

SP's



AN SP GUIDE PUBLICATION

ISSN 2230-9268



**MAI**



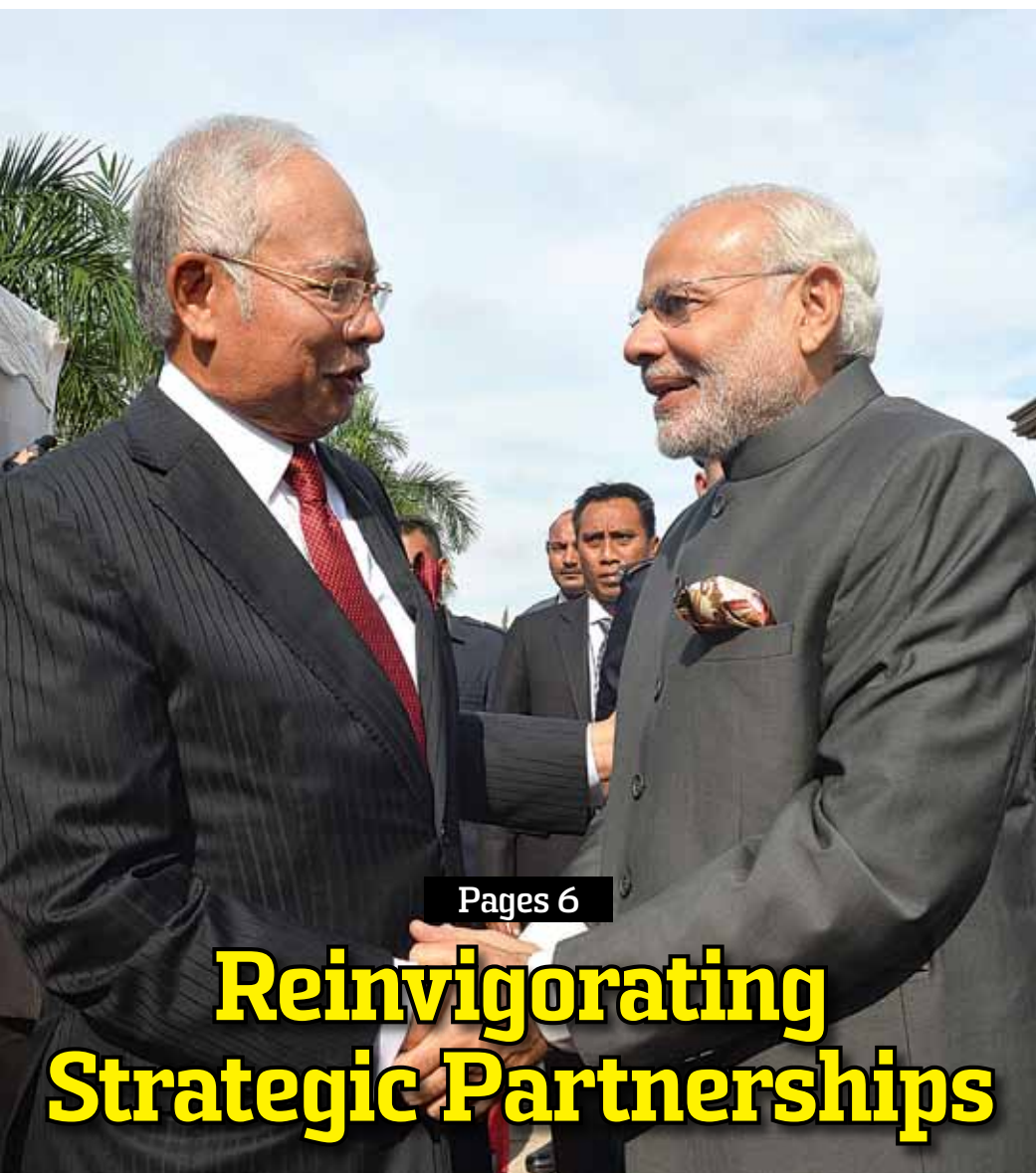
**of SP's** DECADES OF  
SINCE 1964 BOUNDLESS  
EXCELLENCE

Vol: 5 Issue 23 ■ December 1-15 • 2015

[www.spsmai.com](http://www.spsmai.com)

ONLY FORTNIGHTLY ON **MILITARY AEROSPACE INTERNAL SECURITY**

₹55.00 (INDIA-BASED BUYER ONLY)



Pages 6

# Reinvigorating Strategic Partnerships



## CNS: Indian Navy is on the threshold of transformation

PAGE 8



## Interview: Joseph Parsley, Yulista LLC

PAGE 14

FROM THE  
EDITOR'S DESK

4

SP'S EXCLUSIVES

5

SECURITY BREACHES

22



OEM

Interview:  
Sunil Raina,  
Rockwell Collins

12

MILITARY

Report  
Viewpoint  
Updates

AEROSPACE

Developments

21

10

18

19



In a country like India with limited support from the industry and market, initiating 50 years ago (in 1964) publishing magazines relating to Army, Navy and Aviation sectors without any interruption is a commendable job on the part of SP Guide Publications. By this, SP Guide Publications has established the fact that continuing quality work in any field would result in success. ”

Narendra Modi, Hon'ble Prime Minister of India



While we at SP's cherish our journey started in 1964, founded by our Founder Editor and Founder Publisher Shri S P Baranwal; we do believe that the entry into 51st year and beyond is just a beginning for us. We therefore look forward to constantly evolving and expanding our qualitative efforts during coming years and coming decades.

**Most Trusted Partner for Now & for Future**



**SP GUIDE PUBLICATIONS**

[www.spguidepublications.com](http://www.spguidepublications.com)

## Admiral R.K. Dhowan reviews passing-out parade at NDA


**C**hief of the Naval Staff Admiral R.K. Dhowan, Reviewing Officer, reviewed the passing-out parade of 129th Course of the National Defence Academy (NDA) on November 28, 2015. A total of 338 cadets graduated from the Academy as they passed through the portals of the prestigious Khetrapal Parade Ground. It included 229 cadets from the Army, 40 cadets from the Navy and 69 cadets from the Air Force. There were 16 foreign cadets from friendly countries who also passed out from the academy. The list included four cadets each from Bhutan and Tajikistan, two cadets each from Maldives, Afghanistan and Fiji, and one cadet each from Ethiopia and Lesotho. The Reviewing Officer was received by Vice Admiral G. Ashok Kumar, Commandant, NDA, at the Parade Ground.

Admiral R.K. Dhowan thereafter addressed the passing-out course cadets wherein he complemented



the cadets for their good turnout and exceptional drill movements. He said that more than 33,000 cadets have passed out of this academy and they have served the armed forces of the nation with great pride. He said that NDA is not only a cradle of leadership but also a cradle of jointmanship. He emphasised that no service can win a war on its own. He advised the cadets to follow the five principles of leadership, i.e. commitment, courage, compassion, credibility and integrity and continue to strive for excellence.

He congratulated the cadets and parents of the passing-out course and specially the award-winners. He thanked the parents for sending their children to the academy and said that the entire nation is proud of them. He also appreciated the effort put in by the Commandant and the entire training staff at NDA for having trained such fine cadets and honed their skills.

A fly-past by three Su-30MKI aircraft each in VIC formation marked the culmination of this grand event. 



### Cover:

Prime Minister Narendra Modi made official visits to Malaysia and Singapore recently and has reinvigorated the strategic partnerships with these two countries. Prime Minister Modi being received by Prime Minister of Malaysia Najib Razak in Putrajaya on November 23, 2015.

Cover images: PIB, Indian Navy, Yulista

### PUBLISHER AND EDITOR-IN-CHIEF

Jayant Baranwal

### ASSISTANT GROUP EDITOR

R. Chandrakanth

### SR TECHNICAL GROUP EDITORS

Air Marshal B.K. Pandey (Retd)

Lt General Naresh Chand (Retd)

Lt General V.K. Kapoor (Retd)

R. Adm S.K. Ramsay (Retd)

### SPECIAL CONTRIBUTOR

Lt General P.C. Katoch (Retd)

### CHAIRMAN & MANAGING DIRECTOR

Jayant Baranwal

### PLANNING & BUSINESS DEVELOPMENT

Executive Vice President: Rohit Goel

### ADMIN & COORDINATION

Bharti Sharma

### DESIGN & LAYOUT

Creative Director: Anoop Kamath

Designers: Vimlesh Kumar Yadav,

Sonu Bisht

Research Assistant - Graphics:

Survi Massey

### SALES & MARKETING

Director: Neetu Dhulia

General Manager Sales: Rajeev Chugh

### SP'S WEBSITES

Sr Web Developer: Shailendra P. Ashish  
Web Developer: Ugrashen Vishwakarma

© SP Guide Publications, 2015

### SUBSCRIPTION/ CIRCULATION

Annual Inland: ₹1,320 • Foreign: US\$ 325

E-mail: [subscribe@spguidepublications.com](mailto:subscribe@spguidepublications.com)  
[subscribe@spsmai.com](mailto:subscribe@spsmai.com)

### LETTERS TO THE EDITOR

[editor@spsmai.com](mailto:editor@spsmai.com)

### FOR ADVERTISING DETAILS, CONTACT:

[advertise@spsmai.com](mailto:advertise@spsmai.com)

[neetu@spguidepublications.com](mailto:neetu@spguidepublications.com)

[rajeev.chugh@spguidepublications.com](mailto:rajeev.chugh@spguidepublications.com)

### SP GUIDE PUBLICATIONS PVT LTD

A-133 Arjun Nagar  
(Opposite Defence Colony)  
New Delhi 110003, India.

Tel: +91 (11) 24644693,  
24644763, 24620130  
Fax: +91 (11) 24647093  
E-mail: [info@spguidepublications.com](mailto:info@spguidepublications.com)

### REPRESENTATIVE OFFICE

204, Jal Vayu Vihar  
Kalyan Nagar  
Bengaluru 560043  
Tel: +91 (80) 23682204

### MOSCOW, RUSSIA

LAGUK Co., Ltd, Yuri Laskin  
Krasnokholmskaya, Nab.,  
11/15, app. 132, Moscow 115172, Russia.  
Tel: +7 (495) 911 2762,  
Fax: +7 (495) 912 1260

Owned, published and printed by Jayant Baranwal, printed at Kala Jyothi Process Pvt Ltd and published at A-133, Arjun Nagar (Opposite Defence Colony), New Delhi 110003, India. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, photocopying, recording, electronic, or otherwise without prior written permission of the Publishers.



