Towards an Integrated Deployment and Crisis Response Planning System for C²

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Navy planners are being asked to do more with less

- 529 ships in 1991; only 281 today!
- Operational tempo increases due to Global War On Terrorism, Maritime Homeland Security/Defense

Frequency of deployment replanning is high and getting higher

- Crisis Response/Humanitarian Ops on the rise
- Deliberate planning to study hard $$ questions rising
- Request for Forces is migrating to Request for Capabilities (more options for response)

Available deployment tools do not provide sufficient Speed of Command to keep up while staying agile
The Fleet Response Plan and Deployment Options

Understanding the Fleet Response Plan

<table>
<thead>
<tr>
<th>Fleet Response Plan</th>
<th>Non-Deployable</th>
<th>Emergency Surge</th>
<th>Surge</th>
<th>Deployable</th>
<th>Sustainment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Phase</td>
<td>Maintenance</td>
<td>Unit Level Training</td>
<td>Intermediate Level Training</td>
<td>Advance Level Training</td>
<td>Deployable</td>
</tr>
<tr>
<td>Combat Capability</td>
<td>Non Mission Capable</td>
<td>Self Defense Limited Offensive</td>
<td>Offensive Multi-Unit Integration</td>
<td>Deployable</td>
<td>Sustainment</td>
</tr>
<tr>
<td>Deployment Options</td>
<td>Non-Deployable</td>
<td>GWOT Counter Drug</td>
<td>CSG ESG</td>
<td>Deployable</td>
<td>Sustainment</td>
</tr>
</tbody>
</table>

FEP C2X JTFX

0 7 10 ~11 13 24 27

27 month repeating cycle

01/21/2006
Selected Carrier Strike Groups From 2004 (in WebSked)
Deployment Planning is a Complex Process
(tradeoffs/impacts are everything)

- Installs/Maintenance
- Ordered Deployments
- Presence Requirements
- Navy Policy (rules)
- Force Structure
- Readiness
- Tomahawk Requirements
- Training Plans
- Course Of Action Development
- Team Vetting

The Approved Deployment Plan
Change Happens Frequently and Fast
(Each Change Trigger the Planning Cycle)

Mid-Year 2004 Navy Deployment Changes

- Original 2004 Approved Deployment Plan
- Approved Kitty Hawk Backfill Deployment Plan
- Approved Tsunami Response Deployment Plan
- EUCOM CSG Presence Request
- Multiple Tsunami Response COAs
- Multiple Kittyhawk Backfill COAs
- JFK Early Decommissioning Study
- Kitty Hawk Backfill
- Crisis

Crisis

Original 2004 Approved Deployment Plan

Time

(discarded)
WebSked DS Already Schedules the Navy

• First Fielded in 2002; Designated by CNO as Navy’s Authoritative Employment Scheduling System in 2004

Features
• Visual Scheduling
• Optional Offline Scheduling/Print (MS Excel)
• Automated Workflow
• Email Notification
• Common Schedule Picture
• Ad Hoc Reporting
• Planning Decision Aids
• Fuel Planning and Estimating
• Support for Large Sets of Contingency Plans (Emp)
• Force Planning and Allocation
• Mission Needs Brokering (Services)

Schedules Maintained
• Global Naval Force Presence Schedules
• Deployment Schedules (Fleet Response Plan)
• Contingency Planning (Emp)
• Modernization Schedules
• Exercise Schedules
• Transit Schedules
• Services Schedules
• Mid Range Battle Group Training Cycle Schedules (import)
• Operational Schedules
• Historical schedules (last 5 yrs of operational schedules)
The Solution

• Complete the automation of the Navy Deployment/Employment planning chain in WebSked
  – Leverage existing automation investment in Employment Sheduling and Fleet Response Plan maintenance
  – Movement of planning data from requirements to deployment plans to employment schedules to execute is fast and efficient

