

# OCIO Road Map to IT Modernization

How the OCIO will upgrade IT for Better Service

## Road Map Status Report – Advisory Committees

June 2009





# Overall Message

Significant Challenges Have Been Imposed by the Current Economic Environment

- ❖ 5 Year Plan has been extended to 7 due to funding
  - ❖ Same Plan of activities, but spread over a longer time
  - ❖ Not driven by programmatic delays
  - ❖ Increases the likelihood of encountering identified risks
  - ❖ Will increase the total life-cycle costs to do the same amount of work
- ❖ Most planned initiatives are on-time or only experiencing slight delays (1 Quarter at most)
- ❖ Significant Progress is being made with AIS remediation on selected Patent & Trademark systems (TDR, Madrid, OACS, SCORE)
- ❖ Re-Alignment for organizational strengthening and accountability became effective 6/7/2009



# OCIO Funding Impacts – FY 2009 (In millions)

October 1, 2008

June 1, 2009

❖ Compensation	\$67	\$60
❖ Business Projects	\$44	\$15.5
❖ Note: Some projects were intended to replace aging systems (PFW, OACS, EAST)		
❖ Road Map Projects	\$37	\$30
❖ Operations & Maintenance	\$139.5	\$135

***Total Removed = \$47 Million***

***From our FY 2009 Budget Request***



# Current Maintenance Windows

- ❖ Generally, the current Maintenance Window for the Production Environment (internal systems only) is:
  - ❖ Tuesday thru Saturday: Midnight to 5:30 AM
  - ❖ Saturday: 10:00 PM to 5:30 AM Sunday
  - ❖ Sunday: 10:00 PM to 5:30 AM Monday
  
- ❖ Total Maintenance Hours Per Week: 42.5
- ❖ Hours Spent on Routine Backups: 30
- ❖ Hours Left for Upgrades or Deployments: 12 (across the entire week)



# Proposal Under Review With Patents

## *Recommend Extending the Friday/Saturday Nightly Windows*

- ❖ Extend weekend production outages (final times are still under discussion)
- ❖ 10 PM Friday to 5:30 AM Saturday (vice midnight Saturday to 5:30 AM on Saturday) \*except for systems related to establishing a filing date (e.g. EFS-Web; RAM; etc.)
- ❖ 10 PM Saturday to 7:00 AM Sunday (vice 10 PM Saturday to 5:30 AM Sunday)
- ❖ Maintain exceptions for 24x7 systems maintenance with sufficient notification/coordination
- ❖ EFS-Web or RAM
- ❖ Network outages for PTONet III
- ❖ Long Term Outages: 30 to 60 days notification to the public and unions
- ❖ Maintain exceptions for Patent & Trademark Quiet Times



# Looking Forward

- ❖ Continue to build collaborative relationships with our customers
- ❖ Continue to scrutinize Operations and Maintenance to squeeze out additional efficiencies to fund infrastructure improvements
- ❖ Plan and build to quality - explore contracting alternatives to increase competition and drive increased value and significant improvement in the quality of the deliverables
- ❖ Shift from foundational training (EPMS, contracting, SDLC) to more focused technical skills re-refresh.
- ❖ Continue to Phase 2 of the organizational re-structure to improve accountability and get the right people in the right jobs to maximize the potential of the existing staff
- ❖ Build/replace AISs analyzed by SWAT team
- ❖ Develop a set of reusable services and start the migration of the operational environment to a Service Architecture based on modern technologies
- ❖ Address customer concerns of performance and capability



# End Presentation Appendix



# Major Identified Challenges – Status

(As of May 2009)

## **G** AIS Stabilization

### ❖ System Loading, Monitoring, & Diagnostics

**G** SWAT Team Analysis & Review is underway or complete for 14 AISs, some fixes are immediate, FY 2010 budget and maintenance planning will repair the rest.

**G** Proactive Monitoring for real time analysis and downtime reduction.

**G** Metrics Service to monitor systems in real time – design complete.

## **G** Process Standardization

### ❖ Lack of Repeatable Process Standards

**G** Mitigated through Enterprise Program Management System (EPMS); and document policies, procedures and standards (Software, Network, Hardware, Desktop COTS, Security, & Monitoring), and implement the System Development Lifecycle (SDLC) to control management of the full Systems Life Cycle in a consistent way.





# Major Identified Challenges - Status

## **Y** Organizational Strengthening

### **Y** Headcount (Current)

- ❖ OCIO Position Ceiling – 549
- ❖ Current On-Board – 463
- ❖ Vacancies – 86
- ❖ Authorize to Pursue Remaining – 14
  - ❖ 3 interviewing
  - ❖ 1 paneling
  - ❖ 1 no selection/re-advertise
  - ❖ 9 authorized to advertise
- ❖ Business Area Details to Augment Vacancies – 29 Patent and 1 Trademark

**G** Increased financial transparency through a focus on publication and collaboration on spending reports, budget formulation, and strategic planning.



