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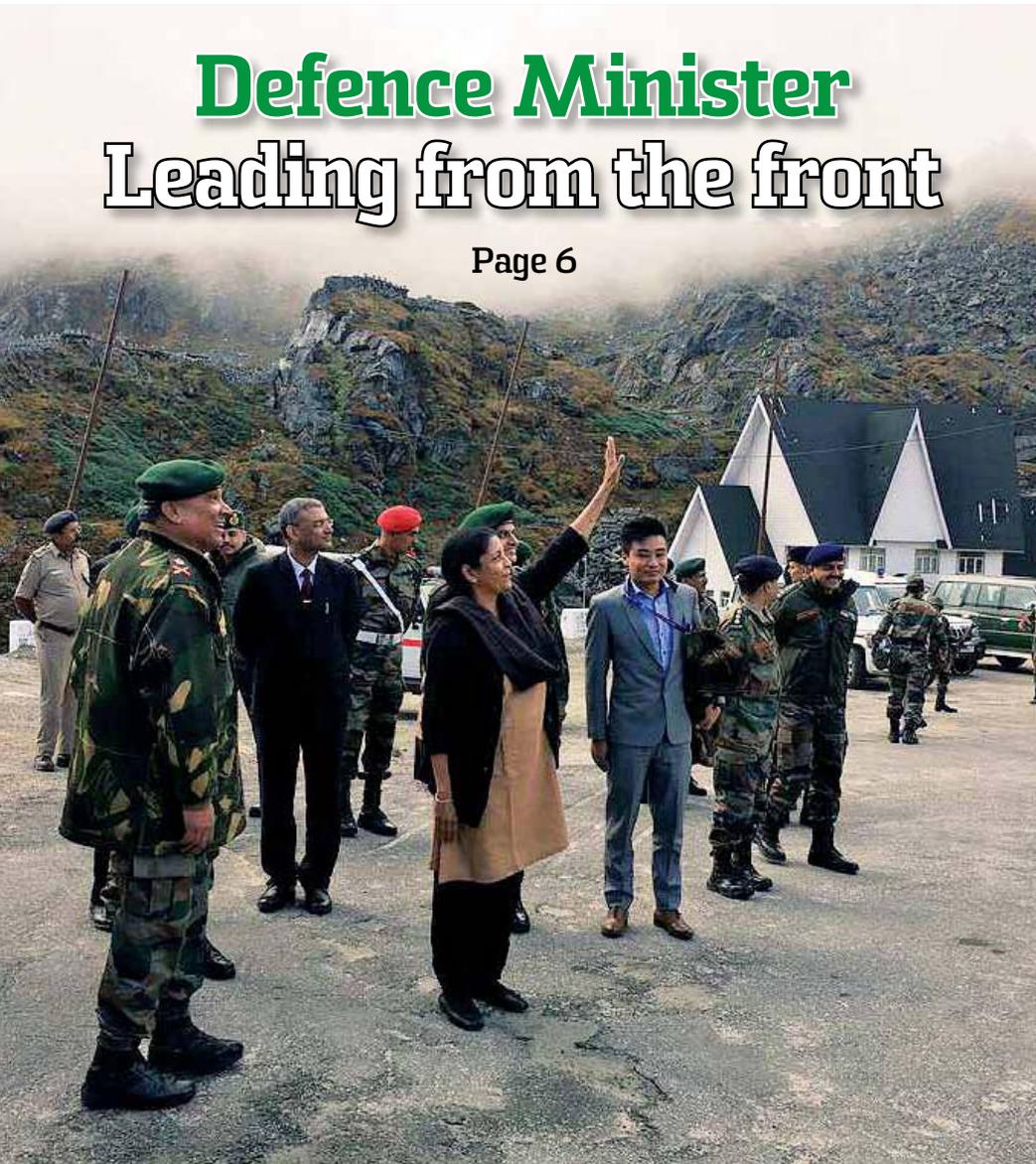
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ONLY FORTNIGHTLY ON **MILITARY AEROSPACE INTERNAL SECURITY**

## Defence Minister Leading from the front

Page 6



### Nirmala Sitharaman shows the way

PAGE 8



### Hands-on approach to national security

PAGE 10

DELENG/2010/34651

**FROM THE EDITOR'S DESK** 4  
**SECURITY BREACHES** 22

**MILITARY**  
Updates 14

**AEROSPACE**  
IAF Anniversary  
Developments  
Unmanned

**CORPORATE**  
15 News 20  
18 Technology 21  
19



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Narendra Modi, Hon'ble Prime Minister of India (\*message received in 2014)



**SP GUIDE PUBLICATIONS**

[ SP's @ 53 PURSUING EXCELLENCE OVER FIVE DECADES SINCE 1964 ]

## Indian Naval Ships Satpura and Kadmatt visit Sasebo, Japan

In pursuance of India's Act East Policy and demonstration of India's commitment to peace and stability in the Indo-Pacific Region, Indian Naval Ships Satpura and Kadmatt are visiting Sasebo, Japan from October 12 to 15, 2017. The visit of these ships is part of the Indian Government's initiatives to strengthen the long standing, mutually supportive and strong relationship between Japan and India. This historic relationship spans across the entire spectrum of engagement between both countries - cultural, spiritual, economic and security.

The visiting Indian Naval ships will engage with the JMSDF in formal calls, as also professional, social and sporting interactions. After completion of the harbour phase, the ships will take part in Passage Exercise (PASSEX) with the Murusame Class destroyer, JS Kirisame.



Since the first 'Navy to Navy Staff Talks' between the two nations in November 2008, naval ties have reached new heights with bilateral and multilateral exercises and enhanced cooperation in information sharing, meteorology and oceanography, disaster management and military training. The defence and security interaction between both countries has since expanded to encompass a Defence Policy Dialogue and a Maritime Affairs Dialogue.

Both navies look forward to enhanced cooperation in the fields of military technology, white shipping, training, intelligence sharing, humanitarian assistance and disaster relief and exchange of subject matter experts in various fields. With relations between both countries at an all time high and more avenues under consideration, the future looks promising with safer sea lanes and highly modernised navies helping in fulfilling each other's obligations. 



### Cover:

*Nirmala Sitharaman has adopted a proactive approach and has begun her tenure by acquainting herself with the ground situation on the hostile frontiers on which the Armed Forces are deployed.*

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## Leading from the front

**A**mong all the ministerial portfolios, the defence portfolio is very crucial and during the three years of the NDA Government, we have seen frequent changes with the Finance Minister, Arun Jaitley stepping in twice as interim Defence Minister. After Manohar Parrikar's return to Goa as Chief Minister, the Prime Minister had the onerous task of picking a person of high calibre at the helm of this key portfolio.

The Prime Minister moved Nirmala Sitharaman from the Ministry of Commerce and Industries as the Defence Minister, there could not have been any better choice. She has stepped into the 'boots' and is already leading from the front, having gone to forward bases, egging armed forces personnel to remain their best, prioritising the requirements and setting the agenda, though there is still a long way to go before she gets the grip on the labyrinthine portfolio.

In an open letter to the Minister, the former Chief of the Air Staff, Air Chief Marshal PV.Naik (Retd) has written "You are a lady RM (Raksha Mantri) and not a ladies' RM. You are a soldier's RM, both men and women. My wife says she has tremendous faith in you. In fact, I speak for all soldiers. We have high hopes in you." The former Air Chief said the new Defence Minister's mantra should be re-equip and re-arm. Reforms can be taken up later. "It is, in fact, a crying need that the Armed Forces must be integrated with MoD and become a part of the decision making apparatus. We should start small, say at Director level, and make it work before taking it further. This, ma'am, is the first step. Without this, the rest is cosmetic."

The Minister has already shown the way. Her visit to the operational sectors is a very appropriate step for it is not only good for the morale of the soldiery but also is indicative of a dynamic Defence Minister who wants to not only understand the operational dynamics of each theatre of operations but also wants to see the actual ground conditions in various sectors of a theatre, writes Lt General V.K. Kapoor (Retd). Similarly, Air Marshal B.K. Pandey (Retd) is endorsing the proactive approach of the Minister and said she has

begun her tenure by acquainting herself with the ground situation on the hostile frontiers on which the Armed Forces are deployed.

We also have coverage of the the 85th anniversary of the Indian Air Force, which was celebrated across the nation, the main event at the national level was the Air Force Day Parade at Air Force Station, Hindon.

