

# समाचार पत्रों से चयित अंश Newspapers Clippings

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## IAF Southern Command chief takes Tejas for a spin

*Mr. T. Suvarna Raju, CMD-HAL thanked the AOC-in-C for reposing faith in this advanced indigenous combat aircraft.*



*Air Marshal R.K.S. Bhadauria, Air Officer Commanding in Chief, Southern Command, with the aircraft.*

Bengaluru: In a major leg up for made-in-India fighter jet “Tejas”, Air Marshal R.K.S. Bhadauria, Air Officer Commanding in Chief (AOC-in-C), Southern Command, demonstrated its prowess during a solo flight in Bengaluru on Tuesday, a harbinger of operationalization of the fleet.

In the IAF hierarchy, Air Marshal Bhadauria stands second after Chief of the Air Staff Air Chief Marshal Birender Singh Dhanoa and former Air Chief Marshal Arup Raha to fly this combat aircraft. Air Marshal Bhadauria has been pushing the Aeronautical Development Agency and Hindustan Aeronautics Ltd for early operationalization of the fleet from the time he took over the reins of the Southern Air Command of IAF in March 2017. The IAF has placed an order for 123 ‘Tejas’ combat jets with the first squadron scheduled to move to its location at Suler near Coimbatore shortly.

Mr. T. Suvarna Raju, CMD-HAL thanked the AOC-in-C for reposing faith in this advanced indigenous combat aircraft. HAL is set to ramp up production of these fighter aircraft from eight to 16 a year with the establishment of an additional production line in Bengaluru. The design activities for improved version, Tejas MkIA, are already underway. No 45 Squadron, “The Flying Daggers”, which was the first squadron to be equipped with Tejas LCA in July last year, played host to the Air Marshal who has been associated with ‘Tejas’ programme for the last 15 years.

## सेना के तीनों अंग करेंगे जॉइंट ट्रेनिंग

■ विस, नई दिल्ली : तीनों सेनाओं ने साथ मिलकर काम करने की दिशा में बड़ा कदम उठाया है। सशस्त्र बलों के इतिहास में पहली बार जॉइंट ट्रेनिंग के लिए मूलभूत सिद्धांतों का दस्तावेज जारी किया गया है। रक्षा मंत्री निर्मला सीतारमण ने पद संभालते ही तीनों सेनाओं की संयुक्तता को प्राथमिकता बताया था और संकेत दिए थे कि ट्रेनिंग से इसकी शुरुआत की जा सकती है। उन्होंने अंडमान का भी दौरा किया था, जहां तीनों सेनाओं की संयुक्त कमान है। मंगलवार को तीनों सेना प्रमुखों की कमिटी के चेयरमैन

और नेवी चीफ एडमिरल सुनील लांबा ने जॉइंट ट्रेनिंग का सिद्धांत पत्र जारी किया। यह सेनाओं के लिए बेसिक नॉलेज का काम करेगा, जिसका भविष्य में और विकास किए जाने की बात कही गई है। बताया गया है कि इस दस्तावेज को तैयार करने में तीनों सेना मुख्यालयों और संबंधित पक्षों को शामिल किया गया। इससे पहले अप्रैल में तीनों सेनाओं का संयुक्त सिद्धांत पत्र जारी किया गया था। कहा गया है कि इसका मकसद तीनों सेनाओं में तालमेल और साथ मिलकर काम करने की क्षमता बढ़ाना है।

तालमेल बढ़ाने को तीनों सेनाओं ने उठाया बड़ा कदम

**The Tribune**  
— VOICE OF THE PEOPLE —

## Army lists 9 top-priority tunnels in Ladakh, Himachal, Tawang

*Part of the wider project to have 17 tunnels to provide all-weather connectivity.*

*By Ajay Banerjee*

Faced with the rising military might of China, the Indian Army has identified nine “top-priority” tunnels, including those in eastern Ladakh, Himachal Pradesh, Tawang in Arunachal Pradesh and Doklam plateau in eastern Sikkim. This is to ensure all-weather connectivity in these areas.

These are part of the wider project to have 17 tunnels all across the Himalayas to provide all-weather connectivity. The Army headquarters had pinpointed its needs as per operational needs. The work on several of these projects has commenced. India and China share a 3,488-km-long undefined boundary in the Himalayas.

The ones to connect Ladakh will change the lives of people and add to the military preparedness. The first is an alternate route from Himachal Pradesh that will connect Padum in Zaskar, Ladakh, with an existing jeep-track in the hill state.

