

The room where war games get real

With the skies too crowded for fighter pilot training, VR is the future. **George Grylls** gives it a try

In a darkened room a row of military commanders scan the flickering screens as they prepare for a war to break out in the Lake District.

High above, a Watchkeeper drone beams down thermal images from the crash site where an Apache helicopter has been shot down moments before. A man wearing goggles turns around and starts pinching the air. Only by putting on a virtual reality headset can you see he is adjusting some detail in a 3D map displayed in the centre of the room.

This is Project Odyssey, a simulation of a training exercise developed by BAE Systems in partnership with seven smaller companies. At a time when the need for wargaming exercises has never been more acute, the companies argue that this room represents the future of military training.

The number of commercial planes flying through the airspace above Britain has made it harder for the military to stage drills that resemble modern warfare. Preparing for swarms of drones requires a bigger training area.

"When I was training we would get away with a training area the size of Scotland," Tim Colebrooke, a former RAF pilot and the training strategy manager at BAE, says. "Now we'd need an area the size of the UK. We can't do dogfighting over Heathrow."

On one of the screens that cover the walls of the fake military headquarters at BAE Warton, in Preston, footage from the drone shows a crowd of people gathering around the stricken helicopter. On another screen, a message from the battle commander pops up on the internal messaging system: "Social media indicates unknown individuals in Coniston. Possibly carrying weapons."

In the storyline developed for the demonstration, Cumbria is a peaceful nation bullied by its neighbours to the north and in need of military support from its southern allies to maintain its independence. A convoy of armoured vehicles, watched over by three Typhoon fighter jets, is making



In the headquarters of Project Odyssey in Warton, George Grylls acts as a Typhoon pilot taking down enemy jets in a VR military training exercise



its way from Kendal to bring relief to the people of Coniston, but one of the helicopters on the mission has been shot down, bringing the three countries to the brink of war.

On this occasion, a low-altitude flypast by the Typhoons over the crash site is enough to scare the crowds away and it seems war has been averted. But relying on artificial intelligence to subtly alter the scenarios, the simulation is so sophisticated that the next time something like this happens, the residents may no longer be so scared of low-flying warplanes and an entirely different chain of events could be triggered.

RAF chiefs have been to Warton to see how the technology could be used by the Ministry of Defence.

In another room, the pilots sit in arcade-style chairs complete with joysticks and throttles. They wear monitors that record their heartbeats as well as helmets that measure the dilation of their pupils. "We can dial up the difficulty if they're finding it too easy," Colebrooke says.

It seems implausible that the pilots experience the same fear they would if they were in a real plane but they insist the spikes in their heart rates are there — albeit much shallower.

"Press the button on your third finger," says Al Allsop, 49, a former Harrier and Typhoon pilot, as I strap in to

one of the Typhoons and try to ease the aircraft away from the battle.

The big red button on the throttle seems as good a trigger to pull as any, so I press down hard. I look up to see an Amraam missile hurtling towards Barrow-in-Furness. "You've earned yourself a one-way ticket to the Hague there," says Allsop chuckling at my mistake, before talking me through a barrel roll over Lake Windermere.

There is no sense of fear in the simulation and one wonders how similar it is to a real-life training exercise.

"It's a bit like reading past papers before going into an exam," Allsop says. "There's no fear of death. But that's good because you're supposed to be learning. It's a safe environment to make mistakes." In the fake headquarters, the blurring between reality and fiction is a little disconcerting.

As video game franchises such as *Call of Duty* develop ever more realistic depictions of war, it seems inevitable that real-life conflicts will be waged by people in darkened rooms watching screens and pressing buttons thousands of miles away from their enemies. The pilots in the simulation are pretending to fly aircraft, but the age of drones is already upon us and the next-generation Tempest fighter jet will have autonomous capabilities.

If there were any lingering doubts about the game-ification of war, one of the smaller companies working with BAE on Project Odyssey is a start-up based in Shoreditch whose previous clients include *Minecraft*, the popular computer game in which players create worlds out of cubes.

Mark Doney, 51, an RAF reservist who fought in Iraq and Afghanistan, notes that even though Project Odyssey is simulating an exercise, battles are already being waged in rooms similar to the one at Warton.

"It's not a future question. It's a present question. In fact, it's a past question. This has been happening for 20 years," he says. Sitting in Doney's chair, I adopt his call-sign "Havoc" and transmit a message to a man called "Magic" about the position of Su-27 enemy fighter jets.

On my screen, I swivel the camera of the Watchkeeper to see the people teeming near the site of the crash.

"The drone operators can see the whites of people's eyes," says Doney. "Everything comes down to a human decision."



The screens that cover the headquarters help simulate various scenarios