

New title in here, talking about the use of SMART BoardTM interactive whiteboards





The European Fighter project is one of the most exciting and challenging initiatives to have faced the Royal Air Force in recent years.

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Neil Storey, Training Supervisor for the Ground Maintenance School

The development of the aircraft – known in the UK as the Typhoon – along with the pilots and the men and women who will prepare and maintain it is divided between the four countries involved in the project (the UK, Germany, Spain and Italy), so a flexible approach has been essential. Co-operation has also been key to the success of the project, not only between nations but also with commercial partners such as BAE Systems.

Nowhere is that combination of commitment, co-operation and flexibility more evident than at RAF Coningsby’s Typhoon Training Facility (TTF), where everybody working on the Typhoon will learn their trade.

RAF Coningsby is home to the three main Typhoon squadrons – No 3 (Fighter) Squadron (the first operational Typhoon squadron), No 17 Squadron (the Operational Evaluation Unit for the aircraft) and No 29

Squadron, the Typhoon Operational Conversion Unit.

The TTF at RAF Coningsby is part of No 29 Squadron and is now responsible for all ground-based training of engineers and pilots alike. The Facility was designed as a ‘turn key’ project, the aim being that it would be operational from the day the doors were opened. And as Neil Storey, Training Supervisor for the Ground Maintenance School explained, the learning material and equipment used have been ‘fine-tuned’ over the past 18 months.

“The Training Facility opened with 14 identical classrooms, all kitted out to the same specification,” said Neil, a former member of the RAF who now works at the base for BAE Systems. “Training methods have developed significantly over the years, and a great deal of the training provided is now classroom-based.

“The Typhoon has been described as the easiest aircraft to fly and to work on, and system knowledge is now the key, but the training challenges we face are of a different nature. This is a European project, so the training has to be designed to meet the requirements of all the nations involved, and obviously the skills and experience of those working on Typhoons will vary from country to country.”

For Neil and his team, the key to providing the most comprehensive training has been the development of two main systems – the Maintenance Simulator Training (MST) system, and the Trilogi database. The MST enables trainers to set up computer-based, problem-solving scenarios for ground crew to work through; using a detailed graphics-based replica of the Typhoon, students can learn to strip the aircraft down simply by clicking a mouse.

The Trilogi database holds information relating to all the maintenance procedures and tests that ground crew need to know. Constantly updated, Trilogi is effectively a maintenance dictionary for the Typhoon.

Before the introduction of the MST and the Trilogi database, the training courses for technicians were based around hard-back manuals and microfiche files. Now each desk in the classrooms within the TTF is equipped with three computer screens, so that those studying can have three displays running simultaneously – the MST on one screen, Trilogi on another, and a third screen to focus on the task they are working through.

However, when the facility was opened the equipment available to trainers needed improving. “All we originally had

in each classroom was a single projection screen and a small magic board,” said Neil. “If we were trying to present something about the Typhoon using the MST, we had to switch between three different displays on the projection screen, which was far from ideal.”

Having identified the problem, the training team found the solution. With a central SMART Board interactive whiteboard in each classroom, operated by lectern-mounted Symposium Interactive pen display and flanked by two projection screens, the displays used by trainers now mirror the systems used by students.

