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Feb
2024

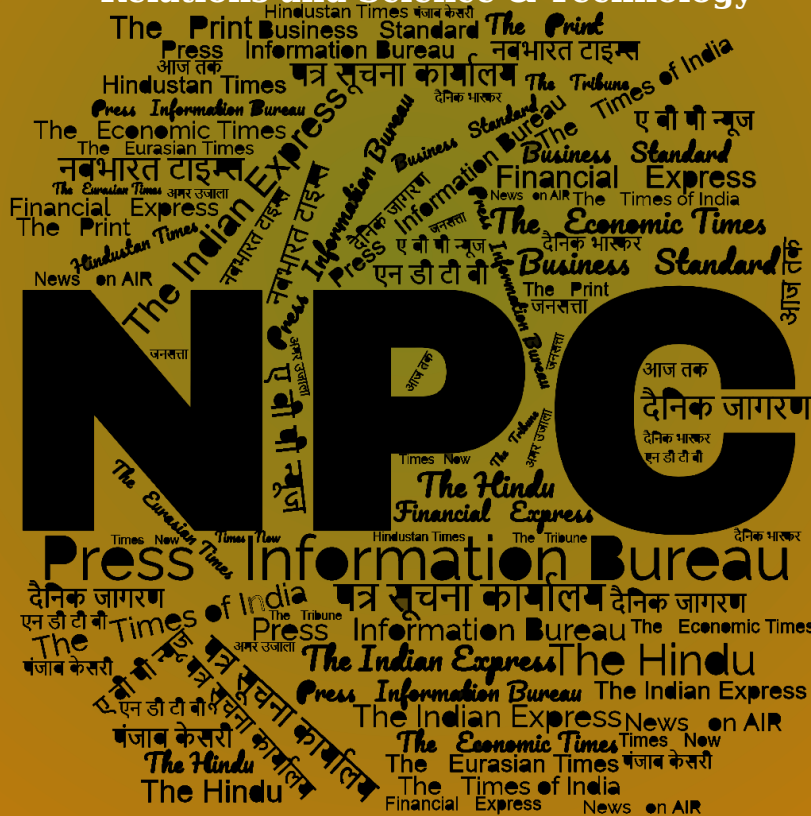
खंड/Vol. : 49 अंक/Issue : 27

07/02/2024

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Tue, 06 Feb 2024

Abhyas Target Aircraft Ready for Production: DRDO

Nearly a decade after the first developmental trial, the Defence Research and Development Organisation (DRDO) on Monday confirmed that indigenously developed high-speed expendable aerial target Abhyas is now ready for production.

The confirmation came after a series of successful developmental trials of the unmanned aerial vehicle from the Integrated Test Range (ITR) off Odisha coast in last four days.

Defence sources said four trials of the aircraft developed to be used as target for flight tests of surface-to-air and air-to-air missiles were conducted validating four different mission objectives in a revised robust configuration.

Designed by DRDO's Bengaluru-based Aeronautical Development Establishment (ADE), Abhyas was test flown from the launching complex-III of the test facility in full operational configuration.

A statement issued by DRDO said Abhyas requires minimum logistics and is cost-effective compared to imported equivalents. The new system, which has export potential and can be offered to friendly countries, is now ready for production. The pilot-less target aircraft used a single booster that has been designed by Hyderabad-based Advanced Systems Laboratory (ASL) to provide reduced launch acceleration.

A defence official said several mission objectives like safe release of booster, launcher clearance and attaining required end of launch velocity were achieved during the trials. "Various parameters including required endurance, speed, manoeuvrability, altitude and range were also successfully validated," he said.

DRDO chairman Samir V Kamat thanked the team associated with the design, development and testing of the system. Defence Minister Rajnath Singh congratulated DRDO, armed forces and the defence industry for the successful flight trial of Abhyas. The system will meet the requirements of aerial targets for the armed forces, he said.

<https://www.newindianexpress.com/states/odisha/2024/Feb/06/abhyas-target-aircraft-ready-for-production-drdo>

IIT Madras to Spearhead Development of India's First Indigenous 155mm Smart Ammunition

The Indian Institute of Technology Madras (IIT Madras) has joined hands with Munitions India Limited, a key player in defence manufacturing, to create the nation's first domestically designed 155 Smart Ammunition. This collaboration aims to enhance accuracy and lethality in defence operations, marking a crucial stride towards self-reliance in defence production.

Partnership for Indigenous Smart Ammunition

IIT Madras and Munitions India Limited, under the Ministry of Defence, Government of India, have embarked on a two-year initiative to develop advanced smart ammunition. The primary objective is to achieve a Circular Error Probable (CEP) of 10 meters, a significant improvement from the current 500 meters, thereby enhancing precision in defence operations.

Key Objectives and Features

The smart ammunition project focuses on increasing accuracy and lethality at the terminal impact point. This involves housing guidance, navigation, and control systems, alongside advanced technologies such as miniaturized electronics and sensors. Notably, the ammunition will utilize the Indian Regional Navigation Satellite System (IRNSS), ensuring independence from foreign satellite systems.

