NO HIGHWAY IN THE SKY

_In the air are no streets, no channels, no point where one can say of an antagonist, ‘If he wants to reach my capital he must come by here’. In the air all directions lead everywhere._

H.G. Wells

What is a **Pathfinder**? At first glance it is a publication produced since June 2004 by the Air Power Development Centre, an issue of which you are reading at the moment. The title though has a more significant meaning. The title is meant to commemorate the Pathfinder Force that was formed in Bomber Command, Royal Air Force, during World War II. Without the contribution of the Pathfinder Force, Bomber Command would probably have been disbanded, which would have meant that the British contribution to the strategic air offensive against Germany would have been drastically reduced or may not have continued all.

Before it can create the necessary effect and become a useful air asset, a strike force must be able to locate the designated target. German air units operating during 1937 in the Spanish Civil War recognised that aerial navigational aids would be vital to reach the target, especially during bad weather and/or night. Accordingly, a special target finding Luftwaffe unit Kampfgruppe 100, was formed and made ready for action in November 1939. It employed an electronic navigational aid system based on radio beams, which intersected once the target was reached. Flares would then be dropped to illuminate the target for the incoming bombers. Perhaps the best-known application of this technique was the destructive raid on the British city of Coventry in November 1940.

The pre-war doctrine of RAF Bomber Command made no provision for night attacks. The basic belief was that a self-defending force of bombers could operate safely in daylight. For daylight bombing raids the only navigational aids deemed necessary appeared to be a map and a pair of binoculars. During this period, specialist navigational training was available for only two officers every year.

An aerial navigator’s job is to know the position of the aircraft at all times. Today, much reliance is placed upon the Global Positioning System governed by signals originating 20,000 kilometres above the earth. The method employed by Bomber Command, however, before the introduction of the first electronic navigational aid in 1942 was a combination of dead reckoning and celestial observation. Dead reckoning relies on basic information such as the last known location of the aircraft, time elapsed, average wind drift, ground speed and direction. Celestial navigation involves reasonably complicated mathematical computations based on sextant star observations.

There were many opportunities for error, and navigators who until 1942 were also responsible for aiming the bombs, understandably made them. Examples highlight the point: a raid on Berlin by 103 aircraft in August 1940 resulted in the destruction of a suburban garden summer-house by the only bombs which fell within the city limits. In October 1941, crews were briefed to bomb Stuttgart. The bombs fell in the countryside well outside the city. Later that year, 152 aircraft were sent to attack Nuremberg. The raid resulted in the extended bombing of a small village sixty-five miles from Nuremberg with another small town 152 kilometres from Nuremberg being bombed for some hours.

Two specific reviews of bombing results showed the extent of such inaccuracy. The Butt Report of August 1941 based on the examination of 650 photographs covering
100 bomber raids indicated that generally only one in five aircraft reached within five miles of a designated target. A further report carried out by the Operational Research Section of Bomber Command in October 1941 produced even more dismal findings: only fifteen out of a hundred aircraft, it argued, managed to drop their bombs within five miles of the target point.

It is likely that between one half and three quarters of the bombs dropped at night were not even hitting the cities which they were supposed to be aimed at. Bomber Command clearly was in crisis: the formation of the Pathfinder force was a vital element, together with the introduction of the four-engined bomber, which made Bomber Command operationally functional.

In late 1941 there was a suggestion in the Air Ministry that a Bomber Command target finding force be established. Some groups were experimenting with ‘raid leaders’. However, Sir Arthur Harris, appointed Commander-in-Chief of Bomber Command in February 1942, rejected the proposal to form a special force dedicated to finding the target. The Pathfinder Force was not established until August 1942.

It was thus almost a year from the Butt Report to August 1942 before the Pathfinder Force was established. In that ten months Bomber Command aircrew and aircraft had been lost on largely unproductive operations. Continual arguments between senior people were a source of delay. For example, it took several weeks before the British Treasury, considering the cost, would agree with a Harris request that aircrew of the new all-volunteer force, who were expected to fly 45 operational missions instead of the normal thirty in a ‘tour’, be promoted one rank. Air Staff officers were in favour of the proposed Pathfinder Force; operational commanders generally were not. Harris had a personal dislike for a main air staff proponent and had to be directly ordered by The Chief of the Air Staff to drop his opposition.

Initially the Pathfinder Force consisted of only five squadrons. By January 1943 it had doubled in size and formed 8 Group (Pathfinder Force) finishing the war with twenty squadrons. It was equipped with the most effective electronic navigation aids particularly the H2S airborne radar, specially designed flares and the highly versatile Mosquito aircraft. Technique followed the Luftwaffe model of finding and then illuminating the target. The destruction of many German cities followed.

The Pathfinder Force had only one commander, Donald Bennett, a Point Cook trained Australian pilot and navigation expert, a previous RAF bomber squadron commander and, among other things, the holder of a number of long-distance flying records. In the course of a year he was promoted from Wing Commander to Air Vice-Marshal and at 33 became the youngest to hold that rank in the history of the Royal Air Force.

The Pathfinder Force flew a total of 50,490 sorties against some 3,440 targets for the cost of 3,727 aircrew killed on operations. It was disbanded in December 1945. It is often presented as an elite force but in fact its members were drawn from the main force operating squadrons. It was not always successful in what it attempted to do. Which organisation is? But if it had been formed earlier it may have saved many more Bomber Command aircrew lives and even perhaps have helped shorten the war.

In recognition of their special status all aircrew members of the force were entitled to wear the Pathfinder eagle badge on the left pocket but not on operational sorties given the possible repercussions if a crew member was captured by the enemy.

Key Points

- Dropping bombs on a designated target has focused the attention of airmen since the advent of air power.
- During World War II, the RAF established the Pathfinder Force to improve the accuracy of aerial bombing.
- Australia had a pivotal role in the establishment and subsequent success of the Force with the appointment of a Point Cook trained commanding officer for the duration of its existence.