In his fortnightly viewpoint, Lt General P.C. Katoch has called for equipping the foot soldier. He opines that it is an irony that the soldier at the cutting edge continues with antiquated weapons and equipment even as the nation uses the Army as first respondents even for law and order duties that should be taken on by the huge police forces. While welcoming the decision to equip the Army with the advanced medium-range-surface to air missile (MRSAM) capable of shooting down ballistic missiles, fighter jets, AWACS (airborne warning and control systems), surveillance aircraft, helicopters and drones, at a range of 70 km, by 2020, Lt General Katoch gives emphasis to the needs of the foot soldier.

These articles and more in this issue. Happy reading !

A handwritten signature in blue ink, consisting of several overlapping loops and lines, positioned above the name and title of the author.

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

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AIR CHIEF MARSHAL  
P.V. NAIK (RETD)

# I like the Raksha Mantri

*I first saw her as the Party spokesperson. She exhibited logic, patience and a good command over both Hindi and English. Her fighting spirit, toughness and bulldog tenacity were there for all to see.*



Defence Minister Nirmala Sitharaman took part in the festivities, and interacted with troops at Siachen Base Camp on Vijay Dashmi

**I** do not know why but I like the new RM. I have tried to analyse the reason. She looks sincere and she has worked hard in her previous ministry. I first saw her as the Party spokesperson. She exhibited logic, patience and a good command over both Hindi and English. Her fighting spirit, toughness and bulldog tenacity were there for all to see. In effect she became a prominent public figure during the run up to the 2014 elections. Then she was given independent charge of Commerce and Industry ministry. What surprised me was that after becoming a junior Minister, she totally vanished off the TV screen. To me this showed simplic-

ity and good judgement. Her appointment as RM was, indeed, a pleasant surprise.

The RM has done her graduation and Masters in economics. I expect her to be peripherally aware of Defence issues as much as any other Minister. Now the whole 'kichdi' is in her lap. She is a Cabinet Minister. She is a member of the CCS. Everybody will be watching her performance because she is the first lady to take charge of the Defence set up. Many would like her to stumble and fail. I am sure many more would like her to succeed. By now, definitely she is up to her ears in files and briefings and every sec-

and person must be telling her what to do and what to watch out for. It is a tough field. There has been a lack of continuity and the problems are pressing. The timing is such that I do not envy her. I would like to help, in my own little way, if I may.

Ma'am the first thing you must have realised is that you do not have a lot of time. The General elections are less than two years away. Hence it is vital to prioritise issues that can be dealt with in this time frame. The second facet to understand is that the Defence Ministry is unlike any other. All other ministries have a singularity of purpose. All members of the ministry work towards the same aim. In your Ministry it is 'us' versus 'them'. Through the Seventies, Eighties and the Nineties, the bureaucracy continued to acquire disproportionate powers vis-à-vis the Service Chiefs. The bureaucracy conveniently points to the "Government of India Transaction of Business Rules" framed in 1961 under the constitutional powers of the President of India. These documents continue to guide the conduct of business by the Government of India. It is instructive to read the document. Under these rules, the three Service headquarters were designated as "Attached Offices of the Department of Defence", and are therefore placed in a position subordinate to the DoD. The Service Chiefs, as professional heads of the three Armed Forces and with an experience garnered over a period of at least four decades, found no mention in these rules. The Secretary Department of Defence on the other hand, according to these rules, is responsible for Defence of India and every part thereof including preparation for defence and all such acts as may be conducive in times of war to its prosecution and after its termination to effective Demobilisation. It is, in fact, a crying need that the Armed Forces must be integrated with MoD and become a part of the decision making apparatus. We should start small, say at Director level, and make it work before taking it further. This, ma'am, is the first step. Without this, the rest is cosmetic. Just 'lipstick'.

The next step is to 'see the lay of the land'. You must visit the forward areas and go to the forward units. Mingle with soldiers. Share a cup of tea in an enamel mug. Eat fresh pakoras in a cracked plate. Do not give them speeches but talk to them and listen to them. You will get an idea of their life spent in the service of the nation. Appreciate the hardships. Please visit the forward Air Force and Naval bases. The aim is to gain the trust of the soldier. Promise them only what you can deliver. But deliver on your promises.

Learn to trust your Chiefs of the Army, Navy and the Air Force. These are officers who have been through the mill for almost four decades. They carry a wealth of knowledge and experience in matters pertaining to military security. Harness this wealth. Give them easy access to your office. I can, personally, vouch for all three, ma'am. Their loyalty is already absolute. As a corollary, you, too, must gain their trust. I am sure you have already started having briefings every morning. May I suggest you avoid this temptation. Do not concern yourself with routine. Nothing would please the bureaucracy more than to tie you up with routine and the mundane. I think a weekly meeting with the Def sec & the Chiefs would suffice, but do minute these meetings for follow up. For military grievances, ask military advice. For a solution, involve both the military and the babus. Please, for heavens' sakes, do not take

**The mantra should be re-equip and re-arm. Re-forms can be taken up later.**

Today's procurement cycle is about six to eight years. The PM's policy of 'Make in India' is vital for us. In the two odd years available to you, try to clear the way for Private sector to participate in Defence production. Try to create a level playing field. They are ever so willing to contribute. Ma'am, I would urge you to view HAL and DRDO with more than a modicum of concern. They are monolithic and need critical surgery. Ideally, they need to be sub divided into manageable entities under professional management. Presently, just make them more accountable. The serious business, leave it for your longer innings.

Many will try to convince you that a Chief of Defence Staff (CDS) is the answer to all ills, a sort of panacea. May I suggest you not touch this subject even with a long barge pole. You do not have the time. Of course, a CDS is required in six or eight years time. After WWII almost every country had some sort of a CDS. The jointness, however, was conspicuous by its absence. In UK it was the Iron Lady, Maggie Thatcher, threatening dire consequences, that brought in a reluctant jointness. In the US they had to enact the Goldwater-Nichols Act through the Congress. Do you have the time? Best leave it to the second innings. The mantra should be re-equip and re-arm. Re-forms can be taken up later.

I should like to paraphrase a passage from Chanakya's advice to his king." If ever things come to a sordid pass, O King, when, on a given day, the Mauryan soldier has to LOOK BACK over his shoulder ("Simhawalokana") prompted by even a single nagging worry about his and his family's material, physical and social well being, it should cause you and your Council the greatest concern and distress! It is my bounden duty to caution you, My Lord, that the day when the Mauryan soldier has to demand his dues or, worse, plead for them, will neither have arrived suddenly, overnight nor in vain. It will also bode ill for Magadha. For then, on that day, you, My Lord, will have lost all moral sanction to be Rajadhiraja ! It will also mark the beginning of the end of the Mauryan Empire!" I think Chanakya brings out very clearly what the society owes a soldier. His self respect must never be trifled with. Do not be lulled by the term 'equivalence'. A soldier's task is a thousand times more onerous. The rest, ma'am I leave to your decency and judgement.

**You are a lady RM and not a ladies' RM. You are a soldier's RM, both men and women. My wife says she has tremendous faith in you. In fact, I speak for all soldiers. We have high hopes in you.**

military decisions based solely on the shadow files created by Babus. Do consult the Chiefs.

The premier need of all three Services today is equipment. Tanks, guns, aircraft, ships, weapons, ammo. Please give it top priority. May I sincerely urge you not to fiddle around with DPP. Instead, remove the blockages. Find out who is responsible for delay and let the heads roll.

Today's procurement cycle is about six to eight years. The PM's policy of 'Make in India' is vital for us. In the two odd years available to you, try to clear the way for Private sector to participate in Defence production. Try to create a level playing field. They are ever so willing to contribute. Ma'am, I would urge you to view HAL and DRDO with more than a modicum of concern. They are monolithic and need critical surgery. Ideally, they need to be sub divided into manageable entities under professional management. Presently, just make them more accountable. The serious business, leave it for your longer innings.

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I saw pics of your visit to the Navy. You also launched an all women sailing expedition to circumnavigate the globe. Perfectly fine. Just a small reminder. You are a lady RM and not a ladies' RM. You are a soldier's RM, both men and women. My wife says she has tremendous faith in you. In fact, I speak for all soldiers. We have high hopes in you. Whether you tow the Party line or represent the soldier constituency only time will tell. Let me candidly share with you, ma'am. Win a soldier's trust and see what it feels like . It is a fantastic feeling.

God forbid that I should ever be so presumptuous as to offer advice to anyone holding such a high station. Shared above are just a few suggestions, offered in good faith, in my personal capacity, because I like the RM. 