Ravi Kant, Chairman and Managing Director of Munitions India Limited, expressed enthusiasm for the partnership, citing it as a crucial step towards realizing India's 'Aatmanirbhar Bharat' vision. Prof. G. Rajesh from IIT Madras highlighted the complexity of the project, emphasizing its potential to revolutionize modern ammunition manufacturing.

Key Characteristics

The 155mm Indian Smart Ammunition is designed for compatibility with existing artillery guns, offering seamless integration without necessitating modifications. It boasts advanced features such as fin stabilization, canard control, and a 3-mode fuse operation, catering to various tactical requirements.

The collaboration between IIT Madras and Munitions India Limited signifies a significant advancement in India's defence capabilities. By harnessing indigenous expertise and cutting-edge technology, the development of smart ammunition promises to bolster national security while fostering self-sufficiency in defence production.

<https://economictimes.indiatimes.com/news/defence/iit-madras-to-spearhead-development-of-indias-first-indigenous-155mm-smart-ammunition/articleshow/107462407.cms>

Outnumbered by Pakistan & China, India Wants More 'Eyes in the Sky', Early-warning AEW&C

India is making significant progress in developing and deploying advanced indigenous airborne early-warning and control (AEW&C) aircraft, also known as 'eyes in the sky'. These aircraft will enhance surveillance and detection capabilities along the borders with China and Pakistan, as well as provide guidance to friendly fighters during air combat.

The Defence Research and Development Organisation (DRDO) and the Indian Air Force (IAF) are actively working on the development of six Mark-1A and six Mark-2 versions of the Netra AEW&C aircraft. Three Netra aircraft have already been inducted since February 2017.

According to sources, the defence ministry will soon consider the acceptance of necessity (AoN) for the six Mark-1A aircraft. This will involve equipping Brazilian Embraer jets with active electronically scanned array antenna-based radars, electronic and signal intelligence systems, at an estimated cost of Rs 9,000 crore.

A source stated, 'These six AEW&C aircraft will be similar to the existing Embraer-145 jet-based Netra, which has a radar coverage of 240 degrees. However, the new aircraft will feature advanced software and technologies such as gallium nitride-based TR modules for the radars.'

Developmental work is already underway for the six Mark-2 aircraft, which will have larger and more advanced AEW&C radars and sensors. These will be installed on second-hand Airbus A321 planes acquired from Air India, at a cost of Rs 10,990 crore. The first Mark-2 aircraft, equipped with a nose antenna in addition to the main dorsal antenna for 300-degree radar coverage, is expected to be delivered in 2026-27. Technologies from the Mark-2 aircraft will also be incorporated into the Mark-1A versions.

The development of these aircraft is crucial for India, as it currently lags behind Pakistan and China in the AEW&C and AWACS (Airborne Warning and Control System) domain. The IAF currently operates only three Israeli Phalcon AWACS mounted on Russian IL-76 transport aircraft, which provide 360-degree radar coverage and a range of 400 km. Pakistan possesses 11 Swedish Saab-2000 Erieye AEW&C and Chinese Karakoram Eagle ZDK-03 AWACS aircraft. China, on the other hand, has approximately 30 AEW&C aircraft, including Kong Jing-2000 'Mainring', KJ-200 'Moth', and KJ-500 aircraft.

The IAF recognized the urgent need for more AEW&C aircraft during the aerial skirmish with Pakistani fighters in February 2019, which were supported by Saab-2000 Erieye AEW&C aircraft. The ongoing standoff with China in eastern Ladakh has further emphasized the requirement.

A significant advantage for the IAF is that the existing Netra and Phalcon aircraft are fully integrated into its integrated air command and control system (IACCS). This automated air defence network, equipped with data links, is being expanded to integrate a wide range of military and civilian radars, thereby enhancing surveillance capabilities and closing gaps in Indian airspace.

<https://economictimes.indiatimes.com/news/defence/outnumbered-by-pakistan-china-india-wants-more-eyes-in-the-sky-early-warning-aewc/articleshow/107446878.cms>

Need to Maintain Rules-based Indo Pacific; India-US Defence Ties Come to the Fore at Defense News Conclave in Chennai

Former chairman of the Defence Research and Space Organisation (DRDO) S. Christopher on Tuesday, February 5, 2024, emphasised the need for people to connect between India and the United States, to strengthen strategic relationships between the two countries.

The need to maintain a rules-based order in the Indo Pacific and the emphasis on India-U.S. defence cooperation came to the fore during a Defense News Conclave organised by the U.S. Consulate General Kolkata, the U.S. Department of State and CUTS International, in Chennai.

Delivering his keynote address, Mr. Christopher said peace could not be assumed but had to be assured. “It has to be assured by not only power but also partnership,” he said and added that there needed to be collaborations at the people-level rather than only at a military- or other levels.

United States Consul General in Chennai Christopher W. Hodges said we all lived in an interconnected world now, and so, what happened in the Indo Pacific mattered for the rest of the globe and vice versa. He underlined the significance of maintaining a rules-based order, which supported international law and respected human rights and of maintaining a “secure and open” Indo Pacific.

“These things all matter. They affect everybody in the world and India and the United States have a chance to drive them in our bilateral relationship as well as through mechanisms like the Quad,” Mr. Hodges emphasised and said the components in the Quad saw the common interest in maintaining a secure and open Indo Pacific.

