Prevention is better than Cure: What is the Utility of Air Power in Conflict Prevention?

By Group Captain Clive Blount

Against the aspiration for an 'adaptable Britain' and a need to get maximum value from a taut force structure, the flexibility and adaptability of air power provides decision-makers with a key crisis management tool – across the whole spectrum of conflict. In this article, Gp Capt Blount examines this utility, asking how air power can be used to prevent recourse to war to solve conflict. After first describing the range of conflict prevention, from upstream engagement - such as defence diplomacy or security sector reform - to deterrence and coercion, he then goes on to describe the attributes of air power that make it uniquely suited to support conflict prevention activity. Using historical examples, he demonstrates that air power provides decision makers with strategic choices unavailable from the deployment of other force types. Blount then summarises with a list of the key properties of air power as a conflict prevention tool.

Introduction

The National Security Strategy clearly states[1] why the UK must attempt to influence events abroad in order to safeguard its security at home. This policy, combined with such liberal interventionist strategies as *'A Force for Good'*[2] , has led to a series of major expeditionary operations by British forces in recent years, several of which have led to long-term commitments from which disengagement has been increasingly difficult. As the character of conflict has changed - from that of wars between opposing armies, fighting for their respective national wills and seeking destruction of the opposing army, to that of 'War among the People' where the aim is to influence the will of those people in the national interest - the outcome of intervention has become indecisive, generally resulting in a change of conditions whilst leaving the underlying conflict and fundamental *causus belli* intact; this is illustrated by the fact that of the 39 current conflicts, 31 are re-emergences of previous conflicts.[3] Whilst the UK Military Instrument should always be ready to fight for our National Interest, and indeed a high-end combat capability must absolutely remain our *raison d'etre*, the old adage 'Prevention is better than Cure' suggests that use of military capability to prevent conflict is a preferable option. Conflict Prevention in the national interest is a strategic level activity that must, by its very nature, involve all elements of national power to engage in a region and to bring influence to bear. It will range from early engagement, to develop an early understanding of the region and to build UK influence, through an entire spectrum of engagement in, and national commitment to, the region, to actions just short of full military intervention in a war. It should always be remembered however, that prevention has its practical limits and is very much enabled by a credible threat… traditional 'hard power'.[4] Air power, with its inherent strengths of speed and reach, has a flexibility and agility that gives it wide-ranging utility across the whole spectrum of conflict and is likely to play a full part in any future conflict prevention activity. My intent in this article is to look first at the spectrum of activity involved in preventing a possible conflict, and then describe some of the stages that may be followed in an attempt to contain an emerging crisis. I will then examine each stage in turn to establish possible roles that air power may play in support of that activity. I will conclude by summarising the key properties of air power as a conflict prevention tool.

The aim of conflict prevention activity must ultimately be *containment* of an emerging crisis before it becomes conflict. However, early engagement by the UK in a region may be effective in influencing regional tensions at an even earlier stage. Generally, early engagement should be driven by UK Foreign and Security objectives (ie. the national interest) and should be co-ordinated activity across government, including such departments as the FCO, DfID and the DTI, as well as the MOD. Early engagement visibly demonstrates the UK's interest in the region and could send early deterrent messages to a potential aggressor. Activities in which Defence capabilities may play an effective role include capacity

building, (including training and support to Defence Sales) key leadership engagement, security sector reform and support in developing key infrastructure. The UK has a history of being widely respected for excellence in the defence arena, both in equipment terms and with a reputation for being a 'fighting nation', so any offer of UK military capabilities in support of engagement activities would doubtless be most attractive. It must be noted, however, that reputations can be fragile, and credibility must be protected if engagement is to form part of national strategy. In addition to these focussed activities, engagement in a region enables us to be immersed in the local culture, environment and politics, enabling a much more in-depth *understanding*. Even if engagement activity does not prevent a conflict, this understanding will be key to effective crisis management and would enable us to be much more effective if intervention is eventually required. Finally, trust and co-operation amongst friends and allies cannot be surged in time of crisis - they need to be nurtured in advance;[5] mutual understanding, friendship and partnership building are central to this early engagement.