# Major Identified Challenges - Status

## **G** Organizational Strengthening (con't)

### **G** Skill-base

- ❖ Completed Task Order Manager/Contracting Officer Technical Representative Training
- ❖ On-going Enterprise Program Management System Tool Training
- ❖ Completed System Development Life Cycle Training
- ❖ Individual Development Plans (IDP) project is well underway and expected to be complete in November of 2009

### **Y** Contractor Reliance

- ❖ Reductions in allowed hiring have delayed significant progress

### **G** Employee Survey Results

- ❖ Significant positive improvement since 2007
- ❖ Job Satisfaction was up 13% overall!
- ❖ Leadership confidence was up 18% overall!
- ❖ Plan to address identified issues in July



# Major Identified Challenges - Status

## **Y** Disaster Recovery

- G** Completed requisition for additional disk storage for failover.
- G** Completed selection of vendors for additional telecommunications circuits to Boyers.
- Y** Completed 36% (142 TB) of data replicated to the remote facility
- R** Funding for additional hardware/software infrastructure to support building redundant systems at remote facility
- G** TRAM, CM and email redundancy still underway

## **G** Data Center Stabilization

- G** System Aging & Platform Proliferation
  - ❖ 12 of 22 systems have been deployed – Some delay was due to power restrictions which have been mitigated with a plan to recover 90 KW.
- Y** Power
  - ❖ Received final solution drawings to support the power changes to IT West necessary to recapture power for the IT East Production Data Center.
  - ❖ Regained 90 KW from the removal of IT West off redundant power



# Major Identified Challenges - Status

## **Y** Desktop Stabilization

- Y** Federal Desktop Core Configuration (FDCC) 1.0 pushed to 16%
- G** Reduced local administrative rights by 31%
- G** Anti-virus push to update versions is at 90%
- G** Establishment of business area baselines is on-schedule
- R** Evaluation of tools for automated deployment and monitoring is on-going but slow due to funding

## **G** Service Desk

- G** ITIL-based (Information Technology Infrastructure Library) Incident Management analysis complete – establishment of policies and procedures for deployment will be complete by the end of fiscal year 2009
- R** Acquisition of a Help Desk services tool that supports an ITIL-based management process is delayed to FY 2010 due to funding



# Major Identified Challenges - Status

## **G** Telecommunications

- G** Completed the PTONet III acquisition in 6 months!
- G** Completed setup of first acquired PTONet III equipment in Remsen Test facility and data center – will test the roll-out by completing the IT West facility (Lab) by July 30<sup>th</sup>, on schedule
- G** Begin receipt and testing of data center firewall, switches, and end-of-life equipment for deployment in early July

## **G** Enterprise Architecture

- G** Completed audit of current environment, tools, and documentation as the authoritative source of the Enterprise Architecture
- G** Enterprise Architecture and SOA Migration Analysis complete



# Current Maintenance Windows

- ❖ A convergence of events related to the Road Map are putting pressure on our ability to perform all the necessary maintenance within the current window
- ❖ Data Center and AIS Stabilization (Database, Servers, & Storage)
  - ❖ Storage Upgrades to replace aging/leased devices
  - ❖ Server Replacements
  - ❖ McData Storage Area Network (SAN) Migration
  - ❖ ERA SAN storage migration
  - ❖ Operating System and Database Patch Updates
  - ❖ C&A Remediations
  - ❖ Server Anti-Virus Upgrades & Scanning
  - ❖ Unix & Window Operating System Upgrades
  - ❖ SWAT Team recommendations and AIS Upgrades



# Current Maintenance Windows

- ❖ Disaster Recovery
  - ❖ BC/DR Storage Migrations
  - ❖ Data Bunkering (Replication)
  
- ❖ Telecommunication Stabilization (PTONet III)
  - ❖ Replacement of Campus-wide Nortel network infrastructure with Cisco
    - ❖ Lab and production
    - ❖ Firewall End-of-life
    - ❖ Blue Coat End-of-life



# Current Maintenance Windows

- ❖ Current Maintenance Window for the Production Environment (internal systems only)
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# Impacts

- ❖ Limited maintenance windows forces work to production hours
- ❖ Technical activities require more than time allotted in one window
- ❖ “Non-impactful” prep-work completed during day
- ❖ If a mistake is made during preparation, there is a potential impact to production systems.
- ❖ Examples include the replacement of storage devices required preparatory steps to be taken during the day on 4/23. Work was not expected to have an impact, however, one of the necessary steps caused an unexpected disconnection of disks from the network, and ultimately impacted all AIS's.



# Proposal Under Review with Patents

## *Recommend Extending the Friday/Saturday Nightly Windows*

- ❖ Extend weekend production outages to 9 hours each day
- ❖ 10 PM Friday to 7:00 AM Saturday (vice midnight Saturday to 5:30 AM on Saturday)
- ❖ 10 PM Saturday to 7:00 AM Sunday (vice 10 PM Saturday to 5:30 AM Sunday)
- ❖ Maintain exceptions for 24x7 systems maintenance with sufficient notification/coordination
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