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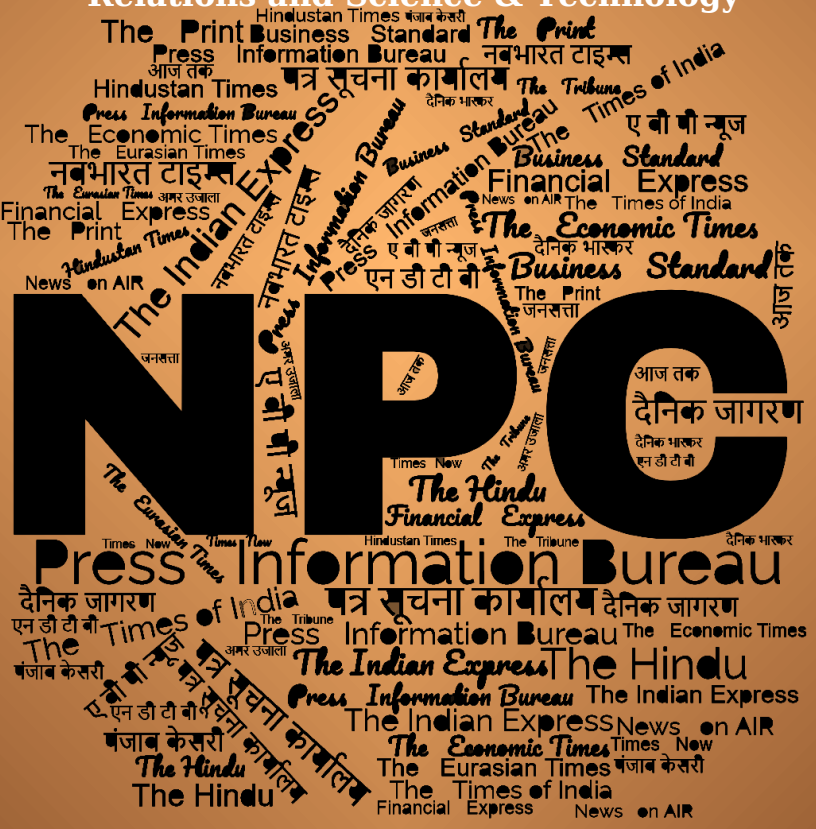
समाचार पत्रों से चयित अंश
Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

A Daily service to keep DRDO Fraternity abreast with DRDO Technologies, Defence Technologies, Defence Policies, International Relations and Science & Technology



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CONTENTS

DRDO News

DRDO Technology News

अमर उजाला

Wed, 10 May 2023

पुलिस को हाइटेक बनाएगा डीआरडीओ: बच नहीं पाएंगे साइबर अपराधी, प्रशासनिक कार्यालयों के कंप्यूटर नहीं होंगे हैक

चंडीगढ़ सेक्टर-18 में जल्द ही देश का पहला साइबर ऑपरेशंस एंड सिक्योरिटी बनकर तैयार होगा। इससे चेहरा अपराधियों को पकड़ना और आसान हो जाएगा। साथ ही अपराधी प्रशासनिक कार्यालयों के कंप्यूटर सिस्टम भी हैक नहीं कर सकेंगे।

चंडीगढ़ में 88 करोड़ की लागत से बन रहा देश का पहला साइबर ऑपरेशंस एंड सिक्योरिटी सेंटर

चंडीगढ़ के एसपी (क्राइम एवं साइबर) केतन बंसल ने कहा कि इस सेंटर को पुलिस खुद चलाएगी। उन्होंने बताया कि लगभग दो दिशा से इस सेंटर को बनाने के प्रयास चल रहे थे। चंडीगढ़ के लिए यह बड़ी उपलब्धि है। डिफेंस रिसर्च एवं डेवलपमेंट ऑर्गेनाइजेशन (डीआरडीओ) शुरू में सेंटर को संचालित करेगा और पुलिस के जवानों को प्रशिक्षण देकर इसे पुलिस विभाग के हवाले करेगा।

हैकिंग की स्थिति में अलर्ट जारी करेगा

इस सेंटर में एक ट्रेनिंग लैब भी बनाई जाएगी। यह सेंटर हैकर्स से निपटने में अहम रोल अदा करेगा। चंडीगढ़ प्रशासन के विभिन्न विभागों से जुड़ी जानकारी को सेंटर से जोड़ा जाएगा। ऐसे में विभागों के कंप्यूटर आदि को हैक करने की कोशिशों को रोका जा सकेगा। कंप्यूटर को एक ऑपरेटिंग सिस्टम (ओएस) भी जोड़ा जाएगा जो हैकिंग की स्थिति में अलर्ट जारी करेगा। वहीं कई प्रकार के डाटा के विश्लेषण के साथ जटिल साइबर केसों को सुलझाया जाएगा।

गृह मंत्रालय से राशि जारी

सेंटर का निर्माण 88 करोड़ रुपये से होना है। इस बजट में से 22.35 करोड़ रुपये गृह मंत्रालय से जारी किए जा चुके हैं। यह रकम आगे डीआरडीओ को भेज दी गई है। प्रशासक बीएल पुरोहित की मंजूरी के बाद इस दिशा में काम शुरू हुआ है।