**SP GUIDE PUBLICATIONS**

[www.spguidepublications.com](http://www.spguidepublications.com)





## Kudos to the tri-services for selfless service

**T**he ongoing natural disaster in Chennai has wrecked havoc and massive relief operations are on at the moment. Leading the relief operations are the three services – the Indian Army, the Indian Navy and the Indian Air Force. The tri-services have deployed personnel and equipment to provide succour to the victims of the deluge and they are working round the clock in a highly commendable manner. Kudos to all who have put service before self.

The Navy Chief Admiral R.K. Dhowan, in an exclusive response to queries by **SP's**, mentioned how the Navy had deployed its personnel with boats and other equipment to rescue marooned people and how they were distributing relief material. Importantly, how INS Rajali had become an alternate airport for Chennai with the present airport having shut down due to flooding. Prime Minister Narendra Modi who made an aerial survey of the damage announced ₹1,000 crore towards relief operations.

Admiral R.K. Dhowan also mentioned how the Indian Navy was operationally capable and combat ready. He has dwelt at length on the Navy's acquisition plans, particularly on EMALS (electromagnetic aircraft launch system) and how that a study will reveal on what kind of launch and recovery system the Navy would need. Similarly, on the acquisition of the E-2D Hawkeye he indicated that it would become clear after the report was submitted. Nevertheless, the Navy's plans are aligned with national objectives that lay emphasis on the 'Make in India' programme.

The Prime Minister had just returned from official visits to Malaysia and Singapore, two key nations in South East Asia from a trade and strategic point of view. Not just economic issues were discussed but strategic ones with regard to security and peace in the region and how they could contribute to that. With both Malaysia and Singapore, India has historic ties with quite a large Indian population settled in these countries. India and Malaysia have outlined several areas in defence where the two could cooperate effectively. With Singapore, the Indian Navy had a joint exercise called Simbex 2015.

As the programmes gain momentum, there is renewed interest from original equipment manufacturers (OEMs) and one of them Rockwell Collins has expanded its presence in India to work out ways of participating in various programmes. This issue also carries an interview with Joseph Parsley of Yulista which sees numerous opportunities in the aircraft (rotary-wing and fixed-wing) and combat vehicle (tracked and wheeled vehicle) modification and technology insertion markets.

In his fortnightly viewpoints, Lt General P.C. Katoch (Retd) has lambasted the Defence Research and Development Organisation following the crash of the Nishant unmanned aerial vehicle and how the organisation is draining resources without producing anything of significant value, commensurate with the investments made. In another viewpoint, he has talked about how China is working strategically its military organisational structure to ensure that it goes ahead with its plans of dominance in the region.

Besides these features, we have the regular departments and we look forward to your feedback.

Happy reading !

**Jayant Baranwal**  
Publisher & Editor-in-Chief



# Final delivery of An-32RE tactical transport aircraft

**I**n big relief to the Indian Air Force (IAF) after months of uncertainty and assurances, Ukraine earlier this month completed the delivery of the final (and fifth) batch of eight upgraded and overhauled An-32RE tactical transport aircraft to India. The aircraft were upgraded under the framework of a major contract between the State Enterprise 'SpetsTechnoExport' (the special exporter of State Concern 'Ukroboronprom') and Indian Government in 2010. The upgrade involves a major life extension of 15 years, cementing the An-32RE as the IAF's tactical transport warhorse.

"Today we transfer another five modernised aircrafts and successfully complete one of the most important export contracts which total value is \$400 million. After Ukroboronprom gained control over Ukrainian strategic aviation enterprises, we have received an assignment to increase the number of manufactured aircrafts and expand cooperation in this area. Now we are moving steadily in that direction, and today's event proves it," said Arthur Heruvimov, the Deputy Director General for Development of Ukroboronprom in a statement released earlier this month. He added, "Thanks to the trust of the Indian side, today we can talk about a significant increase of our workload and additional supplies of a wide range of aviation spare parts for Indian market." **SP**



## IAF for Indian EW suite for Mi-17V5 fleet



**I**n a commitment towards Indian avionics and electronic technology that have made a global mark in recent years, the Indian Air Force has announced its intention to procure and install electronic warfare (EW) suites comprising radar warning receiver (RWR), missile approach warning system (MAWS) and countermeasure dispensing system (CMDS) on all Mi-17V5 helicopters. Additionally, limited Mi-17V5 would also be integrated with laser warning receiver (LWR) and directed infrared countermeasure (DIRCM). The proposals are invited from Indian vendors only, stipulates

the request for information that is likely to be hotly contested by a raft of firms that have generated capabilities in this field through collaborations and organic research in recent years.

With the V5 variant of the workhorse Mi-17 cementing its position as the rotorcraft backbone of the IAF, the integrated EW suite is intended to provide crucial capabilities of intercepting, identifying, prioritising and displaying airborne and ground-based threat from radars and missiles to the pilot and effectively provide self-protection to the helicopter against radar controlled weapon and IR seeking missiles by employing different countermeasures (chaffs, flares, directed infrared, etc). The deployment of Mi-17s in hostile scenario, including India's 'Red Corridor' has spurred the need for greater survivability equipment and gear. **SP**

## Arihant successfully executes weapon ejection

**I**ndia's Arihant ballistic missile submarine platform demonstrator has successfully executed a weapon ejection trial in the Bay of Bengal under the aegis of the Indian Navy, BARC and the DRDO. The submarine, on sea trials since last year, fired what has been reported to be an unarmed B-05

submarine launched ballistic missile that sports a range of approximately 1,000 km in an unarmed or 'dummy' configuration. The trial was strictly to observe and validate the weapon ejection mechanism from the Arihant's dorsal vertical missile launch silos that release their weapons through hydraulic hatches.

The Arihant is currently on a crucial leg of trials in the Bay of Bengal, validating virtually all aspects of its efficacy as a strategic weapons delivery platform, including its dive depth and endurance, acoustic signatures at various speeds, lurking depth and weapons release depth. A parallel programme to develop its weapons, including the B-05 has progressed with more tests likely in Spring 2016. The Arihant will ultimately sport the K-4 strategic nuclear missile, a submarine-launched version of the Agni-III, giving the platform its full-fledged place in India's nuclear triad. Sources tell **SP's** that the successful weapons release test on the Arihant has been shared and acknowledged at the highest levels of government.

Navy sources also confirmed that the Arihant's presence at the International Fleet Review 2016 is also under consideration, though **SP's** has independently learnt from government sources that this is unlikely. **SP**

# India's strategic engagement in South East Asia

*Prime Minister Narendra Modi made official visits to Malaysia and Singapore recently and has reinvigorated the strategic partnerships with these two countries*

[ By **R. Chandrakanth** ]

**A**t the invitation of Dato' Sri Mohd Najib Tun Abdul Razak, Prime Minister of Malaysia, Narendra Modi undertook an official visit to Malaysia on November 23, 2015. Earlier, Modi participated in the ASEAN-India Summit and East Asia Summit on November 21-22, 2015. The two Prime Ministers held official talks in Putrajaya and jointly inaugurated the Torana Gate in Brickfields, Kuala Lumpur, a gift from India to Malaysia, as a symbol of India-Malaysia Friendship.

## **Peace and Security in the Region**

During the official talks, the two Prime Ministers acknowledged that India-Malaysia relations have made impressive strides in recent years. The two leaders acknowledged the contribution made by Malaysia and India in promoting growth, economic development and stability in the Asia-Pacific region, and recognised each other's responsibility in the promotion of peace, development and security of the region, and beyond, based on a convergence of political and socio-economic interests and aspirations.

## **Defence and Security**

The two Prime Ministers agreed to enhance defence exchanges through regular dialogue at various levels, including between the Defence Ministers, senior defence officials, Chiefs of the Armed Services and through Service-to-Service Staff Talks. The two also agreed to convene the next India-Malaysia Defence Cooperation Meeting at Defence Secretary/Secretary General level. They welcomed the outcome of the joint exercises Harimau Shakti and to upgrade the exercises to company level, and subsequently to tri-services exercises. There was agreement on setting up the Su-30 Forum for cooperation in training, maintenance, technical support and safety-related issues, building on the assistance by India for successful completion of the Su-30MKM training programme by Indian pilots in Malaysia.

India and Malaysia also agreed to promote joint collaboration on projects of mutual interest in the defence sector including in the areas of defence equipment and industry, research, training and capacity building; hold annual talks between the Heads of the Indian Coast Guards and the Malaysian Maritime Enforcement Agency including during Head of Asian Coast Guard Agencies Meeting (HACGAM).

## **Condemn Terrorism**

The two leaders expressed strong condemnation for terrorism in all its forms and manifestations, and called upon all States to reject terrorism and bring perpetrators of terrorism to justice. In this context, they welcomed the ongoing cooperation between the two countries on counter terrorism and agreed to further enhance cooperation in this direction. They agreed to continue sharing of information and

best practices to address the challenges posed by terrorism, and other traditional and non-traditional threats.

They also agreed to discuss further the signing of the memorandum of understanding (MoU) on Transfer of Sentenced Prisoners, which is an important humanitarian gesture towards sentenced prisoners.

## **Strategic Partnership with Singapore**

At the invitation of Lee Hsien Loong, Prime Minister of the Republic of Singapore, Modi paid an official visit to Singapore from November 23 to 24.

Both Prime Ministers held substantive discussions in areas of mutual interest, signed the Strategic Partnership, and witnessed the signing and exchange of nine bilateral documents, and the launch of commemorative stamps to celebrate the 50th anniversary of diplomatic relations.

## **Political, Defence and Security Cooperation**

The two Prime Ministers decided to sustain the momentum of bilateral relations through regular high-level visits. They encouraged the continuation of regular exchanges under the agreed dialogue mechanisms between the Foreign Ministries and the Defence Ministries. They reaffirmed the importance of defence relations between India and Singapore in their Strategic Partnership. In this regard, they welcomed the signing of the revised Defence Cooperation Agreement (DCA) which will upgrade and strengthen bilateral defence relations. They agreed to hold regular high-level meetings, including at the level of the Defence Ministers. They endorsed the continuation of joint military exercises and training between their armies, air forces and navies.

