

# 'The C-130J Hercules is a Special Operations Version, Which is Being Considered'

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**With the greater likelihood of surgical air strikes instead of a full-scale conventional war, what doctrinal adjustments have come about in the Indian Air Force?**

It is often said that classical wars are passé and that future wars would be swift, lethal and limited in their scope. The IAF's forte lies in its capability to conduct a swift and decisive offensive air campaign. We, therefore, have a number of deep-strike and medium-range ground-attack squadrons, backed by a sizeable fleet of multi-mission capable aircraft and a strong air-defence network. We are working towards building our space and reconnaissance assets that will enable us to obtain very accurate, near real-time picture of the battle-space. We also strive to build an impressive capability with numerous force-multipliers, like the flight refuelling aircraft, AWACS and UAVs, to be able to detect and attack any hostile target before it can harm our interests. The aim is to dominate the battlefield with armed sensors and aircraft and work in tandem with the surface forces. New tactics that enable rapid engagement of time-sensitive targets, networked intelligence, surveillance and precise target engagement would be the focus of future wars.

**In an earlier interview, you mentioned the need for joint and parallel warfare. What is meant by these terms, and what has been the progress on both?**

Warfare demands meticulous planning and flawless execution. 'Joint warfare' demands joint planning, which provides multiple options to achieve operational objectives. This in turn demands good understanding of one another's tactics, to permit the employment of the different forces and bring about synergy. The second element of 'joint warfare' is execution. Joint execution of warfare between the surface

forces and the air force would be crucial to any future operation. The existing organisations and structures cater for both joint planning and joint execution and proved very effective and extremely successful both in 1971 and 1999. The necessary organisation and structure for synergy is therefore in place and needs no change.

'Effect-Based Operations' is the new buzz-word. The focus at any level of war is not on the specific weapons used or on the targets attacked, but rather on the desired effects. Closely associated with this principle is the strategy of 'parallel warfare', wherein the attempt is to paralyse the enemy by multiple and simultaneous attacks, at the tactical, operational and strategic levels. Future conflicts would require increased emphasis on precision, intelligence, reconnaissance, lethality and speed of operations. These are precisely the hallmarks of air power. These are the areas of activity that any modern air force must specialise in; and these also are IAF's objectives. Apart from the ability to act quickly, air power being ubiquitous, also has the ability to strike deep and over a wide range of targets in a large geographical area. We do need to maintain a numerical superiority; we have to acquire the technology that enables conduct of a well-orchestrated effects-based parallel warfare campaign.

**Does the joint doctrine issued by the Integrated Defence Headquarters emphasise on contingency-based jointness, or does it seek across-the-board jointness between the three services?**

The joint doctrine is a significant milestone on the path to developing a truly 'joint' capability for the Indian armed forces. This doctrine postulates the fundamental principles by which we will employ our joint war-fighting capabilities to conduct successful operations in wars of the future. It will complement the Service doctrines, which have already been promulgated and will lead to a better understanding of the application of military power in a variety of situations. The doctrine should convey a signal to any potential adversary that India's military preparedness is founded on the joint and synergistic employment of its powerful forces.

**The IAF appears to be preparing for two additional roles; asymmetric warfare and out-of-area rescue and relief operations. What does this involve and what capabilities would be required?**

Our strategic boundaries have been re-defined taking into consideration our growing energy needs. This has necessitated a requirement for 'strategic reach' to safeguard our national interests. We also have a perspective plan for 10-15 years, which is based on the envisaged threat and requirements that are in sync with national aspirations. India needs adequate force to protect and project Indian interests. Thus the IAF vision is 'strategic reach'. The future involvement of IAF in peacetime roles and in Operations Other Than War (OOTW) is likely to increase. IAF should have the capability to be able to rise to the occasion anywhere within the Indian area of interest.

