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दैनिक सामयिक अभिज्ञता सेवा

A Daily Current Awareness Service



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Reliance Defence Partners South Korean Co LIG Nex1

Partnership targets \$5-b heavy weapons programme for Indian armed forces



Anil Ambani group firm Reliance Defence, a wholly-owned subsidiary of Reliance Infrastructure, has signed a strategic partnership with South Korean defence major LIG Nex1 to jointly manufacture military hardware for India's armed forces, the company said on Monday.

According to sources, the partnership will target \$5-billion programmes, which could potentially include a \$2-billion indigenous defence production.

Currently, there are multiple programmes for Indian armed forces that the two companies plan to address together. This will include improving the existing weapons system which is part of LIG Nex1's portfolio to meet specific requirements of the Indian armed forces. Cumulative value of these programmes being targeted will exceed multi-billion, the company said. The two companies will explore opportunities in a range of defence products required by the Indian armed forces, leveraging on LIG Nex1's capability in heavy weapons like anti-ship missiles, anti-tank guided missiles and guided rockets. They have also identified air defence and surveillance radar systems that can be manufactured in India as a potential area of cooperation.

Reliance Defence has industrial licences for military platforms and is the fastest-emerging private sector enterprise in the development, manufacture and supply of defence aerospace, land and naval platforms and equipment.

Reliance Infrastructure has decided to go slow on asset-heavy projects and focus more on its defence business. It acquired Pipavav Defence & Offshore Engineering to foray into the sector. It has signed collaboration deals with international defence manufacturers to manufacture in India for the armed forces.



Work to reinforce strong image of Army: Gen Rawat to commanders

The Army has been in the spotlight after a video emerged showing a man tied to the bonnet of an Army jeep in Budgam, during repolling in Srinagar.

Army Chief General Bipin Rawat on Monday reminded top Army commanders about the strong image of the force and called for efforts to reinforce it further. Gen Rawat was speaking at the Army commanders conference. In his address on the opening day of the three-day conference, Defence Minister Arun Jaitley hailed the Army for effectively meeting national challenges. He said, "Whenever the challenges multiply or their nature changes, the Indian Army has always outperformed itself."

Sources told The Indian Express that the Defence Minister did not mention Kashmir in his address. Jaitley assured the commanders that modernisation of defence equipment is the top priority for the government, the

ministry said in a statement. Gen Rawat observed that the Army continues to hold a strong image and a professional reputation, and exhorted all ranks to endeavour to further strengthen the same, according to the statement. The Army has been in the spotlight after a video emerged showing a man tied to the bonnet of an Army jeep in Budgam, during repolling in Srinagar.

The Army Chief called on Jammu and Kashmir Chief Minister Mehbooba Mufti on Saturday and also met National Security Advisor Ajit Doval on Sunday. Held twice a year, the Army commanders' conference deliberates on the prevailing security scenario, strategic and actionable issues to ensure effective combat edge.



Tue, 18 Apr, 2017

Will ensure funds to modernise Army: Govt

India and Pakistan on Monday continued to exchange heavy fire along the line of control in J&K, even as finance-cum-defence minister Arun Jaitley assured the Army that adequate funds will be provided for modernisation since it was a top government priority.

Officers said Pakistan army has been resorting to unprovoked firing on forward Indian positions in areas like Jhangarh in the Nowshera sector along the LoC for the last three days, which comes amid the ongoing bilateral diplomatic face-off over the death sentence imposed on Indian national Kulbhushan Jadhav by a Pakistan military court.

In Nowshera intermittent firing from across the border began again at about 8am on Monday and continued till late in the evening. Indian troops, in turn, retaliated strongly and effectively with 120mm heavy mortars and other weapons, with the assessment being that there were some casualties among Pakistani soldiers.



Tue, 18 Apr, 2017

Army to order probe in 'human shield' incident

The Army is going to order a court of inquiry (CoI) into the controversial Budgam incident which saw Rashtriya Rifles soldiers trussing up a civilian on their jeep's bonnet as a human shield while rescuing over a dozen security personnel and election officials from an angry stone-pelting mob on April 9. The Army brass contends the Rashtriya Rifles company commander at Budgam, a major from the Army Service Corps, exhibited quick-thinking, presence of mind and initiative to prevent bloodshed in an explosive situation while responding to an SOS from the trapped security personnel and election staff at a polling booth on April 9. It was the safest course of action to save lives, said a senior officer.

But the Army will nevertheless conduct the CoI, which is a routine practice in the force, to ascertain the facts and circumstances that led to the episode. It's a factfinding mission, not an indictment. The different videos will be examined, while statements of the rescued ITBP and J&K police personnel will also be recorded, said the officer.

Top sources in the defence ministry defended the young officer, saying that by showing exemplary presence of mind, he saved more than 20 lives. They also refuted the claim that Farooq Ahmad Dar, who was used as a shield, was an innocent bystander. He was part of the mob of stone-pelters, a source said.

