Aviation Weather Services (AJW-94)

NextGen Weather Processor (NWP) Briefing

Presented to: Friends & Partners of Aviation Weather (FPAW)
By: Benn Deans, Manager, FAA Aviation Weather Processors
Date: July 14, 2011
NWP Problem Statement

• Weather is responsible for 70% of delays over 15 minutes and contributes to 24% of accidents
  
  – Up to 2/3 of weather delays are potentially avoidable, based on NAS Operations Subcommittee Research, Engineering and Development Advisory Committee (REDAc) study

• Traffic managers and users must mentally interpret weather conditions, future traffic, and airspace information and their potential impact on decisions

• Inconsistencies exist in the presentation of weather information among the various weather processor programs via displays
NWP Program Scope

• NextGen Weather Processor (NWP) establishes a common weather processing infrastructure that will functionally replace the legacy FAA weather processor systems and host new capabilities:
  – NWP will consolidated weather product generation by weather processor systems such as:
    • Weather and Radar Processor (WARP)
    • Corridor Integrated Weather System (CIWS)
    • Integrated Terminal Weather System (ITWS)
  – NWP will provide advanced aviation specific weather information through the assimilation of extended National Weather Service (NWS) forecast models with real time radar extrapolation
  – NWP will perform Weather Translation which will enable the use of weather information by automated decision support tools (DSTs)
  – NWP will address consolidation solutions for weather displays
FAA Weather Processor Programs that will be replaced by NWP

- Wind shear alerts
- Wind shear/Microburst
- 6-Level Reflectivity
- Reflectivity Products
- Surface Observations
- Satellite, RUC, NEXRAD, TDWR
- Alphanumeric products
- METARs, TAFs, Weather Graphics
- Alphaneumrics, Lightning, Model data, NowRad
- Satellite, RUC, NEXRAD, TDWR

NEXRAD Display

- NOAA Product Generation Centers
- Global Sources
- Alphanumeric products
- METARS, TAFs, SIGMETS
- Models & AWC Data
- RUC, Icing, Turb, Conv.
- Model Data & other Wx Data
- Satellite, RUC, NowRAD
- METAR, TAFs & Weather Graphics
- Alphanumeric, Lightning, Model data, NowRad

WARP Display

- WARP
- Vendors
- METAR & TAFs
- Models & AWC Data
- RUC, Icing, Turb, Conv.

FBWTG (WARP)

- Global Sources
- Alphanumeric products
- METARS, TAFs, SIGMETS
- Models & AWC Data
- RUC, Icing, Turb, Conv.
- Model Data & other Wx Data
- Satellite, RUC, NowRAD
- METAR, TAFs & Weather Graphics
- Alphanumeric, Lightning, Model data, NowRad

ADAS Display

- ADAS
- Vendors
- METAR, TAFs, Weather Graphics
- Alphanumeric, Lightning, Model data, NowRad

Lightning Vendor

- MDCRS Via ARINC

FPAW Briefing on NWP
July 14, 2011
Various Weather Displays….

Tower
- Supervisor
  - ITWS SD (1)
  - WARP (via IDS-4)

TRACON
- TMU
  - ITWS SD (3-11)
  - CIWS (1-2)
  - WARP via IDS-4
- AT Supervisor
  - ITWS SD
  - WARP via IDS-4

ATCSCC
- Sector Mgmt
  - ITWS SD (2)
  - CIWS (14)
  - WARP (23)
- Weather Unit
  - ITWS SD (2)
  - CIWS (14)
  - WARP (23)

These are just a few!!

External Users:
- Airlines, Airports,
- Universities,
- Government, etc..

ARTCC
- TMU
  - ITWS SD (1-2)
  - CIWS (1-4)
  - WARP (1-2)

CWSU

AT Supervisors
- SOC
  - CIWS (0-12)
  - WARP (6-12)
- ATC
  - WARP (1)
  - WARP (via DSR, ERAM, URET, ATOP)

ITWS Web

CIWS Web
NWP Acquisition Activities

- A **Market Analysis** is being performed this year with Industry and it is comprised of a Market Survey and a Request for Information (RFI)
  - **Market Survey** (Qualification Information)
    - It was released on May 25 and responses were received in June
    - Purpose was to announce NWP solicitation and determine vendor capabilities
  - **Request for Information** (RFI) – Screening Information
    - It will be released in the next month
    - Purpose is to identify the appropriate acquisition strategy to use and satisfy the proposed technical solution/scheduling information objectives
- A Request for Comment (RFC) of the draft System Specification and draft Screening Information Request (SIR) will be released this fall
- A SIR will be conducted in the form of a **Request for Offer** (RFO) in 2012