As for defence cooperation between the India and the U.S., Mr. Hodges said the amount of defence cooperation and spending had been essentially nothing in 2008, but went up to 25 billion USD in 2023 and further said that the “trajectory for that is very, very positive to continue”. It was an “amazing opportunity”, as both the countries had a “convergence of common interest and common values”.

Pradeep S. Mehta, secretary general, Consumer Unity & Trust Society (CUTS) said that the defence cooperation between India and the U.S. has become an integral and central aspect of the national security policies of both the countries and has grown significantly in the recent past.

Referring to the recent observation by U.S. ambassador to India Eric Garcetti in Jaipur that there still were problems in relocating investments from China to India, which were going to Vietnam, Mr. Mehta said: “He [Mr. Garcetti] was quite right in saying that we [India] still have these problems because of issues of mindset and [the] kind of bureaucracy which prevails, continue to prevail, in spite of the the best efforts being made by the government.”

<https://www.thehindu.com/news/national/tamil-nadu/need-to-maintain-rules-based-indo-pacific-india-us-defence-ties-come-to-the-fore-at-defense-news-conclave-in-chennai/article67817407.ece>

Army Undertakes 110 Development Projects in Ladakh Villages

The Fire and Fury Corps of the Indian Army has undertaken about 110 development projects worth more than Rs 6 crore under the Operation Sadbhavna in the remote border villages of Pangong area in Ladakh. It is planned to almost double this contribution next year, besides undertaking other welfare and support activities to civil administration from time to time.

Deputy Commissioner, Leh, Santosh Sukhadeve chaired a review meeting today at Leh.

The meeting primarily focused on the ongoing development projects in border villages under the Vibrant Village Programme and the advancements in Project Tsangda at the Pangong area.

Colonel Atul Bharadwaj, representing HQ 14 Corps, shared detailed insights into the multifaceted development projects initiated by the Indian Army under the Vibrant Village Programme in Leh.

He elaborated on the various approved projects, including installation of a Community Radio Station at Hanle, provision of ambulances with accessories for multiple villages, installation of borewells, establishment of an archery node, and other significant initiatives aimed at enhancing community welfare and infrastructure.

In addition to the ongoing projects, Colonel Bharadwaj also presented proposed initiatives under the Vibrant Village Programme. These proposals encompassed a wide spectrum of development areas, ranging from classroom repair and renovation to the procurement of essential vehicles and machinery, construction of welcome gates, and the provision of extreme cold climate tents.

The meeting also discussed Project Tsangda, where the District Panchayat Officer of Leh provided an overview of the existing sanitary complexes in Durbuk and Pangong areas, emphasizing both functional and non-functional aspects. Councillor Chushul highlighted the necessity for additional amenities, including cafeteria and toilet facilities at key locations, along with the need for generator installation at Pangong. He also advocated for the upgradation of women's skill development centers and craft facilities in the Chushul region.

The meeting was attended by Chief Planning Officer of Leh, Councillor Chushul, District Block Development Officer of Durbuk, and the supervisor overseeing Project Tsangda.

<https://www.thestatesman.com/india/army-undertakes-110-development-projects-in-ladakh-villages-1503267228.html>



Wed, 07 Feb 2024

"Exercise will Get as Real as it can be": Captain Shobhit Mishra as IAF Gears up for Exercise Vayushakti 2024

The preparations of the Indian Air Force for 'Exercise Vayushakti 2024' are in full swing. It will take place on February 17 and all frontline aircraft, including the Rafale fighter jets.

Captain Shobhit Mishra, the Chief Operation Officer Group, told ANI that the exercise will "get as real as it can be."

He said, "Air Force Station Jodhpur is one of the biggest air bases of the Indian Air Force and is one of the primary air bases for launching a plethora of aircraft towards Exercise Vayushakti 2024. The aircraft that are likely to operate from here are the versatile Su-30 MK and the newest induction, the Rafale aircraft."

The officer stated that this exercise aims to revalidate the concept of operations.

"Number of weapons will be fired by these aircraft; some of the weapons that will be fired by Rafale contain air-to-air missiles. And Su-30 MK will be carrying out carpet bombing..." he said.

"The aim of this exercise is to revalidate our concept of operations and the exercise will get as real as it can be," he added.

The 'Exercise Vayushakti' has been going on since 1954.

The VayuShakti-2024 would be in the form of a major firepower demonstration in Jaisalmer where all the major fighter aircraft, including the Rafale, Su-30MKIs, LCA Tejas, Mirage 2000 and MiG-29s, would be showcasing their firepower by shooting different missiles and bombs at designated targets. 77 fighter planes, 41 helicopters and five transport aircraft will take part in the exercise. Further, there will be demonstrations of surface-to-air, air-to-air, and air-to-ground weapons.

All frontline aircraft, including the Rafale fighter jets and Prachand attack choppers, will take part in the Indian Air Force's Exercise Vayushakti, Air Force Vice Chief-Air Marshal AP Singh said last week.

The exercise is scheduled to be held on February 17 in Rajasthan's Jaisalmer.