प्रिडिक्टिव पुलिसिंग पर होगा काम

सेंटर में एक सोशल मीडिया सेल भी बनाया जाएगा। इसके जरिए किसी प्रकार की अफवाह या जानकारी पर शुरू से नजर रखी जाएगी और इसे पुलिस के हेल्पलाइन नंबर 112 के साथ जोड़ा जाएगा। ऐसे में पुलिस तुरंत कार्रवाई कर पाएगी। सेंटर प्रिडिक्टिव पुलिसिंग पर भी काम करेगा। इसके तहत उन जगहों और रैली, धरना आदि पर खास नजर रखी जाएगी, जहां अपराध होने की आशंका अधिक हो। ऐसे में पुलिस तेजी से प्रतिक्रिया कर पाएगी। इसके जरिए पुलिस को पहले ही बता दिया जाएगा कि किस जगह गश्त करने से अपराध को रोका जा सकता है।

डीआरडीओ के इन-हाउस सॉफ्टवेयर लगेंगे

पुलिस के एक बड़े अधिकारी ने बताया कि जिस जगह यह सेंटर बनाया जाएगा, वहां ज्यादा निर्माण कार्य की संभावना नहीं है और ज्यादातर खर्च सॉफ्टवेयर और हार्डवेयर पर ही आएगा। डीआरडीओ के कई अपने इन-हाउस

सॉफ्टवेयर ही हैं, जो यहां लगेंगे। छह महीने के भीतर यह सेंटर बन कर तैयार हो जाएगा। सेंटर चेहरा पहचान प्रणाली (फेशियल रेक्गनिशन सिस्टम) पर भी काम करेगा। संदिग्ध और आपराधिक प्रवृत्ति के लोगों का डाटा शहर में लगाए गए हाई-रेजोल्यूशन कैमरों से जोड़ा जाएगा। ऐसे में किसी भी संदिग्ध की जानकारी प्राप्त होते ही अलर्ट जारी किया जाएगा। इसके बाद पुलिस उसे तुरंत पकड़ पाएगी।

पड़ोसी राज्यों को भी मिलेगी मदद

इस सेंटर के बनने से पंजाब, हरियाणा और हिमाचल प्रदेश जैसे पड़ोसी राज्यों को भी साइबर अपराधों को सुलझाने और जानकारी का आदान-प्रदान करना आसान होगा। बता दें कि चंडीगढ़ ज्वाइंट साइबर क्राइम कोऑर्डिनेशन टीम का नोडल सेंटर है। गृह मंत्रालय ने इंडियन साइबर क्राइम कोऑर्डिनेशन सेंटर के तहत इस टीम को बनाया था। इसका मकसद साइबर अपराधों और अपराधियों से जुड़ा डाटा राज्यों और केंद्र शासित प्रदेशों के बीच साझा करना था। नेशनल साइबर क्राइम रिपोर्टिंग पोर्टल पर शिकायतों का विश्लेषण करने के आधार पर चंडीगढ़, हिमाचल प्रदेश, हरियाणा (मेवात बेल्ट), पंजाब, उत्तराखंड, झारखंड (जामतारा बेल्ट), जम्मू एंव कश्मीर तथा लद्दाख के लिए कोऑर्डिनेशन टीमें बनाई गई थीं।

https://www.amarujala.com/amp/haryana/crime/drdo-will-make-police-hi-tech-cyber-criminals-will-able-to-escape-2023-05-10

THE HINDU

Wed, 10 May 2023

Avenues for Collaboration with Codissia will be Explored: DRDL Director

Defence Research and Development Laboratory, Hyderabad, will explore avenues for collaborating with Coimbatore District Small Industries Association (Codissia) to source products for aerospace and missile applications, Defence Research and Development Laboratory (DRDL) Director G.A. Srinivasa Murthy, said on Wednesday.

“There are lots that could be done together with small-scale enterprises where new ideas are generated,” Dr. Murthy said, inaugurating the eighth edition of SUBCON 2023 organised by Codissia Intec Technology Centre as a platform for vendor development.

The DRDL Director, who also inaugurated a grand exhibition showcasing the strengths of industrial sector in the region in the manufacture of machine tools, auto components, sheet metal fabrication, engineering devices, foundry, plastic, and farm machinery and equipment, said growth of small enterprises that would pave the way for cutting down imports and stepping up exports was required for strengthening the country’s exchequer.

Industry associations provide the confidence to individual entrepreneurs to take risks, he said, complimenting Codissia for organising the event for strengthening capacities of its members.

The three-day event envisages providing opportunity for small-scale industries to meet the country’s leading manufacturers and several large and medium enterprises to ramp up their operations. More than 1.5 lakh visitors are expected to visit the exhibition projecting Coimbatore as a major hub of MSME sector in India with multiple products in multiple segments, according to the organisers. The inauguration was followed by talks by experts on ‘connecting SMBs to emerging global business opportunities’; ‘SMB- plan for growth and opportunities in large projects’; ‘banking solutions for SMBs’; ‘how does a small to mid-size manufacturer plan for growth?’; ‘initiative towards empowering SMB - policies and implementation strategy of the State’;

strengthening of SMEs - productivity and global competitiveness', and 'best practices in sub-contract manufacturing - strategies and relationships'.

The talks were followed by a panel discussion titled 'Small to Big - Proven Growth Methodologies' from successful entrepreneurs, and and 'Small is Big' conclave and award function.

https://www.thehindu.com/news/cities/Coimbatore/avenues-for-collaboration-with-codissia-will-be-explored-drdl-director/article66834773.ece

THE HINDU

Wed, 10 May 2023

Andhra University Physics Students Visit Open House at NSTL in Visakhapatnam

Nearly 60 students and research scholars of Andhra University Physics Department on Wednesday visited the Naval Science and Technological Laboratory (NSTL) here to participate in the Open House exhibition organised as part of the National Technology Day celebrations. It will conclude on May 11.