They welcomed further collaboration in defence technology, and encouraged co-development and co-production between the defence industries of the two countries.

The two Prime Ministers decided to expand cooperation in maritime security. In this regard, they welcomed the signing of the Technical Agreement on the Sharing of White-Shipping Information between the Indian Navy and the Republic of Singapore Navy in July 2015 and they witnessed the signing of the documents for its operationalisation. They endorsed regular exchanges between the two Coast Guards and looked forward to greater bilateral Coast Guard Cooperation.

## **Security Roundtable**

They noted the useful discussions between both sides at the India-Singapore National Security Roundtable meetings and affirmed its continuation on an annual basis. They welcomed the revival of the Joint Working Group on Intelligence Cooperation on Combating Terrorism and Transnational Organised Crime in order to intensify cooperation on information and intelligence sharing on



Prime Minister Narendra Modi and the Prime Minister of Singapore Lee Hsien Loong during the signing ceremony in Istana, Singapore, on November 24, 2015

terror networks and work together to share experiences on dealing with the growing phenomenon of radicalisation. They noted the ongoing interactions in cyber issues and agreed to strengthen bilateral cooperation in this area. The two Prime Ministers also agreed to establish appropriate mechanisms for regular bilateral consultations and exchange of real-time information between the relevant agencies in India and Singapore. They witnessed the signing of the MoU on cooperation in the area of cyber security. They witnessed the signing of a MoU on cooperation in combating illicit trafficking in narcotic drugs, psychotropic substances and their precursors.

## Dialogue between Defence Ministers

Establishing more regular dialogues between both Defence Ministers, deepening collaboration in maritime security and boosting cooperation between Singapore and India's defence industries were some of the key points that came up. These are the agreements stated in the revised DCA between Singapore and India. Under the ambit of an Enhanced Defence Partnership, the revised DCA was signed by Minister for Defence Dr Ng Eng Hen and his Indian counterpart Manohar Parrikar. The DCA was also symbolically exchanged by Permanent Secretary for Defence Chan Yeng Kit, and Indian Foreign Secretary Dr Subrahmanyam Jaishankar, in the presence of both Prime Ministers.

Commenting that the revised DCA was a significant milestone from the first one signed more than 10 years ago, Dr Ng said: "Our defence ties have committed to meetings at the highest level between Defence Ministers regularly...and more military-to-military ties and exercises.

"Specifically (there is) also closer collaboration for maritime security...(and) an agreement on exchange of information for white-shipping." (White-shipping refers to commercial shipping information about movement of cargo ships.) He added that this collaboration put defence relations between both countries on a better footing, and signalled that Singapore and India had become closer defence partners.

On the topic of maritime security, Dr Ng said that both countries valued the importance of peace and stability, with reduced tensions and minimal possibility of any disruption to global trade and maritime lanes.

## Maritime Security

Dr Ng said: "Maritime security is an essential lifeline for economies or trade in this region, whether it's the South China Sea or Strait of Malacca. India's voice will be heard and we share common perspectives in terms of common stability."

The revised DCA also coincided with the signing of a Technical Agreement on the Sharing of White-Shipping Information between the Republic of Singapore Navy and the Indian Navy in July this year. With the technical agreement, this has allowed Singapore's Information Fusion Centre and India's Directorate of Network Centric Operations to exchange real-time white-shipping information for greater maritime awareness and sense-making.

The revised DCA is seen as bringing the defence relations between Singapore and India a few notches up, as both countries commemorate 50 years of diplomatic relations.

Defence interactions between both countries include high-level visits, policy dialogues, joint military training, defence technology cooperation, courses, seminars and other professional exchanges. **SP**





Chief of the Naval Staff Admiral R.K. Dhowan during the Navy Day press conference in New Delhi on December 3, 2015

# 'Indian Navy is on the threshold of transformation through continuous consolidation of its capabilities through indigenisation'

[ By Rear Admiral Sushil Ramsay (Retd) ]

**D**uring the annual Navy Day press conference on December 3, 2015, Admiral R.K. Dhowan, Chief of the Naval Staff, addressed a host of issues including the operational readiness of the Indian Navy, infrastructure development, human resources management, coastal security, cyber security, foreign cooperation initiatives, joint exercises, etc.

He reiterated that the Indian Ocean has emerged as the world's centre of gravity as 80 per cent of the oil and trade that emanates from the Indian Ocean region (IOR) is extra-regional in nature. This implies that any impediments to the free movement of oil or trade through IOR will have an impact not just on the economies of the region, but the global economy as well. The Indian Navy which is the world's fifth largest navy, has onerous responsibilities to be the net security provider in the maritime domain of interest to India. The Indian Navy is empowering India with maritime security to safeguard its assets employed for the economic growth of the country. The Indian Navy is on the threshold of transfor-

mation through continuous consolidation of its capabilities through indigenisation. The blueprint of the Indian Navy is firmly anchored on self-reliance and indigenisation. Towards this objective science and technology road map and infrastructure plans to meet the futuristic requirements have been promulgated and disseminated widely to the indigenous industry for its greater participation. This vision is directly in line with the 'Make in India' initiative of the Prime Minister Narendra Modi.

With the aim to showcase the Indian Navy, foster a better understanding of the navies of the world and share best operational practices, the International Fleet Review is scheduled at Visakhapatnam in February 2016. A scintillating video clipping on the forthcoming prestigious event was showcased for the audience. This was followed by yet another video clipping demonstrating the annual round-up of the Indian Navy and its growing prowess.

He highlighted measures initiated in maintaining a high tempo of operations with Indian Navy ships deployed at extended ranges from Indian coasts, spanning from the South China Sea and Sea of Japan in the east to the Persian Gulf and the Atlantic Ocean in the west and at the same time remaining focused on maritime and

coastal security in close liaison with other national authorities and agencies. He also highlighted that transformation has taken place with the induction of MiG-29K, Boeing P-8I, Vikramaditya, newer and powerful surface and subsurface platform participating in networked theatre level operational readiness exercise networked through dedicated naval satellite Rukmini.

He also gave a detailed resume on the measures initiated and

progress made towards providing seamless coastal security. 87 Automatic Identification System stations have been networked to provide data through 46 coastal radar stations. Regular coastal security exercises have been conducted networked through 51 nodes of IMAC at Gurgaon. **SP**

*For a recent full interview with CNS, log on to [www.spsmai.com](http://www.spsmai.com)*

## EXCLUSIVE

### CNS answered to SP's on Navy Day press conference

**SP's M.A.I.:** Quick questions –

- EMALS status – can we get an update?
- Also, what role do you foresee for E-2D Hawkeye if and when inducted?
- Can I ask you regarding Chennai situation? What all steps are being taken towards this problem?

**CNS:** In **Chennai**, we have our ships, aircraft and personnel deployed. For the last nearly one week, the weather has created havoc with flooding in Chennai and around the coastal areas of Tamil Nadu. Our naval teams including our Geminis, our ship Airavat as well as our tanker, are deployed there with the helicopters and divers distributing food packets, distributing water, rescuing marooned people, from remote locations.

We also carried out innovative survey of the areas using UAVs where we could then assist the state administration to show them the water logged locations for pinpointing the launch of rescue operations.

In addition, the whole of Chennai airport is flooded, so INS Rajali, the Indian Navy's airbase, has been activated and all the relief material as well as the civil flights are operating out of there. This is ensuring that the stagnation that was coming due to the inability to use the airport at Chennai is now being worked through INS Rajali. Just yesterday we had nearly 40 tonnes of relief material that landed there, the NHDR teams landed and we also had some civil flights that will be operating so that all the stranded passengers can be taken out.

This is one of our tasks, one of our roles and the Navy is there

standing by and in action to take stock of the situation, actually help out people who are marooned.

We have our Geminis and boats in the water going to the remote locations, we have all our sailors and personnel who are deployed for this operation also taking stock of the situation.

Regarding **EMALS**, it is related to our indigenous aircraft carrier which is the next carrier that we would like to build indigenously in the country. The Navy needs to have two operational carriers at any given moment of time for which we need to have an inventory of three aircraft carriers so that we can keep two operational – one on each coast because the concept of our operations is centred around the carrier task force for sea control and of course the submarines for sea denial.

In keeping with that vision and making sure that we induct the carrier at the right time so that we have two carriers available, we have carried out a study, a detailed study as to what the contours of this aircraft carrier should be.

This aircraft carrier at this point of time, we are looking at something in the region of 60,000 to 65,000 tonnes. All aspects related to the propulsion, type of aircraft, launch and recovery system on this IAC are part of the detailed study. We are also looking at the aspects of the build strategy, design strategy. EMALS is one of the options which are being looked at this point of time. Nothing has been firmed up and we are looking at all launch and recovery options.

As far as the **Hawkeye** is concerned, that also forms a part of the same study. Once we decide on the launch and recovery system, we will take stock of aircraft that will fly from it. **SP**



(Left) Electromagnetic Aircraft Launch System (EMALS); (right) E-2D Advanced Hawkeye

# Tri-services help in rescue and relief operations in Chennai

[ By R. Chandrakanth ]

**T**he southern city of Chennai has never been battered this badly in its history. The deluge which has taken hundreds of lives and dislocated thousands of families is the worst crisis that it has witnessed in many years. The burgeoning metropolis on the east coast has become islands of misery and at the time of writing, there was a brief respite from the rains. Relief operations on a massive scale are ongoing and in the forefront are the tri-services of the armed forces – the Indian Army, the Indian Navy and the Indian Air Force.

## Indian Army deploys men and material

The Indian Army's four columns, including troops from the Garrison Infantry Battalion located in Chennai along with four columns from Bengaluru, continue to carry out extensive rescue and relief operations at Tambaram, Mudichur, Mannivakkam, Guduvancheri and Urapakkam areas. The Army is addressing the most critical areas where flood water levels have reached 10-12 feet. Over 30 Army trucks have also been employed for ferrying stranded people in areas where the water level is less than six feet.

The Army column located at Guduvancheri and Urapakkam are carrying out rescue operations and have rescued over 600 stranded people in Waigai Nagar and Priya Nagar. The Army column at Mannivakkam has evacuated over 800 people including stranded students from educational institutes in and around Kutheri to safer places. Another Army column operating at Mudichur has rescued over 750 people.

