CENTRALISED ISR:
THE BEDROCK OF CAMPAIGN SUCCESS

Historically, military forces have been complex organisations. But the changes that are taking place in the threat spectrum and the demands being made of modern military forces are giving a completely new dimension to the complexities that face them. The greatest challenge that military planners face today is that of uncertainty. This complexity and the ensuing uncertainty have been amplified manyfold by the advent of the information age.

It is universally agreed that today we are living in the information age. Even in our day-to-day lives most of us receive a large quantity of information from many different sources. This flood of information, wanted and unwanted, can become overwhelming if not properly managed. Advances in technology have effectively brought this phenomenon to the battlespace. In the military domain, such 'information overload' can lead to a situation wherein critical information may not be readily discernable to commanders, causing possible paralysis of the decision-making apparatus—a recipe for failure.

It is, therefore, not surprising that in recent years, intelligence, surveillance and reconnaissance (ISR) has assumed critical importance, especially in military operations. The ADF defines ISR as an activity that synchronises and integrates the planning and operations of sensors, assets, and processing, exploitation and dissemination systems in direct support of current and future operations. This is an integrated intelligence and operations function. ISR is a part of a larger national intelligence network and seeks to provide decision-makers, at all levels, with detailed information and intelligence regarding likely courses of action, doctrine, strategy, tactics, infrastructure and any other factor that could have a bearing on an adversary's will and warfighting capability.

ISR is a process-based activity that creates understanding by adding value to available information through analysis and assessment. Value is added by the process of analysis using knowledge and other factors that convert information to intelligence. A human element is always part of this transformation. Military forces use this process-based approach as a fundamental tool, mainly because the focus of military operations is the ambiguous and uncertain domain of the adversary's thoughts, ideas and intentions.

On the positive side, information technology, coupled with high-speed communications has provided commanders at the highest strategic level access to an ever-widening picture of the battlespace. Simultaneously, it also provides the warfighter at the tactical level with the capability to apply force—both kinetic and non-kinetic—with extreme precision, based on this information and intelligence.

Currently strategic national security is increasingly being viewed within the paradigms of a National Effects-Based Approach (NEBA). NEBA is oriented to encompass all the disparate elements of national power, mainly the military, diplomatic, economic and information capabilities, which will be used in combination on an as-required basis to ensure national security. The military forces rely on the concept of network-enabled warfare to operate within the NEBA. This is about creating a force with sufficient flexibility and adaptability that is capable of generating the desired effect within the context of a given operation. This force should be able to respond rapidly to emerging threats and also capitalise on fleeting opportunities in the battlespace. From a technical perspective, it is about networking the entire force by facilitating the sharing of huge quantities of information by the use of communications technology. This could involve ISR inputs to agencies other than the traditional military forces.

The primary capability that network-enabled warfare brings to military operations is increased situational awareness (SA) at all levels. SA is critical in all phases

of a campaign, from the basic planning stage to the conduct of operations and the concluding drawdown. Currently available technology facilitates the fusion of information from multiple ISR assets and its display in widely dispersed data screens, even in cockpits. However, to ensure that this information translates to adequate SA, it will have to be analysed to present a credible picture of the situation in the field. This is the basic human factor in ISR. Unfortunately, this aspect of ISR is often overlooked because of over emphasis on technology.

ISR provides SA at the operational level to fine-tune campaign plans and, at the tactical level, the capability to carry out time-sensitive targeting. A robust command and control (C2) and ISR capability that is networked adequately is a critical factor for success in a campaign.

ISR has to be timely, accurate and relevant—a primary foundational requirement. While accuracy is a laid down absolute, the other two attributes are almost always relative. Accuracy of information can be judged in more or less black and white terms, being either right or wrong. However, timeliness is relative to context and puts a strain on the analytical process. The more time that is available to analyse information the better the intelligence output and SA should be. However, this process has to be optimally dovetailed with the urgency to get the intelligence to the decision-maker. Similarly, relevance also is relative to the context and level of decision-making.

Large amounts of data/information/intelligence can be made available at the strategic level where the time and 'collaborative space' available for decision-making is the maximum. However, the availability and analysis needs to be centrally managed to ensure the appropriate prioritisation according to the commanders' requirements. As the level of the decision-maker moves down to the tactical, the available time also becomes constrained, making it necessary for intelligence of direct relevance to the mission only to be passed to that level. The human element in this process cannot be over emphasised.

The current challenges facing the ISR process are daunting. In the future these challenges will only increase in number and complexity as the adversary becomes inured to the warfighting methodology of nation-states. The operational tempo in the modern battlespace means ISR has to be almost real-time if it is to be relevant. The distilling of intelligence from the large amount of information that is collected—and doing it within the ever decreasing time-span available—is a difficult task. Further, to ameliorate strategic ambiguity, it is also necessary to analyse a broader range of information, increasing the pressure on an already compacted timeframe availability. Consequently, the pressures on the human analysis process are incredibly high.

Only centralised coordination of the ISR process will be able to ease these pressures and optimise the relevance, accuracy and timeliness of the output from information gathered from different sources—from satellites to human sources in the battlefield. Any other model is bound to fall short and have a negative impact on the chances of campaign success.

- ISR is a part of the national intelligence network and is critical to military operations

- ISR inputs are provided to all elements of national power as required and are not exclusive to military forces

- Only centralised coordination of ISR assets and processes will create optimum relevance, accuracy and timeliness in their employment

"Nothing is more worthy of the attention of a good general than the endeavour to penetrate the designs of the enemy."

Machiavelli
Discourse, 1517