The students were allowed to have a glimpse of the weapons and defence systems being developed by the NSTL for Indian Navy. A multimedia presentation on the technologies developed by NSTL was also made during the visit.

The department head D.B. Venkatadri said that the tour was useful for the students of physics and electronics to know about the defence equipment and latest technologies.

https://www.thehindu.com/news/cities/Visakhapatnam/andhra-university-physics-students-visit-open-house-at-nstl-in-visakhapatnam/article66834916.ece

Defence News

Defence Strategic: National/International

Press Information Bureau
Government of India

Ministry of Defence

Wed, 10 May 2023

Department of Defence Production Waives off Quality Assurance Charges

In a significant move to promote reforms and bring ease of doing business, Department of Defence Production has waived off Quality Assurance (QA) charges levied by the QA Agencies under its

administrative control for the stores meant for the exports. This industry friendly initiative would make the defence products cost competitive in global market.

The Ministry of Defence provides proof/testing facility to the industry for their products through its various Proof/Testing establishments to make the Indian Defence Products more competitive in the international market. Charges are levied by the QA Agencies as per the fixed rates and the industry adds this charge to the cost of the products which adversely affect its cost competitiveness. But now these charges have been scrapped.

https://pib.gov.in/PressReleasePage.aspx?PRID=1923133

ThePrint

Wed, 10 May 2023

Accidents Push Govt Panel to Review Military's Advanced Light Helicopter Dhruv, 'Faster Fatigue' of Parts Found

A top government regulatory body, responsible for the certification of military aircraft, is undertaking a full review of the indigenous Advanced Light Helicopter (ALH Dhruv) — the key workhorse of the Indian military — following a spate of accidents.

Sources in the defence and security establishment told ThePrint that the committee set up by the Bengaluru-based Centre for Military Airworthiness and Certification (CEMILAC) — which has representatives from the manufacturer Hindustan Aeronautics Limited (HAL), National Aerospace Laboratories (NAL) and the Aeronautical Development Agency (ADA) — has already identified certain issues in the preliminary study.

CEMILAC is a regulatory body under the Defence Research and Development Organisation (DRDO) that's mandated to certify the airworthiness of military aircraft, helicopter, Unmanned Aerial Systems (UAS), aero-engines, air launched weapons and other airborne stores.

The review comes after a spate of helicopter crashes in recent times. Three ALH have crashed since March, including one last week in which an Army technician was killed.

There have been nearly a dozen accidents involving the helicopter in the past five years. The Dhruv has been grounded for safety checks by the services following this month's crash.

Speaking to ThePrint, the sources ruled out any design flaw in the helicopters, which has accumulated over 3 lakh hours of intense flying.

Over 300 helicopters are in service with the Army, Navy, Air Force and the Coast Guard, sources said, adding that so far, the committee has found that there is faster fatigue of certain parts.

ThePrint was the first to report in October last year that the crash of an ALH known as the Rudra in Arunachal Pradesh had occurred after the "collective", which controls the power to the rotors and back, had broken.

Sources had then said that the Court of Inquiry (CoI) into the miraculous escape of former army Commander Lt Gen Ranbir Singh in an ALH crash 2019 had occurred because of the failure of the "collective".

The CoI found that the rod had broken in half as if someone had cut it. However, further analysis showed that the rod had high fatigue marks, as with other helicopters.

"The CEMILAC panel has found that certain parts are showing higher fatigue than what the time frame is. So this is something that one would be considering to change," a source told ThePrint.

The source explained that if normally a particular part has a flying life of about 300 hours, then it is serviced or replaced after 300 hours.

However, if the fatigue is developing much before 300 hours, then one will have to reduce the flying life mentioned, so that necessary replacement or service can be done.

Black box to be examined

Talking about the crashes that took place last month, sources said that prima facie it looks more of a maintenance issue at the service level than any technical defect, as initially suspected.

The sources said that the flight data recorder (FDR) of three helicopters are yet to be studied and more details will emerge after that.

FDR, or black box, is an instrument that records the performance and condition of an aircraft in flight. It's usually investigated after an accident.

"The Dhruv is a mature platform with a design that has been proven. The issue is with certain parts which are more metallurgical in nature. Certain changes will have to be made in terms of servicing schedule," said the source quoted above.

LCH grounded along with the ALH

Like the ALH, the indigenous Light Combat Helicopter (LCH) is also grounded, and is going through a full technical check by the armed services.

The IAF and the Army had ordered for 15 LCH last year, of which 10 were to go to the former while the army was to get five.

Defence sources said that the IAF has received five of the 10 orders and they are undergoing the same checks and balances as the ALH following Dhruv's crashes last month.

Sources said that the LCH is also based on the ALH design and is, in fact, a derivative of it. It will likely face the same technical issues, they said.

As ThePrint reported in February, the Army is looking at procuring nearly 95 Prachand LCH for mountain warfare, as well as nearly 110 Light Utility Helicopters (LUH) to replace the aging Cheetahs and Chetaks from HAL.

https://theprint.in/defence/accidents-push-govt-panel-to-review-militarys-advanced-light-helicopter-dhruv-faster-fatigue-of-parts-found/1565610/

The Tribune

Wed, 10 May 2023

Doval, Israeli FM Discuss Ways to Boost Defence Ties

Israel Foreign Minister Eliyahu Cohen had met NSA Ajit Doval on Tuesday to discuss prospects of further defence and security cooperation between the two countries, said a MEA release on Wednesday.

Cohen had also met Defence Minister Rajnath Singh besides calling on PM Narendra Modi and meeting with External Affairs Minister S Jaishankar.

