NDIA System Engineering Conference
28 October 2014

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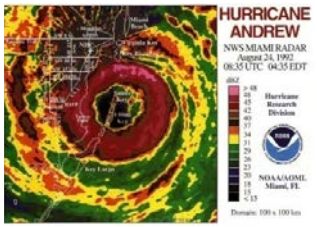
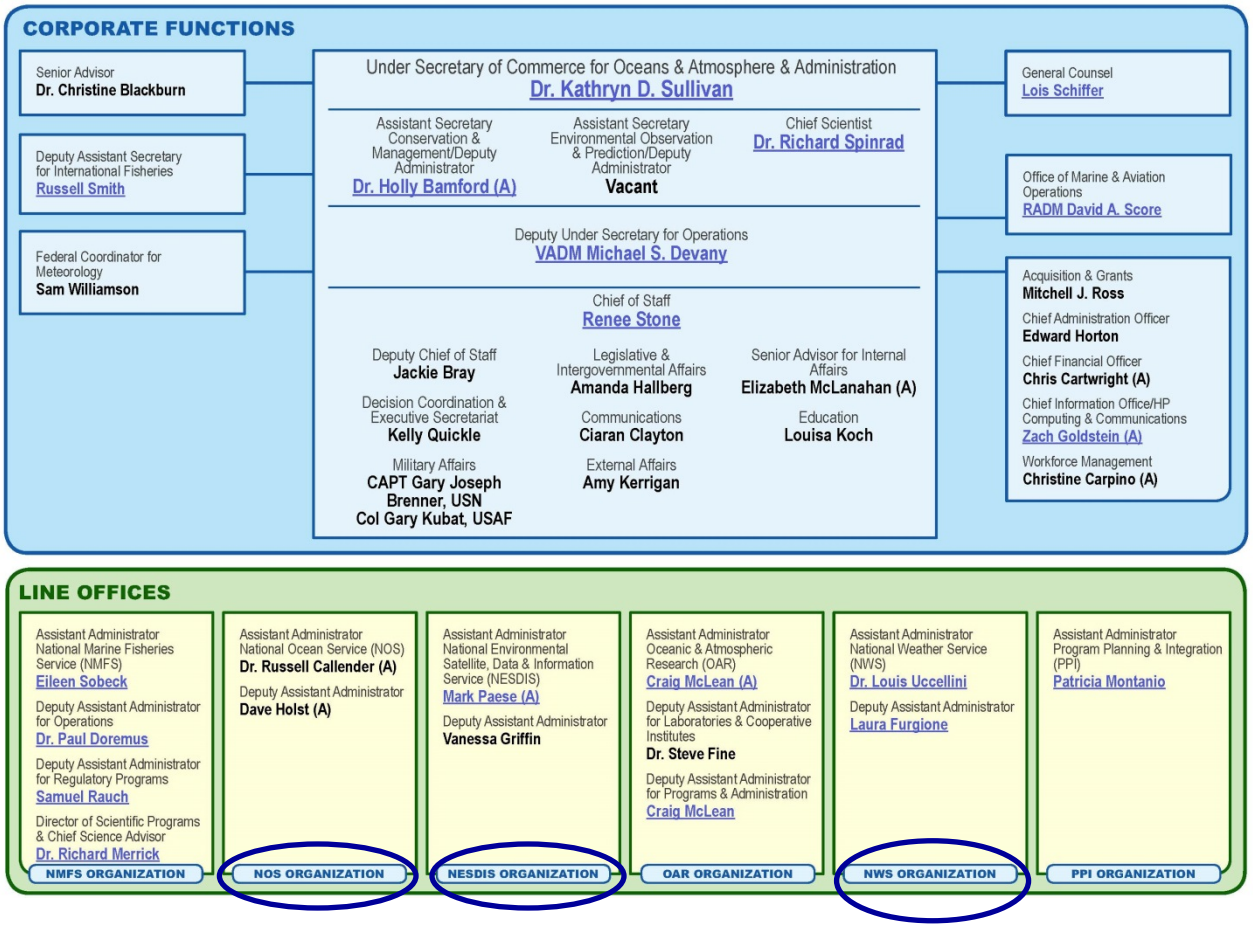
NOAA Composition



