



## Case for a Joint Communication Command for the Indian Armed Forces



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Joint tri-service institutions are not new to the Indian Armed Forces. The National Defence Academy, Defence Services Staff College and the National Defence College stand testimony to fact that our predecessors were alive to the emerging challenges and created institutions far ahead of the times. The Armed Forces medical service is another live example of tri-service integration. However, jointness at other functional levels languished for decades, which was severely exposed during the 1999 Kargil war. The Kargil Committee Report published in the second half of 2000, was brutally critical of the lack of integration between the services and the need to evolve joint response mechanisms. Since then, the proposed restructuring of the Indian Armed Forces including the Higher Defence Organisations (HDO), has been in the limelight and a matter of intense speculation and debate. A few cautious steps towards achieving

### Key Points

- Modern warfare which is essentially net centric will arguably turn completely net dependant in the near future.
- Recently a tri service network overlay (Defence Communication Network – [DCN]) has been created at the apex level as a step towards integration.
- However, existing organizations, processes and networks do not lend to tri-service communication integration and status quo may result in further silo based development in future.
- Incompatible communication is arguably the first and primary barrier to integration, especially at the operational and tactical levels.
- Is there a case to suggest that the first aspect to be given a thrust towards jointness should be communications?
- A new Defence Cyber Agency under the HQ IDS and headed by a Major General or equivalent rank officer is in the process of being established.
- Positive developments are also expected in the creation of the Chief of Defence Staff/Permanent Chairman Chiefs of Staff Committee, Joint Operational Commands, Special Forces Command and Aerospace Command.
- It is in this context that the creation of a Joint Communication Command (JCC) is being proposed as a part of the formalization of structures desired for joint war fighting.

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jointness have been taken wherein Headquarters Integrated Defence Staff (HQ IDS), Strategic Forces Command and the Andaman and Nicobar Command have been created. The implementation of the balance of the recommendations has seen the emergence of insurmountable differences within the Government, strategic community and the uniformed fraternity, resulting in limited progress. However recently, positive developments have emerged which indicate a concerted attempt by all stakeholders to push through this matter having a deep bearing on national security. Media reports have suggested that on 17 January 2017, during the Combined Commanders Conference at the Indian Military Academy Dehradun, which was attended by the Prime Minister, the Raksha Mantri and the National Security Advisor, the agenda was deliberated upon<sup>1</sup>.

More recently, media reports have indicated that as a follow up of the deliberations, a new Cyber Agency under the HQ IDS and headed by a Major General or equivalent rank officer is in the process of being established. This Agency will have both offensive and defensive capabilities and is expected to evolve into the eagerly awaited Joint Cyber Command<sup>2</sup> Positive developments are also expected in the creation of the Chief of Defence Staff/Permanent Chairman Chiefs of Staff Committee, Joint Operational Commands, creation of The Special Forces Command and the Aerospace Command.

It is in this context and as a corollary, the creation of a Joint Communication Command (JCC) is being proposed.

### **Why Communication?**

Modern warfare which is essentially net centric will arguably turn completely net dependant in the near future. If an attempt is made to strip the complexities of modern warfare to the first principles,

it can visualized as the interplay between five major components, namely, sensors, shooters, decision-makers, information nodes (where data is stored/processed) and finally, the ubiquitous network. The desired characteristics of the network, which may seem utopian in the present day Indian Armed Forces are enumerated as follows:

- (a) Extend over multi- dimensional space.
- (b) Boundary less and not restricted by ownership.
- (c) Accessible to all stakeholders equally.
- (d) Fully plug and play.
- (e) Support diverse systems.
- (f) Utilise uniform protocols including security.