While flood rescue operations are in full swing, three more Army columns from Bengaluru are being brought in with rescue and relief equipment to augment rescue efforts. Additional two columns have been kept on standby in Secunderabad for any contingencies. With civil communication and mobile towers out of communication in

critical areas of Chennai, the Army is resorting to radio communication for coordinating rescue operations to reach affected people and rescue them.

The Chief of Army Staff, General Dalbir Singh, reviewed the situation and strategised additional measures and efforts required for the ongoing rescue and relief efforts.

## IAF aircraft does sorties after sorties

The Indian Air Force is also spearheading the rescue and relief operations called 'Operation Madad'. The IAF established an air bridge between Tambaram Air Force base and Naval Air base Arakkonam in Chennai to facilitate rescue and relief operations. The Chennai airport has shut down following flooding. The IAF has deployed six Mi-17, one Mi-8, one ALH and five Cheetah helicopters. Strategic airlift assets including C-17 Globemaster, C-130 Hercules, IL-76, An-32 and AVRO aircraft are flying extensively, carrying relief materials and disaster relief and rescue teams including the National Disaster Response Force (NDRF), Army and other relief teams. Flood victims are being evacuated out of Tambaram base to safer areas.

The IAF has airlifted 17 teams of NDRF teams from Delhi, Bhubaneswar and Bathinda. It has also airlifted four Indian Army columns to Chennai. One C-130J from Tambaram to Delhi and two C-17s from Arakkonam took stranded passengers to Begumpet and Delhi. The helicopter operations are on in full swing wherein four medium-lift helicopter, one advance light helicopter (ALH) and five Chetak/Cheetah are involved actively in rescue and relief operations. One helicopter is positioned in Tirupati to aid the Andhra Pradesh Government.

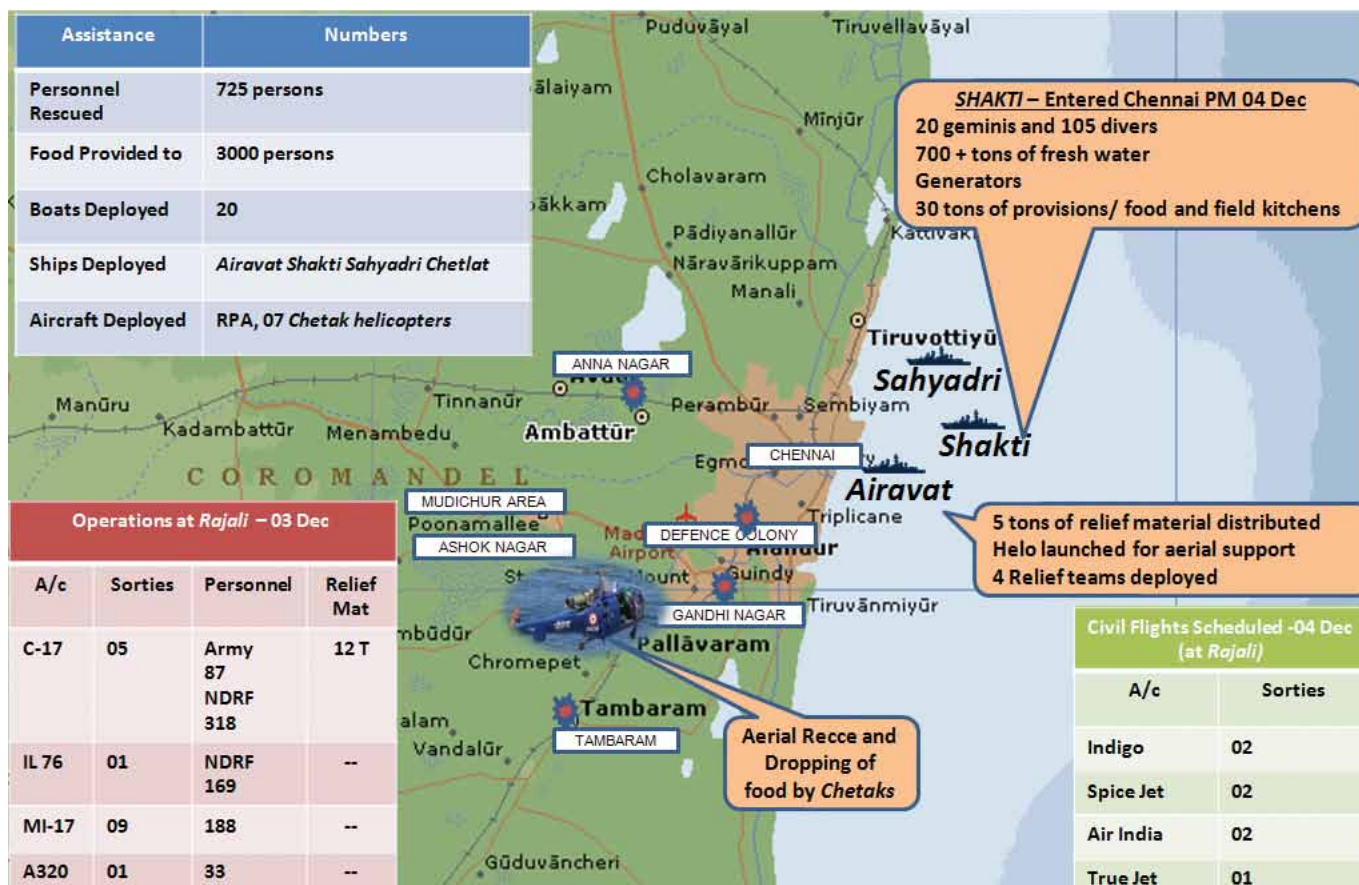
## Indian Navy uses UAVs to pinpoint worst affected areas

The Indian Navy is also in full force at Chennai helping in the rescue and relief operations. The Chief of Naval Staff, Admiral R.K. Dhowan told **SP's** that the Navy had deployed personnel and equipment in



PHOTOGRAPHS: Indian Army, Indian Air Force, Indian Navy





A graphical representation of relief efforts by Indian Navy during Chennai floods

the relief operations and that INS Rajali had become an alternate airport as the Chennai airport remains under water. The Rajali naval base is being used to bring in relief material from outside Chennai and also to evacuate stranded civilian passengers. The Navy has deployed unmanned aerial vehicles (UAVs) to help the administra-

tion in pinpointing the worst affected areas and directing rescue and relief operations to areas which required urgent attention. INS Airavat ex Visakhapatnam has also been rushed to Chennai with relief material.

A Navy press release said that three flood relief teams deputed as follows: One team comprising of 20 sailors (five divers and 15 good swimmers) with Gemini and associated gears deployed on December 1 near Adyar bridge. Another team consisting of one officer 16 sailors (four divers and 12 good swimmers) and two Geminis deployed at Tambaram. The third team from INS Rajali consisting of two officers 50 sailors also deployed near Tambaram. Rajali Parundu and ships put on standby for Helo/RPA sorties and deployment of boats/portable de-flooding pumps. Also INS Chetlat on Palkbay patrol responded to distress call to rescue missing fishing vessel. The Navy Helpline is 044-25394240.

The Prime Minister Narendra Modi also made an aerial visit of the flood affected city and announced ₹1,000 crore towards relief operations. **SP**



(Far left to right) Rescue operations by the Indian Army in Chennai following heavy rains in the region; IAF Cheetah helicopter carrying out winching operations to rescue stranded people; Indian Navy's relief and rescue team in action in the flood hit areas in Chennai and suburbs.



Expanding base in India: Rockwell Collins has opened a new, expanded facility in Bengaluru. "The opening is a reflection of our commitment to India, as well as the increasing demand for services from our India Design Centre in Hyderabad," says Sunil Raina (inset) who took over as the new Managing Director of Rockwell Collins India. "We chose Bengaluru because of the high concentration of engineering talent there and the fact that it is an aerospace hub," he added.

# Rockwell expands its presence

Rockwell Collins recently announced the new Managing Director. **Sunil Raina**, the new Managing Director, will be leading the company's strategy for continued investment and long-term growth in the country. Raina joined Rockwell Collins' Singapore office in 2005 where he was actively involved in defining the strategies for the company's commercial aviation and services business in the Asia-Pacific region. Previously he led Rockwell Collins' Commercial Systems in India and was successful in developing customer relationships that established Rockwell Collins as the preferred avionics partner for leading airlines in India.

**Jayant Baranwal**, Editor-in-Chief, *SP's M.A.I.*, spoke to **Sunil Raina**, Managing Director Indian Subcontinent, and also briefly to **Maureen Stevens**, Senior Communications Business Partner International Rockwell Collins. Excerpts from the interview:

**Jayant Baranwal (JB): What is Rockwell Collins' focus in India?**

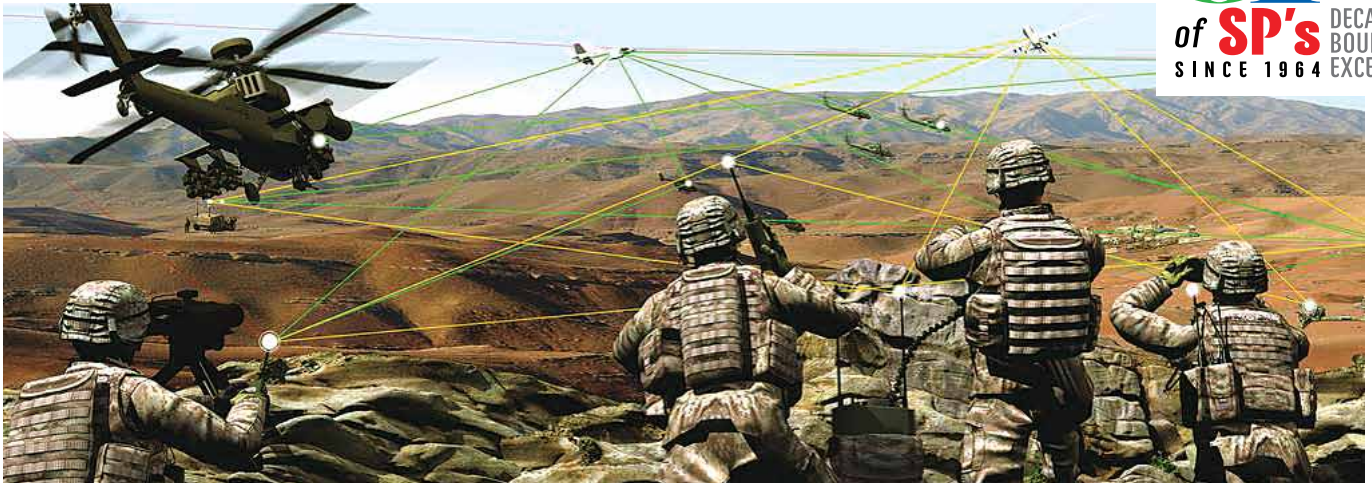
**Sunil Raina (Raina):** Rockwell Collins is well entrenched in the commercial aviation market as well as the defence market in India. For commercial aviation, we have company's advanced avionics, including communication, navigation, surveillance and information management systems for IndiGo, SpiceJet and Jet Airways, and its Dispatch asset management performance based services for Air India's Boeing 787 fleet. Rockwell Collins advanced avionics, cabin and information management systems is part of most business aircraft throughout the region.

