NEXRAD Product Improvement

TAC

NEXRAD Product Improvement
OS&T
November 2006
Open RDA New Components (yellow shading)
Dual Polarization New Components (red shading)

NEXRAD Product Improvement

NEXRAD Open System Architecture
• ORDA Deployment Completed – October 4, 2006
• Program Management Responsibility Transfer in progress
• Data Quality Evaluation Continues
Dual Polarization Acquisition Strategy Outline

• Develop Performance Requirements
  – Leverage NSSL Experience
  – Include ROC and Agency Stakeholders
• Continue Emphasis on Commercial Solutions
• ORDA SIGMET Supports Dual Pol Modification
• Performance-based acquisition
• Utilize NSSL work in Dual Pol Algorithm Development
• Align with Current NEXRAD Maintenance Concept
• Administer in OS&T/NPI
Dual Polarization Focus

• Acquisition
  – Dual Polarization RDA modification
    • Development
    • production
    • Deployment
  – Issues with Acquisition Services
    • NOAA has resource issues
    • FAA Results was subject of Negative IG Findings
    • Investigating alternatives
  – Acquisition Review Board Briefing – 11/15/06
  – Critical Path!
Other Key Activities

• RPG Algorithm Development
  – Utilize:
    • NSSL QPE and HCA R&A versions
    • RDA/RPG Interface Control Document
    • Updated NEXRAD System Specification
  – OS&T validate and implement the HCA algorithm
  – OHD validate and implement the QPE algorithm
  – ROC implement preprocessor/infrastructure and integrate HCA and QPE
OSIP Document Status

• Stage 1
  – Need Identification Document (NID) – March 14, 2005
  – Statement of Need (SON) – April 28, 2005
• Stage 2
  – Concept of Operations & Operation Requirements (CONOPS/ORD) – October 5, 2005
  – Project Plan – October 31, 2005
  – Concept/Research Exploration – November 15, 2005
• Stage 3
  – Business Plan Submitted – July 6, 2006 (Updated September 1, 2006)
  – Project Plan Submitted – August 4, 2006 (Updated September 1, 2006)
  – Applied Research and Development Results Submitted – July 6, 2006
  – WSR-88D RDA / RPG ICD Changes Submitted – July 18, 2006
• Stage 4
  – Deployment Decision Document - TBD
  – Deployment, Maintenance and Assessment Plan - TBD
  – Update Program Plan - TBD
### WSR-88D Dual Pol Schedule

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- **ID 12**: RPG Development
- **ID 13**: System Integration
- **ID 14**: System Test
- **ID 15**: Operations Testing
- **ID 16**: Gate 4A
- **ID 17**: Beta Test
- **ID 18**: Gate 4B
- **ID 19**: Deployment

The schedule includes key dates for each task, such as the start and end dates.
SUPER-RESOLUTION

• Adopted TAC recommendation for Implementation
  • Issue: Increase in processor/comms load
  • Targeted for Build 10 (early 2008)

Improve Angular and Range Resolution
Better Detail on Structure of Tornadoes

Current Reflectivity: 1.0 o x 1.0 km
ORDA Reflectivity: 0.5 o x 0.25 km
(Hook-echo clearly visible)