"All frontline aircraft, including the Rafale fighter jets and Prachand attack choppers, would be taking part in Exercise Vayushakti. We would also be airlifting Army guns in the exercise," AP Singh said.

The exercise of Vayushakti has been going on since 1954. The Air Force Vice Chief said that the IAF would be showcasing its capability to carry out accurate bombing on targets in the exercise.

"The Made in India LCA Tejas, Prachand attack helicopters and ALH Dhruv would be taking part. In two hours, we would be dropping around 40-50 tonnes of ordnance in a one- to two-kilometre radius," he said.

<https://www.aninews.in/news/world/asia/exercise-will-get-as-real-as-it-can-be-captain-shobhit-mishra-as-iaf-gears-up-for-exercise-vayushakti-202420240207024849/>



Tue, 06 Feb 2024

Saudi Arabia: India Promotes BrahMos at World Defense Show 2024 in Riyadh

Union Minister of State for Defence & Tourism Ajay Bhatt, India's ambassador to the Kingdom of Saudi Arabia, Dr. Suhel Ajaz Khan, and Additional Secretary Anurag Bajpai were cordially received at the BrahMos Pavilion during the ongoing WORLD DEFENSE SHOW 2024 in Riyadh,

in a noteworthy demonstration of India's growing prowess in defense technology and strategic diplomacy.

The distinguished delegation was hosted by Dr. Sanjeev Kumar Joshi and Praveen Pathak, Director (Marketing, Promotion, & Export) at BrahMos, signifying a critical milestone in India's defense export initiatives.

The attendance of such well-known leaders highlights how much emphasis India focuses on developing closer relationships with its Middle Eastern allies while enhancing its defense capabilities. India's dedication to cooperation and innovation in defense technology, especially with regard to cruise missile systems, was demonstrated via the BrahMos Pavilion.

The visit by the delegation demonstrated not only India's technological prowess but also its proactive posture in advancing defense cooperation with countries throughout the Middle East. In an effort to improve regional security and stability, India has changed the direction of its defense export strategy by offering BrahMos Cruise missiles to a number of neighboring countries.

With its remarkable speed, accuracy, and adaptability, the BrahMos Cruise missile has changed the face of modern warfare. For countries looking to strengthen their military capabilities, it is a highly sought-after defensive asset due to its precise accuracy when striking targets from land, sea, and air platforms.

<https://www.firstpost.com/world/saudi-arabia-india-promotes-brahmos-at-world-defense-show-2024-in-riyadh-13696622.html>



Wed, 07 Feb 2024

Big Win for Indian Defence Export: Massive \$225 Million Ammo Deal Inked with Saudi Arabia

The Ministry of Defence reportedly signed a \$225 million deal with Nadrah Company on Tuesday for supplying artillery ammo to Saudi Arabia. The event was attended by HE Ahmad Abdulaziz Al-Ohali, Governor of the General Authority of Military Industries, KSA, and Ajay Bhatt, State Defence Minister.

This deal is among the biggest Indian Defence export orders and follows a recent series of bilateral military exercises between both countries. These exercises include 'Sada Tanseeq' with Army's Infantry and 'Desert Cyclone' with Special Forces of both nations.

Additionally, Munition India is developing India's first 155 smart ammunition in collaboration with Indian Institute of Technology Madras (IIT-M). Munitions India Limited, is among India's defence public sector enterprise. The ammunition in development is similar to the US M982 Excalibur, which India also uses in its M777 UltraLight howitzer.

<https://www.republicworld.com/defence/india-inks-225m-artillery-ammo-deal-with-nadrah-for-saudi-arabia-boosting-defence-exports/>

Coast Guard Ship Varaha Arrives in Kenya for 3 Days

In an effort to further enhance ties with Kenya, Indian Coast Guard (ICG) ship Varaha, an Offshore Patrol Vessel, arrived at Port Mombasa for a three-day, on Monday as part of the overseas deployment of ICG ships, Coast Guard officials said here on Tuesday.

The primary objectives of the visit are to strengthen long-standing diplomatic ties, enhance maritime cooperation, and promote interoperability with the Kenya Coast Guard Services (KCGS) and other maritime agencies.

The itinerary includes professional interactions such as onboard training and lectures on Visit, Board Search and Seizure (VBSS) and Maritime Search and Rescue (M-SAR), cross-deck visits, joint yoga sessions, planning conferences, and table-top exercises for Marine Pollution Response (MPR).

Activities during the port call involve Courtesy Calls by the Commanding Officer on various dignitaries and government officials of Kenya, including the Kenya Coast Guard Services.

Kenya and India have historically maintained warm and friendly bilateral relations, sharing common values and diverse cultures. Regular interactions between ICG and KCGS occur through ICG ship visits and various capacity building programmes.

The overseas deployment of ICG ships aligns with the organization's plan to foster bilateral relationships and strengthen international cooperation with Foreign Friendly Countries (FFCs).

During this Africa deployment, the ship is also scheduled to make port calls in Maputo, Mozambique and Dar-e-Salam, Tanzania.

This visit plays a crucial role in strengthening bilateral relationships with key maritime agencies, including the Kenya Coast Guard Services (KCGS), Mozambique Navy and Tanzanian Naval forces.

