Meteorological Measuring Set-Profiler (MMS-P)/Computer Meteorological Data-Profiler (CMD-P)

INVESTMENT COMPONENT

- **Modernization**
- Recapitalization
- Maintenance

MISSION

Provides on-demand, real-time meteorological data over an extended battlespace.

DESCRIPTION

The AN/TMQ-52 Meteorological Measuring Set-Profiler (MMS-P) uses a suite of meteorological sensors, meteorological data from satellites, and an advanced mesoscale atmospheric model to provide highly accurate meteorological data for indirect fire artillery forces. The system uses common hardware, software, and operating systems; is housed in a command post platform shelter; and is transported on an M1152A High Mobility Multipurpose Wheeled Vehicle.

The mesoscale atmospheric model receives large-scale atmospheric data from the Air Force Weather Agency and other meteorological sensors, and produces a vertical profile of wind speed and direction, temperature, relative humidity, cloud base height, type precipitation, and horizontal visibility in the target area, all of which are necessary for precise targeting and terminal guidance of various munitions. Profiler transmits this data to indirect fire direction centers for use in developing the firing solution. The current Profiler provides meteorological coverage throughout a 60-kilometer radius. For the first time, Army field artillery systems can apply meteorological data along the trajectory from the firing platform to the target area.

The Profiler Block III or Computer Meteorological Data–Profiler (CMD-P) AN/GMK-2 System is the next evolutionary block of the Profiler system and is designed to reduce the logistical footprint to a laptop configuration located in the Tactical Operations Center (TOC), thus eliminating the Standard Integrated Command Post Shelter/Command Post Platform, support vehicle, and crew. The CMD-P software on the laptop will port MMS-P software that presently runs on three operating systems (OS) and three separate computing processors onto one OS and processor. Additionally, the local ground sensor will be removed to further reduce the logistical footprint. The system interface with the Advanced Field Artillery Tactical Data System will change from the Single Channel and Airborne Radio Systems to a Local Area Network connection in the TOC. The CMD-P will no longer require a dedicated Global Broadcast Service (GBS) receiver suite (AN/TSR-8) but instead will rely on the TOC GBS. The system software will be capable of providing Field Artillery Computer MET (METCM) and Gridded MET (METGM) messages on demand with or without an operator in-the-loop while extending coverage up to 500 kilometers. CMD-P completed Development Testing in FY11 and Operational Testing in FY12. Fielding is planned to begin in FY13. The CMD-P will reduce the system footprint and result in a significant Operations and Support cost avoidance for the Army as it replaces the MMS-P.

SYSTEM INTERDEPENDENCIES

In this Publication

None

Other Major Interdependencies

Navy Operational Global Atmospheric Prediction System, Global Broadcast System

PROGRAM STATUS

- **1QFY12-4QFY12:** Completed development and testing of CMD-Profiler Block III system, i.e. DT, OT, FQT
- **1QFY12-4QFY12:** Received PEO IEW&S approval to initiate developmental effort for next generation CMD-Profiler System
- **1QFY12-4QFY12:** Continued fielding of the MMS–Profiler Block I GBS Modification Work Order (MWO) (86 systems fielded to date)

PROJECTED ACTIVITIES

- **2QFY12-2QFY14:** Complete fielding of last systems and GBS MWO to Army units
- **2QFY12-2QFY14:** Procurement and fielding of the CMD-P starting in FY13

ACQUISITION PHASE

Technology Development | Engineering & Manufacturing Development | **Production & Deployment** | Operations & Support

Meteorological Measuring Set-Profiler (MMS-P)/Computer Meteorological Data-Profiler (CMD-P)

FOREIGN MILITARY SALES
None

CONTRACTORS
MMS-P – Block I:
Smiths Detection, Inc. (Edgewood, MD)
Pennsylvania State University (University Park, PA)
CMD-P – Block III:
Prime:
Mantech Sensor Technologies, Inc. (Red Bank, NJ)
Sub:
CGI Federal (Lawton, OK)