The Army has suggested that the jeep track from Padum to the base of the 16,700-foot-high Shingo-La on the Zaskar side be metalled and a tunnel be made under the pass that will open in Lahaul-Spiti. The proposed move, if it materialises will provide an alternative shorter route to Kargil.

Ladakh has two other access roads — one from Srinagar and other from Manali via Rohtang. These remain closed for seven months — October to April — due to heavy snowfall in the higher passes. The Army priority list includes making tunnels under the Baralacha La, Tanglang La and Lachung La on the Manali-Leh route. The first two are in Ladakh and the last one in Himachal Pradesh. During winters, Army equipment and men can only be moved onboard the daily flights of IL-76 from Chandigarh.

In Arunachal Pradesh, the Border Roads Organisation has already started ground work for two tunnels through 4,170-metre-high Sela Pass, which would avoid the pass that is snow bound for more than six months.

The project constitutes construction of two tunnels of 475 metre and 1,790 metre each through Sela-Chabrela ridge connecting the Balipara-Chaudur-Tawang road on the Nurarang side.



Wed, 15 Nov, 2017

## Modi backs rules-based security net

*PM chats with Chinese premier ahead of boundary talks, meets Abe*

*By Smita Sharma*

Prime Minister Narendra Modi today chatted informally with Chinese premier Li Keqiang on the sidelines of the East Asia Summit in Manila. Chinese Foreign Minister Wang Yi is expected to attend the Russia-India-China meeting in New Delhi on December 11, followed by the India-China Special Representatives' talks on boundary.

The brief chat came on the day Modi held formal talks with Japanese PM Shinzo Abe and a day after Modi's talks with US President Donald Trump. The White House, in its official release, said: "They pledged to enhance cooperation as major defence partners, resolving that two of the world's great democracies should also have the world's greatest militaries."

Economic cooperation, dedicated freight corridor, bullet train and Asia-Africa growth corridor connectivity project were the main focus of the Modi-Abe talks.

Connectivity, counter-terrorism, nuclear proliferation, blue economy, free navigation in Indo-Pacific region and respect for the United Nations Convention on the Law of the Sea (UNCLOS) were key issues in the ASEAN meetings today.

Addressing the 15th ASEAN-India Summit, Modi said: "India assures its steady support towards achieving a rules-based regional security architecture that best attests to the region's interests and its peaceful development."

"We have strived very hard to fight terrorism and violent extremism. It is time we jointly address this challenge by intensifying cooperation," he said. The PM also held a series of bilateral meetings with PMs of Australia Malcolm Turnbull, Vietnam Nguyen Xuan Phuc and New Zealand Jacinda Arden.

He also invited leaders of all 10 ASEAN member states to be the collective chief guests at the Republic Day celebrations.

## भारत-कजाकिस्तान का संयुक्त सैन्य अभ्यास

बकलोह (हिमाचल प्रदेश), (भाषा): भारत और कजाकिस्तान की सेना ने दोनों देशों के बीच सैन्य और कूटनीतिक संबंधों को मजबूत करने की दिशा में आयोजित किए गए संयुक्त सैन्य अभ्यास प्रबल दोस्ती का दूसरा संस्करण हिमाचल प्रदेश में पूरा कर लिया है।

प्रबल दोस्तीक (मजबूत दोस्ती) का प्रथम संस्करण कजाकिस्तान में आयोजित किया गया था, जो मध्य एशिया का बड़ा देश है और भारत का बड़ा वाणिज्य सहयोगी है। अभ्यास में भारतीय पक्ष के कमांडर ने नाम उजागर नहीं करने की शर्त पर बताया कि पखवाड़ा भर चले अभ्यास का लक्ष्य दोनों देशों के बीच सैन्य सहयोग बढ़ाना और दोनों बलों को संयुक्त राष्ट्र के शासनादेश के अनुसार घुसपैठ निरोधक और आतंकवाद निरोधक अभियानों के



भारत और कजाकिस्तान के सैनिक हिमाचल के बकलोह (चम्बा) में संयुक्त अभ्यास करते हुए। (छाया : प्रै.ट्र.)