• Develop the WebSked Composeable Assistant for Networked-Deployment Operations (CAN-DO) module
  – Easy Visual Course Of Action (COA) deployment planning
    • Quick to plan; Quick to change
  – Electronic fusion of multiple planning sources
    • Eliminate the laborious manual data collection and entry
  – Automation and enforcement of the COA review/vetting process among all Navy deployment planning stakeholders (the TeamSked Community)
The Navy Deployment Planning Process (with WebSked Automation)

Planning

- CNO / TYCOM
- Global Force Management Presence

Certifications
- Exercises
- Battle Group Training

Quarterly Plans

Deployment Schedule

Deployment Force Allocation Schedules

Q – 1mos Employment Schedules

Q – 5mos Service Request

Q – 4mos Service Fill

Services Module

Assign Forces

Require Deployments

Navy Policy

Under Construction

CAN-DO Deployment Module

Force Allocation Module

Order

(3 year plan)

Order

Deployment Force
Allocation Schedules

Q – 1mos Employment Schedules

Q – 5mos Service Request

Q – 4mos Service Fill

Services Module

Assign Forces

Request Assets To Meet Training Objectives

Approved For Operations

01/21/2006
The WebSked Distributed Services Architecture
WebSked Usage, Approval Speed, and Fidelity Improvements

Schedule Fidelity of USS Units

Speed Of Change
Current Quarter Schedules

<table>
<thead>
<tr>
<th>Load Item</th>
<th>2003</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Users</td>
<td>517</td>
<td>1,268</td>
</tr>
<tr>
<td>Active Units</td>
<td>382</td>
<td>937</td>
</tr>
<tr>
<td>Transactions/Day (Avg)</td>
<td>1,228</td>
<td>4,517</td>
</tr>
<tr>
<td>Transactions/Day (Peak)</td>
<td>2,837</td>
<td>10,438</td>
</tr>
</tbody>
</table>
Expected Reduction in Planning Cycle Time With Full Automation

- From Real-World Deployment Planning Mid-2004
- Kitty Hawk Backfill RFF

<table>
<thead>
<tr>
<th>Deployment Planning Phase/Step</th>
<th>Time Current (Days)</th>
<th>Time Automated (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Gathering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Current Plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculate Unit Availability</td>
<td>2.0</td>
<td>0.25</td>
</tr>
<tr>
<td>Manual Data Entry</td>
<td>1.5</td>
<td>0.25</td>
</tr>
<tr>
<td>Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan Development</td>
<td>4.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Course Of Action Analysis</td>
<td>4.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Collaboration</td>
<td>6.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Execution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order Issuance</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Plan Transition</td>
<td>10.0</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>35.5</strong></td>
<td><strong>17.0</strong></td>
</tr>
</tbody>
</table>

53% Reduction In This Case

@10 Similar Cycles/Yr
Potential 188 Planning Days Saved!
CAN-DO Deployment Planning in the WebSked Services-Oriented Architecture

1. Retrieve WebSked DS WSDL Location

2. Retrieve WebSked DS WSDL

3. Submit SOAP XML Request

4. Process Internal Request

5. Process External Request

6. Return SOAP XML Response

WebSked DS Web Services

Server PKI Cert

Client PKI Cert

CAN-DO Desktop Application

WebSked DS Relational Database

External Collaborative Databases

WebSked DS WSDL (Data Description)

UDDI Registry (Discovery Service)

Secure HTTPS Protocol

CAN-DO Builds On Existing WebSked Web Services
For Full SOA Participation

01/21/2006
Conclusion

- CAN-DO is scheduled to deploy in 2007
- CAN-DO Deployment Planning will complete the automation of the Navy Deployment/Employment Scheduling chain (from requirements to sailings) in WebSked Distributed Services
- Full automation shows the promise of cutting deployment planning Course Of Action cycles by over 50%
- Shorter planning cycles means increased Speed Of Command and a more agile and responsive Navy!
For More Information

- Approved Maritime Schedules (Available to ANYONE on the SIPRNET)
  - Also user help including account creation

- WebSked User Help (unclassified)
  - [WebSkedHelp@spawar.navy.mil](mailto:WebSkedHelp@spawar.navy.mil)

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