealed that some Android phones come preinstalled with a special type of firmware developed by Shanghai ADUPS Technology Co. Ltd., a technology company based in China, which transmits entire content of text messages, call logs, contact lists, location information, and presumably other data as well, to a server in China.

Of note, on its website, ADUPS defines itself as a global FOTA (Firmware Over The Air) provider of end-to-end device management and software solutions to leading firms that rely on fast, secure and robust connected services around the world. According to the ADUPS website, it supplies software to two China-based big players in the smartphone industry, Huawei and ZTE. The company says their codes runs on more than 700 million smart devices, including smartphones and cars.

"To ensure ADUPS is providing the correct updates and services, we collect model information, device status, application information, bin/xbin information and summary information from phones and messages, and utilize the information to verify that the appropriate updates and services are sent to the correct devices," ADUPS said on its website.

However, many experts argued that the ADUPS has deliberately designed the software to serve Chinese phone manufacturers which acknowledges user behaviour, a feature which is functioning under the hood.

On acknowledging the feature, an American phone maker BLU Products raised an objection in June 2016. According to a BLU study, about 120,000 of their phones had been affected by the ADUPS software. In response, ADUPS eliminated the functionality only on BLU phones. ADUPS also confirmed that no information associated with that functionality, such as text messages, contacts, or call logs, was disclosed to others and that any such information received from BLU devices during that period, has been deleted.

Google has been offering its Android software for free to phone manufactures with the ability to customise it accordingly. And since it is open to customisation, the operating system can be played around by third-party developers or even smartphone manufacturers to serve their own purposes. Though, Google has asked ADUPS to remove the surveillance script from phones that run services like the Google Play Store, it is yet not confirmed how many phones have already been affected by the software till date.

Business Standard

Fri, 18 Nov, 2016

M28®STOL Turbo-Prop Aircraft now with Indian Type Certificate

The M28® short take-off and landing turboprop airplane is known for safe and reliable flight in extreme environmental conditions. As a strong candidate to connect Tier II and III cities across India, the aircraft also demonstratesbest-in-class performance, high maneuverability and multi-mission flexibility.

Certificates

The M28 Short Take-Off and Landing (STOL) has two type-certificates recognized in the Aviation Industry —from the U.S. Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA). The aircraft also is certified by Indonesia, Nepal, Taiwan and Brazil. In September 2016, India's Civil Aviation Authority DGCA (the Director General of Civil Aviation) approved the PZL M28 aircraft for commercial operations.

Connectivity for regional cities

"The twin turboprop aircraftoffers a host of excellent characteristics best suited to connect regional cities, particularly in the north-east," says Arvind Walia, Sikorsky regional executive for India and South Asia.

"The aircraft's capability to land safely and easily on grass and gravel airstrips is inherent to the design. Also ideal is its easy conversion from passenger seating to carrying cargo, and of course as a VIP transport vehicle."

He said the two M28 aircraft operated by Nepal were effectively used for disaster relief following the 2015 earthquake. The 485 cu ft. (148m3) cabin has a full-width aft door to para drop cargo. The cabin can be outfitted with a removable roller floor, optional cargo hoist, and heavy cargo restraints to speed loading and unloading.

Superior power

The 16,500 lb (7,500 kg) M28 aircraft excels in power, payload and range. Two 1,100 shp (820 kW) Pratt &Whitney Canada PT6-65B turbopropengines deliverhealthypower margins resulting in superior STOL capabilities. Engine power can launchthe M28 aircraft, complete with 19 passengers (or more than 2 tons of cargo) into the air in just 548 meters of runway length. During One Engine Inoperative emergencies, the aircraft can continue safely in flight even in extremely hot or icing conditions with an OEI rate of climb of 450 fpm (138 m/min) on a Standard day.

Best in class payload and range

The M28 aircraft offers the best-in-class comparison with the payload and range. With over 1000 kg payload on board, the M28 offers a range of 1592 km (860 nm) distance + safety reserve for 45 minutes of flight.

The aircraft can haul 2,300 kg (5,000 lb) over 225 nm (450 km) at maximum weight;192 kt (356 km/hr) — and stall speed at 53 kt with engines idling and flaps extended. The engine has a range of operation from -50 to +50degrees C.

Heavy-duty landing gear

The heavy dutynon-retractable titanium tricycle landing gear is key to safe landing on unprepared runways. The main landing gear includes hydraulic brakes that are fitted with an ABS anti-skid system. The nose landing gear is steerable for easy taxi and takeoff.

Avionics

The M28 aircraft alsois equipped with a suite of avionics including the Bendix King Gold Series (made by Honeywell), digital map display, standard VHF/UHF radios (2 each), VOR/ILS/ GPS, MKR, DME, autopilot, ELT and the latest safety features such as TCAS II, EGPWS Mk VI, FA2100 Voice Recorder Assembly, and the SSFDR Flight Data Recorder.