For defence applications the company is focused on communications and avionics solutions that provides enhanced situational

awareness solutions for fixed and rotary-wing aircraft, as well as SATCOM, electronic warfare (EW), and networking systems. We are a communications company; we have a new product, TruNet, which we want to bring to India. The product is exportable, ready for transfer of technology and highly customisable. With the multi-waveform capabilities, TruNet is the first system of its kind that enables civil and governmental users to use existing or develop their own proprietary waveform and crypto to meet their sovereign mission needs.

All products that are part of the TruNet network run the exact same waveforms and capabilities, which provides the potential to support countries' civil and military forces by enabling them to 'plug and play' and work seamlessly together. The system's software





With the multi-waveform capabilities, TruNet is the first system of its kind that enables civil and governmental users to use existing or develop their own proprietary waveform and crypto to meet their sovereign mission needs

defined radios (SDRs) provide multiple waveforms, both narrow and wideband, high speed, mobile ad hoc networked communications, point-to-point data, voice and next-generation SATCOM capabilities. Importantly, we are exploring the potential usage of TruNet around the globe and therefore we can say that we are, in fact, offering the first-hand technology to India at this juncture. We will be showcasing this product at Defexpo 2016. We are working with the Electronics Corporation of India Limited (ECIL) on the front of Electronic Counter-Counter Measure (ECCM) radio modules for Do 228 communications and navigation equipment being provided to the Hindustan Aeronautics Limited (HAL). These systems are being used by the Indian Navy on their P-8I and helicopters, and also by the Coast Guard and the Air Force. We also provide 721S Fixed Site Ground radio as part of an advanced telemetry system for the Indian Air Force through Park Controls & Communications (P) Ltd.

**JB: Tell us something about your facilities in Bengaluru and Hyderabad.**

**Raina:** We aim on how to bring the latest technology in India and have the best partnerships and to grow our engineering facilities and leverage for the existing market and develop for the rest of the world. With the new engineering office opening in Bengaluru, our strategic alliance with Zen Technologies for simulation and training sees a tremendous enthusiasm and boost for the 'Make in India' policy. This includes helping airlines by providing systems for more efficient operations, advancing the military with state-of-the-art avionics and communication technologies, and even helping with passenger flow through airports with more advanced passenger processing systems.

Rockwell Collins' design centre in Hyderabad augments the company's existing engineering capabilities. The India Design Centre (IDC) is dedicated to product development for global markets, with initial work focused on the design of display applications for commercial and military customers and flight management systems. The IDC currently has 630 employees with plans to continue to grow the facility.

**JB: What are your expectations from India in the next 10 years?**

**Raina:** With the new government things are happening at a faster pace and moving in the right direction. Government is trying to do some things differently. We are hoping to see something very soon both in civil and defence.

**JB: How about Rockwell Collins' involvement in business aviation?**

**Maureen Stevens (Maureen):** We are expanding our Corporate Aircraft Service Program (CASP) to reach both operators seeking a scaled-down programme and those preferring a more encompassing programme. Rockwell Collins has developed CASP Elite, which includes more maintenance services, FMS updates and discounts on international trip support. The company also is offering CASP Essential, aimed at entry-level jet or turboprop operators and with a lower minimum flight hour per aircraft requirement.

**Raina:** In fact India is doing very well for our CASP programme, last year India has seen the maximum number of takers for this service in the APAC.

**JB: You mentioned that your 43 per cent business is outside US. Which markets contribute the maximum?**

**Raina:** Europe and Middle East contribute a major share.

**JB: Your take on the Civil Aviation Draft Policy and what is your involvement with MRO?**

**Raina:** More the number of aircrafts means more equipment for us! The government is listening, atmosphere is conducive and the vibes are positive. The Minister and Secretary are very open to ideas and solutions. How it shapes up is to be seen.

We are involved with MROs in two ways – directly, like Air India, where we take up the whole logistics part of the MRO and work on dispatch reliability; and the other involvement is as a service. We have an across India coverage on the MRO with Air Works, Indamer, Jetstar and Shaurya.

**JB: What is the size of Rockwell's investment on R&D?**

**Maureen:** We contribute 20 per cent to R&D, which is consistent over the years and is pretty large compared to our peers.

**JB: Do you have some solutions for combating terrorism?**

**Maureen:** Rockwell has the ground-based detection system – Patrol Persistent Surveillance System (PPSS). The PPSS combines sound, vibration and imaging sensors for enhanced situational awareness and the constant monitoring of threats against military bases, forward observation posts and other secure facilities. The PPSS network automatically recognises new sensors 'on the fly,' so there is no need for the operator to manually reconfigure the system. **SP**





## 'Yulista will support industrial development in India with the latest state-of-the-art manufacturing and fabrication processes'

*Yulista is a recognised industry leader in the modernisation and service life extension of rotary and fixed wing aircraft. YAI has extensive experience with both military and commercial aircraft. **Jayant Baranwal**, Editor-in-Chief, **SP's M.A.I.**, in conversation with **Joseph Parsley**, Director Business Development, Yulista LLC.*

**Jayant Baranwal (JB): History of Calista Corporation and its range of activities.**

**Joseph Parsley (Joseph):** Calista is an Alaska Native Regional Corporation, established in 1971 as a means of creating economic opportunities for approximately 12,900 Alaska Native shareholders in south-west Alaska.

Calista Corporation owns more than 35 subsidiaries, providing a variety of services including rural camp services; heavy equipment sales, rental and service; both rural and urban construction including heavy civil and arctic construction; environmental remediation, range reclamation and natural resource development; ocean and shallow-draft river marine transportation; real estate investments; telecommunications, cyber security and cloud technology; full-service public relations and marketing; website development; military defence contracting; and much more. When you do business with Calista, you have access to a network of companies that are dedicated to delivering the highest quality services at the greatest value.

**JB: Role the Government of Alaska in the establishment of the Corporation – do they continue to play the role in management?**

**Joseph:** In 1971, the landmark Alaska Native Claims Settlement Act (ANCSA) was signed, addressing the issue of Alaska Native land rights. ANCSA created 12 regional corporations and over 230 village corporations, which were established to receive money and manage lands on behalf of their shareholders. ANCSA required that in order for Alaska Natives to receive benefits from the settlement, they needed to enroll by submitting an application to the Bureau of Indian Affairs (BIA). The BIA then assigned which regional corporation an applicant would be enrolled in.

**JB: Does the US Federal Government have any influence on or involvement in the affairs of Calista?**

**Joseph:** The Small Business Administration's (SBA) Office of Government Contracting & Business Development works with federal agencies to award at least 23 per cent of all prime government contract dollars to small businesses and help federal agencies meet specific statutory goals for small disadvantaged businesses, women-owned small businesses (WOSB), service-disabled veteran-owned small businesses (SDVOSB), and small businesses that are located in historically underutilised business zones (HUBZ).

In addition, SBA's Business Development Program assists eligible socially and economically disadvantaged individuals in developing and growing their businesses through one-on-one counseling, training workshops, matchmaking opportunities with federal buyers, and other management and technical guidance.

**JB: Nature and the extent of services Yulista Holding Family of Companies (YHL) provides in the aerospace and also the regular customers' base.**

**Joseph:** Yulista Holding LLC provides professional management and business support services to the YHL family of companies: Chiulista Services Inc; Yulista Aviation Inc; Yulista Management Services Inc.; Y-Tech Services Inc; Tunista Services LLC; Yulista Integrated Solutions LLC; and Yulista Tactical Services LLC. Our resources and expertise in management oversight, technical services, finance, human resources, and administrative support provide stability to our innovative teams.

Our companies provide a wide range of services to both government and commercial clients. Our core services and support areas are aviation, ground, logistics, training, and base operations support. Within these core support areas, we perform aerospace engineering and test services, manufacturing and fabrication, system integration, training services, logistics services, and base and camp services.

Our clients are:

- US Army, Navy, Marines, Coast Guard and Airforce.
- US Departments of State, Homeland Security and Defense.
- Civil Aviation Customers.
- Foreign Military Customers: Honduras, Mexico, Canada, Chili, Columbia, Czech Republic, Germany, Netherlands, Sweden, Egypt, Morocco, Afghanistan, Bahrain, Iraq, Israel, Jordan, Kuwait, Pakistan, Qatar, Saudi Arabia, Turkey, UAE, Yemen, Indonesia, Japan, South Korea, Taiwan, Thailand and Australia.

**JB: The major achievements of the Yulista family of companies.**

**Joseph:** Our contract teams on the Prototype Integration Facility contract have been awarded numerous Army Top 10 Inventions Awards for our support on high-profile programmes such as A2C2S integration onto the Sikorsky Blackhawk platform.

**JB: Would you like to elaborate on your role in Afghanistan and Iraq?**

**Joseph:** Yulista provides contract field teams and aviation platform upgrades. Our recent work for Iraq included militarising a commercial Bell 407 and installing multiple component and armament upgrades. Our team delivered three aircraft and provided kits for over 10 aircraft.