While the Army is sticking to its guns that the incident was an aberration instead of being the norm, with the major taking the unusual but effective decision on the spot to avoid firing on the stone-pelters, some of whom were positioned on rooftops, J&K chief minister Mehbooba Mufti had demanded action against the soldiers during her meeting with Army chief General Bipin Rawat on Saturday.

Naval ship dedicated to Chennai

Naval ship INS Chennai was formally dedicated to the city today in the presence of Chief Minister K Palaniswami and Flag Officer Commanding-in-Chief, Eastern Naval Command, Vice-Admiral HCS Bisht. The dedication ceremony of the P15A Guided Missile Destroyer was marked by a series of drills and events, besides unveiling of a plaque by Palaniswami at the Chennai Port Trust. Vice-Admiral Bisht in his brief address said the navy was fully geared to meet the challenges at sea. INS Chennai has been anchored here since April 15 and was visited by more than 5,000 people, including 2,000 students, the release added.

THE ASIAN AGE

Tue, 18 Apr, 2017

AS US VICE-PRESIDENT MIKE PENCE MADE A SURPRISE VISIT TO THE DEMILITARISED ZONE SEPARATING NORTH AND SOUTH KOREA AND WARNED PYONGYANG THAT THE ERA OF STRATEGIC PATIENCE IS OVER A US NAVAL STRIKE GROUP LED BY NIMITZ-CLASS SUPER CARRIER *USS CARL VINSON* IS APPROACHING THE KOREAN PENINSULA

AMERICAN ARMADA

F/A 18 HORNET

USS CARL VINSON
Aircraft carrier

EA-18 GROWLER

USS STERETT
Guided missile destroyer

USS MICHAEL MURPHY
Guided missile destroyer

USS WAYNE E MEYER
Guided missile destroyer

USS LAKE CHAMPLAIN
Guided missile CRUISER

USS CARL VINSON
Nimitz-class aircraft carrier (with Carrier Airwing-2)
Propulsion: Two nuclear reactors
Length: 1,092 ft
Speed: 30+knots
Crew: ~6,500
Aircraft: ~60+
Armament: Multiple NATO Sea Sparrow, Phalanx CIWS and Rolling Airframe Missile (RAM) mounts

AIRCRAFT ON BOARD
55 F/18 HORNETS
4 EA-18 GROWLERS
4 E-2C/D HAWKEYE
6 H-60 SEAHAWK

Tue, 18 Apr, 2017

Patience is over, Pence warns N Korea

Viewing his adversaries in the distance, US Vice-President Mike Pence travelled to the tense zone dividing North and South Korea and warned Pyongyang that after years of testing the US and South Korea with its nuclear ambitions, "the era of strategic patience is over."

Pence made an unannounced visit to the Demilitarized Zone on Monday at the start of his 10-day trip to Asia in a US show of force that allowed the Vice-President to gaze at North Korean soldiers from afar and stare directly across a border marked by razor wire.

As the brown bomber jacket-clad vice president was briefed near the military demarcation line, two North Korean soldiers watched from a short distance away, one taking multiple photographs of the American visitor.

Pence told reporters near the DMZ that President Donald Trump was hopeful China would use its "extraordinary levers" to pressure the North to abandon its weapons program, a day after the North failed missile test launch.

But Pence expressed impatience with the unwillingness of the regime to move toward ridding itself of nuclear weapons and ballistic missiles.

Pointing to the quarter-century since the United States first confronted North Korea over its attempts to build nuclear weapons, the vice president said a period of patience had followed.

"But the era of strategic patience is over," he declared. "President Trump has made it clear that the patience of the United States and our allies in this region has run out and we want to see change. We want to see North Korea abandon its reckless path of the development of nuclear weapons, and also its continual use and testing of ballistic missiles is unacceptable." Pence said the American commitment to South Korea is "iron-clad and immutable."

Tue, 18 Apr, 2017

Ready to react to 'any mode of war' from US: N Korea

North Korea is preparing for "any mode of war" triggered by US military action, Pyongyang's envoy to the United Nations warned today, saying his country would respond to a missile or nuclear strike "in kind."

The statement from North Korean Deputy Ambassador Kim In Ryong followed warnings from US Vice-President Mike Pence to Pyongyang not to test US resolve following another missile test.

"If the United States dares opt for a military action (...) the DPRK is ready to react to any mode of war desired by the Americans," Kim told a news conference.

"We will take the toughest counteraction against the provocateurs," said Kim. North Korea has taken "self-defensive" measures in response to US threats of military action and these reflect Pyongyang's determination to "counter nukes and ICBM in kind," he said, referring to intercontinental ballistic missiles.

Pence told a news conference in South Korea that "the era of strategic patience is over" after North Korea on Sunday test-fired another missile as fears mounted that it may be preparing a sixth nuclear test.