LT GENERAL V.K. KATPOOR (RETD)

# Nirmala Sitharaman shows the way

*The visit of Nirmala Sitharaman to the operational sectors is a very appropriate step for it is not only good for the morale of the soldiery but is an indicative of a dynamic Defence Minister who wants to not only understand the operational dynamics of each theatre of operations but wants to see the actual ground conditions in various sectors of a theatre.*



Defence Minister Nirmala Sitharaman interacting with the officers and jawans during her visit to the Solmara Military Station, Tezpur, on October 8, 2017

**N**irmala Sitharaman, after becoming the new Defence Minister has been very active to say the least. Apart from holding regular meetings with all three Service Chiefs and the defence secretary to ensure quick decision making in her ministry, she has laid special emphasis on the need to step up the pace of military procurement which despite some dynamism shown by the erstwhile Defence Minister, Manohar Parrikar, in the past, the state of equipment procurement and modernisation is entirely unsatisfactory. The Indian Army lacks modern weaponry which includes basic weapons like carbines and assault rifles, artillery howitzers, helicopters, surveillance and communication equipment, air defence and anti-tank missiles, night fighting aids etc all need replacement/procurement. Moreover, till

very recently even certain categories of ammunition were in short supply and thus there was no ammunition available even for training. The Minister has also declared that she will also hold meetings of the Defence Acquisition Council once every two weeks. The fact that the Prime Minister of India has entrusted her with this important portfolio also speaks volumes for her administrative talent and past efficiency and she is surely and impressively proceeding ahead.

## Visits to Arunachal and Sikkim

Her recent visits to the border areas in Arunachal and Sikkim, aerial survey of Doklam and Nathu La area, and visits to the Army and Air force stations in the vicinity have evoked very positive responses from the countrymen and the Indian soldiery. These visits are indic-



Defence Minister Nirmala Sitharaman with the Vice Chief of Army Staff and other senior army officials at the BPM Hut at Nathu-La

ative of the great interest she is taking in understanding the operational environment in the Eastern Theatre which we could say has been somewhat neglected by the political leadership in the past. While they are used to sanctioning some projects from time to time the defence ministers in the past seldom went to the forward areas of the line of control (with Pakistan) or the line of actual control (with China) to familiarise themselves with the happenings on the ground and to see for themselves the state of preparedness of the armed forces in the various sectors.

For a long time India has felt the need for an active Defence Minister who was willing to understand issues on the ground and even visit to the high altitude areas to meet the soldiery. George Fernandes, with his large number of visits to the Siachen Glacier, was perhaps the last Defence Minister who was active in this respect. Generally they have satisfied themselves with briefings in the operational rooms/offices but would seldom moved out to the operational sectors. Thus the visit of Nirmala Sitharaman to the operational sectors is a very appropriate step for it is not only good for the morale of the soldiery but is an indicative of a dynamic Defence Minister who wants to not only understand the operational dynamics of each theatre of operations but wants to see the actual ground conditions in various sectors of a theatre. This also has a message for our adversaries that here is a Defence Minister who “means business” and therefore integrity of the border areas will not be compromised.

**It is generally accepted by all military and strategic analysts that the time has come for the ministry to be manned by a cadre of officers who are skilled in the management of national security issues and in building military capabilities. A generalist cadre of IAS officers is no longer a viable solution for the complicated and hybrid nature of wars in the future.**

India welcomes the dynamic and no nonsense approach of the new defence minister, and her noble intentions, however at the strategic level, at which She is required to function, she must get her priorities right. And these include overcoming voids and shortages in equipment and ammunition; modernisation of weapons and equipment; early replacement of obsolescent weapons and equipment; drastic improvement of road infrastructure in the border areas in the east and in the west; integration of the Services with the ministry of defence; operational integration among the three Services through integrated regional commands and last but not the least, acquire the ability to fight on digitised battlefields in the future through net centricity.

### Our Recommendations

In the beginning, say for a few weeks, while she familiarises herself with the organisational, functional, and operational details her current activity is not only required but it is absolutely necessary. She should get a first hand feel of the terrain in general and operational conditions existing in various theatres of operations in the nation and thereafter get down to ensuring that the three Services are operationally prepared to face all operational situations that may arise. There is no point in boasting about ability to cater for a two front war if we are operationally not prepared. The best way is to ask the Integrated Defence Staff to hold a National level War Game which she could attend to understand the type of operational scenarios that we may be required to face as a nation and the broad parameters of the grand strategy/national strategy required for handling each scenario. Parts of some discussions could be attended by the Cabinet Committee on Security. This will bring out lessons at national level which could then be implemented with the staff of the Ministry and the three services. We could then say that the defence minister really means business.

Our Ordnance factories are legendary for their lethargic and poor work culture and are responsible for poor state of ammunition reserves in the country.. The Directorate General of Quality Assurance (DGQA) is another organization which is known more for its corrupt practices and inefficiency. Similarly the departments such as the Controllers of Defence Accounts (CDAs) are again establishments which have expanded manifold but have a poor record of competence notwithstanding some islands of efficiency. So perhaps these are areas where the Minister should also pay more attention to because they are ones who are required to provide the logistics (equipment and munitions) and are responsible for the good morale of the soldiery.

It is generally accepted by all military and strategic analysts that the time has come for the ministry to be manned by a cadre of officers who are skilled in the management of national security issues and in building and establishing military capabilities. This cadre can be drawn from the Services as well as the IAS officers who are especially trained in the management of such issues. A generalist cadre of IAS officers is no longer a viable solution for the complicated and hybrid nature of wars in the future. **SP**



AIR MARSHAL  
B.K. PANDEY (RETD)

# Hands-on approach to national security

*Nirmala Sitharaman has adopted a proactive approach and has begun her tenure by acquainting herself with the ground situation on the hostile frontiers on which the Armed Forces are deployed*



Defence Minister Nirmala Sitharaman inside the cockpit of MiG-29 fighter aircraft on her visit to Air Force Station Jamnagar, Gujarat, on October 6, 2017

**I**n the first week of September this year, Nirmala Sitharaman scripted history of sorts when she assumed charge as the first full-time woman Minister of Defence (MoD) in the history of Independent India spanning just over seven decades. She is the second woman to hold this appointment in India, the first being Indira Gandhi who was only a part-time functionary first in the mid 1970s and then again in the early 1980s. During these tenures, she held the Defence portfolio as additional charge while holding the top political appointment of the Prime Minister of India. As the Minister of Defence, Nirmala Sitharaman is also a member of the Cabinet Committee on Security (CCS), the others being the Prime

Minister of India, the Minister of Home Affairs, the Minister of External Affairs who at this point in time also happens to be a lady and the Minister of Finance.

There is no doubt that the responsibility associated with Nirmala Sitharaman's new appointment is enormous and so are the challenges for her that lie ahead. And these indeed are formidable. She undoubtedly is fully aware of the responsibilities accompanying the high profile appointment as is evident from her own words "The role given to me is both challenging and interesting. From here onwards, I will have to prove myself and perform to satisfy the expectations of those who have assigned me for this role." More importantly, as the Minister hold-

PHOTOGRAPHS: PIB, Twitter



(Top and middle) Defence Minister Nirmala Sitharaman laying wreath at the War memorial at Siachen Base Camp on September 30, 2017; (above) Defence Minister at the international border at Nathu-la, Sikkim on October 8, 2017.

ing the Defence portfolio, Nirmala Sitharaman has to ensure that the nation's military is adequately equipped to meet with the challenges of ensuring national security in real terms and not merely project a façade through mere rhetoric as has sometimes been the case.

Two days before she formally took charge of the Ministry of Defence on September 6, 2017, the three service chiefs called on her and apprised her about the overall security scenario, the challenges ahead, the state of operational preparedness and the major issues concerning the Indian Armed Forces. Apparently, in her view, briefing by heads of the Indian Armed Forces was clearly not enough. On her part she has adopted a proactive approach and has rightly begun her tenure by acquainting herself with the ground situation especially on the hostile frontiers on which the Indian Armed Forces are deployed.

### Visit to Operational Areas

The Minister of Defence began her tour on September 10, 2017, with a visit to Goa Naval Area even though it was a Sunday. She was received by Vice Admiral Girish Luthra, Flag Officer Commanding Western Naval Command and Rear Admiral Puneet K. Bahl, Flag Officer Commanding, Goa Naval Area. After a ceremonial reception at the Naval Base Hansa, the Minister of Defence and members of her staff were briefed on Naval Aviation. The briefing was followed by a demonstration of operations by the MiG-29K carrier-borne combat aircraft. The Minister of Defence also flagged off in Panaji, an all-women team of the Indian Navy tasked with a mission to circumnavigate the globe signalling a new level of empowerment of women in the Indian Armed Forces. On the same day, Nirmala Sitharaman visited Golden Katar Division of the Indian Army in Ahmedabad where she was received by General Bipin Rawat, Chief of the Army Staff (COAS) and Lieutenant General P.M. Hariz, GOC-in-C, Southern Command. She desired to first visit the area of Sir Creek owing to its critical importance to the overall security paradigm of Indian Army's Southern Command. She was briefed on the strategic importance of the area and the need to maintain effective surveillance. Nirmala Sitharaman was appreciative of the way the troops were maintaining territorial integrity and were prepared for any eventuality.