As a crisis develops, our involvement will turn from that of building influence to the aforementioned containment of the growing situation. Given that our engagement activity has, hopefully, enabled us to influence allies and partners not to escalate any disagreement, our aim must be to *deter* or dissuade a potential adversary from taking an escalatory path or, indeed, to *coerce* or persuade him to change course to a more acceptable course of action. As both these activities are essentially targeted at the decision-making apparatus of the adversary in an attempt to manipulate his will, the methods used must be agile enough to adapt as the adversary reacts, either turning the 'heat' up or down as required, and should ideally be scaleable to allow varying levels of commitment on behalf of UK decision-makers. The aim must be to control the process - which is rarely as linear as providing a straight forward threat/consequence calculus (the adversary 'has a vote') – we must ensure that our use of power is intelligent in order to avoid unwanted escalation or circumstances that allow the other side to manipulate our decision processes. It is very much a dynamic process, the aim of which has been described as *escalation dominance* and defined as 'The ability to increase the threatened costs to an adversary while denying the adversary the opportunity to negate those costs or to counter-escalate'.[6] Finally, as containment activities approach the more aggressive end of the spectrum and the possibility of conflict increases, the use of military power in coercive activities may also be used to provide a 'shaping' effect in preparation for future conflict.

Air power has a number of unique attributes that provide strategists and policy-makers with a flexible engagement tool which can easily be scaled, both in terms of 'military' effect and level of commitment. Let us now discuss the utility of air power at several points in the crisis management spectrum in an attempt to establish the particular attributes of air power that make it useful in conflict prevention.

The first area in which brings a unique capability is that of early engagement. The speed and reach of air power enables it to be used in a scaleable fashion across the crisis spectrum. The deployment of small numbers of aircraft, 'flying the UK flag' in support of diplomatic or economic activity, could be achieved quickly and with a small host nation support (HNS) requirement or logistic footprint. Scale can easily be increased to larger deployments - such as squadron exchanges or exercises - or, perhaps just as usefully, can be scaled back rapidly in the event that political direction requires it. The influence effect of, for instance, a deployment of fast jets to a country unused to such aircraft can far outweigh the small cost of such a deployment. Air power can be employed rapidly, in a militarily low-key fashion, but can achieve significant effect. In 1988 a unique operation, EXERCISE GOLDEN EAGLE, was undertaken by 29(F) Sqn from RAF Coningsby. The exercise, spread over 11 weeks, involved flying four of the recently introduced to service Tornado F3s 26,500 miles around the world via Malaysia, Thailand, Singapore, Australia and the USA. The event was principally designed to prove the long range reinforcement capability of the Tornado F3 by deploying in support of the Malaysian Peninsular Five Power Defence Arrangement but also provided a demonstration of Royal Air Force planning, airmanship and logistics support. More recently, in Autumn 1998, NATO was holding a Partnership for Peace Exercise, EXERCISE CO-OPERATIVE BEST EFFORT 98 in Macedonia.[7] The exercise was intended to be a tactical infantry section-level exercise for NATO and partner nations but became more strategically significant as the crisis in Kosovo to the North began to escalate. SACEUR, General Wesley Clark, directed that measures should be taken to develop the exercise in order to declare NATO interest in the region and to reassure Macedonia and neighbouring countries of NATO resolve. Air power was the chosen instrument and, within a number of weeks, an air display was arranged for the opening of the exercise with a small number of fast jet flypasts, a parachuting display and a demonstration of a NEO[8] operation by the US 22nd Marine Expeditionary Unit. The event was widely publicised and covered by the regional media. While it is difficult to assess the direct effect of this action, as it was just one of many airpower demonstrations and several ongoing diplomatic and military activities aimed at coercing Milosevic but, by the end of October, large numbers of Yugoslav forces has been withdrawn, an OSCE mission had been deployed, and SACEUR claimed victory for coercion by air power.[9] The events of the following year perhaps subsequently proved otherwise, nonetheless the utility of air power to provide rapid influence effect is unquestioned. Furthermore, the subsidiary effect of exposing the somewhat basic Macedonian ATC services and armed forces to the issues involved in co-ordinating NATO air power undoubtedly paid dividends a year later during OP ALLIED FORCE and during the country's eventual accession process to NATO.