<https://www.dailypioneer.com/2024/india/coast-guard-ship-varaha-arrives-in-kenya-for-3-days.html>

THE TIMES OF INDIA

Tue, 06 Feb 2024

MQ9-B Drones will Provide India with Enhanced Maritime Security, Domain Awareness Capability: US

The US has said the sale of 31 armed drones to India at an estimated cost of nearly \$4 billion would provide it with an enhanced maritime security and domain awareness capability and give the country outright ownership of these aircraft.

Last week, the US approved the sale of 31 MQ-9B armed drones to India at an estimated cost of \$3.99 billion, an acquisition that will bolster India's capability to meet current and future threats by enabling unmanned surveillance and reconnaissance patrols in sea lanes of operation.

“This sale, we believe, will provide India with an enhanced maritime security and maritime domain awareness capability,” State Department Deputy Spokesperson Vedant Patel told reporters at his daily news conference.

“It offers India outright ownership of these aircraft, and this is something that we’ll continue to deepen our cooperation with our Indian partners on,” Patel said.

The mega deal to acquire the drones from US defence major General Atomics (GA) was announced during Prime Minister Narendra Modi’s historic state visit to the US in June 2023.

Under the deal, India will get 31 High Altitude Long Endurance (HALE) UAVs, of which the Navy will get 15 SeaGuardian drones, while the Army and the Indian Air Force will get eight each of the land version – SkyGuardian.

While announcing the approval of the deal, Defense Security Cooperation Agency (DSCA) on Thursday said the proposed sale will support the foreign policy and national security objectives of the United States by helping to strengthen the US-Indian strategic relationship.

It will improve the security of a major defence partner, which continues to be an important force for political stability, peace, and economic progress in the Indo-Pacific and South Asia region, the agency said.

<https://timesofindia.indiatimes.com/india/mq9-b-drones-will-provide-india-with-enhanced-maritime-security-domain-awareness-capability-us/articleshow/107447525.cms>

THE ECONOMIC TIMES

Tue, 06 Feb 2024

China Says its Research Ship Aims to Understand Indian Ocean as it Set to Enter Maldives

Beijing, China on Tuesday defended the increasing forays by its research vessels into the Indian Ocean as well to the Maldives, saying these were for peaceful purposes and aimed at contributing to humanity’s scientific understanding of the ocean. The Maldives had on January 23 permitted China’s Xiang Yang Hong 03, equipped to carry research and surveys, to dock at Male port, saying the halt was for replenishment and that the research vessel would “not be conducting any research while in the Maldivian waters.”

The permission for the Chinese vessel to dock at Male port was given by the recently elected pro-China President Mohamed Muizzu.

The Indian defence establishment said New Delhi is keeping a close watch on the movement of the Chinese ship.

On Tuesday, when asked for his comments at a media briefing here, Chinese Foreign Ministry spokesman Wang Wenbin said the ship’s activities complied with the UN Convention on the Law of the Sea (UNCLOS).

“China’s scientific research activities in relevant waters are for peaceful purposes and aimed at contributing to humanity’s scientific understanding of the ocean,” Wang said.

“For years, China and the Maldives have maintained close cooperation in marine scientific research. China appreciates the facilitation and assistance extended by the Maldives to Chinese

research vessels entering its port on the basis of sovereignty and China-Maldives friendship and in accordance with the relevant provisions of international law," he said.

According to Marine Traffic, a private website keeping a watch on the movement of ships, the eight-year-old Chinese ship is likely to dock at a Male port on February 8.

Earlier, Sri Lanka had banned the repeated visits of Chinese research vessels to its Hambantota port following concerns expressed by India about their nature of research, especially the mapping of the Indian Ocean floor for military purposes besides spying on India's defence facilities.

The permission to allow the Chinese ship comes after Muizzu's state visit to China last month during which the two countries announced the elevation of bilateral ties to a comprehensive strategic cooperative partnership besides signing 20 agreements to assist infrastructure construction in the Indian Ocean archipelago nation.

China also announced a USD 130 million grant, besides promising to send more Chinese tourists to the tourism-dependent Maldives.

An American think-tank has alleged that a massive fleet of China's "scientific research" ships is collecting data from the oceans, including in the Indian Ocean, for military purposes, especially for submarine operations, a charge denied by Beijing.

While permitting the Chinese research vessels, the Maldives Foreign Ministry said last month that it is only for rotation of personnel and replenishment not for research.

Observers say that it is to be seen whether Maldives will stick to its stand of not permitting Chinese vessels to conduct research in the waters close to the proximity of India, considering the deepening economic dependence of the Muizzu government on China.

After assuming office, Muizzu struck anti-India posturing calling for the withdrawal of 88 Indian military personnel stationed in Maldives, and also said Maldives would not renew the hydrography agreement with India.

In his first speech to the Maldives Parliament on Monday, Muizzu, while articulating the need to bolster the Indian Ocean archipelagic nation's military capabilities, said the first group of Indian military personnel will be sent back from the island nation before March 10 and the remaining manning two aviation platforms will be withdrawn before May 10.