दौरान एक-दूसरे के अभियान की प्रक्रिया से परिचित कराना था। अभ्यास में भारतीय सेना के 11 गोरखा राइफल्स की तीसरी बटालियन के एक प्लाटून ने हिस्सा लिया और कजाकिस्तान की सेना से भी इतनी ही संख्या में सैनिकों ने इसमें हिस्सेदारी की। अभ्यास

हिमाचल प्रदेश के चंबा जिले के बकलोह में हुआ।

बकलोह एक पर्यटक केंद्र है और समुद्र तल से 4000 फुट से अधिक ऊंचाई पर है। दोनों देशों के सैनिकों का दो हफ्ते तक कड़े अभ्यास हुआ। दोनों पक्षों ने आतंकवाद निरोधक अभियानों और

### ● प्रबल दोस्ती का दूसरा संस्करण हिमाचल प्रदेश में पूरा

परस्पर सहयोग बढ़ने में कौशल हासिल करने पर संतोष जताया। कजाकिस्तान की सेना के लेफ्टिनेंट कर्नल जी बी कैसीम्बेकोव ने बताया, भारत में ये 14 दिन काफी अच्छे रहे जहां हमें आतंकवाद निरोधक अभियानों के बारे में सार्थक अनुभव हासिल करने का मौका मिला। यह अभ्यास हमारी दोस्ती एवं संयुक्त कार्य को आगे ले जाने में सहयोगी साबित होगा।

उन्होंने कहा कि सैन्य कौशल के अलावा उनकी सेना को भारतीय संस्कृति को अनुभव करने का मौका मिला। और सशस्त्र बलों में उन्होंने अपने दोस्त बनाए।

## THE ASIAN AGE

### Bangla troops train at Indian warfare centre

*Exercise to enhance anti-insurgency coordination between neighbours.*

Guwahati: The Indian Army has set up an independent and fully integrated joint training node for foreign armies in the frontier state of Meghalaya, which started its journey with a joint exercise with the Bangladesh Army.

Apart from the world-class infrastructure, the training warfare node at Umroi near Shillong also offers conducive weather and terrain to enhance the training environment for any Army.

Defence spokesperson Suneet Newton said that officers from Bangladesh Army became the first batch visitors to undergo training at the new facility.

The joint training node comprises best-in-class training facilities like jungle lane shooting range and network enabled computer warfare center, he said.

The Indian Army has built the node in a record time of one year for hosting "Exercise Milap" a joint training exercise with the Bangladesh Army. India is represented by the Red Horn Division under the aegis of the Gajraj Corps in the joint drill.

The Indian Army has other joint training centres in Belgaum in Karnataka, Vairengte in Mizoram and Bakloh in Himachal Pradesh but Umroi is Eastern Command's first of its kind independent and fully integrated joint training node for foreign armies.

"This Umroi node will pave the way for projecting the frontier states of Meghalaya and Assam on the world map of foreign armies," said the defence spokesperson.

Informing that 14 officers from Bangladesh Army and 20 officers from the Indian Army have been handpicked to undergo the black board exercise at Umroi Cantonment, Lt. Col. Newton said that both the contingents have displayed great enthusiasm and professionalism while carrying out discussion on various aspects related to counter insurgency operations.

Brigadier General Md. Mainur Rahman of the Bangladesh Army is the contingent commander for the visitor and Brigadier S. Sanjay is leading the Indian Army contingent.

"The camaraderie developed between the two contingents during the exercise will assist in enhancing confidence between the two armies, which may be called upon to grapple with counter insurgency operations," said Lt. Col. Newton.

Security experts believe that India-Bangladesh joint training exercise, in its seventh edition, also sends a strong signal to the world that both India and Bangladesh understand the emerging threat of transnational terrorism.

The exercise has helped both the contingents to understand techniques, tactics and procedures followed by both the armies in counter-insurgency operations, said Lt. Col. Newton.



*Wed, 15 Nov, 2017*

## **Army Tanks Seen Heading towards Zimbabwe Capital**

Harare: Zimbabwe was on edge on Tuesday as armoured personnel carriers were seen outside the capital a day after the army commander threatened to "step in" to calm political tensions over the president's firing of his deputy.

The Associated Press saw three armoured personnel carriers with several soldiers in a convoy on a road heading toward an army barracks just outside the capital, Harare.

While it is routine for armoured personnel carriers to move along that route, the timing heightened unease in this southern African country that for the first time is seeing an open rift between the military and 93-year-old President Robert Mugabe. The military has been a key pillar of Mugabe's power since independence from white minority rule in 1980.

Mugabe last week fired Vice President Emmerson Mnangagwa and accused him of plotting to take power, including through witchcraft. Mnangagwa, who enjoyed the backing of the military and was once seen as a potential successor to Mugabe, fled the country and said he and his family had been threatened. Over 100 senior officials allegedly supporting him have been listed for disciplinary measures by a faction associated with Mugabe's wife, Grace Mugabe.

The first lady, whose political profile has risen in the past few years, now appears positioned to replace Mnangagwa at a special conference of the ruling party in December, leading many in Zimbabwe to suspect that she could succeed her husband as president.