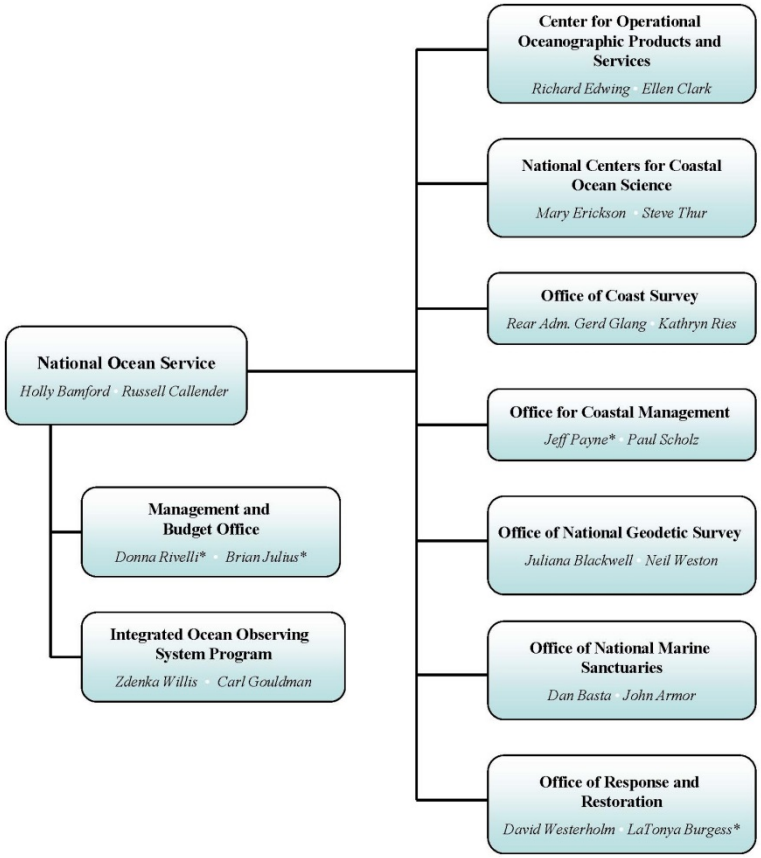
- 21,335 Staff (federal, contractor, associate)
- 435 Buildings
- 122 Weather Forecast Offices
- 13 River Forecast Centers
- 1,429 Real-Time Weather Stations
- 17 Satellites
- 8 Buoy Networks: 1042 Stations Deployed
- 19 Ships
- 14 Aircraft
- 3 Weather and Climate Research Supercomputers
- 2 Operational Supercomputers
- 13 National Marine Sanctuaries and 1 Marine National Monument
- 55 Commercial Fishery Management Plans developed by 9 Fishery Management Councils
- 286 Data Centers
- 46 Exhibit 300 IT Investments
- 71 Mission FISMA Systems
- 47 Infrastructure FISMA Systems
- Operates in all states, Puerto Rico, and Guam

National Oceanic and Atmospheric Administration (NOAA)



Mission: Science, Service, and Stewardship.
To understand and predict changes in climate, weather, oceans, and coasts,
To share that knowledge and information with others, and
To conserve and manage coastal and marine ecosystems and resources.