As the last example has shown, a key part of early engagement is that of

building indigenous capability. In capacity building, and in developing broader wider influence, air power can again provide an agile tool. Unlike other forms of military power, there is a subtle difference between military *aircraft* and military *air power*. Many people are interested in military aircraft without being particularly interested in warfare; most aviation magazines cover, equally, military and civil topics. It is possible therefore for air power to have a positive effect without necessarily appearing overtly combative in nature, and this may be a useful property for strategists to exploit. For example, the training of military pilots from other nations in elementary and advanced flying has long been a UK strength, most recently evinced by the training of Afghan helicopter pilots at Boscombe Down, but the development of deployable military experts to develop indigenous civil aviation capability – in the absence of a local aviation authority or 'deployable CAA' – provides a valuable option for the diplomatic and economic lines of operation. The role of RAF Gibraltar, whilst a key part of the PJHQ-run Permanent Joint Operating Base established for contingency operations, uses spare capacity to provide a vital service to the Colony as 'Gibraltar Airport'. A Colony of less than 30,000 persons would be unable to afford to run a civil airport, without which its independent status would be much undermined. The presence of an RAF airfield provides the UK Government with a useful tool to influence diplomatic, military and economic affairs in the region. Along the same lines, but in less-established areas, the ability of an air force to deploy to austere operating strips with no control infrastructure, and to develop these as capable operating bases, is a unique capability existing in very few non-military organisations. Whilst a dedicated deployable airfield activation party, along the line of the RAF Construction Wings and Servicing Commandos of the Second World War,[10] is likely to be uneconomic, military skills in this area, such as those now provided by the Royal Engineers and such units as Tactical Comms Wing, may prove to be a key means of building influence in a region. Again, it is clear that air power provides scaleable effect; assets can be deployed to immediately boost indigenous capability by adding that 'Air Power Advantage' to less developed or militarily capable countries. It was to achieve this effect that the USAF provided air power support to South Vietnam in the early stages of John F Kennedy's presidency in 1961 under such auspices as Operation FARM GATE. Under such schemes, squadrons were specifically trained to fill the role of providing air power support to developing nations, in order to counter the perceived threat from communism under Khrushchev's 'Wars of National Liberation'.[11] Known colloquially as 'Jungle Jims' these forces consisted of a number of bespoke mobility, attack and specialist COIN aircraft and had personnel capable of operating alongside, or training, indigenous forces. They were used overtly to send a message of US intent by equipping and training indigenous forces or, as in 1961, relatively covertly as 'advisers' to the South Vietnamese military.[12]

Strategically, however, the perception that the crisis was largely communist in nature – rather than nationalist and anti-colonialist – and the behaviour of the government in Saigon undermined any conflict prevention activity. As the crisis in Vietnam deepened, so did US commitment, and there was a move from conflict prevention to counter-insurgency - with advisors being cleared to take a gradually more aggressive role, eventually participating in combat operations. On a less ambitious level, and rather more commonplace, the provision of loan service personnel has always been a cost-effective measure of building capability, reassurance, influence and, indeed, understanding.

As a threat begins to emerge, it becomes important to provide reassurance to our Allies in the region – both to send a message of UK intent to potential adversaries, but also to influence our friends' policy choices. (For instance, to prevent our allies from taking precipitate steps out of fear or for self-preservation). As stated previously, deployments of military aircraft are a quick and straightforward way of demonstrating intent and, again, provide policy-makers with flexibility; the effect may range from the totally unthreatening - such as the Red Arrows (a clear demonstration of Britain's skill and airmanship) - to an obvious signal of intent sent by the arrival of a package of armed fighters; multi-role capability enables aggressive intent to be rapidly adjusted from, say, the defensive posture of Typhoons in the Air Defence-role, to an aggressive stance by arming the same aircraft with attack weapons. In a broader sense of multi-role capability, many military aircraft can have much utility in non-military roles; ISR support of border and customs authorities by patrol aircraft and disaster relief and support to development agencies by mobility platforms, are but two examples of how air power can reassure and support a foreign government under pressure. Furthermore, air power may be the only way to rapidly deliver aid to a starving population on the verge of revolution, as part of a comprehensive approach to supporting a regime and maintaining regional influence. The strategic effect of the Berlin Airlift in demonstrating intent and providing succour to the starving, besieged, West Berliners is well documented;[13] in more recent times, the rapid use of air power to reassure was evinced by the deployment of Tornado F3s to Lithuania to fill a QRA role in 2004 - demonstrating NATO resolve to protect the newly acceded Baltic States. Indeed, Control of the Air is likely become of increasing importance as it is a key enabler to many of the activities that follow, should the crisis develop, so early deployments of Air Defence aircraft and battlespace management assets are highly likely, and have much utility, in many scenarios.

