

US Air Power in Iraq

On 17 January 1991 the US and its allies launched Operation Desert Storm; one of its chief aims was to evict Iraq from Kuwait. For four decades prior to the war, the US military, focusing on countering the threat represented by the Soviet Union and its allies, had been preparing for large-scale conflict against conventional forces. By 1991 the armed forces' equipment, doctrine, organization, training, and as a result, overall capability had indeed attained new peaks.

Iraq fielded large Russian- and Western-equipped conventional armed forces including a robust air defence system, although doctrine and training in particular were much inferior. Operation Desert Storm saw a well worked-up US-led force fighting just the sort of war it was prepared for.

Operations began with a massive month-long air-only campaign against the Iraqi forces in Kuwait and Iraq before land operations were begun. Early target sets in the air campaign included air defences and long-range offensive capabilities, the leadership, industrial production, infrastructure and telecommunications, that is, mainly strategic targets. As the campaign progressed attention was increasingly focused on military targets, the coalition beginning to concentrate more on shaping the battlefield for the following ground operations; close air support (CAS) and battlefield air interdiction therefore became more important.

In the following years, in addition to enforcing sanctions, the US and the UK maintained no-fly zones in the north and south of Iraq, limiting the country's air defence strength in these areas particularly and also depleting residual conventional military capabilities. But the overall geo-strategic framework was also to change dramatically: the September 11, 2001 terrorist attacks jolted the US and its allies to the threat posed by increasingly capable and well-organized worldwide-ranging terrorist forces. And the concomitant proliferation of weapons of mass destruction (WMDs) had become a growing concern, particularly when combined with the terrorist threat.

JDAM: a new-generation precision guided munition
(SOURCE: BOEING)



An F/A-18 fighter/attack aircraft equipped with a Joint Stand-off Weapon (JSOW) (painted red for this demonstration photo), another new precise weapon.

(PHOTO: BOEING)

When *Operation Iraqi Freedom* was launched on March 20, 2003, the military-strategic background was completely different. In this operation, the US aim was primarily to enforce a regime change in Iraq, to find and destroy WMDs in the country and to prosecute the war against terrorism. Notably political realities militated against a long air campaign; parallel operations therefore became more important and indeed, land operations began on the same day as the air campaign. Not surprisingly, this initial conventional (joint) campaign was short.

The limited conventional forces available to Iraq at the outset of *Operation Iraqi Freedom* are in no way a model for a more capable conventional opponent that could emerge in the medium or long term. However, in the 12 years from Desert Storm to Iraqi Freedom, the US forces have been developing new operational concepts and doctrines leading to tremendous improvements in their ability to face any military opponent and some of these were employed in Iraq.

New Operational Concepts

By the time of *Operation Iraqi Freedom*, effects-based operations (EBOs), in which combat power is directed towards the

specific military-strategic aims, had risen to the fore. Different roles were emphasized compared to *Operation Desert Storm* and previous air operations; in particular, air support became important early in the campaign.

Additionally *Operation Iraqi Freedom* saw the employment of rapidly maturing network-centric capabilities, enabling a dramatic shortening of the sensor-to-shooter chain. Pointedly, the time between identifying and striking a target decreased from about a day in *Operation Desert Storm*, to 45 minutes in *Operation Enduring Freedom* in Afghanistan in 2001-2, to about 11 minutes in *Operation Iraqi Freedom*.

An example of what can be achieved is illustrated by what is perhaps the single most famous air sortie in the campaign. On April 7, 2003 a B-1B bomber, en-route to a target in western Iraq, and after just having received fuel from a tanker, was re-rolled to attack a building in Baghdad in which Iraqi leaders were suspected to be located. The bomber struck the site with Joint Direct Attack Munition (JDAM) Global Positioning System (GPS)-guided bombs 12 minutes later. The aircraft then moved on to targets elsewhere in Iraq.

It is notable that the emergence of network-centric warfare (NCW) is seeing the network, the linkage between aircraft,

weapons and other systems, become more important, while on the other hand, the value of these individual systems *per se* is decreasing. Further “legacy” systems are being used in new and innovative ways; generally aircraft and weapons that could adapt to other missions are proving to be more useful. Bombers, for instance, performed on-call air support, as they had done in Afghanistan a year earlier. Their long endurance enabled them to stay airborne in theatre for many hours to strike any targets that may emerge and for which they could draw from their substantial weapons loadout. B-1Bs indeed flew long endurance patrol missions up to eight hours in length, dropping 50% of the JDAMs launched despite only providing 2% of the air sorties. B-52 bombers and F-15E strike aircraft also flew long-endurance patrols.

An important requirement for the shortening of the sensor-to-shooter chain (otherwise known as TCT – time-critical-targeting) against small, mobile targets was the employment of precision-guided munitions (PGMs), these being either laser- or satellite-guided. PGMs constituted 70% of the weapons compared to 9% in *Operation Desert Storm*.

Newer precision-guided weapons included the JDAM and the Joint Stand-off Weapon (JSOW); the UK Royal Air Force evaluated its Storm Shadow standoff missile from Tornados, although the weapon was still under development.

Reconnaissance/targeting pods were a crucial element in enabling TCT. B-52s notably used the new Litening-II pods



Heavy bombers like the B-52 undertook on-call air support and long endurance patrol

(SOURCE: USAF)

operationally for the first time, this system making the old bombers much more effective weapon platforms in the Iraqi scenario. Another new system evaluated in theatre was the Raptor reconnaissance pod on Tornado. Other pods included the US ATARS and LANTIRN.

Otherwise, special operations were crucial to the success of the campaign, their contributions including the performance of ground-based targeting.

Lingering Concerns

In general, while a tremendous amount of data was available from many sources, intelligence analysis needs to be improved. Further, despite successes of individual aircraft and weapons, there were tactical concerns regarding the provision of CAS particularly when forces from different services and nationalities were involved; improvement of joint and combined tactics, techniques and procedures (TTPs) is required. Fratricide has continued to be a problem as it was in *Operation Desert Storm*.



The B-1B, another heavy bomber, struck an Iraqi leadership target 12 minutes after being retasked from another mission.

(SOURCE: USAF)

Instances have involved both US and UK aircraft and systems. Compatible identification-friend-or-foe (IFF) systems and better-coordinated TTPs are demanded. It is also important to note that the harsh desert environment adversely affected delicate systems.

As Iraq's conventional forces were quickly overwhelmed, the campaign quickly developed into one focused against guerrilla forces. Pointedly, operations are still underway; the use of air power against irregular

forces has traditionally been neglected, but demands more emphasis today.

Overall, *Operation Iraqi Freedom*, while not a model for future conflict, still provides pointers to how far the US has progressed along the path to fielding fully network-centric- and effects-based operations-capable forces – capabilities that are increasingly important in the emerging American way of war. **FL**

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