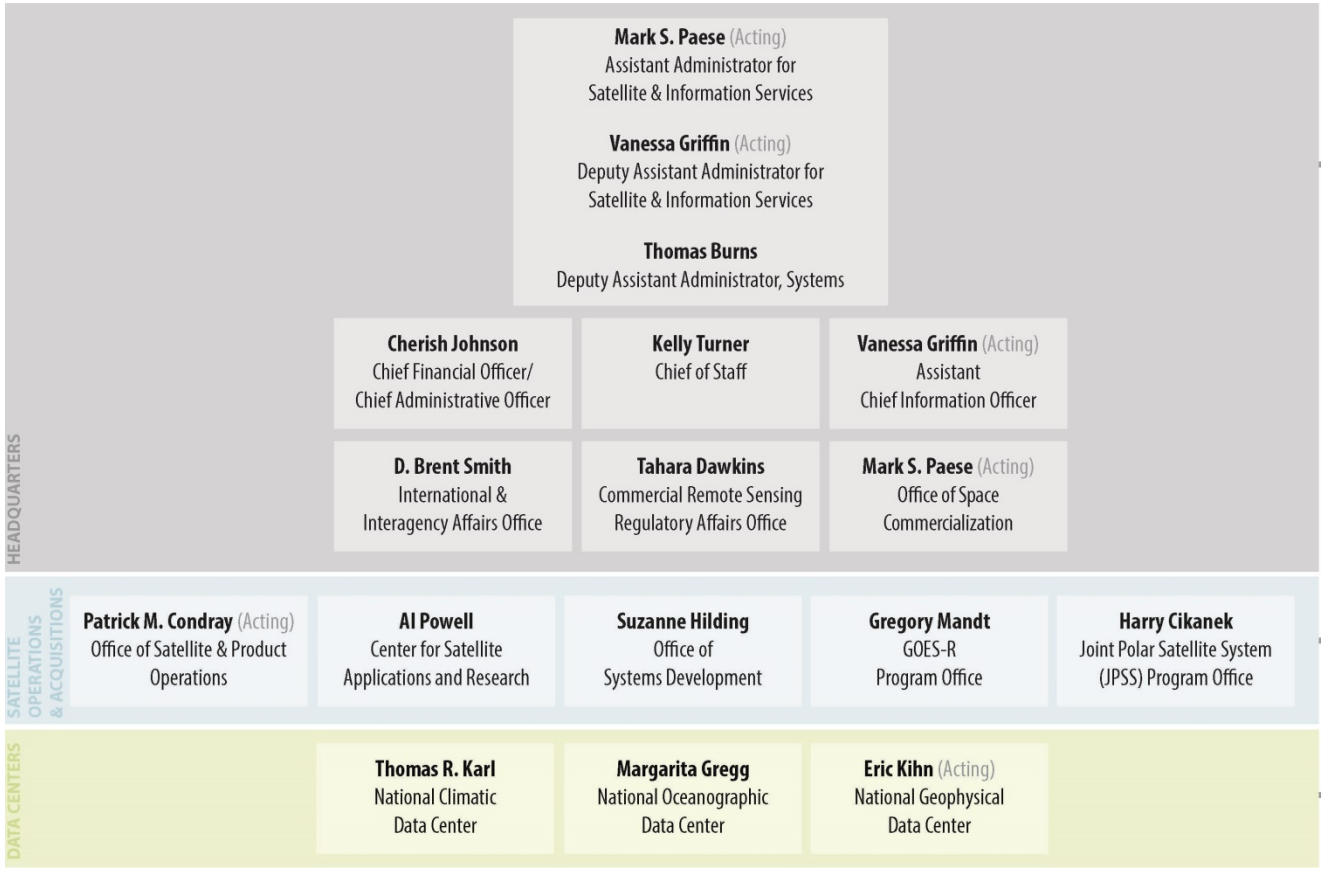
National Ocean Service
(NOS)



Mission

To provide science-based solutions through collaborative partnerships to address evolving economic, environmental, and social pressures on our oceans and coasts.