On September 16 and 17, 2017, the Minister of Defence visited Headquarters Western Command of the Indian Army located at Chandimandir. Here she was briefed on the operational preparedness, administrative issues and ex-servicemen affairs by Lt Gen Surinder Singh, GOC-in-C Western Command, Army. In response, she appreciated the efforts of Western Command and expressed her complete confidence in its immense operational might. She also lauded its contribution in all spheres including assistance to civilian administration especially during the recent past. She also laid a wreath at Veer Smriti, planted a sapling and interacted with Junior Commissioned Officers and Other Ranks from the units located there. The following Saturday i.e. on September 23, 2017, Nirmala Sitharaman visited the field firing range in Khetolai area in Pokhran and interacted with the senior officers of the Indian Army stationed there.

The following week i.e. on September 29, 2017, Nirmala Sitharaman arrived at Srinagar on her two-day maiden visit to the state. Accompanied by General Bipin Rawat, COAS, she headed for Kupwara in North Kashmir for an on-ground assessment of the situation along the Line of Control. On return to Srinagar from Kupwara, she was briefed on the overall situation in the Valley, including counter-insurgency and counter-infiltration operations. Nirmala Sitharaman complimented the commanders for the high level of synergy achieved with the Jammu and Kashmir Police and central armed paramilitary forces. Later in the evening, she interacted with Chief Minister Mehbooba Mufti and called on Governor NN Vohra.

From Srinagar, Nirmala Sitharaman flew to Ladakh on September 30, 2017, visited forward locations including Siachen and reviewed



Defence Minister Nirmala Sitharaman on the Arjun Battle Tank along with the Arjun regiment on September 23, 2017

the security situation in the area. She was accompanied by the COAS, Army Commander, Northern Command and Commander 14 Corps. She interacted with the soldiers in the remote areas of Siachen Glacier, the world's highest and coldest battlefield and in the Ladakh region and conveyed her best wishes on the occasion of Dussehra. She uttered comforting words when she said "I assure you that the government is with you all the time and in all circumstances. We are not only sensitive to your needs and demands, but also to those of your families."

She also inaugurated a bridge on river Shyok on the road between Durbuk and Daulat Beg Oldi which was constructed by the Border Roads Organisation. During her visit, she also interacted with personnel of the IAF serving at the Air Force Station, Leh.

From the icy heights of Siachen, the next weekend i.e. on October 7, 2017, Nirmala Sitharaman was at Air Force Station Jamnagar in Gujarat to garner first hand information about the role and nature of operations undertaken by the IAF air base. A live demonstration of special heliborne operations by the Garud Commandos was also staged for the Minister of Defence. She also sat in the cockpit of a MiG-29 fighter aircraft during her visit.

From the Western coast, Nirmala Sitharaman flew to the North East region of the country on October 7, 2017. She travelled 52 km by

road from Gangtok in Sikkim to visit Nathu La on the Sino-Indian border. She was accorded a guard of honour on her arrival at Nathu La and was also briefed about the security preparedness along the Sino-Indian border in the Sikkim sector by Lt Gen Abhay Krishna, GOC-in-C, Eastern Command. Lt Gen Sarath Chandra, Vice Chief of Army Staff was also present. Her scheduled aerial survey of Doklam and forward posts in the border areas of Sikkim was cancelled due to inclement weather. However, after her return from Nathu-la, she carried out an aerial survey of Gangtok and surrounding areas from the new Greenfield Pakyong Airport in East Sikkim.

Nirmala Sitharaman's appointment as the Minister of Defence came at a time when the stand-off with China in Doklam had ended. However potentially, relations with China will remain a challenge that she or the nation cannot wish away. But perhaps the most difficult task for her would be to provide the much needed impetus to the plan for modernisation of the Indian Armed Forces. Having traversed the length and breadth of the country in just over a month and having gained firsthand knowledge of the challenges the Indian Armed Forces are confronted with, Nirmala Sitharaman would be in a better position to understand the urgency with which issues pertaining to national security ought to be addressed. **SP**

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LT GENERAL  
PC. KATOCH (RETD)

# Ignoring the foot soldier – Chronic malady

**A**ccording to media reports, the Army is slated to get the advanced medium-range-surface to air missile (MRSAM) capable of shooting down ballistic missiles, fighter jets, AWACS (Airborne Warning and Control Systems), surveillance aircraft, helicopters and drones, at a range of 70 km, by 2020. These missiles are to be produced in a joint venture (JV) between the Defence Research and Development Organization (DRDO) and Israel Aerospace Industry (IAI). DRDO has signed a ₹17,000 cr deal with IAI to produce these missiles.

The MR-SAM, a land-based version of the long-range surface-to-air missile (LRSAM) for the Navy; the deal envisages 40 firing units and around 200 missiles. The first set of missile system reportedly will be ready in the next three years, albeit what that 'set' will constitute has not been specified. Hopefully, DRDO will meet this timeline but the overall provision of 40 firing units and 200 missiles will go much beyond 2020. However, this certainly is good news since these MRS-AMs will mark a paradigm shift in Army's strike capabilities.

What is not good news is the media report that the Ministry of Defence (MoD) has junked the order for procurement of light machine guns (LMGs) for the Army. According to the report, the MoD has scrapped the procurement plan for some 44,000 LMGs for the foot soldiers of the infantry, describing it as "another major blow to the Army's modernisation plans." MoD retracted the request for proposal (RFP) for the 7.62mm LMGs on ground it is single-vendor situation with only Israeli Weapon Industries (IWI) in the fray after protracted field trials (December 2015 to February 2017). The procurement plan was to import 44,000 LMGs with transfer of technology (ToT) under 'Buy and Make' followed by large-scale indigenous production by the Ordnance Factory Board (OFB), cost estimate of entire project being ₹13,000 crore. This is the third such project, after the cases for new assault rifles and close-quarter battle carbines, to be junked over the last two years. In May 2015, the RFP for the assault rifles was scrapped, forcing the Army in September 2016 to re-launch its global hunt for around two lakh new-generation 7.62mm x 51mm assault rifles after similar bids over last decade were shelved on various grounds including corruption.

In 2016, the MoD also scrapped tender issued in 2010 for 44,618 close-quarter battle carbines, in which too IWI had emerged as "resultant single-vendor" over Italian firm Beretta, amid allegations of irregularities and political intrigue. Significantly, the Army had issued a global tender in 2008 to replace the 1944 vintage British-era carbines but

the ensuing cycle has brought all efforts to nought. Similarly, in 1980, 17 x 5.56mm rifles from 11 countries were imported by MoD to equip three Parachute Commando battalions and three Parachute Battalions of the Parachute Brigade. Despite successful trials, the red tape and mafia blocked imports, giving these 17 weapons to DRDO who took 15 years to produce the 5.56 INSAS rifle that was nowhere close to top 10 assault rifles of the world.

The IPKF went to Sri Lanka in 1987 armed with the unwieldy 7.62 SLR rifles battling the LTTE armed with AK 47 assault rifles. Eventually, Army had to import 1,00,000 AK 47 rifles (then costing only \$300 apiece) to give 100 per infantry battalion in the IPKF. In 2011, another tender was floated for direct acquisition of 65,000 new generation assault rifles for the Army costing ₹4,848 crore to equip 120 infantry battalions. OFB was to then manufacture over 1,13,000 such rifles through joint venture with the foreign vendor providing ToT. The rifle was to weigh around 3.5 kg with advanced night-vision, holographic reflex sights, laser designators, detachable under-barrel grenade launchers etc. However, since the Excalibur had only some cosmetic changes to the original INSAS, it too failed in the trials undertaken by the Army. Now the whole process for procuring an assault rifle for the Army has started once again. Procurement of state-of-the-art LMGs has unfortunately met the same sorry end.

The irony is that the soldier at the cutting edge continues with antiquated weapons and equipment even as the nation uses the Army as first respondents even for law and order duties that should be taken on by the huge police forces. Forcing the infantry to continue with antiquated weapons on pretexts like "single vendor situation" and even "resultant single-vendor" is ridiculous. Why exceptions can't be made given the crying need for modernisation. Take the CQB carbine procurement; is the fault of the Army that despite elaborate trials, "resultant single-vendor" situation occurred.