### **Present Configuration**

Present net centric capabilities of the Indian Armed Forces are weighed down by legacy networks which are individually extensive and complex. Since the complete migration to new all pervasive tri-service networks would be a technical and logistic nightmare, the current approach is focused on achieving basic functional efficiency using the existing individual service networks with gateways to suitable overlay networks. Recently a tri-service network overlay (Defence Communication Network [DCN]) has been created at the apex level as a step towards integration. This state-of-the-art network will function under the control of the HQ IDS and has its tentacles extending to the army Corps and the air/naval bases. However, in spite of such positive developments and efforts, it would not be misplaced to suggest that functional integration especially at the operational and tactical level is still lacking. A simple example would amplify the contention. In the era of data link enabled modern fighters capable of delivering precision accuracy, a present day combat team commander in the Tactical Battle Area (TBA) cannot seek and obtain an air strike

in support of ground operations, using automated processes. In spite of the fact that individual service level communication systems are fairly modern and capable, the only reliable means of communication between ground and air elements, remains plain old Radio Telephony. (It a matter of separate debate whether the pilot on the modern fighter platform has the time for a radio conversation in the complex multi-tasking environment, he/she is operating in). Hence, the isolated nature of networks is in a way compromising the overall kinetic effect which can be delivered in a truly integrated environment. It can arguably be stated that after years of joint services training, the mind of commanders at all levels is no longer a limitation to integration. Every commander fully understands the need for integration and means to achieve the same. However, the constraint is the nature of networks, as extant.

Hiring of communication circuits is a major expenditure component of communication directorates of respective services. Since advanced communication technology now enables far greater number of voice/data channels over the same circuit or media, rationalisation of hiring of circuits is the need of the hour. An illustration would amplify the contention. There are a large number of stations which have formations/units of the army co-located with air and naval bases/other units of the IAF or IN. However, individual services have hired separate circuits for respective elements and consequently a large number of circuits exist between the same two locations running in parallel. While utilisation patterns may differ, the need for holistic planning cannot be overemphasized in order to achieve savings to the exchequer. Extending the same analogy to the terminal end, separate Local/Wide Area Networks and voice exchanges are functioning in the same station. Ideally, these modern exchanges

and switching devices which offer immense capacity could be shared, resulting in better functional integration.

In addition, communicators across the board will invariably indicate the following critical problems areas while operating in an integrated environment, which makes joint communication a major challenge:

- (a) Variety of equipment.
- (b) Incompatible communication standards and protocols.
- (c) Incompatible security codes and algorithms.

It is evident that there is a huge gap between what exists and what is needed. Existing organisations and processes do not lend to tri-service communication integration and a status quo may result in further silo based development in future.

### Addressing the Need

Communicators across the three services are a similar breed. At the basic level, they speak the same language. However, even if there is a genuine inclination of communicators to integrate the disparate networks, existing technical profile prevents the same.

Hence, the moot questions which arise are enumerated :

- (a) Whether incompatible communication is the first and primary barrier to integration, especially at the operational and tactical levels?
- (b) Is there a case to suggest that the first aspect to be given a thrust towards jointness should be communications?
- (c) Towards this, would it be prudent to consider a Joint Communication Command (JCC) for the Indian Armed Forces, wherein the communicators from the three services operate under the same tri-services umbrella.

Certain selected communication functions may be brought under the ambit of the JCC which have a

direct bearing on integration and joint operations. The author of this piece is sanguine that this aspect has been thought over and deliberated earlier; however, the sheer scale of integration problems, both technical as well as HR related, would have resulted in it being a non-starter. Individual services would have found the proposal daunting alongside the fear of loss of intimate communication support.

It could however be argued that this apprehension and fear needs to be discarded at the earliest if the Armed Forces desire to fight and win the future war in a truly networked environment. It would be foolish to stay cocooned in individual service comfort zones and derive strength in legacy systems, which give a false sense of functionality in peace time. The age old adage: ‘if it ain’t broke don’t fix it’ will not work in this context. The stakes are immense and there is a need for drastic change and not depend on small incremental steps to effect the transformation.

### Proposed Framework

The proposed JCC is recommended to evolve in two stages, with the threefold aim of addressing joint communication planning, joint procurement of systems and joint manpower planning including training.

- (a) Stage 1. The fielding of the DCN provides a unique opportunity and a stepping stone to achieve tri-service communication integration. In Stage 1, the staffing, management, exploitation and operations of DCN down to the furthestmost nodes, may be taken on by signallers drawn in from all services. The control element under HQ IDS could form the nucleus of the JCC.
- (b) Stage 2. As the next step, certain elements of the communication directorates functioning under the respective service HQs are recommended

to be brought under the umbrella of the JCC. Core communication planning, procurement, and manpower planning staff of respective directorates may be placed under the JCC, while the balance staff may be retained at respective directorates as hitherto. This would ensure minimum turbulence, while at the same time result in congruent communication and manpower planning. A limited number of communication training establishments could be earmarked for joint training and placed under the control of the JCC.