The Maldives has traditionally been India's key maritime neighbour in the Indian Ocean Region (IOR) and occupies a special place in its initiatives like SAGAR (Security and Growth for All in the Region) and the 'Neighbourhood First Policy' of the Narendra Modi government.

<https://economictimes.indiatimes.com/news/defence/china-says-its-research-ship-aims-to-understand-indian-ocean-as-it-set-to-enter-maldives/articleshow/107466933.cms>



Tue, 06 Feb 2024

Chinese Spies Hacked Dutch Defence Network Last Year - Intelligence Agencies

Chinese state-backed cyber spies gained access to a Dutch military network last year, Dutch intelligence agencies said on Tuesday, calling it part of a trend of Chinese political espionage against the Netherlands and its allies.

It is the first time the Netherlands has publicly attributed cyber espionage to China, as national security tensions grow between the two countries.

“It is important to ensure that espionage activities of this nature committed by China become public knowledge since this will help to increase international resilience to this type of cyber espionage,” Dutch Defence Minister Kajsja Ollongren said.

The agencies, known by their Dutch acronyms MIVD and AIVD, said the hackers had placed malicious software, or malware, that cloaked its own activity inside an armed forces network used by 50 people for unclassified research.

“MIVD & AIVD emphasise that this incident does not stand on its own, but is part of a wider trend of Chinese political espionage against the Netherlands and its allies,” they said in their report.

China’s embassy to the Netherlands did not immediately respond to a request for comment. Beijing routinely denies allegations of cyber espionage and says it opposes all forms of cyberattack.

Last April, AIVD said in an annual assessment that China posed the greatest threat to the Netherlands’ economic security with espionage attempts targeting high-tech companies and universities.

A prime target is ASML (ASML.AS), opens new tab, based in the southern city of Veldhoven - the world’s dominant supplier of lithography machines for making computer chips.

In a separate report, also last April, the MIVD said China was illegally attempting to acquire Dutch space technology. It was not clear from Tuesday’s report what information the hackers were trying to obtain. The agencies said the damage was limited because the network was separate from the ministry’s main system.

‘LAMB TO THE SLAUGHTER’

Last month, Reuters exclusively reported that the U.S. government had launched an operation to fight a pervasive Chinese hacking operation, dubbed “Volt Typhoon”, that compromised thousands of internet-connected devices.

It was not clear from the report if the activity revealed by the MIVD and AIVD was connected.

The malware, known as Coathanger, appeared able to conceal its own presence, at least for a time.

The agencies named it after a snippet of code that contained a line from “Lamb to the Slaughter”, a short story by British author Roald Dahl.

That line, “She took his coat and hung it up”, describes the moments before a wife murders her unsuspecting husband with a frozen leg of lamb.

“Coathanger” remains on a device even after an update or reboot, and deletes itself from virus scan results. The report assessed with “high confidence” that both the hacking and the malware were the work of “a state-sponsored actor” from China.

It said the implant had also been found on the network of a Western international mission as well as a handful of others, adding:

“The malware has been developed specifically for FortiGate devices, which are used by organisations as a firewall to protect their systems.”

Fortinet (FTNT.O), opens new tab, the maker of the firewall, which is used worldwide, did not immediately respond to a request for comment.

<https://www.reuters.com/technology/cybersecurity/china-cyber-spies-hacked-computers-dutch-defence-ministry-report-2024-02-06>



Press Information Bureau
Government of India

Office of Principal Scientific Advisor to GoI

Tue, 06 Feb 2024

24th Meeting of Prime Minister Science, Technology & Innovation Advisory Council (PM-STIAC) Discusses Regulation of Medical Products, Approval Processes, Challenges & Opportunities in India

Principal Scientific Adviser (PSA) to the Government of India, Professor Ajay Kumar Sood convened the 24th Prime Minister Science, Technology & Innovation Advisory Council (PM-STIAC) meeting today (February 6, 2024) at Vigyan Bhawan in New Delhi.

The meeting brought together PM-STIAC members, key government officials, and experts from the medical and health industry to discuss priority areas of the health products ecosystem, particularly the current regulatory processes of medical products, gaps, and challenges faced by stakeholders, and emerging opportunities in the regulatory space. The aim was to provide recommendations for a robust regulatory ecosystem.

The meeting was joined by Scientific Secretary Dr. Parvinder Maini and the Secretaries of all relevant departments including Secretary (Health & Family Welfare) Sh. Apurva Chandra, Director-General Indian Council of Medical Research Dr. Rajiv Bahl, Secretary (Biotechnology) Dr. Rajesh Gokhale, Secretary (Pharmaceuticals) Sh. Arunish Chawla, Secretary (Environment, Forests & Climate Change) Ms. Leena Nandan, Secretary (Science and Technology) Prof. Abhay Karandikar, Director-General Council of Scientific and Industrial Research Dr. N. Kalaiselvi, Secretary (Earth Sciences) Dr. M. Ravichandran, Secretary (Defence Research and Development Organisation) Dr. Samir V Kamat and Chairman (Indian Space Research Organisation) Sh. S. Somanath.