THE ASIAN AGE

Fri, 18 Nov, 2016

Underground ocean found on Pluto, likely slushy with ice

Scientists have found a hidden ocean beneath the frozen surface containing as much water as all of Earth's seas.

Scientists have found evidence that tiny, distant Pluto harbors a hidden ocean beneath the frozen surface of its heart-shaped central plain containing as much water as all of Earth's seas.

The finding, reported on Wednesday in two research papers published in the journal Nature, adds Pluto to a growing list of worlds in the solar system beyond Earth believed to have underground oceans, some of which potentially could be habitats for life. Pluto's ocean, which is likely slushy with ice, lies 93 to 124 miles (150 to 200 km) beneath the dwarf planet's icy surface and is about 62 miles (100 km) deep, planetary scientist Francis Nimmo of the University of California, Santa Cruz said in an interview.

With its ocean covered by so much ice, Pluto is not a prime candidate for life, added Massachusetts Institute of Technology planetary scientist Richard Binzel, another of the researchers. But Binzel added that "one is careful to never say the word impossible." Liquid water is considered one of the essential ingredients for life.

The discovery was made through an analysis of images and data collected by NASA's New Horizons spacecraft, which flew past Pluto and its entourage of moons in July 2015."It shows that nature is more creative than we are able to imagine, which is why we go and explore," Binzel said. "We see what nature is capable of doing."

Despite being about 40 times farther from the sun than Earth, Pluto has enough radioactive heat left over from its formation 4.6 billion years ago to keep water liquid. "Pluto has enough rock that there's quite a lot of heat being generated, and an ice shell a few hundred kilometers thick is quite a good insulator," Nimmo said. "So a deep subsurface ocean is not too surprising, especially if the ocean contains ammonia, which acts like an antifreeze."Scientists made the discovery as they were trying to figure out why a 621-mile (1,000-km) wide impact basin known as Sputnik Planitia, which contains the curious heart-shaped region, was located in its present position near Pluto's equator.

Computer models showed the basin likely filled with ice, which caused Pluto to roll over, cracking its crust. That could happen only if Pluto possessed a subsurface ocean, the analysis found. New Horizons is on its way to another frozen world in the Kuiper Belt region of the solar system about 1 billion miles (1.6 billion km) past Pluto. A flyby of the object, known as 2014 MU69, is scheduled on Jan. 1, 2019.

THE TIMES OF INDIA

Fri, 18 Nov, 2016

'Great valley' larger than Grand Canyon found on Mercury

Washington: Scientists have discovered a 400 kilometres wide "great valley" in the southern hemisphere of Mercury which provides more evidence that the small planet closest to the Sun is shrinking. Scientists used stereo images from Nasa's MESSENGER spacecraft to create a high-resolution topo map that showed the broad valley - more than 1,000 kilometres long - extending into the Rembrandt basin, one of the largest and youngest impact basins on Mercury.

About 400 kilometres wide and three kilometres deep, Mercury's great valley is smaller than Mars' Valles Marineris, but larger than North America's Grand Canyon and wider and deeper than the Great Rift Valley in East Africa."Unlike Earth's Great Rift Valley, Mercury's great valley is not caused by the pulling apart of lithospheric plates due to plate tectonics; it is the result of the global contraction of a shrinking one-plate planet," said Tom Watters, senior scientist at the Smithsonian National Air and Space Museum in the US.

Mercury's great valley is bound by two large fault scarps - cliff-like landforms that resemble stair steps. The scarps formed as Mercury's interior cooled; the planet's shrinking was accommodated by the crustal rocks being pushed together, thrusting them upward along fault lines. However, the valley is not only the product of two large, parallel, fault scarps - the elevation of the valley floor is below that of the surrounding terrain, suggesting that another process may be at work. The most likely explanation for Mercury's great valley is long-wavelength buckling of the planet's outermost shell in response to global contraction or shrinking.

Cooling of Mercury's interior caused the planet's single outer crust plate to contract and bend. Crustal rocks were thrust upward while the emerging valley floor sagged downward. The sagging valley floor lowered part of the rim of the Rembrandt basin as well. "There are similar examples of this on Earth involving both oceanic and continental plates, but this may be the first evidence of this geological process on Mercury," Watters said.

The research was published in the journal Geophysical Research Letters.

THE TIMES OF INDIA

Fri, 18 Nov, 2016

ISRO spend on MOM wasn't even Rs 450cr

By Chethan Kumar

The Indian Space Research Organization (Isro), which, according to all official claims, is reported to have spent Rs 450 crore on the Mars Orbiter Mission (MOM), did not even spend the whole of that shoestring budget. An austere Isro managed to save Rs 2.61 crore which it promptly returned to the Centre, reaffirming MOM to be the world's cheapest mission to the red planet, at a cost of Rs 447.39 crore.