Pyongyang is seeking to develop a long-range missile capable of hitting the US mainland with a nuclear warhead, and has so far staged five nuclear tests, two of them last year. US President Donald Trump's decision

at the weekend to send the Carl Vinson carrier-led navy strike group to the Korean peninsula shows that the US reckless moves for invading the DPRK have reached a serious phase," said Kim.

The North Korean deputy envoy asserted that Pyongyang would hold the United States wholly accountable for the catastrophic consequences to be entailed by its outrageous actions. US Secretary of State Rex Tillerson will next week chair a special meeting of the UN Security Council on North Korea.

THE ASIAN AGE

Tue, 18 Apr, 2017

Russia warns US over strike on N. Korea

Moscow: Russia on Monday warned Washington against launching a unilateral strike on North Korea, after US vice-President Mike Pence said the era of "strategic patience" with Pyongyang was over. "This is a very risky path," Russian foreign minister Sergei Lavrov said at a news conference in Moscow. "We do not accept the reckless nuclear missile actions of Pyongyang that breach UN resolutions, but that does not mean that you can break international law," he said. "I hope that there will not be any unilateral actions like the one we saw recently in Syria." — AFP



Tue, 18 Apr, 2017

China to launch its first cargo spacecraft for space lab

China is set to launch its first cargo spacecraft between April 20 and 24. The Tianzhou-1 has been transferred with a Long March 6 Y2 carrier rocket from the testing centre to the launch zone in Wenchang, Hainan province, said the office of China's manned space programme. IANS



Tue, 18 Apr, 2017

Ultralight device can be charged with movement

It is used to power portable electronics

Scientists have developed a light-weight, paper-based device that can harvest energy from body movements to power sensors and watches.

Despite the many advances in portable electronic devices, one thing remains constant — the need to plug them into a wall socket to recharge.

Portable electronic devices, such as watches, hearing aids and heart monitors, often require only a little energy. Researchers from Georgia Institute of Technology in the U.S. and Chongqing University in China wanted to see if they could delink small energy needs from the wall socket by harvesting energy from a user's body movements.

Earlier, scientists created triboelectric nanogenerators (TENGs) that can harness the mechanical energy all around us, such as that created by our footsteps, and then use it to power portable electronics.

However, most TENG devices take several hours to charge small electronics, such as a sensor, and they are made of acrylic, which is heavy.

Researchers then turned to an ultralight, rhombic paper-cut design a few inches long and covered it with different materials to turn it into a power unit.

The four outer sides, made of gold- and graphite-coated sand paper, comprise the device's energy-storing supercapacitor element. The inner surfaces, made of paper and coated in gold and a fluorinated ethylene propylene film, comprised the TENG energy harvester.

Pressing and releasing it over just a few minutes charged the device to 1 volt, which was enough to power a remote control, temperature sensor or a watch, researchers said. The research was published in the journal ACS Nano.


THE ASIAN AGE

Tue, 18 Apr, 2017

Researchers link robots into surveillance teams

This includes autonomous aircraft, ground vehicles, and humanoid robots

AGE CORRESPONDENT



If you were monitoring a security camera and saw someone set down a backpack and walk away, you might pay special attention — especially if you had been alerted to watch that particular person. According to Cornell researchers, this might be a job robots could do better than humans, by communicating at the speed of light and sharing images.



The researchers are developing a system to enable teams of robots to share information as they move around and, if necessary, get help in interpreting what they see, enabling them to conduct surveillance as a single entity with many eyes. Beyond surveillance, the new technology might help when teams of robots relieve humans of dangerous jobs like disposing of landmines, cleaning up after a nuclear meltdown or surveying the damage after a flood or hurricane.

"Once you have robots that cooperate you can do all sorts of things," said Kilian Weinberger, associate professor of computer science, who is

collaborating with Silvia Ferrari, professor of mechanical and aerospace engineering and the project's principal investigator, and Mark Campbell, the John A. Mellowes '60 Professor in Mechanical Engineering.

Their work, "Convolutional-Features Analysis and Control for Mobile Visual Scene Perception," is supported by a four-year, \$1.7 million grant from the U.S. Office of Naval Research (ONR). The researchers will call on their extensive experience with computer vision to match and combine images of the same area from several cameras, identify

objects and track objects and people from place to place. The work will require groundbreaking research, Weinberger said, because most prior work in the field has focused on analyzing images from just a single camera as it moves around. And often, Ferrari added, a camera that doesn't move at all. The new system will fuse information from fixed cameras, mobile observers and outside sources. The mobile observers might include autonomous aircraft and ground vehicles and perhaps humanoid robots wandering through a crowd. They will send their images to a central control unit, which might

also have access to other cameras looking at the region of interest, as well as access to the internet for help in labeling what it sees. The core technology is a combination of "deep learning" that lets a computer interpret images, and "Bayesian modeling." The programming will also include a "planning function" to figure out how to obtain additional data that might be needed to resolve an uncertainty. In addition, previous work by the researchers has been supported by the National Science Foundation and the US Department of Energy.