



IN THE **RED** CORNER

Discovery Air Defence provides adversary support for the Bundeswehr (German Armed Forces) with six A-4Ns helping take the pressure off the Luftwaffe's fleet of Eurofighters, as **Dr Stefan Petersen** explains.



One of the roles carried out by the A-4Ns is 'Red Air' sorties against the Luftwaffe's Eurofighters. All photos author

Flight hours are expensive, especially those of highly sophisticated combat jets such as the Eurofighter. So it is important to ensure that every flight hour is used as effectively as possible. But when pilots practise aerial combat against each other using the same aircraft type, the results are split: whereas the 'Blue Air' is deploying the jet as it would do in a real scenario, the opponent performing the role of 'Red Air' has to simulate the tactics of the opposing side. As a result the training benefit for the latter is substantially reduced.

"That's where we come in," said Elmar Besold. The 53-year-old is lead fighter pilot at the German branch of Discovery Air Defence (DA Defence). The Canadian company offers 'Red Air' adversary services with six A-4N Skyhawks at Wittmund Air Base for one-sixth of the cost of a

Eurofighter hour. But there are other benefits as well.

Besold explained: "We tow DO-SK6 targets for air-to-air gunnery practice, drop DM-18 and DM-38 practice bombs at military exercise areas to train Forward Air Controllers and serve as radar targets for training fighter controllers as well as targets for naval ship air-defence crews."

The lead pilot has notched up 2,000 flying hours on the Skyhawk over the past 11 years. Before that, the former Luftwaffe instructor pilot and weapons instructor spent 3,500 hours in the cockpit of the McDonnell Douglas F-4F Phantom. "That was in Wittmund, too – so for me it is, as it were, a home match."

DA Defence is a fully owned subsidiary of the Canadian company Discovery Air, which has a total workforce of 900 and a fleet of 150 aircraft and offers flying as well as air ▶

Skyhawk C-FGZH/534 lands at Wittmund after a mission.



logistic services.

Under the terms of the contract with the Bundeswehr, 1,200 flying hours are to be provided per year for a period of five years, at a total cost of around €44m. In return DA Defence has to fly two rounds a day, each with up to six aircraft, from Wittmund, the home base of the Taktische Luftwaffengruppe 'Richthofen', which will regain full wing status in mid-2016, or from other operational bases.

"When it is more cost-effective, we relocate as well, either within Germany

or abroad," said Besold. The jets of DA Defence visited Decimomannu in Sardinia for the first time in June 2015, to support the Eurofighter deployment of Taktisches Luftwaffengeschwader 73 'Steinhoff' to the Mediterranean island.

Up to the end of 2014 this role had been performed by Skyhawks of BAE Systems, which had also been based at Wittmund and had largely operated with the same personnel. After the contract expired, their employment with BAE ceased and they were taken on by DA Defence.

"All the Germans and one American were taken on by the Canadians, pilots and technicians," said Besold. However, it had not been a simple takeover; every one of them had to go through the full job application process. However, recruitment of the team brought massive benefits to the new contractor.

"There was no real transition period," explained Besold. "Discovery Air had to wait until BAE Systems had vacated the infrastructure and could only then move in. That created problems, but we were able to

The A-4Ns also tow DO-SK6 targets for air-to-air gunnery practice, plus drop DM-18 and DM-38 practice bombs at military exercise areas to train Forward Air Controllers. Additionally, they can serve as radar targets for training fighter controllers as well as targets for naval ship air-defence crews.





DA Defence Skyhawk C-FGZO/532 and Eurofighter 31+01 of Taktische Luftwaffengruppe 'Richthofen' fly in formation during a joint training flight.

solve them thanks to our experience.”

The DA Defence team in Germany numbers 26, 19 of whom are ground staff. Most of them are Germans, but three Canadians also work on a permanent basis in Wittmund.

“And we regularly get personnel over from North America, to help with the inspections, for example,” said Besold.

All seven pilots – five Germans and two Canadians – can, like him, look back on a long military career. As a former Tornado Weapons System Officer with more than 2,000 flight hours, Rolf Brandt also knows his métier inside out. The 50-year-old has

been head of German Operations since September 2015 and is in charge of an important outpost of DA Defence that is to be expanded further in the future.

The provision of adversary jets for air combat training by civil contractors is a growing market, and now that the Montréal-based company has its feet on the ground in Europe, expansion is on the cards. DA Defence celebrated its 50,000th accident-free flying hour a few months ago.

Brandt said: “For the future we are also planning to operate the F-16A/B Fighting Falcon. That would bring our capabilities a lot closer to that of current high-performance

jets, such as the Eurofighter and F-35.”

DA Defence’s A-4Ns are already a lot more modern than their predecessors from BAE Systems.

Besold explained: “We have the latest avionics on board in the form of the Garmin GTN 750. They also feature GPS, a radar warning receiver, VHF/UHF radios, TACAN [tactical aid to navigation], TCAS [traffic alert and collision-avoidance system] and a Head-Up Display. With all the various screens, it is nearly a glass cockpit.”

The CBLS (carrier, bomb, light store) pods on the two outboard stations can accommodate up to eight practice bombs. ▶



Skyhawk C-FGZE/495 is readied for a target-towing sortie.

Ground crew attend to Skyhawk C-FGZS/337 following its return from a sortie.



The third external tank on the centreline station is replaced by the SK6 pod on target-towing sorties. The flight profile recorders provided by the Luftwaffe are identical to the Eurofighter systems.

Besold continued: "The data from each mission is immediately transmitted via a secure military line, so that it is available in the wing for the debriefing."

All the A-4Ns are former Israeli Air Force aircraft and originally belonged to Advanced Training Systems International (ATSI) in Mesa, Arizona,

which was taken over by Discovery Air in December 2013. Their J52-P408 engines from Pratt & Whitney produce 110.5kN of thrust and give the 10,472lb (4,750kg) jet a top speed of almost 777mph (1,250km/h).

"The acceleration is so powerful that we have to pull up steeply after take-off to keep the speed below 225kts so that the front gear can be retracted," said Besold.

The A-4Ns have the visual distinction of having been fitted with infrared-suppressing

frequently to check up on us," added the lead fighter pilot. "But that brings benefits both to us and the customer, as it makes us feel we are in good hands in the system."

To satisfy the stringent requirements, DA Defence's pilots undergo additional internal training programmes.

The contract with the Bundeswehr includes pure training flights with simulated weapons deployment on the range.

Besold recalled: "There used to be similar work-ups with BAE."

It also helps that the pilots have practised the required capabilities while in active service – and during their time with BAE Systems. "So we really are only doing work that we know inside out from our former lives." **AN**

"For the future we are also planning to operate the F-16A/B Fighting Falcon. That would bring our capabilities a lot closer to that of current high-performance jets such as the Eurofighter and F-35."

tailpipe extensions in Israel.

The Skyhawks are registered in Canada and are thus subject to the regulations of Transport Canada.

"They maintain tight oversight and visit us

DA Defence's A-4Ns are ex-Israeli Air Force examples and have the visual distinction of infrared-suppressing tailpipe extensions.



WITTMUND SKYHAWKS

Red Air A-4s