If MoD had doubts, the entire trial process could have been scrutinised and retrials ordered, if required. For that matter, is the procurement plan for the MRSAMS not single-vendor situation? Why can't the same be applied to infantry weapon procurement after a global tender has been floated? The fact remains that no defence deal anywhere in the world goes without something under the table. Unfortunately, in case of small arms weapons especially in the case of 'Buy and Make' where only small number are to be imported, that 'something' is too small an amount. But then will the powers that be ever take a call to modernise the foot soldier, and if so, in what timeframe? **SP**

**The irony is that the soldier at the cutting edge continues with antiquated weapons and equipment even as the nation uses the Army as first respondents even for law and order duties that should be taken on by the huge police forces.**

## 'Integration of Services my priority' says Defence Minister

**D**efence Minister Nirmala Sitharaman joined the ongoing Army Commanders' Conference at Manekshaw Centre, Delhi Cantt for over 30 minutes and addressed senior Army hierarchy including Army Chief and all Army Commanders.

Welcoming the Raksha Mantri, the Army Chief informed the audience about the extensive travel undertaken by her to forward posts including Siachen after taking over the charge of the Ministry. He also expressed pleasure on the fact that Sitharaman had already travelled extensively in border areas of the North-East and also across the border in Tibet.

During her address, she referred to her visits to the forward areas and meeting with troops as eye-opening. She conveyed admiration of the Nation for the professionalism of the Indian Army during events like Doklam standoff, response to natural disasters and keeping the situation of insurgency in the North East states fairly under control.

Assuring focus on capacity and capability development, she promised close monitoring of improvement in strategic infrastructure, long pending force modification requests, welfare of serving, retired and families. The Defence Minister informed of her request to Home Minister for provisioning of HADR equipment to allow Indian Army to use them during natural disasters.

Listing her top priorities, she said integration of the Armed



Forces is essential particularly in the domain of training, communication, logistics and cyber among others to prepare for any future conflict.

She called upon Indian Army in continuing leveraging its strength in diplomatic defence cooperation with neighbourhood and in the region, support for Make in India dream and Nation building during all times. She confirmed that morale of forces will remain the highest among the priorities of the government. **SP**

## Indian Navy foils piracy attempt in Gulf of Aden



**A** piracy attempt on the high seas was foiled by an Indian Naval warship on 06 October 2017. INS Trishul a stealth frigate of the Indian Navy whilst on anti-piracy patrol in the Gulf of Aden, was escorting a merchant vessel MV Jag Amar when she detected a boat carrying out suspicious manoeuvres in the vicinity of the merchant ship.

INS Trishul closed the boat for investigation and launched her integral helicopter to investigate. The skiff was carrying items identified as piracy triggers and some small arms with ammunition. Marine commandos boarded the pirate boat and neutralised all piracy triggers in accordance with Standard Operating Procedures.

The merchant vessel Jag Amar with all 26 Indian crew is safe and is continuing her passage. The skiff and her crew were released.

The Indian Navy has been deploying a warship in the waters in and around the Gulf Of Aden since 2008 and has safely escorted hundreds of merchant vessels through these treacherous waters. Indian ships are mandated to prevent piracy and are not mandated for regional law enforcement. The actions taken by the ship are the rationale for the continued deployment of Indian ships for anti-piracy operations in the Gulf of Aden. **SP**

## INS ITS ships visit Penang, Malaysia

**I**ndian Navy Ships Tir, Sujata, Sudarshini, Shardul and ICGS Sarathi visited Penang, Malaysia from October 8 to 12, 2017. The visit was aimed to expose the trainees to the conduct of Indian Navy warship in foreign waters, port familiarisation and foster 'bridges of friendship' between the two countries. The ships belong to the First Training Squadron of the Indian Navy functioning under the Southern Naval Command, headquartered at Kochi and comprises six indigenously built ships, namely, Indian Naval Ships Tir, Sujata, Shardul, Indian Coast Guard Ship Sarathi and two Sail Training Ships, viz, INS Sudarshini and INS Tarangini.

The Southern Naval Command (SNC) is the Training Command of the Indian Navy which is headed by Vice Admiral A.R. Karve, Flag Officer Commanding-in-Chief, Southern Naval Command.

The Indian Navy has imparted training to international trainees for more than four decades, and approximately 13,500 personnel from over 40 countries have been trained. Presently four officers from Malaysia are undergoing various ab-initio to advanced courses at SNC. The Command has gained the reputation of being the finest training destination by maintaining a focussed approach to provide high quality training and by constant adaptation to evolving tactics and technologies. **SP**



Chief of the Air Staff Air Chief Marshal B.S. Dhanoa inspects the parade during the Air Force Day celebrations

# Anniversary Celebrations of the Indian Air Force

*While the 85th anniversary of the IAF was celebrated across the nation, the main event at the national level was the Air Force Day Parade at Air Force Station, Hindon.*

[ By Air Marshal B.K. Pandey (Retd) ]

**O**n Sunday October 8 this year, the Indian Air Force (IAF) celebrated its 85th anniversary country wide. Unfortunately, this year, the fervour and enthusiasm normally associated with the event, was somewhat subdued on account of two depressing episodes. First of these was the somewhat sudden demise of 98-year old Marshal of the Indian Air Force Arjan Singh, an iconic figure who with

his unmatched record of professionalism, valour and leadership, stood tall in the IAF fraternity. Even after his passing away, his memories will continued to be a source of inspiration for future generations and will be cherished forever. The second and a rather traumatic event was the crash of the Mi-17 V5 helicopter during a logistic support mission to forward posts in the North East in which rather tragically, seven brave hearts lost their lives. These included five officers and men of the IAF and two soldiers from the Indian Army.

(Top) Skydiver of the Akash Ganga team descending with ease and precision;  
(Middle) The IAF colours Nishan Toli marches past;  
(Bottom) IAF Air Warrior Drill Team displaying their alluring skills during Air Force Day parade.

While the 85th anniversary of the IAF was celebrated at all units and stations of the IAF all over the country, the main event at the national level was the Air Force Day Parade and the enthralling aerial display of put up by aircraft of the IAF at Air Force Station, Hindon near Ghaziabad in Uttar Pradesh. The parade was reviewed by Air Chief Marshal B.S. Dhanoa, Chief of the Air Staff (CAS), IAF. Amongst the dignitaries present were General Bipin Rawat, Chief of the Army Staff and Admiral Sunil Lanba, Chief of the Naval Staff. Also present were defence attaches as well as several other senior functionaries both from the civil and the military, serving as well as retired. A special guest of honour at the occasion was the former national level cricketing icon Sachin Tendulkar who has been conferred with the honorary rank of Group Captain.

Established on October 8, 1932, the IAF has a glorious record of performance and achievements in its history of 85 years. The fledgling IAF played a stellar role in the campaign against the rebels in the North West Frontier Province as also in World War II, thwarting the advance of the Japanese Army in Burma, now Myanmar. Since its inception, the IAF has ensured the security of the Indian air space with great diligence and dedication. Apart from participating in the several violent conflicts with the Pakistan, the IAF has undertaken a number of other minor operations which include Operation Vijay to claim Goa, Operation Meghdoot to establish control over the Siachen Glacier in the disputed Kashmir region, Operation Cactus that was India's intervention in the Maldives and Operation Poomalai to air drop supplies by transport aircraft over the besieged town of Jaffna in Sri Lanka. In addition, the IAF has always been in the forefront to undertake Humanitarian Assistance and Disaster Relief (HADR) operations both within the country and across the globe. These operations have included evacuation of Indian nationals as well as others stranded in foreign lands owing to turmoil and strife in those countries. The IAF has also been a participant in several of the United Nations Peacekeeping Missions as well as in air exercises with the Air Forces of other nations including of the major powers.

On the occasion of the 85th anniversary of the IAF, the President of India Ram Nath Kovind lauded the highly professional service through a message which said, "On Air Force Day, I salute the valour, commitment and dedication of our brave air warriors. They safeguard our skies." Prime Minister Narendra Modi too offered his greetings and felicitations on the occasion to all personnel of the IAF and their families. In a message on Twitter, the Prime Minister said, "On Air Force Day, best wishes to our courageous air warriors and their families. Their determination and prowess ensure that our skies are safe."

Union Minister of State for Defence Subhash Bhamre also greeted air warriors and their families on the occasion.

