

SOGITEC DISPLAYS FOR F16

In the Emirates, Sogitec is going to install a visual simulation system common to the two types of aircraft (Mirage 2000-9 and F16) used by its customer and designed for network operation

Already possessing a fleet of Dassault Aviation Mirage 2000-9s, for which it acquired training and mission simulators (see Interactions N° 19), the UAEAF & AD (United Arab Emirates Air Force & Air Defense) is going shortly to complete its air force with American F16s. In order to extend the tactical training capacity of the customer's simulator pool to the new aircraft, Sogitec proposed to Lockheed-Martin a visual system based on the same components as those already used for the Mirage 2000 aircraft. Concerned are the image generator in the Apogée family, the projection system and data base, terrain and sensors. This uniformity of components will provide a compatibility facilitating the networking of the simulators for the two types of aircraft .

international tender for the F16 display and the simulation equipment training means, including the visual systems. Sogitec was selected, to the detriment of two strong American competitors, in the second semester of 2000 and the contract was awarded shortly thereafter between Sogitec and Lockheed-Martin's simulation subsidiary, located in Akron, Ohio. Two types of visual display systems will be supplied by Sogitec, one for the 3 training simulators (ULT/Unit Level Trainer), the other for the mission simulator (WST/Weapon System Trainer). The first system will be equipped with an Apogée image generator – designed and developed by Sogitec – and the associated projection system. Three channels will project a visual field of 150° (horizontal) x 40° (vertical) onto a cylindrical screen, to which will be added three sensor channels (IR and NVG). The database delivered will be identical to that of the Mirage 2000-9: same exercise terrain area, same image definition, compatible with both systems. In addition, the customer will dispose of the tools necessary for introducing changes in it himself.

LOCKEED MARTIN PICKS SOGITEC



For the user, the advantage of choosing Sogitec for both programs is twofold. In terms of logistics, first, since this will enable him, in particular, to reduce his stocks of spares and implement identical competence levels for the same pieces of equipment.

Next, in terms of operational considerations, having a single industrial contact, he will benefit from the introduction of maximized reliability when conducting networking operations. It can be noted in this respect that the aircraft manufacturer, in agreement with the customer, put out an

The second system will be comprised of a high-gain screen dome eight meters in diameter – also built by Sogitec, which will receive an 8-channel terrain image mosaic covering a horizontal visual field of 300° at and a vertical field of view of 140° up to the equator. The dome will be equipped with a high-resolution quadri-target projector. The terrain images making up the mosaic will come from Apogée and the modes displayed will be the



Dassault Aviation

UAE Mirage 2000-9

AND Mirage 2000-9

binocular (JVG) modes. The sensor channels will be the same as those in the ULT system.

VERITABLE COOPERATION WITH AMERICAN INDUSTRY



To this equipment will be added complementary items : Other services, in particular integration, display-simulator coupling, and simulator networking will be implemented directly at Lockheed-Martin, in the United States as well as at the user's sites. Sogitec will provide for user training and will supply the documentation as well as the spare parts associated with the equipment.

The company's choice shows the recognized quality of the Sogitec simulation systems. It also shows the capacity of adapting these systems to weapon systems other than those traditionally concerned. Finally, through the cooperation set up with the American aircraft manufacturer, it will be seen that this contract is highly significant of Sogitec's capacity to develop a deep-rooted technical and operational relationship with a large, foreign customer.



UAE F16 future variant

Equipped mainly with Tornados for its air missions, Germany grants a wide area to simulation for the training and practice of its pilots, those of the Luftwaffe as those of the Navy. Seven Tornado simulators are presently in service in the country, plus an additional one in the United States, on the Holloman base (New Mexico), appreciated for its exceptionally good weather, and especially for the absence of environmental problems. All of them were built by CAE GmbH. After tight competition, Sogitec was selected with its partners CAE and STN-ATLAS by the BWB (Bundesamt für Beschaffung – the federal procurement department) to supply the image generation system for this 8th simulator. Although the contract has been frozen in fiscal year 2001 for budget reasons, the urgent need of the German-American base in New Mexico let

people think that the award will occur in early 2002. An initial production which should be followed by an equivalent system to modernize the other seven existing simulators on the German side of the Rhine. This production will be built around a new-generation machine presently under development which will be equipped with visual systems offering pilots complete coverage of the visual field, i.e. 300° (height) x 130° (vertical). The image projected will be composed of a mosaic of 13 high-resolution windows plus a FLIR (Forward Looking Infra Red*) channel. The image generation system will use at first a data base developed in its SINDBAD system, then the data bases developed by the Luftwaffe at the US Navy center at the Büchel base.

* Low-altitude navigation aid system for terrain reconnaissance.

FOR THE SIMULATORS FOR
ITS TORNADO FLEET,
IN GERMANY AND ALSO
IN THE UNITED STATES,
THE BUNDESWEHR HAS
CHOSEN THE SOGITEC
VISUAL SYSTEM