On Monday, army commander Constantino Chiwenga issued an unprecedented statement saying purges against senior ruling ZANU-PF party officials linked to the 1970s liberation war should end "forthwith". AP

# India, China in fierce race to cut satellite launch cost

*Countries' agencies say they can provide access to space at low price*

Beijing: The Indian Space Research Organisation (Isro) is fully prepared to compete in the global race to cut the cost of launching satellites, the agency said on Tuesday after China announced plans to bring down prices to \$5,000 a kilogram.

Satellite launch prices usually aren't made public and a Chinese official made the rare comments on plans to reduce costs at an aerospace forum in Beijing this month. Reacting to China's plans, an Isro official said that not only is the Indian agency "competitive" but it is working to reduce the cost of access to space through new technology. The effort is to bring down launch costs to "onetenth" of what they are now, the official said.

Yang Baohua from the China Aerospace Science and Technological Corporation (CASC), a state-owned entity that develops and manufactures spacecraft and launch vehicles, said the company is "ready to provide cheaper and faster low-earth orbit rocket launches".

The People's Daily, the Communist Party's mouthpiece, quoted Yang as saying: "The price could be as low as \$5,000 per kilogram and the pre-launch preparation will only need a week."

Will Isro, known for its cost-effective model, be able to compete? "We are quite competitive," Isro spokesperson Deviprasad Karnik said, responding to China's plans. "As of now, India is quite competitive with regard to the prevailing global launch cost. So far, India has launched 209 satellites of nano, micro, mini, and standard size for 28 countries. There is a global move to reduce the cost of access to space to the tune of one-tenth of the prevailing one. India is also working towards that," he said.

The cost of launching satellites using rockets of the United Launch Alliance — a joint venture of Lockheed Martin and Boeing that provides services to the US government — ranges between \$14,000 a kilogram to \$20,000 a kilogram. However, private launch service provider SpaceX plans to bring down costs to about \$2,500 a kilogram with its partially reusable rockets.

Isro's low prices and its high success rate have attracted foreign clients. While a satellite launch on Arianespace's rocket costs about \$100 million after subsidies, SpaceX will charge \$60 million. In contrast, Isro charged an average \$3 million per satellite between 2013 and 2015.

Antrix Corp Ltd, Isro's fledgling commercial arm, is widely seen as a serious contender in the \$335.5 billion global space industry, even though the launch market only brings in about 20% of the agency's revenues. But Isro is better placed to capitalise on the new market for launching small satellites, including those which will be used for space-based, highspeed internet connections.

Karnik outlined some of the steps being taken by Isro to bring down costs. "India is developing reusable launch vehicles. We have successfully tested a mission — RLV-TD and Scranjet -TD — in that direction, with TD standing for technology demonstrator. Efforts are on for the fullfledged development of such systems," he said.

Karnik declined to share details of how much India charges but the fact that India has done launches for 28 countries, including Germany, Canada, The Netherlands and Israel, points toward the sharply competitive model put in place by Isro.

Karnik said the Chinese effort to reduce costs was part of a global trend. "As I have already mentioned, the global move is to reduce the cost of access to space to the tune of one-tenth of the prevailing (prices)," he said.

With six manned space missions, China's space programme is more advanced. But that hasn't stopped Beijing from closely tracking the commercial aspect of India's space programme and attempting to make its own cheaper.

# The New York Times

Wed, 15 Nov, 2017

## Five Technologies That Will Rock Your World

*By Cade Metz*

After the Russian hacking of the 2016 election, many people worry that technology has gone too far. And yet it continues to evolve rapidly.

Largely because of the success of companies like Google, Facebook and Amazon, investment in tech research continues to climb. At the same time, because of the sudden maturation of mathematical methods that can deliver what is commonly called artificial intelligence, the possibilities are expanding.

There is reason for concern, but also for optimism. The new wave of artificial intelligence will reduce jobs, but will also improve your health and products like your smartphone. Here are five areas where tech companies, large and small, will change the way we live.

### **A.I. Health Care**

Over the last half decade, with help from the complex algorithms deep neural networks, computers have learned to see. Loosely based on the web of neurons in the human brain, a neural network can learn tasks by identifying patterns in vast amounts of data. By analyzing millions of bicycle photos, for instance, a neural network can learn to recognize a bicycle.