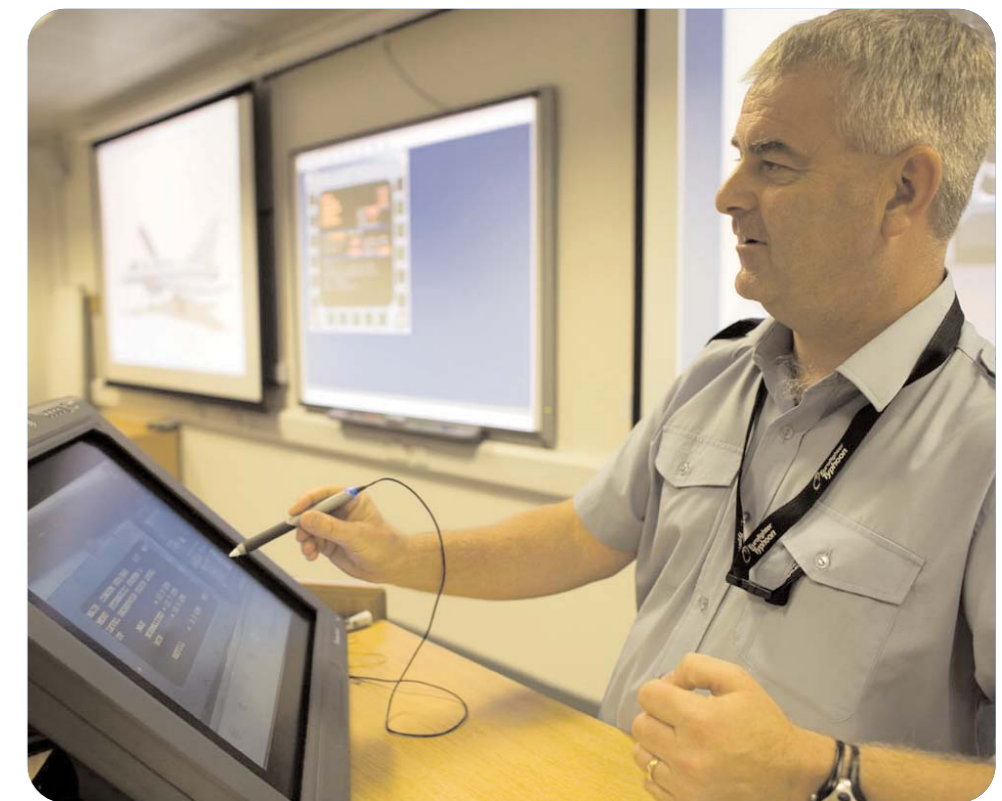
Improving the equipment has had benefits for trainers and students alike, as Chief Technician Tony Blake, Senior Avionics Instructor at the TTF, explained. “We’ve loaded the MST and the Trilogi database onto the SMART Boards, and the result has been brilliant, it’s so much quicker now to

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run sessions. If we had to go through the same process switching between the three displays on a PC it would take 30-40 seconds each time to load up, and over the course of a training session that can make a real difference.”

One of the key components on the aircraft is the Maintenance Data Panel, which ground crew technicians will use



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Objectives of using the technology:

- Manage emergencies more effectively through technology
- Creating effective links between command centres
- Centralise video feeds in order to access and review incidents, with the added ability to annotate these.
- Provide a platform for effective briefings and de briefings.

to identify potential faults and run checks, and the SMART Board interactive whiteboard's ability to replicate the characteristics of the Panel has also improved the authenticity of the training.

“On the Typhoon the Maintenance Data Panel is a touch screen system, so getting technicians to work through the Panel using the touch screen properties of the board is almost identical to what they will have to do on the aircraft itself, which makes it much more realistic,” added Tony.

With the length of courses ranging from three or four weeks to four months or more, encouraging students to come up to the front of the classroom and use the touch-screen system has also helped to break the ice. “Some of them will not have used interactive boards before, others will be familiar with them from other learning environments, but once they've got over any nervousness about being out at the front of the class, all of them have been very positive about using the technology,” says Tony.

SMART Board interactive whiteboards are now being used throughout the TTF, including classroom-based pilot training and debriefing, and Neil knows that as the Typhoon project progresses, the training will develop, and along with it the increased use of technology.

“Although we know we are not using it to anywhere near its full potential, the fact is that it is already a great tool for us, particularly with systems such as the Trilogi database and getting technicians to feel comfortable working on the Maintenance Data Panel,” said Neil.

“We are already running Power Point presentations on the SMART boards, as well as using DVDs and video footage for training and debriefing. But one of the important issues for us is that the equipment and software we use has to be flexible. Things have moved on a lot over the past 18 months, and they will continue to change and progress over the next 18 months. We will have to continue fine-tuning the training packages that we use, so we will need to know that the equipment we have will be able to keep up with that. This is why making the most of the SMART Boards will be so important for us.”

With more than 60 ground technicians and pilots currently learning their trades at the Typhoon Training Facility, it's clear that the training team will have a vital role to play in the success of the European Fighter project. With the best available equipment, and a combination of flexibility, co-operation and commitment in its approach to the project, it's also clear that 29 Squadron will be an integral part of the RAF's development in the future.

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For further information contact:

SMART Technologies Inc.

1207 – 11 Avenue SW, Suite 300,
Calgary, AB T3C 0M5 CANADA

Phone: +1.403.245.0333 **Fax:** +1.403.228.2500

Email: infouk@smarttech.com

Web: www.smartboard.co.uk

Authorised SMART Reseller