Personal Computer Debriefing System

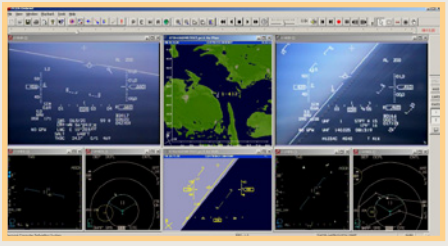
The Personal Computer Debriefing System (PCDS) is a Windows-based, user-friendly, stand-alone flight debriefing system. Data from various tracking sources can be recorded and replayed to provide the debriefer with a comprehensive operational capability. The state-of-the-art synchronized digital video replay capability makes PCDS the F-16 pilot's debriefing tool of choice for the Air National Guard (ANG), Air Combat Command (ACC) and European Participating Air Forces (EPAF), U.S. Navy and Coast Guard.

In addition to the 3-D graphic displays, PCDS also provides a user-configurable tabular display of parameter and pairing data. The default map set includes Europe, CONUS, Alaska and Hawaii. Tools for merging, reducing, converting and transferring PCDS recorded data files are also included.

Using the Live Monitor capability, as the real-time picture is displayed, PCDS can record data locally for replay and/or transfer to a remote site. Recorded PCDS data files are kept small and compact through the use of an efficient data packing technique and compression algorithms, thereby facilitating remote distribution via secure telephone units. The sources used for Live Monitor include Distributed Interactive Simulation (DIS), Test and Training Enabling Architecture (TENA), Computation and Control Subsystem (CCS) and Host Range Interface Protocol (HRIP).

Government owned and developed, PCDS is managed by NAVAIR, with the PCDS Software Support Activity (SSA) located at NAS Patuxent River, Md. Future enhancement requirements are gathered directly from the user communities; these requirements are prioritized at the annual Users' Conference.

Plan view with overlays



Integrated playback

FOR MORE INFORMATION

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https://mpc.mission-planning.org/sites/spt/pcds/default.aspx
www.navair.navy.mil/ranges

December 2010

NAVAIR Public Release #10-1461
Approved for public release; distribution unlimited

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CAPABILITIES

- Monitors, records and replays flight maneuvering Time Space Position Information (TSPI) data from multiple sources
- Networked playback enables user to drive multiple PCDS Debrief applications across a network in master/slave configurations
- Replays up to 16 channels of recorded audio (recorded on a range)
- Integrated ACMI, DVR and Electronic Warfare playback
- IRIG 106 chapter 10 audio/video playback
- Printable shot log provides timely shot and drop validation
- 3-D textured surface maps using National Geospatial-Intelligence Agency (NGA) data products including Digital Terrain Elevation Data (DTED) and Vector Smart Map (VMAP)
- Displays multiple 3-D, video, EW, tabular and pairing views simultaneously
- Designed to play up to 1000 concurrent air, land, weapon and sea tracks, bomb impact points, threats and terrain (full capacity dependant on system processor power and memory)
- PCDS File Converter allows conversion of various formats to the PCDS format
- Interface with Falcon View to import map, overlay and threat data within PCDS
- Import of Joint Mission Planning System (JMPS) files, including steerpoints, threats, lines and destinations
- Joint Anti-Air Model (JAAM) integration provides accurate missile flyout simulation

DEVELOPMENT & APPLICATION

PCDS was initially designed to support Tactical Aircrew Combat Training System (TACTS) and Air Combat Training System (ACTS) training ranges. The aspirations of the development and support team led to a redesign using an object-oriented methodology. The result is an increasingly popular software application that is easy to use and deploy.

PCDS is currently

- Providing a "Virtual ACMI Range" capability for the F-16 Block 30/40/50 by merging data recorded onboard each aircraft's Digital Transfer Cartridge (Mega-DTC) and integrated replay of recorded digital video
- Supporting several Joint National Training Center (JNTC) large-scale exercises to monitor and record training scenarios
- Used as a monitoring and engineering tool on board the Joint Strike Fighter (JSF) Cooperative Avionics Test Bed (CATB) and in the lab at Eglin AFB to support flight-testing operations
- Providing F-16 Aircrew Training Devices (ATD) Link Trainer Debriefing at Springfield ANGB, Ohio
- Supporting Air Combat Command (F-16, A-10, F-15, B-2) and European Participating Air Forces (M4.2/M5)
- Providing Digital Video Replay for the U.S. Coast Guard

REQUIREMENTS

Please note that these are the **minimum** *system requirements to use PCDS. Please contact PCDS Technical Support for recommendations to suit individual system needs.*

BASIC SYSTEM REQUIREMENTS

- Pentium 3 microprocessor
- OpenGL-compatible 64 MB graphics card with hardware acceleration
- Microsoft Windows NT/2000/XP
- 512 MB RAM

DIGITAL VIDEO CAPABILITY REQUIREMENTS (4 CONCURRENT DIGITAL VIDEO VIEWS)

- 3.0 GB Pentium 4 microprocessor
- OpenGL-compatible 256 MB graphics card with hardware acceleration
- Microsoft Windows 2000/XP
- Microsoft DirectX 9.0
- USB 2.0 Port(s)
- Firewire 800 (IEEE1394B) for IRIG RMMs
- 2 GB RAM