Accordingly, we have a comprehensive plan to procure both heavy and medium-lift aircraft. Today, we have a capability gap between the 5-ton and 40-ton lift capacity. HAL is looking into the possibility of joint production of a transport aircraft in the 15-20 ton payload class. Recent operations, both in India and alongside the UN, have indicated to the increased requirement of helicopters. We are proposing to procure additional medium-lift helicopters. This would then give us the ability to take on all the internal commitments, the expected increased UN commitments and other OOTW tasks.

**Probably a big challenge for the air force is to arrest its dwindling combat aircraft strength. What will it be at the end of the 10th defence Plan (2007) and the 11th defence Plan (2012), and what definitive steps has the air force taken to arrest this?**

The air force today has a leaner force structure due to a resource crunch in the past and the expected phase-out of older fleets. The IAF has taken a number of steps to obviate the effect of 'force draw-down'. We have planned upgrades on the MiG-27, MiG-29, Jaguar and Mirage-2000 fleets. While some are nearing completion in this Plan period, a major portion would be completed in the 11th Plan period.

The contract for 20 Tejas (LCA) aircraft in the IOC configuration has been signed on 31 March 2006. By the end of the 11th Plan, one squadron of LCA would be in operational service in the IAF. With the likely commencement of induction of the selected MMRCA, in the middle of the 11th Plan period, the effect of depletion would have been arrested. Besides, a number of force-multipliers, such as the Flight Refueller Aircraft (FRA), AWACS and UAV are being inducted to enhance the combat effective-

ness of the force. Nevertheless, they say that 'quantity has its own quality'; we therefore need a certain strength despite the induction of modern technology.

**When will the RFP for the 126 MMRCA be issued, and when do you expect the contract for the same to be signed? Your predecessor, ACM S. Krishnaswamy (retd) has said that the requirement of 126 MMRCA was projected to the government in 2001 and now more numbers may be needed. Do you agree with him and is something being done about this? In the meantime, is the air force seeking more numbers of Mirage-2000 aircraft?**

The RFP for 126 MMRCA, as I have stated on earlier occasions, will be issued shortly. As per our 11th Plan, the contract for these aircraft is planned to be signed by the end of 2007-08. Presently, we are moving ahead with the procurement of 126 MMRCAs.

**Considering that the buzzword in the IAF is 'transformation', please give an update on the following: communications, data-linking, surveillance and reconnaissance systems and precision-guided munitions? Is the first Phalcon delivery slated for November 2007 on schedule and what infrastructure on the ground has been envisaged for its optimal exploitation?**

The Air Defence Ground Environmental System (ADGES) was planned and designed to provide a comprehensive and reliable air defence capability against hostile air attack. The system, one of the best at the time of induction, has lived its life. There was a need felt for an upgrade in order that state of the art voice-data-video convergence requirements could be met.

We are in the process of looking at a data-link project to network all the air borne platforms and sensors with the ground sensors and the Integrated Air Command and Control System (IACCS). That would be a significant step towards achieving a net-centric warfare capability. The first IAF AWACS would probably take to the skies by the end of next year. The focus of the IAF is to bring the sensors and shooters into a single real-time network. This would result in enhanced situational awareness of all elements and synergise their capabilities.

**What steps does the IAF plan to take by the end of 11th defence plan regarding expansion of space capabilities?**

The IAF is following an incremental approach to capacity building in 'space'. It is

presently consolidating its requirements regarding space technologies and applications. The Defence Space Vision (DSV) – 2020 outlines the roadmap for space matters for the three services. DSV-2020 aims at achieving desired space-based capabilities in three phases, which are near-term, medium and long-term. Near-term space applications would be pursued during the 11th Plan, in which 'force enhancement' capabilities in Communications, IS&R and Navigation would be the focus. By the end of the 11th Plan, IAF would integrate various applications like IACCS and AWACS which would have a significant space element.