The events of the day began with flag-bearing sky divers of the famous Akash Ganga Team of the IAF jumping out of An-32 aircraft with their colourful parachute canopies and performing a series of manoeuvres during their descent to the ground before the spectators. On the tarmac of Air Force Station, Hindon, the entire range of aircraft on the inventory of the IAF was on static display with combat platforms in battle ready condition. Heralded by the bugle, contingent on parade consisting of four squadrons with two flights each, marched in smartly to the tune of the No1 Air Force Band and





(Top) IAF's SU-30MKI escorting C-17 Globemaster III during fly past carried out during Air Force Day Parade;  
(Middle) Surya Kiran Acrobatic Team (SKAT) comprising Hawk 132 advanced jet trainer performing manoeuvres;  
(Bottom) IAF Sarang helicopters carrying out a manoeuvre during Air Force Day Parade.



took position. The parade was commanded by Group Captain Syed Muzaffer Yunus, Commanding Officer of a Mi-17 V5 Helicopter Unit in Northern sector.

In the middle of the parade was the Nishan Toli carried by an officer and escorted by six air warriors. The Nishan Toli is a flag which symbolises the bravery, valour and commitment to mission, integrity and excellence of the IAF. It was presented to the IAF by Dr Rajendra Prasad, the first President of the nation on April 1, 1954. Since, then this flag is most revered and is hoisted on important occasions.

Inspection of the parade by the CAS was followed by the march past during which three Mi-35 attack helicopters of the IAF flew past. The march past was followed by presentation of awards. The Chief Guest and Reviewing Officer Air Chief Marshal B.S. Dhanoa then conferred the awards of Vayu Sena Medal, Vayu Sena Medal (Gallantry) and Vishist Seva Medal to individuals selected to receive these.

This was followed by address by the CAS in which he highlighted the grave security situation the country is currently faced with and the uncertainties in the present geo-political environment in the region. The evolving scenario may require the IAF to fight a short and swift war. He assured the nation that the IAF is prepared to fight a war at a short notice and is fully geared up to respond to any security challenge to the country in the most befitting manner. He went on to say that the focus was to transform the IAF into a technology-intensive force in the next few years to significantly enhance its overall prowess.

What followed was a stunning display of precision and coordination in rifle drill by the Air Warrior Drill Team of the IAF. In conformity with the motto of the team which is "Drill to Thrill", members of the Air Warrior Drill Team displayed a complex sequence of foot and rifle movements through nine different formations. The standard of performance this year was significantly better than that in October 2016.

The aerial display commenced with vintage aircraft, the Tiger Moth bi-plane, the erstwhile basic trainer aircraft and the Harvard single piston engine intermediate trainer aircraft that were in use in the 1950s and the 1960s. These two aircraft that were pulled out of the museum and participated in the aerial display, revived nostalgic memories amongst the elderly veterans who had trained on these platforms.

These vintage machines were followed by aircraft that are currently operational in the IAF. These included the C-17 Globemaster III heavy lift transport aircraft, the C-130J Super Hercules, Sukhoi Su-30 MKI, Mirage-2000, Mig-29s, Jaguar and the Mig-21 Bison. The high point of the aerial display was the display by the Light Combat Aircraft Tejas of the recently raised No 45 Squadron Flying Daggers. A Tejas piloted by the Commanding Officer of the Squadron, Group Captain Madhav Rangachari, staged an impressive air display, putting the Tejas through its paces before an appreciative audience despite the poor visibility.

The grand finale of the aerial display was the performance by the Sarang helicopter team that put up a remarkable sequence of manoeuvres while in formation by rotary wing platforms. Wrapping up the air display was the Surya Kiran Aerobatic Team (SKAT) equipped with the Hawk 132 Advanced Jet Trainer. This was even more impressive with its air display of a variety of manoeuvres in formation including aerobatics. **SP**



## Defence Minister interacts with IAF Commanders during Air Force Commanders' Conference

The bi-annual IAF Commanders' Conference was inaugurated by the Defence Minister On October 10 at Air Headquarters (Vayu Bhavan). Chief of the Air Staff, Air Chief Marshal B.S. Dhanoa, welcomed the Defence Minister Nirmala Sitharaman and Raksha Rajya Mantri Dr Subhash Bhamre and introduced the IAF Commanders to them.

The CAS briefed the Defence Minister on the current status of the IAF and the efforts that have been made in the recent past. During her address the Defence Minister said that the devolved powers given to the Service Chiefs should be fully utilised for achieving their capabilities. The Minister said that Air Force alongwith Ordnance Factory Board and DRDO should make an assessment about indigenisation under 'Make in India' programme. She said that the budgetary allocations should not be viewed as a constraint and should be looked at to acquire what is absolutely necessary. She said that the Government is committed to fill the gaps which have arisen due to lack of timely decision making in the last decade.

The Chief of the Air Staff while addressing the Commanders emphasised the need for continuous effort and training to maintain IAF's cutting edge. He also reiterated the IAF's role as the first responder in most contingencies and thus the need to sustain the ongoing process of capability enhancement making use of the Government's thrust on 'Make in India' initiative.

The Commanders' conference will concluded on October 12, 2017 over next three days till wherein discussions took place on various subjects that will decide the future trajectory of IAF, which includes operations, maintenance issues and various administrative initiatives that will be taken to enhance the working environment of the IAF keeping in focus IAF's core principle of 'People First, Mission Always'. In consonance with Government of India's 'Digital India' initiative two mobile Apps for Air Force Cellular Network (AFCEL) phones called 'MEDWATCH' and 'AFCHAT' were released during the Conference. Various other initiatives like online testing and evaluation and online entrance examination to further the initiative were also covered. The new look Air Force Central Accounts Office (AFCAO) website with enhanced features also was launched during the conference. A book titled 'Aero India- Ascent through the ages' is was released during the conference. **SP**

## Defence Minister visits Air Force Station Jamnagar

Defence Minister Nirmala Sitharaman was on a maiden visit to the Air Base at Jamnagar in Gujarat. She was received by Senior Air Staff Officer, HQ South Western Air Command Air Marshal D.S. Rawat and Air



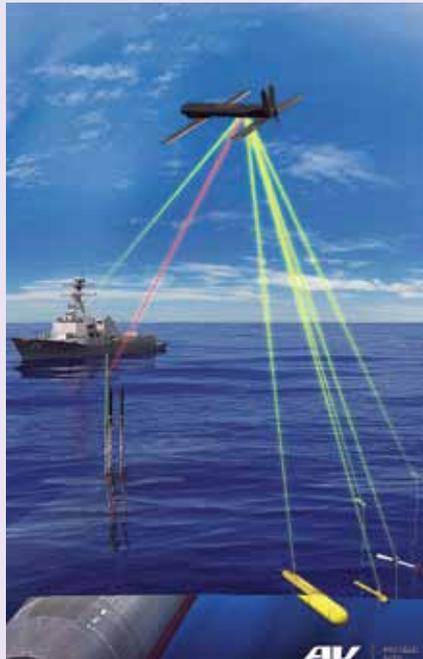
Officer Commanding Air Force Station Jamnagar Air Commodore Sanjai Chauhan. She was briefed on the significance of Jamnagar Air Base and the role and nature of air operations undertaken. A static display of aircraft that had operated from the base and weapon systems were shown to the Defence Minister during her visit to the Air Traffic Control Centre. She also interacted with the air warriors at a Barakhana organised in her honour. **SP**

## AeroVironment gets \$2.5 million for Blackwing UAS programme

**A**eroVironment, Inc. recently announced the receipt of a contract award from the United States Navy on September 29, 2017, for continuation and expansion of its Blackwing small unmanned aerial vehicles (UAV) programme.

The contract includes orders for multiple Blackwing vehicles, sensor payloads and refurbishment kits for a total value of \$2,578,822. The initial set of vehicles are anticipated for delivery by May 2018, and final delivery anticipated by November 2018. This contract is consistent with the Navy's plans to resupply existing vessels and equip additional submarines with the Blackwing capability.

Blackwing is a small, tube-launched unmanned aircraft that employs an advanced, miniature electro-optical and infrared (EO/IR) payload, integrated inertial/GPS autopilot system and secure Digital Data Link (DDL), all packaged into a vehicle that launches from under the surface of the sea, from manned submarines and unmanned underwater vehicles (UUVs).



“Since first being deployed just a few months ago, Blackwing has delivered valuable new capabilities to United States naval undersea warfare units,” said Kirk Flittie, AeroVironment Vice President and General Manager of its Unmanned Aircraft Systems business segment. “This contract is consistent with the Navy’s plans to resupply existing vessels and equip additional submarines with the Blackwing capability.”