**JB: Key objectives of Yulista towards the domestic (US) and the international market.**

**Joseph:** Yulista has built a strong presence in the small business communities in the United States. As with the domestic markets, we provide the same services to our international customers. Yulista performs the same large company services for the price of small businesses while maintaining high quality solutions and deliverables.

**JB: Yulista Aviation has presence in Afghanistan, Iraq, Germany and Korea. Activities in these countries?**

**Joseph:** Yulista provides contract field teams and representatives to provide training and modification assistance on multiple aviation and ground vehicle platforms.

**JB: Which cargo helicopter Yulista Aviation has built a simulator for?**

**Joseph:** CH-47F. Yulista provided PM Cargo the engineering, manufacturing and aviation integration facilities for five Build-to-Print CH-47 Transportable Flight Proficiency Simulator (TFPS) Systems. This hardware/system deliverable of a Department of Defense (DOD) Acquisition Category (ACAT) 1D major weapon system training support device is required to train army aviation/military pilots prior to deployment to wartime operations.

These simulators require a bill of material of over 2,000 line items, manufacturing and assembly of approximately 1,000 metal components, modification or manufacture of more than 500 wire harnesses and/or cable assemblies, and complex installation of electrical and mechanical components. These transportable simulators include an assortment of COTS (Commercial-off-the-Shelf) components, aircraft components, and state-of-the-art graphics. The seventh foreign military sales (FMS) unit is currently in production for the Australian Army.

**JB: Services provided by Yulista Management Services Inc in the field of military and civil aviation as well as for the land and marine forces.**

**Joseph:** Yulista provides engineering, manufacturing and fabrication, system integration and training for civil aviation, land and marine forces. Yulista is experienced in providing shelter and component upgrades for marine vehicles, including the MK-18. Yulista an industry leader in the modernisation and service life extension of military weapons systems, ground combat systems, ground sensor and surveillance systems, and associated ground support equipment. Yulista has a full range of capabilities to support around combat vehicles through modification and technology insertion. capabilities include design, prototyping, fabrication, integration, and sustainment.

Our civil aviation sector offers a full spectrum of services that includes hangar storage, fleet maintenance programmes, contract maintenance services and field support.

Mi-17 helicopters; (inset L-R) Mi-17 engine and Mi-17 FCU





Bell 407 commercial version (left); upgraded for military applications (right).

**JB: What kind of aviation support is Yulista providing to the US Government?**

**Joseph:** Yulista is a recognised industry leader in the modernisation and service life extension of rotary- and fixed-wing aircraft. YAI has extensive experience with both military and commercial aircraft. YAI is an FAA Part 145 Repair Station.

Yulista has extensive experience in design, development, fabrication, assembly and integration of aviation modifications. YAI employs FAA licensed aircraft mechanics and electricians with specialties in wiring, sheet metal painting, component troubleshooting, and installation. YAI also has contact field teams for kit installation at remote locations.

**JB: What kind of modifications does Yulista undertake on military platforms and how unique are the modifications?**

**Joseph:**

- Engine
- Airframe
- Communications
- Survivability
- Sensor Packages
- Avionics Upgrades
- Technology Insertion
- Aircraft Reset
- Prototype Development
- Platform Integration
- Electronics Upgrades
- Test, Validation, Verification and Limited Production
- Unit, Intermediate, and Depot Level Maintenance and Repair of both Rotary- and Fixed-Winged Aircraft
- Reset and Preset Operations
- Sustainment Solutions
- Overhaul and Repairs
- Scheduled/Unscheduled Maintenance
- Phase Maintenance
- Hangar Storage
- Aircraft Refurbishments
- Avionic Upgrades/Replacements
- Ballistic Protection
- Communication Upgrades/Integration
- Corrosion Control and Prevention
- Maintenance Stands and Ground Support Equipment

**‘We see numerous opportunities in the aircraft (rotary-wing and fixed-wing) and combat vehicle (tracked and wheeled vehicle) modification and technology insertion markets’**

- Paint & De-Paint Operations Support

**JB: Little bit about the Yulista’s global plans. Does the company set up service support facilities in countries other than the US?**

**Joseph:** Our current plans are focused on the Middle East, India and the Far East. We intend to penetrate these markets by establishing in-country global partnerships.

**JB: What possibilities do you intend to see in India?**

**Joseph:** We see numerous opportunities in the aircraft (rotary-wing and fixed-wing) and combat vehicle (tracked and wheeled vehicle) modification and technology insertion markets.

**JB: Will Yulista bring the finest state-of-the-art solutions to India? Any scope of embargo if at all from US side?**

**Joseph:** Yulista will support industrial development with the latest state-of-the-art manufacturing and fabrication processes. We don’t see any issues with US embargos.

**JB: Militarily, what are the offerings Yulista may like to pursue in India?**

**Joseph:** Rotary-wing, fixed-wing and ground vehicle modifications and technology insertion.

**JB: Are your solutions confined to equipments manufactured in US only or can cover those which are of Russian origin?**

**Joseph:** We can also do modifications and technology insertions on Russian and European rotary-wing and fixed-winged aircraft.

**JB: Will Yulista have any kind of specific solutions for civil aviation fronts too?**

**Joseph:** Our primary focus will be supporting India’s military services with our in-country global partner(s). However, our capabilities can be readily applied to the private aircraft modifications and technology insertion market.

**JB: In homeland security, what are the services provided by Yulista?**

**Joseph:** Again, a majority of our homeland security services are centred around aircraft and ground vehicle modification and technology insertion solutions. SP




 LT GENERAL  
P.C. KATOCH (RETD)

# Nishant dumped finally – When will we privatise?

**Y**et another failed crash-landing of DRDO's (Defence Research and Development Organisation) Nishant UAV shows the dismal state of the governmental defence-industrial complex. To meet the Army's needs for intelligence gathering over enemy territory, as also for reconnaissance, training, surveillance, target designation, artillery fire correction, damage assessment, ELINT and SIGINT, it was decided in September 1988 that the DRDO would undertake the indigenous development of its UAV. The GSQR was finalised by the Army in May 1990 and the Nishant UAV attempted its first test flight in 1995.

But 20 years later and having spent some ₹90 crore on the project, periodic crash-landings of Nishant have again brought into focus the gross lack of accountability of DRDO and its inability to meet military requirements with successive CAG reports highlighting endemic corruption in the organisation. As per media reports, the two-decade-old ₹90-crore Nishant UAV programme has proved a 'Dud', with the Indian Army shelving the system and cancelling any further orders after three of the four systems supplied by the DRDO. The media further says that the DRDO had actually overspent ₹5 crore in the vain hope of recovering the project – it actually means 20 years plus ₹95 crore down the drain, leave aside keeping the Army deficient all these years of an indigenous UAV that was meant to be the eyes and ears of the Army, providing high definition images of battlefield, help designate targets, and provide electronic and signal intelligence information.

The 380-kg Nishant UAV is planned for endurance of four hours and thirty minutes, required rail-launching from a hydro-pneumatic launcher and is able to be recovered by a parachute system. The Mobile Hydro-Pneumatic Launcher (MHPL) system mounted on a Tatra truck weighs 14,000 kg and a life-cycle of 1,000 launches before requiring overhaul. DRDO boasted that Nishant is one of the few UAVs in the world in its weight-class capable of being catapult-launched and recovered by using parachute, thus eliminating the need for a runway as in the case of conventional take-off and landing with wheels. As always happens, with DRDO's governmental clout, many a times imperfect equipment and systems gets dumped into the military on the excuse that so much money has already been spent. But the Army has had enough with Nishant UAV with the latest crash bringing all the four introduced into service to the same fate. Significantly, each of these drones had cost the

Army ₹22 crore. Introduced into service in 2011, the last of the four Nishants in service with the Army crashed near the Pokhran range in Rajasthan. According to Army sources the crash was because of a technical glitch. Just 15 days back, another Nishant had gone down, also for a technical reason. Earlier in April, two other Nishant drones had crash-landed on the India-Pakistan border near Jaisalmer.

For their part, the DRDO in its usual manner has blamed the user for poor handling of the system, a point categorically denied by the Army. The irony is that this game has been going on for decades with no one held accountable in the DRDO. In recent months, the issue of DRDO spending ₹5 crore of government funds for crafting a silver chariot for Rath Yatra even had come up in Parliament. Very significantly, a smaller drone named Nethra developed by IIT graduates has been in use with police, paramilitary forces and the National Disaster Relief Force. Perhaps a private company could have easily developed a better UAV for the Army in just two to three years, given the fact that many indigenous companies have been marketing drones and even camcopters. The irony here is that while this monolith of DRDO cannot produce a worthwhile drone in 20 years, Pakistan has already developed and deployed its own armed drone.

The government needs to seriously reflect at this dire state of development not only to pull up DRDO, but also to usher accountability and even stop its false propaganda in media of achievements that are quite imperfect. One example is the Akash AD system that DRDO has been bragging about. Commenced in the 1980s, it was supposed to replace the vintage Kvadrat system for providing AD cover during mechanised manoeuvres. It failed during Army trials in early 2000 and so was dumped on the IAF because it worked in 'static' mode. Now three regiments worth of Akash are being inducted into the Army post massive media blitz that this is an 'improved version'. One regiment has already having been raised but the stark reality is that the Army is forced to still use this 'improved version' of Akash in 'static' role. DRDO has already been developing a wheeled version of Nishant, termed Panchi. Hope another schoolboy level imperfect DRDO invention doesn't get dumped on the Army again just because DRDO spent money. How long are we going to permit DRDO to fool the nation? **SP**

*The views expressed herein are the personal views of the author.*



**The government needs to seriously reflect at the dire state of development not only to pull up DRDO, but also to usher accountability and even stop its false propaganda in media of achievements that are quite imperfect**



LT GENERAL  
P.C. KATOCH (RETD)

# PLA focus versus Indian intransigence

**M**edia is abuzz with news of Chinese announcement of a major military overhaul by putting her armed forces under a joint operational military command to build it into “an elite combat force” by 2020, as put by President Xi Jinping. This will also involve regrouping China’s existing seven military regions into four strategic zones. The aim is to make the Chinese military more agile and combat-ready, and capable of taking the battle to its adversaries far beyond its borders and shores.