Doval has emerged as a pointsman on India's external interactions, especially on security and counter-terrorism cooperation, besides Jaishankar. On Sunday, Doval had met his counterparts from the US and UAE, besides Saudi Arabian Crown Prince Mohammed Bin Salman to discuss regional issues as well as, reportedly, a rail link from West Asia to India.

https://www.tribuneindia.com/news/nation/doval-israeli-fm-discuss-ways-to-boost-defence-ties-506683

NewsOnAIR

Wed, 10 May 2023

PM Modi & Israel Foreign Minister Eli Cohen Discuss Bilateral Ties in New Delhi

Prime Minister Narendra Modi met Foreign Minister of Israel Eli Cohen in New Delhi yesterday. In a tweet, Mr. Modi said they discussed ways to further deepen bilateral cooperation in priority areas of agriculture, water, innovation and people-to-people ties.

Mr. Cohen had earlier said in a tweet that they discussed strengthening the strategic relations between the countries, expanding the Abraham Accords, and promoting a free trade agreement that will boost Israel's economy. He said India is a world power, the fifth largest economy and the most populous country in the world.

https://newsonair.com/2023/05/10/pm-modi-israel-foreign-minister-eli-cohen-discuss-bilateral-ties-in-new-delhi/

The Tribune

Wed, 10 May 2023

PM to Visit US in June; Focus on Defence, Tech

Prime Minister Narendra Modi will embark on an official state visit to the US, which will include a state dinner on June 22, following an invitation from President Joseph Biden and First Lady Jill Biden. This is the Prime Minister's first state dinner with the US President. Former PMs Manmohan Singh and Indira Gandhi were accorded two state dinners each.

The dates of the meeting between PM Modi and Biden have not been announced but it will presumably take place on the same day.

"The visit will affirm the deep and close partnership between the US and India and the warm bonds — of family and friendship that link Americans and Indians together," said a White House statement which expected the interaction to strengthen the commitment to a free, open, prosperous and secure Indo-Pacific.

It will also aim to elevate the strategic technology partnership, including in defence, clean energy and space. "The leaders will discuss ways to further expand our educational exchanges and people-to-people ties, as well as our work together to confront common challenges from climate change to workforce development and health security," added the statement.

The leaders will have several bilateral meetings beginning with the G7 summit next week in Tokyo. The two leaders will then travel to Papua New Guinea for respective country summits with 18 Pacific island leaders.

https://www.tribuneindia.com/news/nation/pm-to-visit-us-in-june-focus-on-defence-tech-506665

mint

Wed, 10 May 2023

Indian Navy and Royal Thai Navy Conduct 35th Indo-Thai Coordinated Patrol

The Indian Navy and the Royal Thai Navy conducted the 35th edition of the India-Thailand Coordinated Patrol (Indo-Thai CORPAT) from May 3 to May 10, 2023, in the Andaman Sea, the Ministry of Defence said.

The bi-annual coordinated patrol aims to reinforce maritime linkages between the two countries and ensure the safety and security of the international trade route in the Indian Ocean.

The Indian Naval Ship (INS) Kesari, an indigenously built LST (L), and His Thai Majesty's Ship (HTMS) Saiburi, a Chao Phraya Class Frigate, along with Maritime Patrol Aircraft from both navies participated in the exercise.

According to the ministry, the patrol helps in understanding and interoperability between the two navies and facilitates the prevention and suppression of unlawful activities such as Illegal Unreported Unregulated (IUU) fishing, drug trafficking, piracy, and armed robbery. It also enables the exchange of information to prevent smuggling, illegal immigration, and conduct search and rescue (SAR) operations at sea.

The Indian Navy has been proactively engaging with countries in the Indian Ocean Region towards enhancing regional maritime security as part of the Government of India's vision of SAGAR (Security And Growth for All in the Region). The 35th Indo-Thai CORPAT is another step towards consolidating inter-operability and forging strong bonds of friendship between India and Thailand.

The Indian Navy and Royal Thai Navy have enjoyed a close and friendly relationship that has strengthened over the years, covering a wide spectrum of activities and interactions.

https://www.livemint.com/news/india/indian-navy-and-royal-thai-navy-conduct-35th-indo-thai-coordinated-patrol-11683730717955.html

ORF OBSERVER RESEARCH FOUNDATION

Wed, 10 May 2023

India's Nuclear Triad: Still a Work in Progress

By Abhijit Singh

The 25th anniversary of India's nuclear tests at Pokhran is an opportunity to reflect on the country's nuclear weapon capabilities. India's nuclear triad has been bolstered in recent years by advancements in delivery vehicles. More than a decade after Indian scientists began working on the

Agni-V, the missile has matured through a process of iteration and testing. On 15 December 2022, the Defence Research and Development Organisation (DRDO) conducted the ninth test-firing of the nuclear-capable ballistic missile. DRDO officials claim that the missile's range of 5,000 km puts it in the category of an intermediate-range ballistic missile (IRBM) rather than an ICBM. But Agni-V's actual range is said to exceed 5,500 km, the minimum range for an ICBM. That gives it the vital capability to strike targets in China.

Also significant from a strategic standpoint is the launch of the S-4 in November 2022, India's third indigenous nuclear ballistic missile submarine (SSBN). Four years after the INS Arihant, India's first indigenous SSBN, became fully operational, the Indian Navy is said to have quietly launched the S-4 at a facility in Visakhapatnam. The submarine is reportedly bigger than the INS Arihant and Arighat, with more space for nuclear-tipped ballistic missiles. Compared to its predecessor platforms' four vertical-launch missile tubes, the S-4 has at least eight tubes for nuclear missiles. The test-firing of a nuclear-capable submarine-launched ballistic missile (SLBM) from the Arihant in October 2022 has added to the optimism surrounding Indian deterrence capability. Many see the test as a step towards assured retaliation. A submarine in the depths of the ocean, they rightly suggest, is best suited to respond to a nuclear provocation by an adversary.

