

# PATHFINDER

AIR POWER DEVELOPMENT CENTRE BULLETIN



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## FACETS OF AIR POWER: STRIKE

The potential of air power to readily overcome geographic barriers, transcend borders and attack surface targets deep inside enemy territory was conceptually recognised almost from the beginning of military aviation. However, it took a great deal of time, technological innovation and procedural maturity to turn the concept into reality. Arguably World War II saw the extensive use of air strike as a decisive capability and its ascendance as a primary air power role. The advent of advanced bombsights, radar-guidance and precision guided munitions increased the accuracy, effectiveness and economy of effort of air strike amplifying its importance as a crucial military capability.

Traditionally, strike has been divided into strategic and tactical, a division primarily made based on the nature of the target being attacked and the impact of its destruction on the war or battle being fought. Strategic strikes were ones that attacked the adversary's war-making potential deep inside enemy territory and did not have an immediate

effect on the conduct of the war, while tactical strikes were normally carried out on targets on or near the battlefield with their destruction having an almost immediate impact on the outcome of the battle. Within this construct, strikes were further divided into convenient groupings—strategic strikes, interdiction and close air support—which is relevant even today. Interdiction is carried out to divert, disrupt, delay or destroy the adversary's military potential before it can be employed against one's own forces, whereas close air support is conducted against an enemy who is in close proximity or in actual contact with friendly forces. Further, strikes can also be conducted against maritime targets through the conduct of strategic strike, interdiction, anti-submarine and anti-surface warfare strikes.

Typically exhibiting the complexity of air operations, strike also contributes to obtaining control of the air. Termed 'offensive counter air', it is aimed at destroying enemy air power capabilities on the ground, before they can be

brought to bear against friendly forces. A classic example of such strikes being able to obtain almost complete control of the air is the pre-emptive strikes that Israel carried out in 1967, which destroyed the Arab air forces' ability to operate effectively for the duration of the war that followed and permitted uninhibited freedom of manoeuvre for Israel's forces.

In recent times, the demarcation between the different types of air strikes has become diffused and they are now considered as a single entity—strike. There are three primary reasons for this development. One, the conduct and characteristics of armed conflict have evolved over a



period of time. Today a single target could be the critical centre of gravity, the destruction of which the adversary may not be able to absorb. Two, technology now permits air strikes to be proportionate, discriminate and precise to an extent where there is only minimal possibility of error. Three, the prevailing international politico-strategic

environment makes it difficult for even a stabilising military force to occupy territory, albeit for a short period of time. Therefore, the use or threat of air strikes to deter is considered a viable option. Further, in contemporary conflict, air strikes are now not only considered a necessity but in a majority of cases, the weapon of first choice. In these conditions, the traditional division of strategic and tactical strike is no longer valid. Every single strike now has the potential to create strategic effects.

While the changes in the conduct and characteristics of war are overarching elements in making strike a crucial element of the offensive air capability, it is technology that has given it the primacy that it now enjoys. Air to surface weapons now have some inherent characteristics that were unheard of even a few decades ago, and which make them extremely effective. The trend is for them to become even more lethal and precise.

Strike weapons have now become truly all-weather and can retain the necessary navigation and terminal accuracy necessary for them to be used in adverse weather and at night. This effectively denies the adversary the traditional sanctuaries of weather and darkness. Their increased precision and the development of variable yield warheads minimise collateral damage, while the reduced size and weight of the weapon and the increase in load-out capability makes it possible for a single platform to carry multiple weapons. This facilitates the prosecution of multiple targets in the same mission, acting as a force multiplier and increasing the efficiency of the system.



Air to surface weapons now have extended range, making it easier to avoid heavily defended targets and reducing the risk to the launch platform. This reduces attrition risk, which is a primary consideration in most military forces. The extended range provides the ability to reach out and strike the enemy without being threatened, which is a powerful deterrent on potential adversaries. It also permits a single platform to cover a larger area of the battlefield if the launch aircraft is adequately linked to the air battle management assets. The improved tracking ability of strike weapons gives them improved mobile target kill probability. In contemporary conflicts where many targets are mobile and provide only fleeting opportunities to be attacked, this ability could be the difference between operational success and failure.

Current weapons have configurable warheads and therefore have increased flexibility in their employment. It also becomes easier to match weapons to targets, which in turn ensures increased lethality and the ability to achieve the desired effect while minimising collateral damage. Perhaps the most significant improvement in strike capabilities have come about because of the improvements in launch aircraft capabilities that permit enhanced connectivity between the platform, command and control nodes and ISR

capabilities. This creates the capability for the weapons to be retargeted, weapon tracking in flight and, if required, the ability to abort a strike even after weapon launch. Improved communications between all mission elements reduces the kill-chain timeline, enabling real-time re-attack tasking as required. Integration of PGMs with real-time C2 and ISR provides greatly enhanced strike accuracy and effectiveness.

Air strikes now meet the universal requirement for attacks to be precise, proportionate and discriminatory while being able to threaten an adversary's strategic infrastructure simultaneously. The enhanced strike capabilities permit the conduct of air campaigns, focused on neutralising enemy 'target systems' and centres of gravity to achieve strategic objectives from the beginning of the campaign, while simultaneously contributing effectively to the surface campaign. Air strikes have now evolved into being a primary choice for offensive action in a campaign.

- *Strike is now understood more in terms of the effects it creates rather than within the traditional distinctions of range and nature of target.*
- *Technology is a critical enabler in making air strikes precise, proportionate and discriminate.*
- *Air campaigns can now be conducted to simultaneously achieve strategic as well as tactical objectives.*

*70 per cent of casualties and injuries to enemy troops in the Vietnam War were caused by U.S. air firepower. Half the Arab tanks damaged during the fourth Middle East War were destroyed by the Israeli Air Force. During the Falkland Islands war between Britain and Argentina, 90 per cent of the 29 vessels that were lost were due to air strikes. All the above indicates that with the rapid development of air weapons, the focus of modern war is gradually shifting to the air. Air firepower is becoming the backbone of joint military operations.*

Maj Gen Zheng Shenxia, PLAAF, 1996



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