Control of the air, precision attack and Intelligence Surveillance and Reconnaissance (ISR) are cornerstones of modern air strategy and key premises of Australian air power doctrine. Together they allow commanders to exploit the air environment and to conduct surface operations where and when required without effective interference from enemy air power. Control of the air is the key to this ability. It provides the necessary conditions to allow the full range of air and surface operations. From the air perspective, control of the air enables persistent ISR, precision attack and counter air, air mobility and air to air refuelling. This Pathfinder describes the connection between control of the air, precision attack, and ISR.

The ability to create precise effects is not only the hallmark of advanced air forces, but arguably the greatest contribution air power brings to the modern battlespace. The RAAF creates precise effects through its capability to conduct precision attack. This capability is reliant on its ability to control the air environment and provide persistent ISR to support these operations. It is essential, therefore, that the RAAF maintains its ability to gain control of the air or if necessary, alternate means of utilising the air environment to collect sufficient information to allow it to achieve precise effects.

Precision attack is the RAAF’s chosen means of applying combat air power to create precise effects against an adversary to achieve desired campaign outcomes. It is defined by the precision of the effect created, and does not necessarily imply the use of precision weapons. The ability to create precise effects allows the RAAF to shape its environment, deter possible aggressors and when necessary respond decisively. ISR provides the timely collection of information which facilitates the RAAF’s ability to conduct precision attack.

Although gaining control of the air is generally the first objective in an air campaign, it is not the ultimate goal. Rather it is a necessary prerequisite for the conduct of all other operations to achieve campaign objectives. In addition to allowing surface forces freedom of action across their domain, achieving control of the air enables the Air Force to conduct the full range of its air operations including selectively applying precision attack in a time and place of its choosing. Gaining control of the air, therefore, is a means to an end. It allows Air Force the freedom of action it requires to optimally apply air power.

The air doctrine of most advanced Western air forces is underscored by the importance of winning and maintaining control of the air to enable the application of precise effects. This Western way of fighting air wars is a result of historical experience in conventional war, especially the two World Wars, and a predilection to seek and exploit technological solutions to military problems. The rise of air power can be seen in this light as a natural development in the quest for victory in the three environmental battlespaces–land, sea and air. By operating under an air environment that friendly forces control, Western surface forces are able to exploit their advanced capabilities, tactics and technologies to most effectively engage enemy forces. By creating precise effects, air forces are able to achieve campaign outcomes with discrimination and minimum force–both of which are important to Western democratic societies.

Similarly, RAAF doctrine is based on gaining sufficient control of the air to allow it to apply precision attack. With a permissive air environment (be it a favourable air situation, air superiority or air supremacy), ADF surface forces have the necessary freedom of action to conduct operations relatively unhindered. RAAF doctrine describes two ways of achieving control of the air, first, by fighting to achieve it through a counter air campaign and, second, by creating sufficient control, in time and space through the use of superior tactics and technology, for particular operations. RAAF air campaigns, therefore,
typically begin with operations to achieve sufficient control of the air to pave the way for the application of precision attack.

A permissive air environment alone, however, is not sufficient for the RAAF to achieve the sort of precise effects described in its air power doctrine. The ability to employ precision attack requires the convergence of information, command and control (C3) and weapons systems to engage targets and create effects that achieve campaign outcomes. In particular, the provision of accurate and timely information is crucial to enable effects-based targeting through precision attack. This information is provided primarily through joint, interagency and coalition channels and relies heavily on airborne and space-based ISR. Although much information, especially in regard to fixed targets, is provided by spaced-based ISR assets, airborne platforms are required for highly specific information on mobile and fleeting targets, especially when weather may adversely affect space-based ISR. Providing a sufficiently permissible air environment for these airborne ISR assets, therefore, requires the RAAF or its allies to either fight for control of the air or else circumvent it for as long as required through technology like low observability (stealth). Air environments where this is simply not achievable, called denied access environments, pose considerable challenge for a strategy based on control of the air.

Without persistent ISR it is extremely challenging to bring precision attack to bear on fleeting, mobile or effectively camouflaged targets, particularly in dense urban environments. Operations in Iraq and Afghanistan against insurgent forces that are embedded within the broader community highlight the enormous difficulty in building sufficient information to effectively apply discriminate force, even in an environment of air supremacy. In denied access environments, the RAAF currently has no capability to achieve the level of persistent ISR required for precision attack across the spectrum of target types. Advanced research into emerging technologies, such as extremely low observable platforms, may one day enable persistent ISR in such environments, but in the interim, strategies, techniques and ‘work-arounds’ are needed to mitigate lack of ISR access.

It is noteworthy that Western air forces have not had to conduct sustained operations to contest and win control of the air in any conflict since the Korean War, since wise adversaries these days choose not to challenge us in that way. The air operations to secure control of the airspace over Kuwait, Iraq and Afghanistan in the past two decades, for example, were all swift and decisive affairs. For the RAAF, air superiority has been established through allied air power in every major conflict it has been involved in. Fighting for control of the air through an air campaign, therefore, although doctrinally entrenched, has not been a particular feature of RAAF experience outside of a coalition setting. What these operations have highlighted, however, is the vital importance of gaining control of the air and the inescapable need for the RAAF to maintain the high-end warfighting ability to gain this control. For the RAAF, maintaining this capability will be the product of an equal mixture of retaining a technological edge, professional mastery and doctrinal agility.

- The ability to create precise effects is the hallmark of advanced air forces
- Control of the air is a means to an end
- The RAAF will continue to generate balanced capabilities to provide air power for Australia’s security

“In Desert Storm … we had air dominance. That air dominance allowed our strike aircraft to devastate the enemy air forces, and, at the same time, allowed our ground forces to operate without any air interdiction. Desert Storm taught us something about air dominance. We had it, we liked it, and we’re going to keep it.”

William Perry, US Secretary of Defense