The deployment of air power can aid the development of a regional 'picture' to build understanding of the area and the issues surrounding the crisis. Deployment of air ISR assets enable early intelligence picture building and have great utility in providing information to aid strategic decision-making. The deployment of Canberra PR9 ac to Central Africa in 1996 provided early indications that a feared resurgence of the Hutu/Tutsi

massacres - much predicted by the media and accompanied by heavy public pressure that the UK 'must do something' - was actually not taking place, enabling UK decision-makers to hold back from commitment until confirmation proved that UK troops were unnecessary.[14] The operation of even non-specialist ISR capabilities add a deal to the wider understanding of a region and is invaluable in partnership building – particularly if conflict prevention fails. As stated in the introduction, once a threat becomes clearly apparent, conflict prevention activity naturally turns to containing that threat. Thinking on the use of military power in activity such as this, particularly outside of the traditional nuclear arena, is still very much in development but the potential of the use of co called soft national power is clearly recognised. This paper will now discuss the utility of air power in deterrence and coercion activity. Whilst military power can play a significant role in both of these activities, it should be remembered that the 'target' is essentially the mind of an adversary. The aim is to influence the decision-making process and to manipulate the will of an opponent and, as such, must remain firmly in the realm of a comprehensive approach using all the components of national power. However, as will be shown, air power's unique attributes enable it to contribute in many areas.

Deterrence represents the effort to dissuade an adversary from taking an escalatory path. Again, high profile air deployments might quickly, and relatively cheaply, demonstrate intent. The speed at which this can be achieved with air power was clearly demonstrated in 1991 when, within 48 hours of Saddam Hussein's invasion of Kuwait, in an attempt to show support for Saudi Arabia and to deter Saddam Hussein from driving his forces further south, Tornado F3s were patrolling in support of the air defence of Saudi Arabia in conjunction with US aircraft, followed into theatre some 24 hours later by Jaguars attack aircraft. Again, this rapid effect was built on to eventually provide a robust air power force for the subsequent liberation of Kuwait, although it could just as easily have been scaled back quickly if the political situation had so demanded. This illustrates a unique advantage of air power over other military capability; the time that it would take to deploy a land battle group by sea does not afford decision-makers the agility to be able to recall, and maybe, redeploy as a situation rapidly changes over time. Once deployed in theatre, the level of air power activity can be controlled to, again, achieve a scaleable effect. This enables policy-makers to control and direct the development of a burgeoning crisis. Exercises, patrolling and firepower demonstrations can all be conducted at varying levels of visibility. Furthermore, air power can be used to support cross-government activity ranging from MACP-type activities, or in support of NGOs, through parades and other diplomatic activity in order to demonstrate UK intent and support.

The psychological effects should not be discounted, particularly in less technologically-inclined nations or nations not used to large deployments of military air power, and again speed, reach and ubiquity

enable an early psyops campaign to be heavily supported from the air – which, as demonstrated by the use of airborne broadcast speakers during the Malaya campaign[15] and again by the psyops assets of the FARM GATE deployment, can be particularly effective in areas where accessibility by other means is limited (by terrain, for example). The psychological effects of the use of air power as the crisis develops should also not be overlooked; we are becoming increasingly familiar with the tactical use of air power in shows of force etc, but the ability to operate at will over enemy territory and to strike ground targets, seemingly without counter, has a significant effect on enemy morale and will to fight. Conversely, we must be cognisant of the potential negative effects of air power, particularly unmanned systems, and specifically the risk of appearing as a 'hi-tech bully' - giving the enemy military, and populace, a rallying point against a distant enemy, unwilling to face an 'honourable' death. Inability to counter the 'cowardly threat' that modern air power presents is likely to become the key driver for an asymmetric response - which may change the nature of the conflict and certainly complicates the policy-makers' problem.