**What is being done regarding medium-lift, both aircraft and helicopter capabilities? The IAF provides the maintenance life-line for Siachen and Sub-Sector North with both AN-32 and Cheetah, which are old and need replacement. Are the US C-130J Hercules and our own Cheetah good replacements?**

Indian Air Force is planning to acquire additional medium-lift helicopters to meet its immediate requirement. IAF also plans to acquire heavy, medium and light transport aircraft to meet its medium and heavy-lift requirement in the 11th Plan period. User trials have been carried out on 'Cheetah' helicopters and it was found to be a good replacement of Cheetahs for air support missions in the Siachen glacier and Northern Sectors. The C-130J version of the Hercules is not a cargo carrier but a special operations version, which is being considered.

**What is the progress on the IACCS, Aerostat radars, medium-powered radars (MPRs), Low Level Transportable Radars (LLTR), and the need for more air-to-air refuellers?**

The Aerostats have been inducted and operationalised. The IAF is also procuring three AWACS to cater for immediate requirements. The Integrated Air Command and Control System (IACCS) will give AWACS the ideal operating environment. Thus our concept of operations would vary with the type of environment. The MPRs are in an advanced stage of the tendering procedure and the RFI for the LLTR is being issued shortly. As far as the FRA is concerned, we do plan to acquire more in future.

**What upgrades and more UAV acquisitions**



**have been planned in the 11th defence Plan?**

The IAF has operationalised its UAV systems and their induction has been completed on schedule. In response to the current and emerging requirements, these UAVs are being employed to carry out a variety of missions. We envisage that the requirements of UAV would increase in future, due to the emerging symmetric and asymmetric threats.

**The provisioning of spares appears to be a major reason for unsatisfactory fleet serviceability in certain cases. What is being done with the OEMs and HAL in this regard?**

The IAF has embarked on a major exercise to address the issue of vendor support for maintenance related activities. A number of long-term business agreements have been concluded or are in the process of being concluded with Russian vendors, who are our major suppliers. A long-term business agreement (LTBA) already exists with Dassault Aviation for maintenance of the Mirage fleet, including repairs/overhaul of rotables and supply of spares for 20 years. Similarly, an LTBA exists for Su-30 and MiG-29 fleets with Russian OEMs. For the Embraer aircraft we have long-term spares supply contract, with a 'minimum-inventory' system.

**What steps have been taken for better inventory management, which is a daunting task, in the IAF?**

On 9 October 2006, the IAF inventory would be comprehensively networked through an Enterprise-Wide Resource Planning (ERP) System known as the 'Integrated Material Management On-Line System (IMMOLS)'. The IAF inventory managers at all levels would now have a cross-section asset visi-

bility. The entire spectrum of the supply-chain management, including provisioning and procurement would now be carried out on-line on a real-time basis. The IMMOLS will also have on-line equipment accounting and audit, a first of its kind.

**The ground-based air defence systems, both for point and area air defence with the IAF are old and need replacement. What is being done in this regard?**

The statement that air defence systems need replacement is not technically correct. It needs to be appreciated that a majority of the

air defence systems of the IAF are still serving their purpose. However, there is a plan to upgrade various sub-systems. During the last five years, the IAF has signed contracts for some radars and additional systems. The induction of these systems will enhance the IAF's AD capability quite a bit.

**In an interview with FORCE (November 2005), you had said that peninsular India would get more importance in the coming years. But, the surveillance capabilities of the IAF to cover areas in the south-east and southern sectors of hinterland are very limited. What is being done about this?**

With the existing AD radars, at high-level, the entire Indian airspace is covered except for some portions. However, IAF's surveillance capability is being revamped with the acquisition of modern radars. With the varied type of sensors, it will be possible to have medium-altitude cover in the entire Indian airspace. IAF has signed a contract for the induction of three AWACS aircraft. These would further improve the surveillance capabilities in the other parts of the country.

**What is being done about integration of all national radar resources of the army, navy and the civil sector?**

Networking of radars is monitored by an Inter-ministerial Co-ordination Committee (IMCC) on Airspace Management and Security. Automation and networking of air defence radars of the IAF is in progress. AAI has confirmed that networking of civil radars is also in progress. With networking of civil radars completed by December 2008, Airports Authority of India and IAF would work together to ensure civil-military radar integration and in this way have a complete and composite air picture. ●