Undersea dilemmas

Nonetheless, the sea component of the triad is facing trials of its own. The commissioning of the INS Arighat, the second SSBN, currently undergoing sea trials, has ostensibly been delayed. Launched in 2017, the submarine was scheduled to be commissioned in 2021, but it will likely be inducted only in 2024. An SSBN must undergo extensive machinery and systems checks and an exhaustive procedure of command, control, and communications verification before commissioning. The process can often be cumbersome, but rarely does it cause the kind of delays being witnessed with the Arighat. A related worry is the lack of progress in testing and operationalising longer-range SLBMs. Recent missile tests from the Arihant have been of the K-15 (700 km); the longer-range K-4 (3500 km) isn't being tested enough in operational conditions, though it is the only SLBM with the range to make deterrence against China credible.

There are also issues of nuclear command, control, and communication. Operational planners and Strategic Forces Command officials are still coming to grips with implementing weapon controls on SSBNs and addressing the problems of deep-sea communications. A nuclear submarine usually has a system of negative control with de-mated missile systems and electronic locks (permissive action links) attached to the weapon system. The locks preclude arming and launching of the missiles without the insertion of a prescribed electronic discrete code by the command authority. With cannisterised missiles on the Arihant, the warheads are supposedly pre-mated. It is for the submarine captain to launch a missile on explicit orders from the command authority. But communication with an SSBN is tricky because the very low-frequency systems in use on the submarine are prone to disruption at great depths.

The air component

The air leg of the triad seems relatively robust. The induction of the Rafale aircraft has provided the Indian Air Force with a sophisticated aircraft with nuclear-warhead-carrying capability. The aircraft is widely seen as the chosen fighter to deliver nuclear weapons, more so than the older Anglo-French Jaguar and the Russian-made Sukhoi Su-30. It is reassuring for some that the air (and land) elements of the triad have civilian scientists maintaining, preparing, and connecting the nuclear warhead. It generates confidence that command and control will be properly exercised. Unlike cannisterised missiles with pre-mated warheads on SSBNs, air- and land-based missile warheads are physically removed from their delivery vehicles.

A complicated dynamic in South Asia

The deterrence discussion has a broader context. Indian nuclear capabilities, while outwardly credible, ought not to be assessed in isolation; they should be weighed against the capabilities of China and Pakistan. Both countries have sophisticated arsenals and believe they have the assets to credibly deter India. What complicates matters, however, is Beijing and Islamabad's perception of strategic stability in South Asia, in particular the latter's suspicion that Indian attempts to develop ballistic missile defence (BMD) are intended to generate strategic asymmetry with Pakistan.

Indian observers tend to see BMD as a benign defensive shield. The regular flight trials of interceptor missiles (one endo-atmospheric interceptor missile test was recently held in the Bay of Bengal), are seen as naturally complementing India's "No first use" (NFU) nuclear policy that emphasises defensive capability as a way of strengthening deterrence. Pakistan, however, sees it differently. Islamabad believes that India's attempts to develop BMD capability are meant to reduce the effectiveness of Pakistan's nuclear arsenal. Islamabad has sought "cost-effective solutions" in the shape of MIRV (multiple independently targetable re-entry vehicles) and cruise missiles, a form of deterrence Pakistani officials describe as "full spectrum," involving the employment of an array of strategic, tactical, and operational weapons. This underlines an essential dilemma for India: Its nuclear doctrine does not really account for the use of tactical nuclear weapons by Pakistan.

As some Indian experts see it, New Delhi's stance on nuclear weapons—that these are 'political' rather than battlefield weapons, meant only to deter nuclear power adversaries —is gravely outdated. The critics point to the blurring of the line between conventional and nuclear deterrence. The three core tenets of India's nuclear doctrine—credible minimum deterrence, massive retaliation, and NFU—are, they aver, from a bygone era and no longer fit for purpose. If anything, the NFU and New Delhi's continuing emphasis on "minimum" limit the size of the arsenal to levels well below the level needed for credible deterrence. Furthermore, India's reluctance to revisit the nuclear doctrine and its refusal to accelerate the nuclear weapons programme—despite clear evidence of the growing arsenals of Pakistan and China—hurts the cause of strategic stability. Sceptics say India's insistence on keeping a small arsenal and yet "retaliating massively" to a nuclear attack is irreconcilable with the idea of credible minimum deterrence.

For other observers, tinkering with the nuclear doctrine is unnecessary, even counterproductive. The issue, NFU proponents aver, is not that India's nuclear doctrine is unviable; rather, dropping NFU will impose a burden on India in terms of investment in financial and technological capabilities to make a 'first use' credible. If New Delhi is certain about never having to carry out a first disarming or decapitating strike on its adversaries, there is no reason for it to be sucked into an arms race by switching over to a first-use doctrine. The 160 warheads and new delivery vehicles that India possesses are enough to convey resolve to opponents; deterrence is credible, even if only just.

https://www.orfonline.org/expert-speak/indias-nuclear-triad-still-a-work-in-progress/

THE ECONOMIC TIMES

Wed, 10 May 2023

China Delivers Two More New Modern Naval Frigates to Pakistan Navy; Completes Four Ships Order

China has delivered two more naval frigates to the Pakistan Navy in addition to the two delivered earlier, completing the order for four ships, the official media here reported on Wednesday. Two Type 054A/P frigates to Pakistan were delivered by China, indicating that all four warships of this

class have been commissioned into the Pakistan Navy, state-run Global Times reported. A joint delivery and commissioning ceremony for the two frigates namely the PNS Tippu Sultan and the PNS Shahjahan was held in the Hudong Zhonghua Shipyard in Shanghai on Wednesday, the daily reported. Chief of the Naval Staff of the Pakistan Navy Admiral M Amjad Khan Niazi, who is on a visit to China, attended the ceremony and boarded the vessels.

