

# FAA William J. Hughes Technical Center

## Weather and Radar Processor (WARP)

***The Weather and Radar Processor (WARP) system is an enroute weather system that provides Mosaiced Next Generation Weather Radar (NEXRAD) information to air traffic controllers via the Display System Replacement (DSR) and provides meteorological products to the Center Weather Service Unit (CWSU) meteorologists and Traffic Management Specialists (TMU).***



### BACKGROUND

The WARP system is being developed in a staged approach and is being deployed in 21 ARTCCs. The first stage, stage 0, was a replacement for the Meteorologist Weather Processor (MWP) and was commissioned in October 1997. Stage 1-2 contains all of the Stage 0 requirements as well as the requirements for interface with other National Airspace System (NAS) subsystems and the DSR. Stage 3 will include Preplanned Product Improvements (P<sup>3</sup>I), which will allow further weather product capabilities for Air Traffic Control (ATC) specialists, meteorologists, and pilots.

### ACCOMPLISHMENTS

- Advisory member to the Cost Plus Award Fee (CPAF) Plan Performance Evaluation Board.
- Participated in monthly WARP Program Status Meetings (PSM) to evaluate the progress of the WARP project development by the prime contractor, the Harris Corp.
- Presented briefings to the Northwest Mountain Region and the Seattle ARTCC on the WARP first site testing activities. Resolved several site test issues (March and July 1998).
- Witnessed the WARP Interface Certification testing for NEXRAD Builds 9 and 10, where WARP was granted unconditional certification (April and June 1998).
- Conducted WARP interface testing with several NAS subsystems at the William J. Hughes Technical Center (WJHTC). The subsystems include the National Airspace Data Interchange Network (NADIN), AWOS Data Acquisition System (ADAS), Weather Message Switching Center Replacement (WMSCR), and the DSR (April – June 1998).
- Updated the WARP Test and Evaluation Master Plan (TEMP) to reflect changes to the WARP acquisition program staged approach (October 1998).
- Witnessed WARP Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) (December 1998 – March 1999).
- Conduct Year 2000 (Y2K) Compliance Certification on the WARP system (March 1999).
- Conduct WARP Operational Test and Evaluation (OT&E) at the FAA WJHTC, Seattle, WA (April – July 1999), and Fort Worth, TX (May – June 2000) ARTCC.

Safety



## WARP Locations and Associated NEXRADs



### FUTURE WORK

- The Weather Branch will participate in the Conduct of Production Site Testing (PST) (January – June 2000).
- The Weather Branch will test a new software algorithm that will automatically remove NEXRAD Test patterns and false erroneous radar information from the WARP and DSR mosaics.
- The Weather Branch will test new requirements that will give WARP the capability to send Request/Reply to WMSCR. This capability will make it possible for WARP to replace the current AIS system in each CWSU.
- The Weather Branch will test the new WINS/URETS function. WARP will provide wind data to support new NAS projects, including Free Flight.

For additional information regarding the Weather and Radar Processor program, please contact:

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