In his opening address, Prof. Ajay Kumar Sood said, “The meeting is aimed at assessing the country’s regulatory system and providing constructive suggestions for improvement as a good regulatory system must balance rigour to ensure safety and quality of medical products that are entering the market and yet be enabling to promote research, development, and innovations so that easy access to healthcare is a reality.”

Delivering his remarks, Dr. V.K. Saraswat, Member S&T, NITI Aayog focussed on the medical device sector and said, “India has brought several reforms by releasing the medical device policy, and now the focus should be on the commercialisation of R&D in this sector.”

Dr V.K. Paul, Member Health, NITI Aayog, in his remarks, said, “This is a very timely discussion and India is ready to have a more responsive and efficient regulatory ecosystem for medical products.”

Industry experts delivered presentations on various themes including:

(i) Approval process of Drugs, its current scenario, and suggested changes which focussed on promoting a stronger innovation ecosystem for manufacturing of drugs and overall enabling regulatory systems that are seamless, robust, and aligned with global practices.

(ii) Vaccine regulation in India, its challenges and opportunities which focussed on simplifying approval processes for vaccine development in India by streamlining various approval processes and reducing dependencies on multiple ministries, agencies, and committees for approvals.

(iii) Diagnostic and medical device ecosystem, its enablers and barriers which deliberated on India's progress in building a resilient innovation ecosystem for medical devices, its barriers, and proposed solutions.

(iv) Regulatory ecosystem for the animal health products which highlighted the progress made and issues faced by industries producing animal health products.

(v) Regulation of emerging therapies in India and lessons from best practices around the world which discussed India's potential to become a global leader in Cell and Gene Therapy (CGT) space. Best practices from the global regulatory guidelines may be reviewed to build on the existing policies.

The final presentation was made by Dr. Rajiv Singh Raghuvanshi, Drugs Controller General of India, Central Drugs Standard Control Organisation (CDSCO) on 'Building a robust and enabling regulatory ecosystem in India' which highlighted the major issues faced by CDSCO in the regulatory ecosystem, and shed light on its recent efforts to transform regulatory ecosystem in India. Following the presentations, Secretaries, experts, and distinguished PM-STIAC members gave their inputs on how various ministries and departments of the Government of India can work together to address this important issue.

In his concluding remarks, Prof. Sood said that input from today's discussion would be taken up to address these issues in a tangible and time-bound manner to create a robust and enabling regulatory ecosystem for medical products in India.

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Government of India

Ministry of Science & Technology

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Union Minister Dr Jitendra Singh Launches the Theme for National Science Day 'Indigenous Technologies for Viksit Bharat'

Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today released the theme for the "National Science Day 2024", titled "Indigenous Technologies for Viksit Bharat". The NSD Theme for this year's celebration reflects a strategic focus on promoting public appreciation for Science, Technology and Innovation and accomplishments of Indian scientists to address challenges through home-grown technologies for over-all well-being.

The Theme not only marks a new era but also presents an opportunity for public and scientific fraternity, both domestically and internationally, to collaborate, work together, and contribute to the well-being of India and humanity as a whole. While emphasizing the importance of making India Atmanirbhar through science, it underscores the need to address subjects that hold significance for humanity as a whole.

The National Science Day (NSD) is celebrated every year on 28 February to commemorate the discovery of the 'Raman Effect'. Government of India designated 28 February as National Science Day (NSD) in 1986. On this day Sir C.V. Raman announced the discovery of the 'Raman Effect' for which he was awarded the Nobel Prize in 1930. On this occasion, theme-based science communication activities are carried out all over the country. The theme launch will trigger celebrations of NSD specially in schools & colleges throughout the country.

In the wake of recent scientific achievements, it may be underscored that the rising trajectory of India over past 10 years is being witnessed globally. We are globally among the top five countries in scientific research publications, 40th in Global Innovation Index (GII) showcasing remarkable climb from 81st rank in 2015 and our patent filing has crossed 90,000 which is highest in two decades. All this is due to strengthening of S&T ecosystem in the nation in fields such as Artificial Intelligence, Astronomy, Solar & Wind Energy, Semiconductors, Climate Research, Space Research and Biotechnology. Indian scientific breakthroughs have reached from the lab to moon; with the successful landing of Chandrayaan-3 on south pole of moon, India became the first country to achieve this feat. India is also acknowledged for robust vaccine development capacity, and it has been proved during COVID pandemic. India is now ready to match the global stride in Quantum Technology. The impact of Indian scientific breakthroughs is significantly enhancing the 'Ease of Living' for the common man.

Professor Abhay Karandikar, Secretary DST in his welcome address said that as we embark on the celebration of NSD and move ahead with the launch of the theme for 2024, it is clearly evident that our scientific endeavours have the power to shape not only the future of our nation but also contribute significantly towards global advancement. "As the scientific community from the States S&T Councils have also joined for the launch of NSD Theme, I must say that together we can create an ecosystem that encourages scientific inquiry and collaboration across the nation to leverage the transformative power of science for the greater good," he added.

Dr Rajesh Gokhale, Secretary, Department of Biotechnology (DBT), Dr Kalaiselvi, DG-CSIR, Dr. Rashmi Sharma, Head, NCSTC, DST and other Senior officials of the Ministry of Science and Technology took part in today's event.