Coercion is often seen as the harder end of containment but, even though kinetic effect may play a key part in coercive activity, it should still be remembered that the target is the opponent's mind. It is often difficult to distinguish between pure brute force operations to destroy a target and coercive attacks. For instance, the Israeli attack on the Osirak reactor was intended simply to destroy the Iraqi nuclear programme. However, the clear demonstration that Israel had the ability to strike at will, deep in Iraqi territory, probably influenced Saddam Hussein's decision-making processes in the following years. The BLACK BUCK[16] raids on the airfield at Port Stanley, whilst designed to deny the runway to Argentinian reinforcements, had a significant coercive effect on Argentinian decision-makers by demonstrating that Britain had the capability to strike at extreme range - particularly targets on the Argentinian mainland. Likewise, although the US struck a range of political and military targets during ELDORADO CANYON[17] which doubtless hindered President Gaddafi's ability to exercise regional power, the success of the operation was really demonstrated by the change in his subsequent behaviour and his ceasing to sponsor terrorism (although relatives of the victims of Flight Pan Am 103, may disagree). Much has been made previously of air power's speed and reach, but it is as a crisis develops that another fundamental characteristic of air and space power comes into the equation; namely, height. Air power can look 'over the wall' into a potential enemy's territory and can be used both to gather information and, in due course, to deliver selective effects at range as part of a coercive strategy. Space, obviously, provides the ultimate high ground, with little restriction on overflight and the ability to gather information about an adversary with minimal political risk of escalation. Developments of a future ability to attack targets on the ground from space, whilst subject to serious legal debate, take this

capability to the ultimate coercive tool.[18] It should not be forgotten, however, that air power was effectively the sole military tool used to coerce Saddam Hussein's Iraq for over 10 years during Operations NORTHERN WATCH and SOUTHERN WATCH. In addition to providing a range of scaleable effects both in terms of footprint and military effect, air power can also provide scaleable effect in terms of political visibility. For example, Unmanned Aircraft are being used to kill key Al Qaeda foreign fighters in Northern Pakistan, where a land force to achieve a similar effect would be politically unpalatable. Similarly, it is widely thought that, in 2007, Israeli air power intercepted and destroyed convoys of arms shipments in Somalia[19] that were destined for Hezbollah, and was also responsible for the destruction of nascent Syrian nuclear facilities[20] – although Israel has never publicly accepted responsibility for these actions. Intriguingly, the Syrian attacks were most probably aided by significant cyber operations, which rendered the Syrian IADS impotent, an early indicator of how important such activities may become in the future.[21]

Finally, In addition to deterrent or coercive effect, air power actions can be used to shape the battle space to prepare for war in the event that conflict prevention fails. Targets, kinetic or otherwise, chosen to produce a coercive effect may also be key in preparing for any future campaign, so consideration should be taken to the wider campaign when planning the early stages. Attacks on air defence systems, for instance, as a show of kinetic intent during a coercion effort, will also have utility if it is required to suppress enemy air defences as part of war-fighting operations if prevention fails. Again, any ISR effort to develop understanding during prevention operations will be key to planning future war-fighting campaigns.

Summary of the Properties of Air Power as a Tool in Conflict Prevention

So then, air power has inherent qualities that make it a unique instrument that strategists and policy-makers can deploy in order to influence future events, manage crises and potentially prevent conflict as part of a comprehensive UK response. This utility can be summarized as a number of key 'headlines'; they are:

Agile Commitment. *Air power provides an agile instrument that may be applied in a controlled manner by policy makers. Its effect is* ***scaleable****, in that a wide range of military (and other) effects may be delivered as size, type, basing and support options are highly flexible. This allows rapid adjustment and strategists are able to 'turn the volume knob' either up or down to control the degree of effect and thereby control escalation. Its effect is* ***rapid****, in that the inherent properties of speed and reach enable air power to be brought to bear rapidly, thus allowing more decision time – the commitment decision can be delayed until the last safe moment.*

Freedom of Political Choice. *The inherent agility of air power described above keeps political options 'open'. Decisions may be taken late and it is possible to 'turn up', 'turn down' or 'turn off' with relative ease. Scale and effect of air power contribution can be rapidly varied and can be both*

military in nature or can support the other lines of operation.

***Effects at Range**. Air power can provide a range of kinetic and non-kinetic effects and, if necessary can be available at range. Air power can therefore influence a potential opponent from afar and without crossing sensitive borders. Emerging technology and space capability will extend influence and understanding over the horizon and could be selective in terms of visibility to further aid the strategists.*

***Wider Effects**. Air power used in conflict prevention activity may also have the secondary effect of preparing the battlespace. The whole range of conflict prevention activities will build understanding, as previously discussed, but assets can be used for contingency planning purposes whilst engaged in wider deterrence or influence activities. ISR assets, for instance, could be tasked for specific surveying or reconnaissance tasks for contingency purposes or, more traditionally, kinetic effect delivered as part of a coercive campaign could be so targeted to 'write down' enemy capability in the event of a failure to prevent conflict. Air power also delivers a series of psychological effects, either by its inherent nature or with specific technical capabilities, which must not be discounted.*