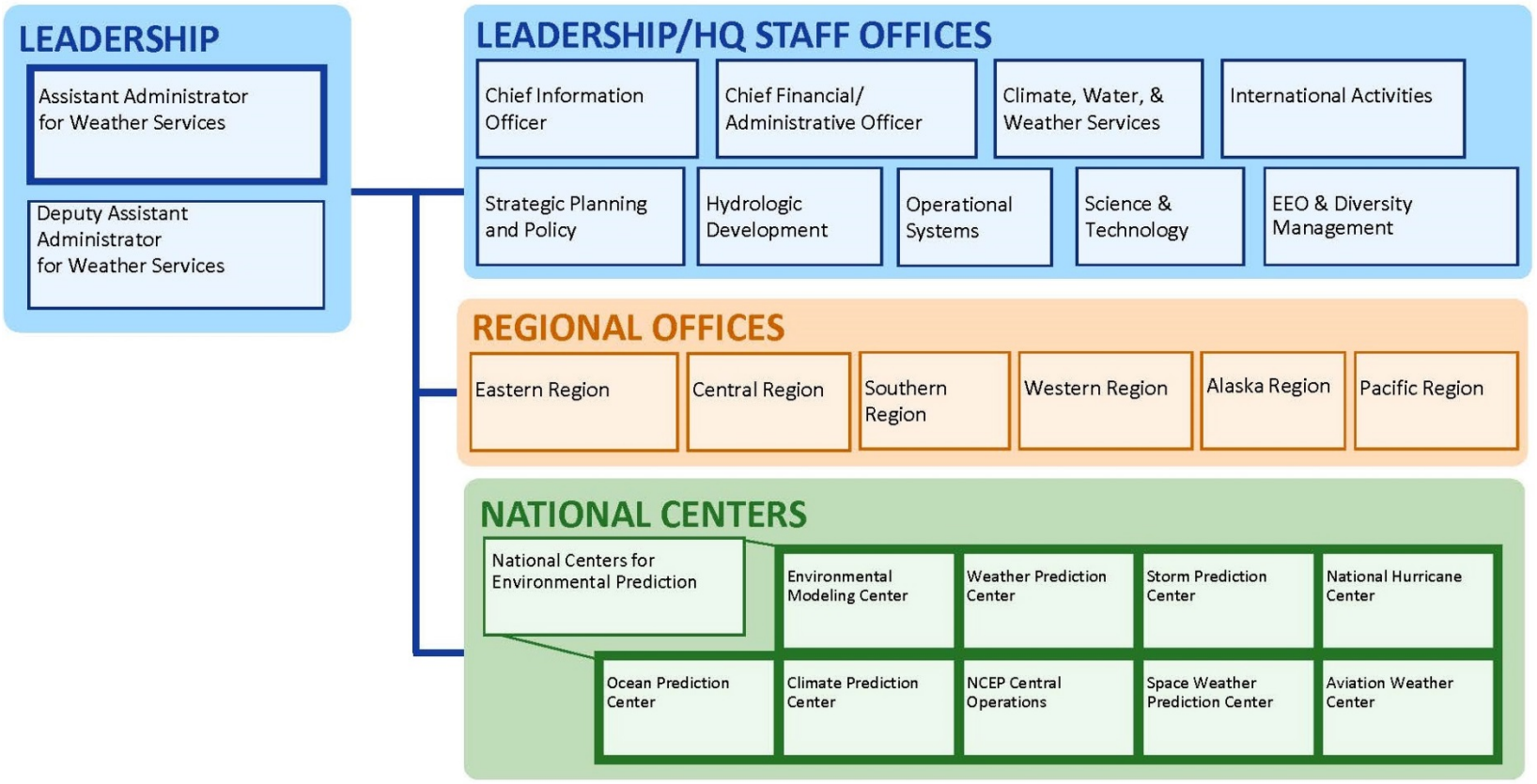
National Environmental Satellite, Data, and Information Service (NESDIS)



Mission

The National Environmental Satellite, Data, and Information Service (NESDIS) is dedicated to providing timely access to global environmental data from satellites and other sources to promote, protect and enhance the Nation's economy, security, environment and quality of life.