Till now, responsibility for covering the 4,057-km-long line of actual control (LAC) was with two Chinese Military Regions—Chengdu Military Region to the east and Lanzhou Military Region for balance LAC. However, the restructuring announced, the entire LAC with India (Ladakh to Arunachal Pradesh) will now be looked after by a new entity called ‘West Zone’. It is being said that such changes in Chinese military are being brought along the pattern of US military. Not that the PLA was neglected or antiquated earlier. Chinese interest in Revolution in Military Affairs (RMA) and the structure of future US armed forces was always strong and being incorporated into the Chinese strategic military doctrine. Their interest in the RMA theory and practice was accelerated due to the dramatic and speedy US victory over Iraq in the 1991 Gulf War wherein, US dominance was achieved through precision weaponry, satellites and superior information and communications technology. The power of technological advances coupled with matching strategy and concepts, organisations and training was fully apparent. This was a catalyst for the Chinese People’s Liberation Army (PLA) to get going on the path to ‘Informization’. In China, change was actually ushered in by Jiang Zemin and its implementation overseen by the Central Military Commission and the Chief of General Staff of the PLA.

However, under Xi Jinping, the Chinese military machine has come into greater prominence, as China has already commenced on a more aggressive path, flexing her muscles particularly in the Indo-Pacific. With three PLA Generals forming part of the powerful Politburo, the PLA has much more say. The Chinese Communist Party (CCP) already exercised tight control over the PLA with political commissars posted at every unit level, reporting directly to the party and wielding much more power than unit commanders. The Chinese military has been preparing to fight at multiple fronts simultaneously for a long time. The new restructuring will synergise the military still better in focusing on conflict.

The Indian military requires organisational changes that are necessary to give an impetus to synergising the armed forces towards integration and RMA. These changes have to be driven from the top leadership of the country. In the United States the catalyst for the transformation process commenced with former Secretary of Defense Donald H. Rumsfeld; the US Department of Defense cre-

ated US Joint Forces Command as the transformation laboratory of the US military to force the US armed forces into jointness. The Goldwater-Nichols Act brought about revolutionary changes in the US armed forces, accelerating synergy and boosting RMA. In Germany the transformation process was initiated by the Berlin Decree which aimed to integrate the armed forces ensuring reaping full benefits of ongoing technological advancements.

The German Chief of the Defence Forces oversees the transformation of the armed forces. In India, even a Chief of Defence Staff (CDS), though recommended by the Kargil Review Committee, has yet to be appointed. A successful RMA also requires key bureaucracies to possess certain institutional characteristics that enable them to direct technological advances to dramatically improve military efficiency and efficacy. Instead of a CDS, the Ministry of Defence (MoD) is reportedly pushing for a permanent Chairman COSC with no operational powers, which will be a puppet appointment with the power of arbitration continuing with the bureaucrats of MoD that have little professional military knowledge. The Andaman & Nicobar Command (ANC) is largely toothless while China is developing ports in the Indian Ocean region (IOR) with strategic aims. Gwadar and Hambantota will accommodate large submarines. Development of bases in outlying islands of Seychelles under pretext of ‘refuelling facilities’ and now in Djibouti as ‘logistic base’ spans the African coast as well. The existing 17 commands of the three Services of the Indian military need to be reorganised into bi-Service and tri-Service Integrated Theatre Commands (ITCs) and Integrated Functional Commands (IFCs).

Detailed studies for such reorganisation were undertaken more than five years back by HQ IDS, examined at DGMO and equivalent level and considered operationally vital. But such organisation cannot take place without a CDS and without the MoD restructured into a Department of Defence (DoD) manned by military professionals. China’s ‘West Zone’ will now look after the entire LAC but even earlier her claims in the Western and Central Sectors along the LAC were being addressed by one Chengdu Military Region, while we have three Commands responsible for the same area—Northern, Western and Central—with attenuated problems. China’s West Zone will have all forces deployed on the LAC under command. We don’t even follow the concept of ‘one border, one force’. To top this, PMF are deployed in sensitive areas and not placed under the command of the Army. The fact is that during the decade-long tenure of A.K. Antony as Defence Minister, defence of India remained defunct. Not much changes have occurred under the new government other than the call for ‘Make in India’, which itself has yet to take off as far as the defence sector is concerned. There is no move towards restructuring at all. **SP**

*The views expressed herein are the personal views of the author*

## Serve the country and Navy with pride: Admiral R.K. Dhowan



The Chief of Naval Staff Admiral R.K. Dhowan with the medal winners, Flag Officer Commanding-in-Chief, Southern Naval Command, in Ezhimala, Kerala. The Vice Admiral Sunil Lanba, the Vice Admiral Ajit Kumar P, the Rear Admiral M.D. Suresh and the Rear Admiral K.S. Venuopal are also seen

**A**t an impressive Passing-out Parade (POP) held at the Indian Naval Academy (INA), Ezhimala in Kerala recently, 330 cadets of the Indian Navy and the Indian Coast Guard and six cadets from friendly foreign countries passed through the portals of the INA, on successful completion of their training. This POP marked commissioning of the cadets of the 89th Indian

Naval Academy Course (PB. Tech) and (M.Sc) Courses into the Indian Navy here today morning.

The passing-out cadets belonged to four different courses of the Autumn Term 2015, viz., the 89th Indian Naval Academy Course (INAC) BTech & M.Sc courses, the 20th Naval Orientation Course (Extended), and, the 21st Naval Orientation Course (Regular). Also graduating and marching shoulder to shoulder with their male counterparts were 21 female cadets from the Indian Navy and the Indian Coast Guard.

The parade was reviewed by the Admiral R.K. Dhowan, Chief of the Naval Staff. After the ceremonial review, the Admiral awarded medals to nine meritorious cadets. During his address, the Admiral congratulated the passing-out cadets and advised them "to serve the country and Navy with pride and always uphold the five values, viz., (i) commitment - to make supreme sacrifice for the nation and navy, (ii) courage - both physical and moral; (iii) compassion - towards men and women you lead, (iv) credibility - in performance and character and (v) finally to have an integrity beyond doubt - always and every time".

The President's Gold Medal, for the cadet adjudged first in the overall order-of-merit of the INAC course was awarded to Flotilla Cadet Adjutant Jaswant Singh, Chief of the Naval Staff Gold Medal for the cadet adjudged first in overall order-of-merit for the Naval Orientation (Extended) Course was awarded to Cadet Arun Balaji E. Cadet Darshita Babu was awarded the Chief of the Naval Staff Gold Medal for the cadet adjudged first in overall order-of-merit for the Naval Orientation (Regular) Course and also the Flag Officer Commanding-in-Chief (South) Gold Medal for being adjudged the best woman trainee of the course. **SP**

## LRSAM successfully flight-tested

**F**or the first time, long range surface-to-air-missile (LRSAM), jointly designed and developed by IAI, Israel and DRDO, has been successfully flight-tested from an Israeli naval platform. The missile successfully engaged and destroyed the incoming air target.

All the subsystems of the missile performed as predicted and achieved the desired goal of hitting the incoming target. DRDO has designed and developed dual pulse propulsion system and other safe arm mechanisms for solid propulsion system for the first time. This test from Israel naval platform achieved the major milestone in proving the missile system with complete participation of the Ship Borne Tracking Equipment, etc.

The missile configuration is same for both LRSAM/MRSAM. Further operational flight trials (OFT) will be conducted shortly from Indian naval platform before induction into the service. LRSAM will be inducted into Indian Naval Ships (P-15A). The LRSAM programme consists of missiles, MFSTAR (Radar), weapon control system, vertical launcher unit and two-way data link. **SP**

## Vice Admiral A.B. Singh assumes duties of Deputy C-in-C of the SFC

**V**ice Admiral A.B. Singh upon promotion to the rank of Vice Admiral has assumed the duties of Deputy Commander-in-Chief of the Strategic Forces Command at New Delhi. He is an alumnus of National Defence Academy and was commissioned into the Indian Navy on July 1, 1983. A specialist in Navigation and Air-

craft Direction, the officer has served in a large number of operational naval ships. His important specialist appointments include Navigating Officer of INS Kamorta (during Op Pawan), and Destroyer Ranjit, besides being the Fleet Navigating Officer of Western Fleet during Op Parakram. The officer has commanded IN ships Veer (missile vessel), Vindhyagiri (frigate), Trishul (guided missile frigate) and Viraat (aircraft carrier). The officer has also been an instructor at NDA, Khadakwasla, Navigation & Direction School, Kochi and Directing Staff at DSSC Wellington. The officer has served at Naval Headquarters as Deputy Director and Principal Director at the Directorate of Naval Plans. He also set up the Directorate of Strategy, Concepts and Transformation as the Principal Director.

The officer earned his post-graduate degree from Madras University during the DSSC Course at Wellington, wherein he was awarded the Scudder Medal for standing first in the course. The officer has also earned a master's degree in global security from Cranfield University, UK. The officer was awarded the Vishisht Seva Medal in 2011 for his exemplary service to the nation.

He was promoted to Flag Rank in 2012 and has served in important billets of Flag Officer AOB Project, Assistant Chief of Naval Staff (Policy and Plans) at Naval Headquarters and Flag Officer Commanding, Eastern Fleet. **SP**





## Rear Admiral Sanjay Jasjit Singh assumes charge as the Assistant Chief of Naval Staff (Communication Space and Network-centric Operation)

**R**ear Admiral Sanjay Jasjit Singh has assumed charge as the Assistant Chief of Naval Staff (Communication Space and Network-centric Operation) on promotion to the rank of Rear Admiral on November 19, 2015. The post was created in 2013 to accord focus to the Indian Navy's drive towards networked operations and utilisation of space-based assets.

He is the second officer to hold the post and takes over from Rear Admiral Kishan K. Pandey who has moved as the Flag Officer Fleet Review, in charge of planning for the forthcoming prestigious International Fleet Review to be hosted by the Indian Navy at Visakhapatnam in February 2016.

Rear Admiral Sanjay Jasjit Singh is a third-generation armed forces officer. An alumnus of the National Defence Academy (NDA), KhadakWasla, he always excelled during training. Adjudged as the Best Naval Cadet at NDA, he was awarded the Binoculars as the Best Sea Cadet and the coveted Sword of Honour as a Mid-



shipman. Commissioned on July 1, 1986, the officer is a specialist in Navigation and Direction course, which he topped, in 1992. He also underwent the Advanced Command and Staff Course at UK, in 2000, where he was the Best Overseas Student amongst Army, Navy and Air Force officers from 47 countries. He has also undergone the Naval Higher Command Course at the Naval War College, Mumbai, and the National Security Strategy Course at the National Defence College, Delhi.