Speaking on the occasion, Admiral Niazi highlighted that the commissioning of the two frigates ushers a new chapter in the Pak-China friendship that has matured and rests firmly on the pillars of trust, respect and mutual support. "The same is manifested in our defence collaborations," he was quoted as saying by Pakistan's Geo News. The Type 054A/P is one of the latest multi-role frigates of Chinese origin, equipped with state-of-the-art weapons and sensors that include CM-302 surface-to-surface missiles and LY-80 surface-to-air missiles as well as Advanced Anti-Submarine Warfare suite and Combat Management System, enabling ships of this class to operate under multi-threat scenarios, Niazi said.

The Type 054A/Ps are being integrated into Pakistan Navy operations, and will be a mainstay of the Pakistan Navy Fleet in the coming years, ensuring the seaward defence and protection of Pakistan's vital sea lines of communication, said the Pakistani naval chief.

On May 8, Chinese Defence Minister Gen. Li Shangfu during his meeting with Admiral Niazi said that the two all-weather friends should seek new areas of military cooperation and jointly safeguard their security interests and region.

Li said the relations between the militaries of the two countries are an important part of China-Pakistan relations, and cooperation between the two sides in various fields, including the two navies, has achieved good results.

Li said the militaries of the two countries should expand new exchange areas, create new cooperation highlights, and work together to safeguard the security interests of both countries and the region, a defence statement here said.

Indian Navy Chief Admiral Kumar said last month that Pakistan Navy is modernising itself at a good pace and seeks to become a 50-platform force in 10-15 years, and they are adding new corvettes and frigates to their fleet.

Niazi's visit is part of a flurry of high-level visits between the two countries this month amid Pakistan's deepening economic and political crisis and reports of leaked documents highlighting deliberations in the Pakistan establishment on whether to move closer to the US to balance ties with China.

https://economictimes.indiatimes.com/news/defence/china-delivers-two-more-new-modern-naval-frigates-to-pakistan-navy-completes-four-ships-order/articleshow/100140870.cms

Firstpost.

Wed, 10 May 2023

China Slams Japan After Deployment of Patriot PAC-3 Missile Near Taiwan

With military analysts in Beijing criticising Japan’s placement of the US-made Patriot PAC-3 missile defence system at Miyako Island, which is close to Taiwan, the breach between archrivals China and Japan is certain to grow.

At a news conference on May 8, Japan's Chief Cabinet Secretary Hirokazu Matsuno said that the Air Self-Defense Force has stationed Patriot PAC-3 ground-to-air guided missiles at its Miyako Island installation in Miyakojima, Okinawa Prefecture.

In the "first island chain" close to Taiwan, this is seen to be a key strategic node.

Matsuno also told the media that the PAC-3 missiles from Japan's Ground Self-Defense Force had been stationed at the Ishigaki and Yonaguni islands in addition to the Miyakojima deployment.

Matsuno explained that the Patriot missiles are intended to intercept any future launches of long-range ballistic missiles from North Korea.

Ballistic missiles that North Korea claimed to be artificial satellites were fired; the missiles twice passed close to these three islands, once in 2012 and again in 2016.

https://www.firstpost.com/world/china-slams-japan-after-deployment-of-patriot-pac-3-missile-near-taiwan-12575942.html

JANES

Wed, 10 May 2023

MAADS Air Defence System Qualified with CAMM-ER Missile

MBDA has qualified the Medium Advanced Air Defence System (MAADS) with its Common Anti-Air Modular Missile-Extended Range (CAMM-ER) missile during a recent test firing, confirming the capabilities and peformance of both the missile and the entire system in an integrated mode.

The company announced the successful test on 5 May and said it was the first time that the Detection Centre module - Sirius battle management command, control, communication, computer, and intelligence (BMC4i) with evolved software - was tested and qualified, integrated with the CAMM-ER missile.

The test involved a target drone simulating an attack by an enemy aircraft that was detected by the MAADS detection centre module, which identified, classified, and determined the type of threat and how to deal with it, and then launched a CAMM-ER missile to neutralise it. MBDA said the trial also verified the two-way datalink between CAMM-ER and MAADS.

MBDA is the design authority for MAADS, which comprises the Detection Centre module, including the company's Sirius BMC4i and Leonardo's Kronos radar.

MAADS will be operated by the Italian Air Force, replacing the Spada (Sword) short-range air defence system and giving the service a medium-range capability. Developed by the UK and Italy, CAMM-ER will replace Italian Air Force and Italian Army Aspide (Albatros) missiles and be integrated into the Italian Navy's Albatros NG new generation naval air defence system.

https://www.janes.com/defence-news/news-detail/maads-air-defence-system-qualified-with-camm-er-missile

THE TIMES OF INDIA

Thu, 11 May 2023

PM to Lay Foundation Stone of LIGO-India, Other Science Projects Worth Over Rs 5800cr Today

PM Narendra Modi will lay the foundation stone of Laser Interferometer Gravitational Wave Observatory–India (LIGO-India) on Thursday. The LIGO-India will be one of the several projects related to scientific and technological advancement in the country worth over Rs 5,800 crore that Modi will lay the foundation stone and dedicate to the nation on Thursday.