National Weather Service (NWS)



Mission

Provide weather, water, and climate data, forecasts and warnings for the protection of life and property and enhancement of the national economy

Vision

A *Weather-Ready Nation*: Society is Prepared for and Responds to Weather-Dependent Events

NOS
Ocean Survey Vessel (OSV)

- NOAA procured a new survey ship based upon the Navy's AGOR 27 program
- NOAA signed an Inter Agency Agreement with Navy's PEO Ships to acquire the ships for NOAA May 2014
- A requirements process was done by NOAA to establish the changes needed to satisfy NOAA's missions
- Requirements were completed Sep 2014

Requirements Process

- NOAA Line Offices established a list of all at-sea requirements for data acquisition to satisfy their unique missions
- Over an 18 month period 322 requirements were identified and documented in a Program Operational Requirements Document (PORD)
- These requirements were integrated by the OSV Integrated Product Team (IPT) into a high level set of requirements for the ship – the Top Level Requirements (TLR)
- Based on AGOR “as built” capabilities
- Iterated extensively with Navy

Requirements Process

NOAA

NAVY

PORDs

MNS

IPT

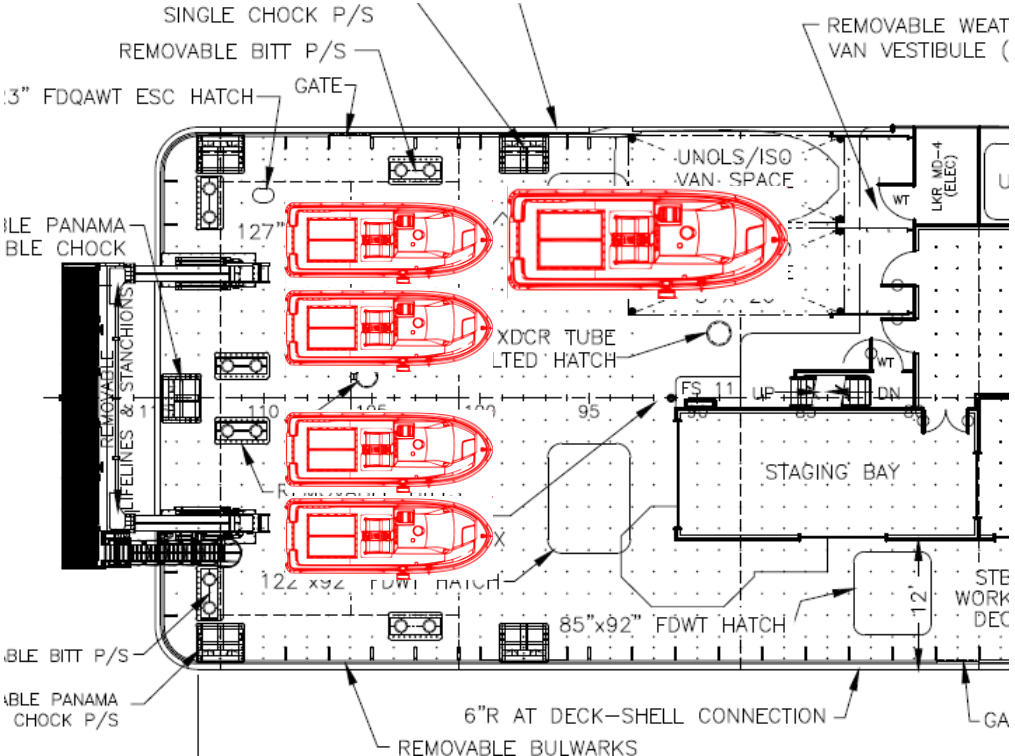
TLR

CDD

System Spec

CDD: Capability Design Document

Example – carry five survey boats



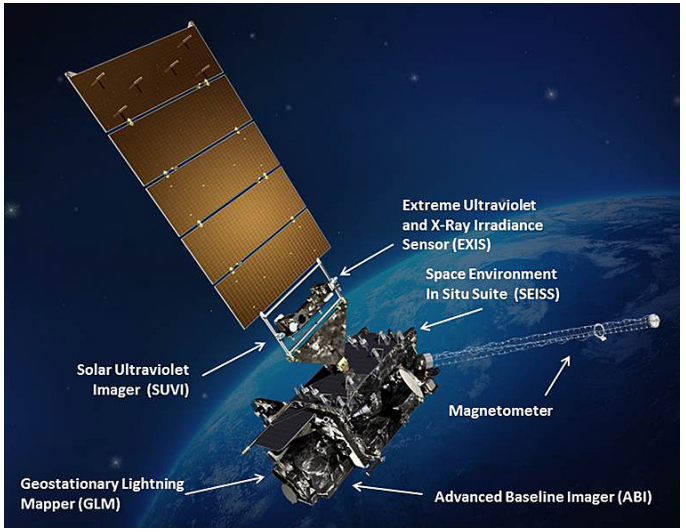
NESDIS

Jason-3 - March 2015; fourth mission in U.S.-European series of satellite missions that measure the height of the ocean surface