Initially, the control footprint of the proposed JCC is recommended to be limited to the level of existing Command HQs, Air and Naval Bases. To avoid being saddled with a vast and unwieldy setup, further amalgamation and joint manning especially in field units/sub-units in all services is not recommended till such time further clarity emerges in the evolution of other joint structures. The proposed JCC framework would also facilitate the setting up Joint Operational Commands as and when created.

### How Does This Help?

The proposed changes are likely to offer the following advantages:

- (a) **Joint Communication Planning.** It is undeniable that apex level communication planning needs to be a joint effort. A joint communication planning cell will ensure that duplication is avoided, common protocols and standards are adhered to, common cipher codes are evolved and functional integration of networks down to the lowest level is ensured.
- (b) **Procurement and Introduction of Systems.** In the current setup, any new system visualisation

is likely to only address the requirements of the HQ at which it is being planned. Presently, tri-service needs are inadequately addressed due to the lack of a suitable empowered organisation like the JCC. The following illustration would amplify the contention. As far back as the early part of the century, the US Armed Forces faced the problem of integrating individual tactical data links like the different weapon data links, platform data links, and unit data links. While individual systems could operate using their own data links there was severe lack of compatibility. In order to surmount the integration issues, the Joint Battle field Airborne Communication Node (BACN) programme was conceptualised and made operational. Presently, this involves the deployment of a versatile and flexible communication pod fitted under an aircraft or UAV which is deployed over the TBA and enables seamless integration of disparate data links, thus enabling net centricity and a major force multiplier effect. Similar issues plague the Indian Armed Forces too; however, the visualisation of such problem areas and the development of advanced technical solutions can fructify, only if suitable empowered structures like the JCC are put in place.

- (c) **Manpower Issues including Training.** A JCC would be able to identify the critical nodes where deployment of suitable trained joint signallers would be required. Such nodes may be held under the direct control of the JCC to ensure seamless integration.

### Will it Lead to Manpower and Resource Optimisation?

With the premium on fresh raisings, any proposed

organisational change needs to be examined through the prism of manpower requirements. The proposed changes would involve a realignment of staff functions which could be achieved by shifting certain functions from existing service specific communication directorates to the JCC. Since no major changes are proposed at the level of lower HQs and units/sub-units, no major effect on manpower is envisaged.

This would however result in considerable resource optimisation and savings, while at the same time achieve the greater aim of integration. Certain areas which could see positive developments are in the rational use of satellite resources, sharing of surveillance data, use of crypto systems and devices, use of radios and other communication systems, hiring of circuits, use of training facilities, etc.

### Purple Communicators

While the debate on the implementation of the recommendations of The Kargil Committee Report is alive, it would be prudent to examine the component(s) of the future battlefield which would require to be integrated for enhanced effectiveness. It has been accepted that aspects like cyber, special forces and aerospace require integration and efforts are in place to achieve the same. There is also a need to consider communications in the same light. Communications are the nerve of the battlefield and more so in the age of net centric warfare. Hence, to suggest that integrating communications should be the first realistic step in the overall aim of 'Jointness' would not be misplaced. While communication systems by very nature lend themselves to integration and compatibility, experience has shown that this potential has largely remained unrealised due to organisational structures, procurement procedures, incompatible training and archaic mindsets. The

proposed JCC manned by ‘Purple Communicators’ could indeed provide the much needed top down thrust so that existing networks start talking to each other, data and info flow is seamless, resources are conserved and new networks are designed with the overall aim of achieving tri-service integration. The proposed JCC could be the cornerstone in the evolution of the Indian Armed Forces into a truly integrated force.

### Notes

1. Available at <http://www.tribuneindia.com/news/uttarakhand/community/pm-at-ima-conference-today-foolproof-security-in-place/353060.html>, accessed on 01 May 2017
2. Available at <http://indiatoday.intoday.in/story/cyber-attacks-pakistan-china-india-defence-ministry/1/896511.html>, accessed on 01 May 2017

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