Besides the LIGO-India in Hingoli, the key projects whose foundation stone would be laid include Homi Bhabha Cancer Hospital and Research Centre, Jatni, Odisha; and platinum jubilee block of Tata Memorial Hospital, Mumbai. This is in line with the PM's vision of Aatmanirbhar Bharat through strengthening scientific institutions in the country.

LIGO-India, to be developed in Hingoli, Maharashtra, will be one of the handful laser interferometer gravitational wave observatories in the world. It is an extremely sensitive interferometer of 4-km arm length capable of sensing gravitational waves generated during the merger of massive astrophysical objects such as black holes and neutron stars.

The LIGO-India will work in synchronisation with two such observatories operating in the US; one in Hanford, Washington, and the other in Livingston, Louisiana.

The other projects that will be dedicated to the nation include fission Molybdenum-99 production facility, Mumbai; Rare earth permanent magnet plant, Visakhapatnam; National hadron beam therapy facility, Navi Mumbai; Radiological research unit, Navi Mumbai; Homi Bhabha Cancer Hospital and Research Centre, Visakhapatnam; and Women & Children Cancer Hospital Building, Navi Mumbai.

The programme and celebrations marking the National Technology Day 2023 has a special focus on Atal Innovation Mission. Highlighting the theme of this year's National Technology Day, the AIM Pavilion will showcase multiple innovative projects and provide an opportunity for the visitors to witness live tinkering sessions, engage in tinkering activities, witness outstanding innovations and products by startups.

During the programme, PM Modi will also inaugurate an expo showcasing scientific and technological advancements made in India recently. He will also release a commemorative stamp and a coin on the occasion.

The celebration of National Technology Day was started by former PM A B Vajpayee in 1999 to honour Indian scientists, engineers and technologists, who worked for India's scientific and technological advancement and ensured the successful conduct of Pokhran tests in May 1998.

https://timesofindia.indiatimes.com/india/pm-to-lay-foundation-stone-of-ligo-india-other-science-projects-worth-over-rs-5800cr-today/articleshow/100140318.cms

THE HINDU

Thu, 11 May 2023

A Ground View of the Indian Space Policy 2023

By Rakesh Sood

On April 20 this year, the Indian Space Research Organisation (ISRO) released the Indian Space Policy 2023 that had been in the works for some years. The document has been received positively by industry. However, it needs to be followed up with suitable legislation, accompanied by clear rules and regulations. Just preceding this, this writer wrote the article, "Awaiting lift-off into the Second Space Age" (April 10, 2023), which said that India's modest entry into the First Space Age followed by its many gains should be used to help the country tap the vast potential in the Second Space Age.

Until the early 1990s, India's space industry and space economy were defined by ISRO. Private sector involvement was limited to building to ISRO designs and specifications. The Second Space Age began with the licensing of private TV channels, the explosive growth of the Internet, mobile telephony, and the emergence of the smartphone. Today, while ISRO's budget is approximately $1.6 billion, India's space economy is over $9.6 billion. Broadband, OTT and 5G promise a double-digit annual growth in satellite-based services. It is estimated that with an enabling environment, the Indian space industry could grow to $60 billion by 2030, directly creating more than two lakh jobs. Yet, it is the enabling policy environment that has proved elusive. The first satellite communication policy was introduced in 1997, with guidelines for foreign direct investment (FDI) in the satellite industry that were further liberalised but never generated much enthusiasm. Today, more than half the transponders beaming TV signals into Indian homes are hosted on foreign satellites, resulting in an annual outflow of over half a billion dollars.

A remote sensing data policy was introduced in 2001, which was amended in 2011; in 2016, it was replaced by a National Geospatial Policy that has been further liberalised in 2022. Yet, Indian users including the security and defence agencies spend nearly a billion dollars annually to procure earth observation data and imagery from foreign sources. To streamline matters, a draft Space Activities Bill was brought out in 2017, which went through a long consultative process. It lapsed in 2019 with the outgoing Lok Sabha. The government was expected to introduce a new Bill by 2021, but it appears to have contented itself with the new policy statement.

What is different

To be fair, the Indian Space Policy 2023 is qualitatively different from previous efforts. It is a short 11-page document, which includes three pages devoted to definitions and abbreviations. The 'Vision' is to "enable, encourage and develop a flourishing commercial presence in space" that suggests an acceptance that the private sector is a critical stakeholder in the entire value chain of the space economy. It makes five key points. It defines its role in India's "socio-economic development and security, protection of environment and lives, pursuing peaceful exploration of outer space, stimulation of public awareness and scientific quest".

First, this is the only reference to 'security' in the document, making it clear that the focus is on civilian and peaceful applications. Considering that space-based intelligence, reconnaissance, surveillance, communication, positioning and navigation capabilities are increasingly seen as mission critical by the defence services, that India conducted a successful A-SAT (anti-satellite) direct ascent test in March 2019, and, in the same year, set up the Defence Space Agency and the Defence Space Research Organisation, it is reasonable to infer that a defence-oriented space security policy document will be a separate document. The United States puts out a space policy

under the aegis of the White House Office of Science and Technology Policy, National Aeronautics and Space Administration (NASA) and the Departments of Commerce and Transportation, while the Department of Defence and the Director of National Intelligence are responsible for the space security strategy.