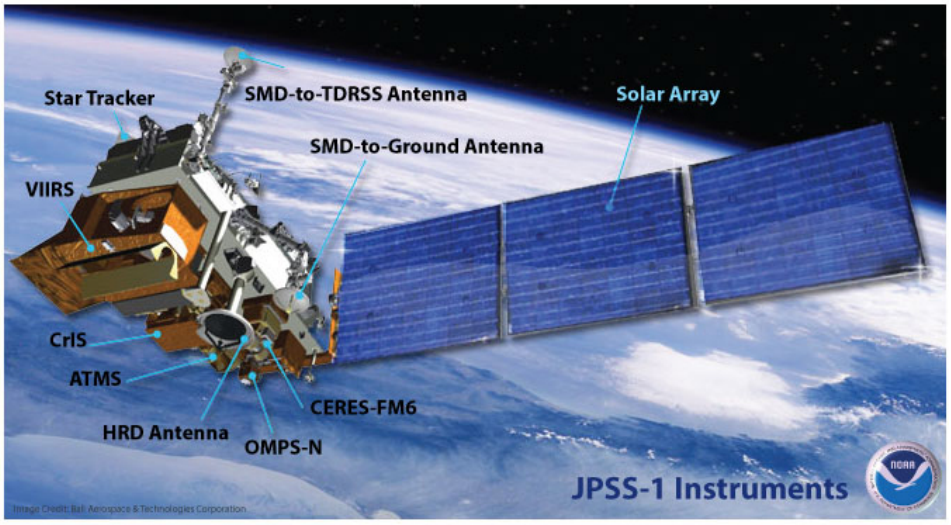
GOES-R – March 2016; Provide images of weather pattern and severe storms as frequently as every 30 seconds, which will contribute to more accurate and reliable weather forecasts and severe weather outlooks

JPSS-1 – December 2016; Ensures continuity of observational data at the quality levels needed to sustain current weather forecasts beyond 2017

