



7th Fighter Squadron instructors were volunteers coming from the 8th and the 9th. All instructors required exceptional flying and teaching skills, as the instructor pilot was not only flying his own T-38 (callsign DEMON), but to a certain extent also the student pilot's F-117. This required a tremendous amount of situational awareness from the instructor.

operational jet, but that changed when it rolled-out in an experimental two-tone light-grey scheme. Preparation for the painting began on 17 November 2003, with the job completed by 26 November. It took some 10 gallons of dark gray paint, five-and-a-half gallons of light gray paint and three gallons of silicon paint to give the test F-117A Nighthawk an F-22 Raptor-style makeover.

The primary reason was that the unit was working on several test plans collectively called F-117 Mission Effectiveness – Force Development Evaluation (FDE) with flight testing starting on 25 May 2004. Force Development Evaluation is the last stage of testing where the operational capabilities of the modification or upgrade are tested on the aircraft, and the information gathered is used to develop tactics for the aircraft. When successfully completed, the upgrade or modification will be fielded to the operational units.

While this umbrella programme covered different areas, it mainly focused on tactics and survivability during daytime operations, thereby expanding on a previous test plan that was run in the mid-1990s called Evening Shade, in which the Dragon Test Team investigated using grey instead of black on the F-117 to extend the employment of the Nighthawk into the dusk and dawn periods.

At the same time, the unit was tasked to study some other advanced (classified) programmes with the F-117, as well as supporting the F/A-22



daytime Force Protection Evaluation – IOT&E, and the Low Observable (LO) Strike Force. To this end the aircraft was requested to be painted grey and flown during the daytime to evaluate survivability and the daytime tactics required to operate stealth aircraft on a 24-hour basis. The grey paint scheme produced no degradation of the aircraft's ability to evade radar detection and, while the experiment showed that using grey instead of black had its advantages in evading optical tracking systems, the use of two different shades of grey made no difference at long range as they tended to merge.

Tactics development

The Fiscal Year '04 test schedule also included F-117 Advanced Employment Tactics Development & Evaluation (TD&E). This was a classified tactics development to improve the survivability of the F-117 in a strike force. Other

tactics-related development and evaluation plans executed during that year were F-117A Attack on Moving Targets TD&E, F-117 Off-Ship Lasing TD&E (buddy lasing) and F-117 Time Sensitive Targeting (TST) TD&E.

Initial TST testing was completed in October 1998 and allowed a pilot to receive live-threat information and manually re-plan a mission from the cockpit. Known as the Integrated Real-time Information into the Cockpit/Real-time Information Out of the Cockpit for Combat Aircraft (IRCCA) demonstration project, the programme was an initiative of the Air Force Research Laboratory – Sensors Directorate at Wright-Patterson AFB, which provided funding and guidance for the project since it began in 1997.

IRCCA made F-117 history when a test aircraft sent its first ever attack sequence images via satellite datalink out of the cockpit and into the hands