Blackwing builds on AeroVironment’s extensive operational experience with small UAS and its Switchblade Lethal Miniature Aerial Missile System (LMAMS) to provide the Navy with a low-cost, submarine-launched UAS optimised for denied environments. AeroVironment developed the Blackwing system as part of a 2013 Navy and United States Pacific Command (PACOM) sponsored Joint Capabilities Technology Demonstration (JCTD) called Advanced Weapons Enhanced by Submarine UAS against Mobile targets (AWESUM). This JCTD was completed in September 2015 with a strong recommendation to transition the capability into the fleet. **SP**

## Upgraded Lockheed Martin laser outguns threat in half the time

**A** Lockheed Martin prototype laser weapon system proved that an advanced system of sensors, software and specialized optics can deliver decisive lethality against unmanned aerial vehicle threats.

In a live-fire demonstration at the Army’s White Sands Missile Range in New Mexico, a 30-kilowatt class laser weapon system developed by Lockheed Martin brought down five unmanned aerial vehicles with a 100 percent success rate.

In tests conducted with the US Army’s Space and Missile Defense Command in August, the 30-kilowatt class ATHENA (Advanced Test High Energy Asset) system brought down five 10.8’ wingspan Outlaw unmanned aerial systems at the Army’s White Sands Missile Range in New Mexico. ATHENA employed advanced beam control technology and an efficient fiber laser in this latest series of tests of the prototype system. Click here to see a video of the testing.

“The tests at White Sands against aerial targets validated our lethality models and replicated the results we’ve seen against static

targets at our own test range,” said Keoki Jackson, Lockheed Martin’s Chief Technology Officer. “As we mature the technology behind laser weapon systems, we’re making the entire system more effective and moving closer to a laser weapon that will provide greater protection to our warfighters by taking on more sophisticated threats from a longer range.”

Lockheed Martin partnered with Army Space and Missile Defense Command on a cooperative research and development agreement to test ATHENA.

The system defeated airborne targets in flight by causing loss of control and structural failure. Lockheed Martin and the Army will conduct post mission reviews, and data collected will be used to further refine the system, improve model predictions and inform development of future laser systems.

ATHENA is a transportable, ground-based system that serves as a low-cost test bed for demonstrating technologies required for military use of laser weapon systems. Lockheed Martin funded ATHENA’s development with research and development investments. It uses the company’s 30-kilowatt Accelerated Laser Demonstration Initiative (ALADIN) that provides great efficiency and lethality in a design that scales to higher power levels. ATHENA is powered by a compact Rolls-Royce turbo generator. **SP**

## Australian University demo of drone which detects human vital signs in war zones

**T**he University of South Australia (UniSA) has announced that it has demonstrated that drones can be used to detect human vital signs in war zones and natural disasters. Under a collaborative agreement with the Defence Science and Technology (DST) Group, UniSA researchers have successfully trialled unmanned aerial vehicles to measure heart and respiratory rates using remote-sensing imaging systems, while hovering three metres from humans.

Video footage from the drones can detect changes in human skin tone and minute head movements to read vital signs, providing a low cost, accurate and convenient way to monitor heart rates without physical restrictions, researchers say. The research could have many applications, including triaging disaster victims in earthquakes, detecting security and terrorism threats at airports, and remotely monitoring heart rates of premature babies in incubators. **SP**

## Leonardo establishes in Western Australia to deliver on major defence contracts

**L**eonardo continues to invest in Australia by opening a new site in Western Australia, through its subsidiary Selex ES Australia Pty Ltd. The addition of this new site confirms Leonardo's commitment to growing its industrial footprint in Australia beyond its current presence in Melbourne in Victoria and Nowra in New South Wales. Further expansion is planned over the forthcoming 18 months. The new opening was announced at Pacific 2017, an international maritime exposition in Sydney, Australia.

The new facility is located in Rockingham, South of Perth and will be the regional hub for engineering, integration, installation and through life support. Proximity to the Hendersen shipyards and Garden Island will allow Leonardo to be highly responsive on naval programmes. It will also allow Leonardo to team with Western Australian companies and build up a local workforce with specialist skills particularly in defence electronics that will complement the already strong shipbuilding capabilities in the area.

The new site will also play a key role in Leonardo's delivery as prime system integrator of the SEA1442 phase 4 solution. Under the programme, Leonardo will provide an integrated suite of state-of-the-art communications capabilities for the upgrade and modernisation of Australia's ANZAC frigates.

The solution includes enhanced external RF communications and internal communications equipment, the provision of a high-

data-rate-line-of-sight bearer and the introduction of a modern communications management system.

The capability upgrade will lay the foundation for a maritime architecture critical to future tactical communications for the Royal Australian Navy (RAN). It will also contribute towards the Australian Defence Force's network-centric warfare concept in the maritime environment, helping reach the goal of a truly networked RAN.

Michael Lenton, Executive Chairman of Selex ES Australia said: "The facility is another example of Leonardo's commitment towards Australia where the company has been active since it first supplied torpedoes to the Navies of Victoria, Tasmania and South Australia in 1885. Over many years, Leonardo has been building a considerable legacy in Australia through the supply of solutions, products and services for both the defence and civil markets. It is a long-term effort we are immensely proud of and intend to build on going forward.

"Leonardo is serious about its investment in Australia and has taken big steps over the past 12 months to significantly grow local capability as well as building and strengthening the national supply chain. Leonardo has been able to grasp the opportunities around the recent thrust in naval capability procurement and we are intent on demonstrating that our local investment in skills and people is as intense as our transfer of technology from our global operations, even ahead of the next round of naval contracts." **SP**

## Thales selects Canada as global hub to boost artificial intelligence expertise

**T**hales announced the creation of the Centre of Research and Technology in Artificial Intelligence eXpertise (cortAIx). Led by Thales, cortAIx, in collaboration with the MILA (Artificial Intelligence Institute of Quebec), the IVADO (Institute of Data Valorization) and the Vector Institute of Toronto, it will be located in Montreal, one of the world's leading Artificial Intelligence (AI) ecosystems. This investment supports Thales' global strategy of technology leadership.

The creation of cortAIx is another building block of the company's digital strategy, one of the key initiatives for company-wide growth. Investment of 50 new world class experts in AI who will work together to strengthen the use of artificial intelligence in Thales products.

This new centre supports the creation of approximately 50 new world class jobs of AI researchers and developers. Their mission will be to advance the safe and ethical applications of artificial intelligence across Thales' vast product portfolio. cortAIx will focus on creating solutions to help airlines, satellite operators, air traffic controllers, mainline and light rail operators, armed forces and critical infrastructure managers, make the best decisions in decisive moments - from the bottom of oceans to the depths of space and cyberspace.

cortAIx supports Thales' goal of being a world leader in AI while delivering future economic benefits to Canada. Leveraging the combined expertise of MILA, IVADO and the rich ecosystem of AI uni-

versities and laboratories, make Montreal and Canada the perfect place to develop cortAIx.

The biggest challenge faced by AI experts today is to perfect the understanding of the mechanisms behind AI developments, while simultaneously evaluating human behaviors as people interact with these new systems. The key mission of Thales' cortAIx is to build "AI inside" solutions that are safe and ethical while granting full authority to the human decision makers.

Building on Thales' recent acquisition of Guavus earlier this year and Vormetric last year, the creation of cortAIx is yet another example of how Thales is strengthening its positioning in one of the key technologies at the heart of global digital transformation.

In the last three years, Thales has invested over €1 billion in key digital technologies and recently announced the launch of its high-tech Digital Factory in Paris. This activity brings together leading technology experts who support the injection of big data and artificial intelligence into Thales solutions, while also ensuring data security - a fundamental requirement of the modern digital economy. **SP**

## HAL files DRHP with SEBI

**T**he Government of India has approved the sale of a 10 per cent stake in the Hindustan Aeronautics Ltd (HAL) - a defence public sector undertaking. Accordingly, HAL has initiated the process of Initial Public Offer (IPO) with the filing of the Draft Red Herring Prospectus (DRHP) on September 29, 2017, with market regulator SEBI. This is a major milestone towards listing of the defence PSU which is slated for partial disinvestment by the Government of India says T. Suvarna Raju, CMD HAL. **SP**

# Engineers unveil futuristic unmanned aircraft concept that uses both fixed and rotary wing flight

*Within the next few decades, armed forces could be using unmanned aerial vehicles (UAVs) with adaptable aircraft technologies that alternate between fixed-wing flight and rotary-wing flight.*



**E**ngineers from BAE Systems together with students from Cranfield University, have revealed a new technology concept – named Adaptable UAVs – which can alternate between the two different flight modes in the same mission. When in rotary wing mode the UAVs can be launched and recovered from battlefields and docked on a special pole.