Second, the policy lays out a strategy and then spells out the roles of the Department of Space, ISRO, the Indian National Space Promotion and Authorisation Centre (IN-SPACe) set up in 2020, and the NewSpace India Limited (NSIL), a public sector unit set up in 2019 under the Department of Space as the commercial arm of ISRO to replace the now defunct Antrix.

Third, it states that ISRO will "transition out of the existing practice of being present in the manufacturing of operational space systems. Hereafter, mature systems shall be transferred to industries for commercial exploitation. ISRO shall focus on R&D in advanced technology, proving newer systems and realisation of space objects for meeting national prerogatives". Another of ISRO's tasks in the new policy is to "share technologies, products, processes and best practices with NGEs (non-government entities) and/or Government companies". This implies that ISRO will now use its biggest asset, its qualified and talented manpower, to concentrate on cutting edge research and development and long-term projects such as Chandrayaan and Gaganyaan.

As ISRO's commercial arm, NSIL will become the interface for interacting with the industry, undertake commercial negotiations and provide hand-holding support to ensure smooth and efficient transfer of technologies.

Private sector role

Fourth, the NGEs (this includes the private sector) are "allowed to undertake end-to-end activities in the space sector through establishment and operation of space objects, ground-based assets and related services, such as communication, remote sensing, navigation, etc.". Satellites could be self-owned, procured or leased; communication services could be over India or outside; and remote sensing data could be disseminated in India or abroad. NGEs can design and operate launch vehicles for space transportation and establish their own infrastructure. NGEs can now make filings with the International Telecommunication Union (ITU) and engage in commercial recovery of asteroid resources. In short, the entire gamut of space activities is now open to the private sector. Security agencies can task NGEs for procuring tailor-made solutions to address specific requirements.

The activities of the NGEs will be in keeping with guidelines and regulation to be issued by IN-SPACe. It is expected to act as the single window agency for authorising space activities "by government entities and NGEs", in keeping with safety, security, international obligations and overall national interests.

Finally, IN-SPACe is expected to create a "stable and predictable regulatory framework" that will ensure a level playing field for the NGEs. It will act as a promoter by setting up industry clusters and as the regulator, issue guidelines on liability issues.

The gaps

The policy sets out an ambitious role for IN-SPACe but provides no time frame for the necessary steps ahead. Neither is there an indicative timeline for ISRO's transitioning out of its current practices nor is there a schedule for IN-SPACe to create the regulatory framework. The policy framework envisaged will need clear rules and regulations pertaining to FDI and licensing, government procurement to sustain the new space start-ups, liability in case of violations and an appellate framework for dispute settlement.

A regulatory body needs legislative authority. The Reserve Bank of India was set up by the 1934 RBI Act, the Securities and Exchange Board of India (SEBI) by the 1992 SEBI Act, and the

Telecom Regulatory Authority of India (TRAI) by the 1997 TRAI Act. IN-SPACe is expected to authorise space activities for all, both government and non-government entities. Currently, its position is ambiguous as it functions under the purview of the Department of Space. The Secretary (Space) is also Chairman of ISRO, the government entity to be regulated by IN-SPACe.

The Space Policy 2023 is a forward-looking document reflecting good intentions and a vision. But it is not enough. What is urgently needed is a time frame to provide the necessary legal framework to translate this vision into reality, to successfully launch India into the Second Space Age.

https://www.thehindu.com/opinion/lead/a-ground-view-of-the-indian-space-policy-2023/article66835931.ece

THE HINDU

Wed, 10 May 2023

ICMR Conducts Successful Trial Run of Blood Bag Delivery under iDrone Initiative

The Indian Council of Medical Research (ICMR) on Wednesday successfully conducted a trial run of delivery of blood bags by drones under its iDrone initiative. The trial run, as part of a pathbreaking validation study, has been undertaken for the first time in the country by the ICMR; Lady Hardinge Medical College (LHMC); Government Institute of Medical Sciences (GIMS), Greater Noida; and the Jaypee Institute of Information Technology (JIIT), Noida, a release issued by the Health Ministry said.

The inaugural trial flight carried 10 units of whole blood samples from the GIMS and LHMC in visual line of sight. “LHMC and GIMS are included as centres for supplying blood bags and testing of the samples, while JIIT is acting as the implementation centre for drone sorties. The protocol development, study designing, implementation, and coordination of the project are being undertaken by scientists from ICMR-Headquarters,’‘ the Ministry said.

“The i-DRONE was first used during the COVID-19 pandemic by the ICMR for distributing vaccines to unreachable areas. Today, we are transporting blood and blood-related products which are supposed to be kept at a low temperature. After the experiment, we found that not only can we maintain the temperature, there was also no damage to the products transported. We sent another sample through an ambulance to see if there are no differences in the samples sent using the two modes — then this drone will be used all over India,” Rajiv Bahl, Director General, ICMR, said.

Dr. Bahl said that clarity on challenge mapping and identifying possible solutions can be achieved by developing indigenous capacities in research, and the introduction of innovations and technologies in the mainstream.

Meanwhile, investigators from the LHMC, GIMS and JIIT will further conduct drone flights to validate the quality of packed red blood cells, fresh frozen plasma, and platelets in this study. The findings of this study will provide scientific evidence from India for examining the impact of drone transportation on blood products. It will lead to development of standard operating procedures (SOP) for wider applicability, and the use of drones for the delivery of blood bags and components. Additionally, it will provide answers to the question of whether drones shall be used as a method of transportation for temperature sensitive blood products in remote locations of the country, the release noted.

https://www.thehindu.com/news/national/icmr-conducts-successful-trial-run-of-blood-bag-delivery-under-idrone-initiative/article66835394.ece