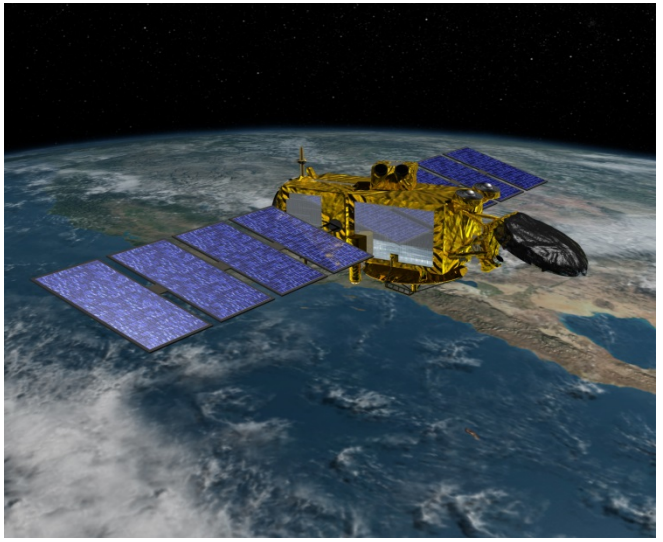
GOES-R



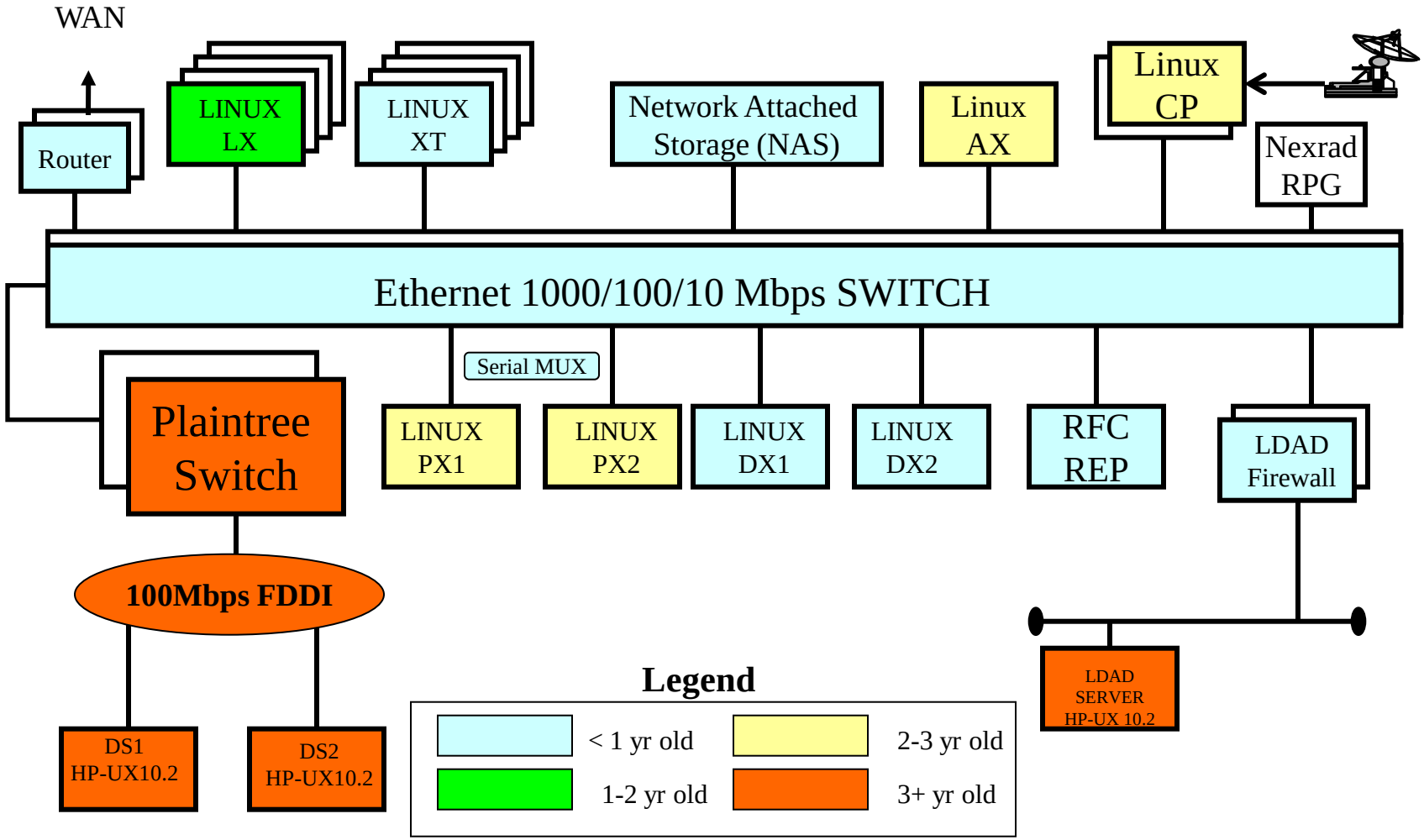
JPSS-1



JASON-3



NWS - AWIPS Hardware Architecture
(~July '05)