This means that services like Facebook and Google Photos can instantly recognize faces and objects in images uploaded to the internet. But artificial intelligence will also lead to a revolution in health care. Using these same techniques, machines can also learn to identify signs of disease and illness in medical scans. By analyzing millions of retinal photos, a neural network can learn to recognize early signs of diabetic blindness. By analyzing CT scans, a neural network can learn to spot lung cancer.

Such technology will improve health care in places where doctors are scarce. But eventually, it will streamline care in the developed world as well. Google is already running tests inside two hospitals in India, and the start-up Infervision has deployed similar technology in hospitals across China.

In the longer term, similar methods promise to rapidly accelerate drug discovery and so many other aspects of health care. "Everything from the nature of the food that we grow and eat to the drugs that we give ourselves to how we monitor the impact of these things is all being transformed by A.I. in deeply profound ways," said Matt Ocko, a managing partner at DCVC, a San Francisco venture capital firm that has invested heavily in this area.

### **Conversational Computing**

Neural networks are not limited to image recognition. Far from it. These same techniques are rapidly improving coffee-table gadgets like the Amazon Echo, which can recognize spoken commands from across the room, and online services like Skype, which can instantly translate phone calls from one language to another. They may even eventually produce machines that can carry on a conversation.

Recently, said Luke Zettlemoyer, a University of Washington professor, there has been a "huge phase shift" in the area of natural language understanding — technology that understands the natural way people talk and write. Companies like Google, Facebook, and Microsoft are at the forefront of this movement, which promises to fundamentally change how we interact with phones, cars, and potentially any machine. Many companies are moving down the same path, including Replika, a San Francisco start-up.

With help from machine learning, Replika offers a smartphone “chatbot” that acts as a kind of personal confidante, chatting with you in moments when no one else is around. But the hope is that these techniques will improve to where they serve you in so many other ways. What if Alexa was truly conversational, if you could have a back and forth dialogue? Right now, it is about basic questions and commands. Today, it “recognizes” words very very well. But truly “understanding” complex English sentences is beyond machines at this point. What if machines could carry on a dialogue like Hal in 2001?

### **Mind Control**

Some people argue there are even better ways of interacting with computers by using brain waves. Rather than telling a computer what you want, many companies say they believe you could just think it.

Using electroencephalography, or EEG — a longstanding means of measuring electrical brain activity from sensors placed on the head — the start-up Neurable is building a virtual reality game that can be played with the mind. EEG is limited for this kind of use, but other researchers, including at Facebook, aim to build a far more powerful systems using optical sensors. Facebook hopes that, in a few years, this technology will let people type with their minds five times faster than they can with a smartphone keyboard.

These techniques will also face physical limits, and that may bar the way to Facebook’s goal. But various start-ups, including Neuralink, founded by Elon Musk, the chief executive of Tesla, are going several steps further, hoping to read brain activity from chips implanted inside the skull. At first, they will limit this technology to people with disabilities. But ultimately, Mr. Musk and others hope to also implant chips in healthy people.

“It is implausible that this technology would go straight into healthy people,” said Ed Boyden, an M.I.T. neuroscientist who is also an adviser to Neuralink. “But there is a natural trajectory where, if a medical technology proves effective, it can move into normal individuals as well.”

### **The Flying Car**

Want more science fiction in your everyday reality? As entrepreneurs like Mr. Musk work to put a chip in your head, others are working to put cars in the skies.

Even as he sets the pace in the race to autonomous cars, Larry Page, the chief executive of Alphabet and a founder of Google, is backing Kitty Hawk, a start-up that wants to move commuting into the air. And many others, including the start-up Joby Aviation, Uber and Airbus, are working on vehicles capable of flying above congested roads. These vehicles take many forms, but generally, they carry a single rider and take off like a helicopter: straight up.

At first, Kitty Hawk will sell its vehicles to hobbyists. But the company hopes it can eventually convince the general public, and regulators, that flying cars make sense. That is no easy task. After all, these cars will require a new kind of air traffic control.

### **The Quantum Computer**

Even more outlandish? It’s the prospect of a quantum computer. Drawing on the seemingly magical properties of quantum physics, such a machine would be exponentially more powerful than computers of today. Think of it this way: A quantum computer could instantly crack the encryption that protects the world’s most private data.

The problem is that these machines are enormously difficult to build. but progress has accelerated. Google, IBM and Intel are investing heavily in this push, as are start-ups like Rigetti Computing.

Researchers say they believe that quantum machines eventually could accelerate drug discovery, streamline financial markets, solve traffic problems and more.

“It is a completely different paradigm for processing information,” said Robert Schoelkopf, who helped invent the techniques that are driving so much of quantum computing research. “So we think that known applications are just the tip of the iceberg.”