***Supports Cross-Government Activity**. In addition to military effect, air power can provide support to all the major lines of operation as part of a comprehensive approach.*

It makes sense that emerging crises should be tackled as early as possible and that the UK should bring its influence to bear rapidly and sensitively to prevent conflict. Early and flexible engagement is the key to this activity, a strategic level activity that must, by its very nature, involve all elements of national power. Such actions could range from early engagement, perhaps with an emphasis on diplomatic and economic activity, in order to develop an early understanding of the region and to build UK influence, through an entire spectrum of engagement in, and national commitment to, the region, potentially escalating to actions just short of full military intervention in a war. Air power, with its inherent strengths and supported by emerging technology, has a flexibility and agility that gives it wide ranging utility across the whole spectrum of conflict. It provides effects that are scaleable - in terms of military effect, logistics footprint, and host nation support requirements - and is relatively cheap to deliver. Above all, air power maintains political freedom of choice as, not only can it be deployed rapidly, its effects can be readily adjusted as the crisis waxes and wanes. The wide – ranging utility of air power is therefore likely to guarantee it a key role in any future conflict prevention activity.

Notes

[1] National Security Strategy 2, Dated Jun 2009.
[2] The Defence Vision, **www.mod.uk/DefenceInternet/AboutDefence/Organisation/Defence Vision/**, accessed 12 May 10.
[3] 'The distinction between inter-state war and intra-state war, and between regular and irregular warfare, will remain blurred and categorising conflicts will often be difficult.' [DCDC Global Strategic Trends IV, p.84(Available through **www.mod.**

uk/dcdc)]
[4] DCDC 'Future Character of Conflict' p36 (Available through **www.mod.uk/dcdc**)
[5] US Maritime Strategy, 'A Co-operative strategy for 21st Century Seapower', 17 Oct 07, p11
[6] Daniel Byman and Matthew Waxman, 'the Dynamics of Coercion:American Foreign Policy and the Limits of Military Might' (CUP:Cambridge, 2002),p 38
[7] Generally referred to in NATO at the time as the 'former Yugoslav Republic of Macedonia' but recognised by Turkey by its constitutional name, 'Macedonia'.
[8] Non-Combatant Evacuation Operation.
[9] Tony Mason, '*Operation Allied Force*' in John A Olson(ed), 'The History of Air Power' (Potomac:Dulles, VA, 2010), p228
[10] Hilary St George Saunders, The Royal Air Force 1939-1945, Vol III, The Fight is Won, (HMSO: London, 1954) Ch 6.
[11] Report of the November 1960 Moscow Communist Conference, given by Khrushchev to the Higher Party School, Academy of Social Sciences, Moscow, 6 Jan 61. A detailed analysis from a US perspective can be found in Foreign Relations of the United States, Vol V, doc15.
[12] John Napier, 'The Air Commandos in Vietnam', MA thesis at **www.afsoc.af.mil/shared/media/document/AFD-051228-001.pdf** last accessed 21 Jan 10.
[13] David Reynolds, 'One World Indivisible: A Global World History since 1945',(Penguin:London,2000), p30,31
[14] House of Commons Hansard Debate for 6 Feb 1997(Pt10). Available at **www.publications.parliament.uk/pa/cm199697/cmhansard/vo 970206/debtext/70206-10.htm**
[15] Brian J Hunt, '*Air Power and Psychological Warfare Operations – Malaya 1948-1960*' RAF Historical Society Journal No 47, pp44-45
[16] Attacks by Vulcan B2s against Port Stanley Airfield and adjacent Radars, carried out between 30 Apr and 12 Jun 82 as part of the Falklands War against Argentina.
[17] US Air Operation against Libya mounted largely from US carriers and airfields in the UK on 15 Apr 96.
[18] '*Air Force Seeks Bush's Approval for Space Weapons Programs*', **www.nytimes.com/2005/05/18/business/18space.htm**. Accessed 12 May 10
[19] Discussions with DDefS(RAF), 21 Apr 10
[20] '*Israelis Blew Apart Syrinan Nuclear Cache*', **www.timesonline.co.uk/tol/news/world/middle-east/article2461421.ece** Accessed 12 May 10
[21] Richard A Clarke and Robert K Knake, 'Cyber War: The Next Threat to National Security and What to Do About it',(Harper Collins: New York, 2010), pp 6-11