The Adaptable UAVs are a hybrid between fixed and rotary-wing aircraft, and would use adaptive flight control and advanced navigation and guidance software, which would allow the aircraft to benefit from the greater speed and range afforded to fixed-wing aircraft, before alternating to rotary-wing mode to hover and achieve vertical take-off and landing. This novel technology could allow UAVs to better adapt to evolving future battlefield situations and through working together in a swarm, tackle sophisticated air defences, as well as operating in complex and cluttered urban environments.

In the rotary wing mode of flight, the Adaptable UAVs can be easily and safely launched and recovered using a range of vehicles in dangerous environments that might be cluttered by personnel, other aircraft or vehicles. The pole constrains the lateral or sideways movement of the UAV when being launched or recovered so strong winds cannot dislodge them and avoids any damage to personnel nearby.

This is particularly important when recovering a UAV to the aft of a ship or a land vehicle. The pole's gyro-stabilised element also ensures that it remains upright independently of the host vehicle's orientation, which may be rolling if on a ship, or in the case of a land vehicle driving up or down a slope at the time of the launch or recovery.

"The battlefield of the future will require novel solutions to meet emerging threats and to keep human operators safe wherever they may be," said Professor Nick Colosimo, BAE Systems' Futurist and Technologist. "The Adaptable UAVs concept and related technologies are one of a number of concepts being explored through close collaboration between industry and students in academia."

Professor Antonios Tsourdos, Head of the Centre for Autonomous and Cyber-Physical Systems at Cranfield University, said: "Working with BAE Systems on the Cranfield University MSc in Autonomous Vehicle Dynamics & Control has provided a great opportunity for the students and research staff to explore a range of novel concepts and technologies."

Cranfield University is one of BAE Systems Strategic University Partners. Research staff and students have explored a range of UAV technologies including research into adaptive flight control and advanced navigation and guidance software. **SP**



## Rapper Lil Wayne refuses to go through security

**R**apper Lil Wayne refused to go through security to enter a South Carolina arena where he was to perform. He was not allowed and had to skip the concert. He spent eight months in a New York City jail for gun possession after police found the weapon on his tour bus as he left a 2007 concert.

A statement by managers of the Colonial Life Arena in Columbia says Lil Wayne, whose real name is Dwayne Michael Carter Jr., refused to enter the building when security workers sought to apply “the venue’s standard safety procedures.” The arena’s management says it wasn’t willing to make an exception for the headliner of Saturday night’s show “and jeopardize safety.”

Tory Lanez, 2 Chainz and Cardi B performed as scheduled. **SP**

## LA Port Terminal cyber-attack

**T**he largest terminal in the Port of Los Angeles remained closed following a cyber attack that hit computers at various companies in Europe and around the globe.

Operations were halted at the normally bustling APM Terminal, owned by Danish shipping company A.P. Moller-Maersk, beginning at about 6 a.m. Tuesday, and remained shut down Wednesday. There was no word on when it might reopen. Maersk issued a statement confirming that it was “hit as part of a global cyber-attack named Petya, affecting multiple sites and select business units. We are responding to the situation to contain and limit the impact and uphold operations.” **SP**

## Investigation exposes security lapses at reactor

**T**he US Federal investigators conducting covert surveillance and other secret operations successfully breached security at two secure US government facilities in Maryland and Colorado, according to a new government report that one lawmaker today described as “disturbing, alarming.”

One of the facilities breached contained a nuclear research reactor. “Our covert vulnerability testing identified security vulnerabilities,” warns a report from the Government Accountability Office (GAO), which sent undercover agents to two campuses of the National Institute of Standards and Technology (NIST), an agency of the U.S. Commerce Department.

The report adds, “Specifically, GAO agents gained unauthorized access to various areas of both NIST campuses.” Investigators sought access to the facilities 15 times and each time were success-

ful, revealed House Committee on Science, Space, and Technology Chairman Lamar Smith, R-TX, whose panel held a hearing into the explosive report today.

“Lax physical security at NIST invites concerns about everything from petty vandalism and theft...to criminals or even terrorists stealing or releasing poisonous chemicals and other dangerous materials that are stored in NIST labs.” NIST labs house a number of dangerous chemicals and radioactive material used for research and testing that could be deadly in the wrong hands. **SP**

## Art dealer who stole celebrity portraits arrested

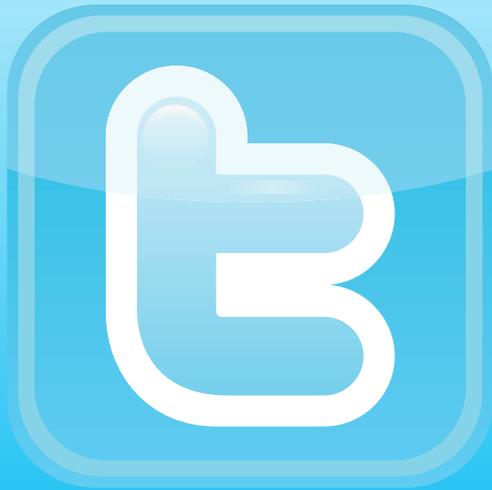
**J**onathan Poole, 69, specialised in artworks by and of famous musicians such as John Lennon, Jim Morrison and Ronnie Wood. However, in a trial at Gloucester Crown Court, UK, it was revealed that he has stolen paintings and sold some he was not entitled to. He has been jailed for four years.

Works Poole stole include paintings of Bob Dylan, Kate Moss and Mick Jagger. Some of the works that have gone missing in Poole’s possession have never been traced.

The prosecutor, James Ward, compared the case to the crimes in the Hollywood film *The Thomas Crown Affair*. He added: “Whilst Thomas Crown stole as a challenge, because his world had become too stiflingly safe, Jonathan Poole stole either to fund a gambling habit, or to stash away money for later life or to fund a lifestyle he couldn’t afford.”

Poole admitted 26 offences against nine victims between 1986 and 2013 involving artworks worth £500,000. The victims included Dire Straits bassist John Illsley and Poole’s brother. **SP**

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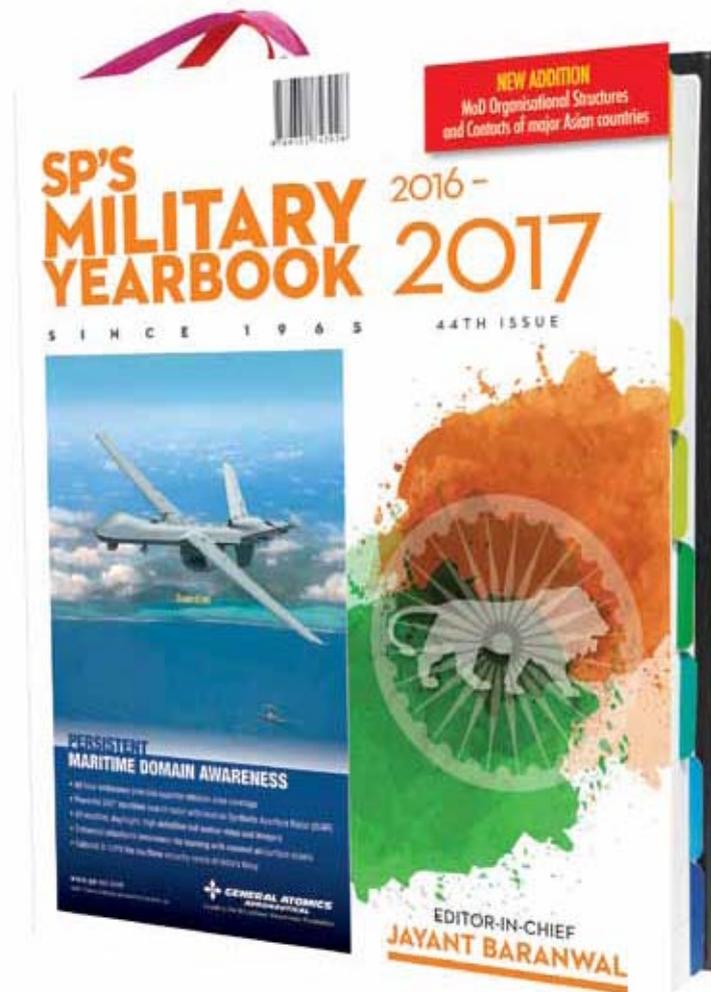


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