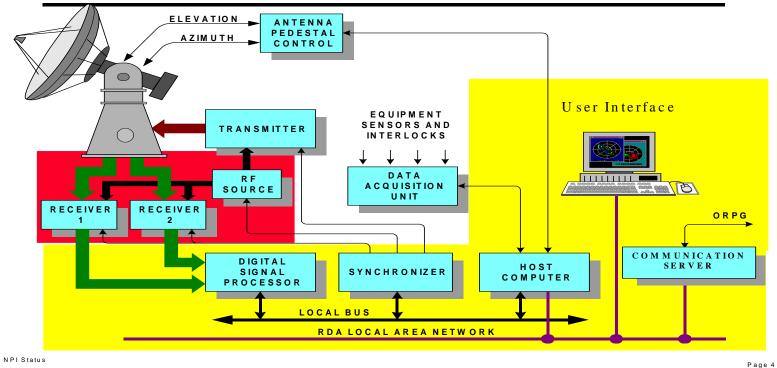# ORDA Status

March 31, 2004

Greg Cate

NEXRAD Product Improvement

Open RDA New Components (yellow shading)
Dual Polarization New Components (red shading)

ELEVATION

AZIMUTH

ANTENNA
PEDESTAL
CONTROL

User Interface

TRANSMITTER

EQUIPMENT
SENSORS AND
INTERLOCKS

RF
SOURCE

DATA
ACQUISITION
UNIT

RECEIVER
1

RECEIVER
2

ORPG

DIGITAL
SIGNAL
PROCESSOR

SYNCHRONIZER

HOST
COMPUTER

COMMUNICATION
SERVER

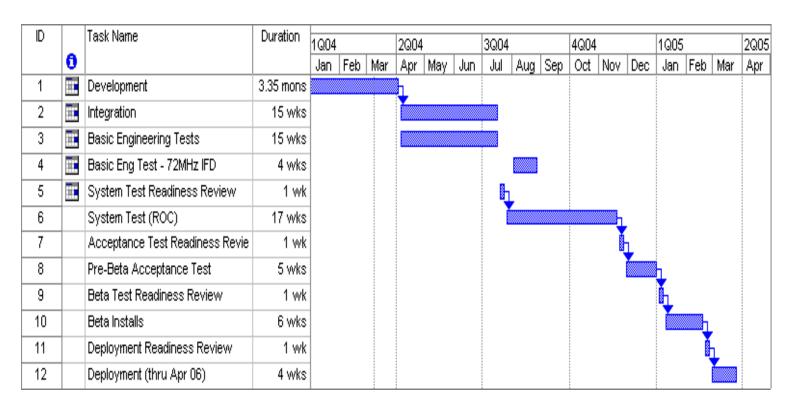LOCAL BUS

RDA LOCAL AREA NETWORK

NEXRAD Open System Architecture

3/31/04

2

Current Status

- ORDA Development/Integration Ongoing
- RSIS has proposed schedule slip (5 months)
  - Underscoped Level-of-Effort
  - IFD Update Delayed
  - Briefed to OS&T Management March 11
  - Briefing to NWS Director, NPMC Pending
  - Contract Actions Required
  - Impacts 6 month Build cycle

Schedule (Proposed)

ID		Task Name	Duration	1Q04			2Q04			3Q04			4Q04			1Q05			2Q05
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1		Development	3.35 mons																
2		Integration	15 wks																
3		Basic Engineering Tests	15 wks																
4		Basic Eng Test - 72MHz IFD	4 wks																
5		System Test Readiness Review	1 wk																
6		System Test (ROC)	17 wks																
7		Acceptance Test Readiness Revie	1 wk																
8		Pre-Beta Acceptance Test	5 wks																
9		Beta Test Readiness Review	1 wk																
10		Beta Installs	6 wks																
11		Deployment Readiness Review	1 wk																
12		Deployment (thru Apr 06)	4 wks																

Schedule Considerations

- No schedule compression available in development/test
- Build-in option for deployment acceleration
  - Option for additional teams
  - Introduce sites to acceleration concept
  - Training and hardware acquisition must keep pace

Technical Performance Analysis

- ROC Subject-Matter-Experts analyzing ORDA radar parameters, GMAP performance

- Include Operational Tests

- "Basic Engineering" tests verify integration fundamentals satisfactory

Potential Added Field Testing

- Potential for fielding portable ORDA (porta-ORDA) to select sites
  - Unit is in portable chassis
  - Can be installed/deinstalled quickly
- Installation during System Test to expose any operational issues
- Expected performance advantages of ORDA will encourage field buy-in

Risk – Test Bed Contention

- Test Bed Contention Continues as Major Risk
  - Test Bed needed by
    - ORDA
    - Six-month builds
    - ROC O&M Support
  - Reduce Risk by Minimizing Build 7 content; coordination with ROC
  - Requires coordination with SREC and NPMC

Dual Pol Update

Proposed Schedule

Schedule

- Operational Development – FY04 – FY07
  - Phase 1 – FY04
    - Define Requirements
    - Complete Program Plan/Acquisition Plan
    - Develop Statement of Objectives for Contract
  - Phase 2 – FY05-07
    - Design/Development
    - Test
- Deploy, Maintain & Assess – FY07-09
  - Production
  - Deployment
- *Obtain NPMC approval-to-proceed at key Program milestones*

Activities

- Request-For-Information Sent
  - Responses Received
  - GC/Contracts Issues Being Resolved
  - Defining Review Team
- NSSL/ROC/OS&T Discussions on RPG-related development requirements

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
- With Requirements as Driver, Contract for –
  - Development
  - Production
  - Deployment
- Utilize NSSL work in Dual Pol Algorithm Development
- Align with Current NEXRAD Maintenance Concept
- Administer in OS&T/NPI