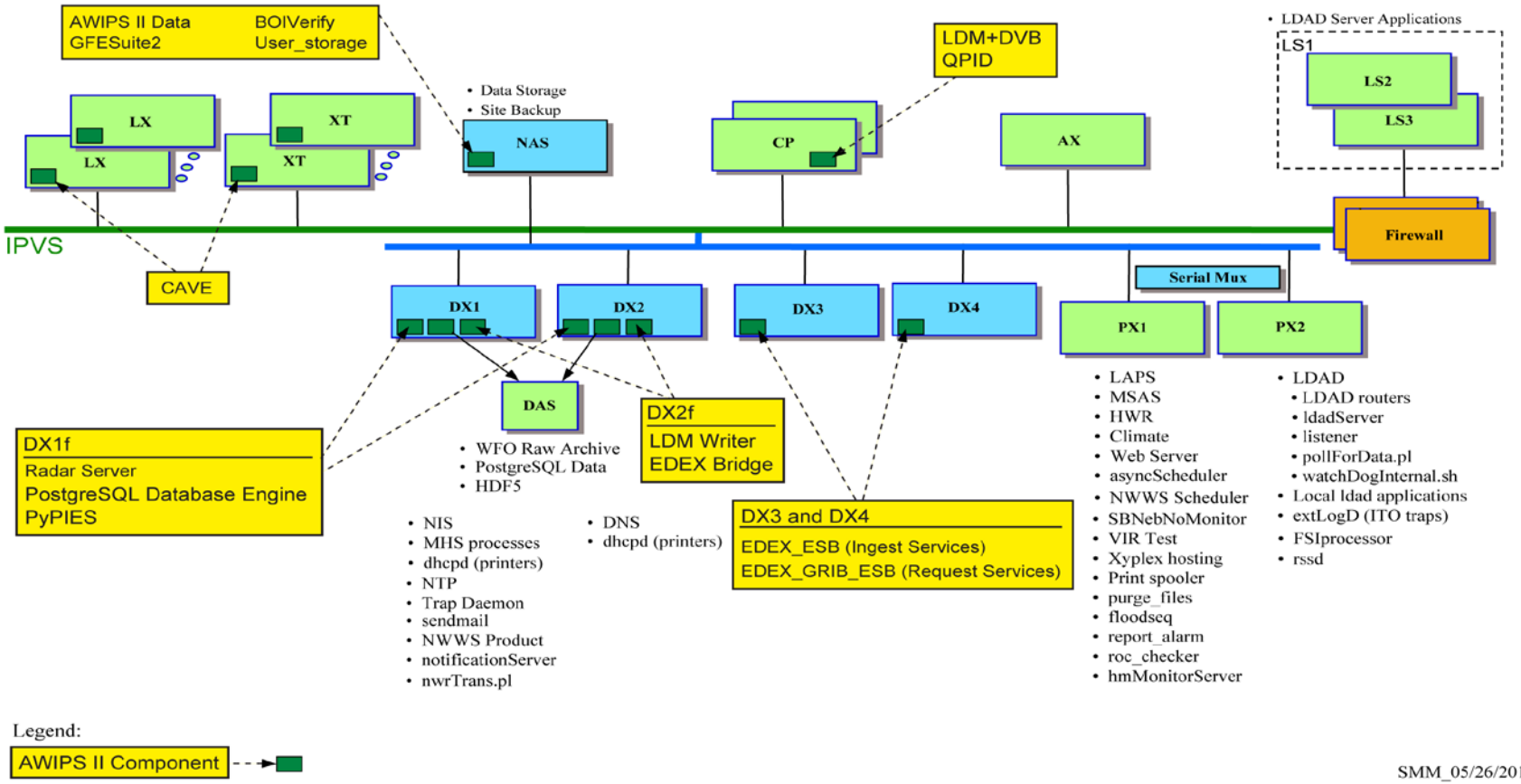


6 Standard Racks Configuration

AWIPS-2 SOA Architecture

CONUS WFO Architecture

AWIPS II Components Deployment Concept



2 ½ Standard Racks Configuration => TODAY ½ Rack

What is Next

- NOS – Preparing for next Milestone Review
- NESDIS – Re-organization and establishment of an integrated ground architecture
- NWS – Re-organization
- NOAA – Enterprise Architecture
- NOAA Educational Partnership Program (EPP)

Thank You