Documents revealing the audited expenditure of all Isro projects in the last five years reveal that MOM isn't the only such project. Though Isro sought Rs 892.69 crore to launch the GSAT-15 communication satellite, the Centre released on ly Rs 830.88 crore. But Isro, which launched GSAT-15 last November, completed the project using just Rs 806.4 crore, saving Rs 24.48 crore. Similarly, it had sought Rs 897.94 crore for GSAT-16 but got only Rs 865 crore and the space agency went on to complete the project with Rs 864.12 crore.

“Unlike the Mars mission, which was a one-time project when cleared, the GSAT programme envisages launching several more satellites. Therefore, the money saved from its launch is with Isro to be used for future satellites,“ a senior official said.

THE ASIAN AGE

Fri, 18 Nov, 2016

New capsule to dispense medicine for weeks

The long-acting pill technology could also have a range of other applications.

London: Scientists have developed a new drug capsule that stays in the stomach for up to two weeks after being swallowed, gradually releasing its payload. The capsule, developed by researchers in the United States, could be a powerful weapon in fighting malaria, HIV and other diseases where successful treatment depends on repeated doses of medicine.

In a study published in the Science Translational Medicine journal on Wednesday, the researchers used the new capsule to deliver an anti-parasitic drug called ivermectin, which they believe could help fight malaria.

The long-acting pill technology could also have a range of other applications, the scientists said - from use in treating Alzheimer's disease and mental illnesses to HIV and tuberculosis.

Although long-acting drug delivery systems already exist, they are either injectable or implantable, or involve an invasive procedure and are not suitable for many situations.

"Until now, oral drugs would almost never last for more than a day," said Robert Langer, a professor at MIT who worked on the study.

"This really opens the door to ultra-long-lasting oral systems ... There are a lot of exciting things this could someday enable."

Drugs taken orally tend to work for a limited time because they pass quickly through the body and are exposed to harsh environments in the stomach and intestines.

Langer said he and his team have been working for several years to overcome this problem, initially focusing on malaria and ivermectin, which kills any mosquito that bites someone who is taking the drug.

Six-armed pill

The new long-acting pill has a star-shaped structure with six arms that can be folded inwards and are encased in a smooth capsule. Drug doses are loaded into the arms, and each arm is attached to a core by a linker that is designed eventually to break down.

After the capsule is swallowed, acid in the stomach dissolves the outer capsule layer, allowing the arms to unfold. Once the star expands it stays in the stomach. It is big enough to resist the forces that would normally push something down the digestive tract, but too small to cause a blockage.

"When the star opens up inside the stomach, it stays inside the stomach for the duration that you need," said Tyler Grant, another researcher on the project.

In tests in pigs, the researchers found that drug doses were gradually released over two weeks, and the linkers that join the arms to the core then dissolved, allowing the arms to break off and pass through the digestive system. The researchers ran mathematical models to analyze the potential impact of the long-acting capsule with ivermectin.

Models suggest that if the capsules were used to deliver ivermectin along with antimalaria treatments to 70 percent of a population, malaria transmission could be cut by as much as it would have been if 90 percent had been treated with antimalaria treatments alone.

The team is working on developing similar capsules to deliver drugs against other tropical diseases, as well as HIV and tuberculosis.

MAIL TODAY

Fri, 18 Nov, 2016

Fatty foods can lead to Alzheimer's among kids

Excessive sugar & fat deplete the levels of a key protein

Fatty foods stunt the development of children's brains, drastically raising their risk of developing a mental illness or Alzheimer's, a new study warns. According to a study published in the journal Molecular Psychiatryon Tuesday, excessive amounts of sugar and fat deplete the levels of a key protein called reelin, which is needed to help neurons connect.

Without reelin, brain functions slow down, hampering behavioural flexibility and memory. Alarmingly, low reelin levels are linked to a drastically high risk of developing Alzheimer's disease in later life. "These changes from a young age onwards are more the result of the fatty foods themselves, and the impact they have on young brains, rather than arising from the mere fact of being obese," one of the researchers Urs Meyer, from ETH Zurich, warns. Dr Meyer tested the theory on mice with fellow researcher Pascale Chavis from France's INMED Institute. However, the authors found mice on a fast food diet produced less reelin, hampering the plasticity of synapses and general cognitive function.

The researchers warn this research is crucial, since adolescence is a time when teenagers' appetites go through the roof, and they tend to have more freedom to eat what they want. And global studies show teenagers are increasingly heading to fast food chains to quell their hunger. "Our study highlights that the quality of the food eaten by teenagers may also be particularly important for an optimal maturation of the prefrontal cortex," says Marie Labouesse, lead author of the study. She added, "Our findings that high-fat diets during adolescence disrupt functioning of the adult prefrontal cortex suggest that a careful nutritional balance during this sensitive period is pivotal for reaching the full capacity of adult prefrontal functions.

Although we still need to find out the exact mechanisms by which reelin neurons get depleted during adolescence, it looks like high-fat foods could kick-start changes in how the prefrontal cortex of younger people develops."