He has held a range of command, training and staff appointments, and has served on most classes of ships of the Indian Navy. His sea command appointments include command of the ASW and UAV-control frigate INS Taragiri, where he was awarded the Nao Sena Medal for his high performance, and the multi-role frigate INS Trishul. His training appointments include officer-in-charge of the Local Work Up Team, responsible for Operational Sea Training of ships, and the Navigation Direction School, his alma mater. In his staff appointments, he has served as the Joint Director of Personnel, Indian Naval Attaché at Iran, Principal Director of Naval Operations and, till recently, the Principal Director Strategy, Concepts and Transformation, wherein he was responsible for drafting the revised Indian Maritime Security Strategy and the Strategic Guidance to Transformation, both of which were released recently.

A keen swimmer and avid reader, he has written regularly on defence and strategic issues. He was earlier the lead drafter for the Indian Navy's Maritime Doctrine, for which he was awarded Commendation by the Chief of the Naval Staff. He has completed several post-graduate study programmes, including MA (History) and MPhil (Arts) from Mumbai University, MA (Defence Studies) from King's College, London, and M.Sc and MHIL (Defence and Strategic Studies) from Madras University. **SP**

## India and Oman Navies to celebrate 60 years of diplomatic relations

**I**ndian Navy and Royal Navy of Oman (RNO) are set to sail together from Muscat to Kochi to celebrate 60 years of diplomatic relations between the two countries as well as to retrace the historic sail ship voyages undertaken by Dhows, and sail trading ships from both countries to each other's ports, taking advantage of seasonal winds. These seasonal winds are called 'Mausam' in Arabic. The flourishing trade of spices and garments from India and dates and gold from Oman, nurtured the two civilisations, developing cultural and trade linkage over many centuries. Since then, over five lakh Indians have made their home in Oman strengthening cultural linkages between the two nations.

Indian Sail Training Ship Tarangini is scheduled to arrive Muscat on November 22, 2015. A host of activities including media interaction are planned by the Indian High Commission at Muscat. The ship will embark 'Distinguished' personnel for short duration during the sail out on November 24, 2015. A Flag Officer from Indian Navy is planned to be deputed for the event at Muscat.

In consonance with the spirit of the event, cadets and young officers from Royal Navy of Oman will embark Indian Sail Training Ship and a few officers and cadets from Indian Navy will embark STS Shabab Oman during sail together from Muscat to Kochi.

On arrival of both Sail Training Ships at Kochi, a grand welcome and a befitting closing ceremony to this endeavour are planned from December 4-7, 2015. Various events such as Distinguished Visitors Programme (DVP), media interaction, reception



hosted by both ships, cultural/heritage tour for RNO personnel, sports fixtures and visit to Indian naval facilities at Kochi by RNO personnel are planned.

The event, celebrating 60 years of establishing diplomatic relations, as well as one of the first major events under 'Project Mausam', will further strengthen diplomatic and maritime linkages between the two countries and pave the way for more such endeavours. **SP**

## Air Chief inaugurates 'Make in India' seminar

**T**he Chairman Chiefs of Staff Committee and the Chief of the Air Staff, Air Chief Marshal Arup Raha addressed senior officers of the Hindustan Aeronautics Limited (HAL) at the inauguration of the Seminar & Exhibition on 'Challenges in Make in India Initiatives' at HAL Nasik Division.

The Air Chief said that indigenisation holds the key to success in attaining self-reliance in defence production and gaining strategic independence. The Air Chief expressed his appreciation on the successful conduct of the event being organised by HAL. He said that quality control and certification of indigenous products should be the focus area to produce world-class high quality equipment.

He further commended the role of HAL and its rich legacy. He said that its history and growth over the last 50 years was synonymous with the growth of the aeronautical industry in India. The MiG Complex has undertaken licensed production and overhaul of various Russian origin aircraft.

The Air Chief further said that the status of the IAF aircraft inventory was mainly dependent upon HAL and he hoped that HAL would ensure timely inductions, quality product support and speedy overhaul of aircraft.



The Air Chief complimented HAL for its significant contribution towards 'Make in India' initiative and boosting self-reliance through indigenisation. He emphasised that setting up of state-of-the-art test facilities for future programmes should be a key focus area so as to transform HAL into a major manufacturing and research and development centre of excellence in the field of aviation. **SP**

## Air Marshal Arora is the new DC (Inspection & Safety) of IAF

**A**ir Marshal Singh Arora took over as Director General (Inspection and Safety) at Air Headquarters, on December 1, 2015.



Air Marshal Arora was commissioned in the Indian Air Force (IAF) as a fighter pilot in December 1981. He has over 2,600 hours of operational flying on MiG-21, MiG-29 and other variants of aircraft in IAF inventory, including helicopters. He has served as Directing Staff at Tactics and Air Combat Development Establishment (TACDE) and as a Flying Inspector in the Directorate of Air Staff Inspection (DASI). He was deputed as defence attaché in the Embassy of India in Bangkok, Thailand, from 2006 to 2009.

He commanded 45 Squadron - The Flying Daggers - as a Wing Commander and as a Group Captain he was Commander of Air Defence Direction Centre and Station Commander of a Signal Unit based at Jodhpur. As an Air Commodore he commanded Air Force Station Adam-

pur in Punjab and as an Air Vice Marshal he was Air Defence Commander at Headquarters of Western Air Command as well as Eastern Air Command.

He is a meritorious graduate of TACDE, Defence Services Staff College and the National Defence College. He is also master of philosophy in defence and strategic studies.

In recognition of his meritorious service, he was commended by the Air Officer Commanding-in-Chief in 1997 and was awarded Ati Vishist Seva Medal on January 26, 2011, by the President of India. **SP**

## Final Boeing C-17 Globemaster III departs Long Beach assembly facility

**T**he final Boeing C-17 Globemaster III military airlifter at the company's plant in Long Beach, California, departed on November 29, marking the official end of aircraft production in Long Beach.

With the completion of C-17 production, Boeing will continue the Globemaster III legacy, providing support, maintenance and upgrades to the worldwide C-17 fleet under the C-17 Globemaster III Integrated Sustainment Program (GISP) Performance-Based Logistics agreement.



"This is truly the end of an era. It's a sad day, but one that all of the Boeing employees and suppliers who have worked over the years building this great aircraft can be proud of," said Nan Bouchard, Vice President and C-17 Program Manager.

The decision to end production of the C-17 airlifter was announced in 2013. Since the first C-17 took to the air on September 15, 1991, the C-17 fleets for the US Air Force and international partners have amassed more than three million flying hours supporting airlift of troops and large cargo, precision airdrop of humanitarian supplies and lifesaving aeromedical missions. **SP**

## White House placed on lockdown after fence-jumper caught

**T**he White House was placed on lockdown recently after a person jumped the fence, CNN reported, adding that the jumper was immediately caught.

Despite the quick capture, the presidential mansion was still on lockdown as the Secret Service conducted a security sweep of the area, ABC News and other media outlets reported. Representatives for the Secret Service could not immediately be reached for comment on the incident.

The Thanksgiving Day incident came amid heightened security concerns in the US and other western countries following the November 13 attacks in Paris that killed 130 people. Islamic State has claimed responsibility for the attacks.

President Barack Obama was in Washington at the White House to celebrate the US holiday, according to his public schedule. **SP**



## French intelligence blamed for Paris attacks



**T**he most glaring slip-up was the failure to flag up the arrest of a Montenegrin suspect in Bavaria 10 days ago in a car packed with Kalashnikovs and grenades – with Paris in his sat-nav.

The information was passed to Interpol but a report said the French did not seem to be interested. One of the killers, Omar Ismail Mostefai, was a Parisian who had been on a terrorist list for five years.

The petty criminal with eight convictions is thought to have travelled to Syria in the past two years. The discovery of a Syrian passport belonging to one of the terrorists suggests one or two of them might have entered Europe as part of the wave of Middle East refugees. **SP**

## Incidents of cyber security breach surge 117 per cent in India: PwC

**I**ncidents of cyber security breach surged by a record 117 per cent during the year and companies are investing more to tackle this menace, as also improve business performance, said a survey.

According to global consultancy firm PwC along with CIO and CSO, “The average number of information security incidents detected by respondents increased by 117 per cent over the previous year, up from 2,895 last year to 6,284 this year.”

Meanwhile, the increase in incidents of cyber security breach globally stood at just 39 per cent during the period under consideration (July 2014-June 2015). The report said that companies in India are investing more to reduce cyber security risks and improve business performance as a 71 per cent increase in budget on cyber security were seen during the said period. Moreover, an increasing number of organisations are now adopting cloud-based security models to manage cyber threats, the report said.

“Organisations in India are looking towards innovative cyber security solutions, and we have seen a 25 per cent compounded annual growth rate (CAGR) in security budgets over the past five years, which support this trend,” PwC India leader, Cyber Security, Sivarama Krishnan said.

Over 71 per cent respondents use some form of cloud-based security tools such as analytics, advanced authentication and identity and access management, the report said. “Not only are leaders adopting innovative solutions, but even fundamental security technologies and practices have seen wider acceptance, and organisations have evolved to master the basics,” he added.

Losses as a result of incidents of cyber security also surged by 135 per cent over the previous year, and the average cost per incident increased by close to 8 per cent, the report said. **SP**





Follow us on Twitter



**SP GUIDE PUBLICATIONS**  
[www.spguidepublications.com](http://www.spguidepublications.com)

*A  
Finest & Handy Document*

Now Available  
**NEW EDITION**

# Indispensable Reference

## SP'S MILITARY YEARBOOK 2015- 2016

S I N C E 1 9 6 5

43RD ISSUE

*From 51 Years Old Media House*

**MUST BUY FOR ALL THOSE WHO VALUE & ARE  
ASSOCIATED WITH THE ARMED FORCES IN THE  
DESTINATIONS - INDIA & ASIA**



**Reserve Your  
Own Copies, Now!**

[order@spsmilitaryyearbook.com](mailto:order@spsmilitaryyearbook.com)



**SP GUIDE PUBLICATIONS**