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Provisions of ANRF Act Comes into Force

The provisions of the Anusandhan Research Foundation (ANRF) Act have been brought into force on February 5, 2024 in line with the commitment of the Government to boost Research and Innovation as the fulcrum of growth and development of the country.

It establishes the ANRF, that will seed, grow and promote Research and Development (R&D) and foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories.

The Government has appointed Prof. Abhay Karandikar, Secretary, Department of Science and Technology (DST) as the interim Chief Executive Officer of ANRF.

ANRF is a government's strong move to provide a high-level strategic direction for research, innovation, and entrepreneurship in the fields of natural sciences including mathematical sciences, engineering and technology, environmental and earth sciences, health and agriculture and have long-term effect, long term outcomes for each citizen.

“The ANRF act coming into force is a heartening piece of news for Scientists, Researchers, innovators and StartUps. For the first time after independence, under the leadership of the Honourable PM Shri Narendra Modi, India now has a National Research Foundation called Anusandhan”, said Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh in his tweet today.

“The ANRF, operationalized by the DST, aims to boost R&D funding from various sources including industry, encouraging private sector involvement. It will also promote interdisciplinary research, with the goal of propelling India into the league of developed nations and making the country a global science and research player during the Amritkaal,” said Secretary Department of Science and Technology (DST) Professor Abhay Karandikar. ANRF will efficiently involve State Universities and Institutions and as per the vision of the Hon'ble PM will catapult us to the league of developed nations pioneering new research in new frontiers.

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New Algorithm can Produce Better Images to Study Ultracold Atoms that Exhibit Quantum Mechanics Governed Properties

Scientists have designed a new image-correction technique capable of getting better images during the study of cold atoms or atoms at absolute zero temperature.

The technique can get rid of 50 percent unwanted interference fringes in the images which are important for understanding the intriguing quantum mechanics governed properties of atoms at cold temperature better.

At low temperatures near absolute zero, original properties of atoms based on classical mechanics are replaced and then governed by the laws of quantum mechanics. They hold potential to offer a possibility to study and better understand the atomic properties at such low temperatures.

The commonly used techniques for the study of ultracold atoms is by deploying magneto-optical traps with high-power laser cooling techniques. Cold atoms of elements like sodium, potassium, rubidium are commonly studied. Detection techniques, namely the fluorescence, absorption or

phase-contrast imaging techniques are used. Of these, the imaging through fluorescence or absorption techniques are widely used.

However, the images obtained using these techniques often suffer due to unwanted interference fringes which are unwanted dark-bright patterns imprinted on the actual images, thus lowering the quality of results obtained. The presence of unwanted interference fringes has the potential to derail the accurate calculation of important parameters -- the atom number, temperature, dynamics in smaller timescales, etc. In order to address this interference problem, a research group at the Raman Research Institute (RRI), an autonomous institute of the Department of Science and Technology has developed an image-correction solution.

The newly developed algorithm is based on the existing eigen-face recognition coupled with smart masking technique aimed to obtain images with minimal interference fringes. This eigen-face recognition is quite similar to finding a correct image of a person or an object from a group of images based on objects features. Our cell phones use this as a base technology, however modern-day smartphones have modified this with additional machine-learning based technology to improve the feature, but the idea remains the same.

“While dealing with the cold atoms, it is necessary to calculate the Optical Density (OD) from which one can determine the temperature, size, density and other useful parameters,” said Gourab Pal, a PhD student at the QuMix lab, RRI.

In this algorithm, researchers need to calculate an important parameter known as the Optical Density, which is the logarithmic subtraction of two frames -- one containing the cold cloud (denoted as S) and other is the probe light (denoted by L).

Under ideal circumstances, both the L and S frames have identical interference fringes, which when logarithmically subtracted result in the removal of fringes.

“But in reality, while working in lab, these frames do not showcase identical interference fringes, making the situation challenging and requiring a de-fringing method to obtain a clean Optical Density,” explained Pal, who is first author of the paper titled ‘Efficient denoising of cold atom images using optimised eigenface recognition algorithm’.

In the paper published recently in the journal Applied Optics, RRI team has claimed that the proposed technique could reduce the interference fringes in the absorption imaging of cold atoms by nearly 50 percent. In addition, there was a marked improvement, of the order of 50 percent, obtained in the temperature uncertainties in cold Rubidium atoms, when this algorithm was applied. Scientists argue that the absorption imaging technique is popular in the cold atom community and has a wide range of applications.

“This is particularly useful where the number of atoms is fewer. Absorption imaging can be used to find the density profile of cold and ultracold atoms. In this technique, we find the temperature of a cold atom cloud via time-of-flight measurements. The basic of the quantum gas microscopy is the absorption imaging. In addition, this method is used to perform in-situ measurements of trapped atoms,” said co-author of the paper, Saptarishi Chaudhuri, head QuMix laboratory, RRI.

The absorption imaging technique is best suited when atom numbers under study are small. Thereby, it can be deployed to calculate the density profile of cold and ultracold atoms and the temperature of a cold atom cloud via time-of-flight measurements.

Publication link - <https://opg.optica.org/ao/abstract.cfm?uri=ao-62-33-8786>

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