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Joint Data Integration Joint Test

A Success Story

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Purpose

- Provide test product delivery and JC2 training management capability transition status

Bottomline Up Front...

- JDI JT closes on 29 April 11
- Test products will be completed on schedule and delivered to intended customers
- Working transition through JFCOM (J7-ownership), and DUSD P&R for gap funding

JDI Problem Statement

The Joint Task Force (JTF) Commander and Component Commanders *lack C2 data management procedures* needed to improve the quality of the Common Tactical Picture (CTP) used to support operational level force employment decisions

Validated by JFCOM, JTF-519, JDI JWAG

“No Confidence in the Picture!”

Joint Test Summary

Thirty-two (32) month test directed to RESEARCH, IDENTIFY, DEVELOP, TEST and EVALUATE new CTP Data Management TTP to improve quality of CTP

CLOSEDOWN JDI JT 29 April 2011

- Teamed with JFCOM (J7 / J8 / JID / JDTC / J684)
 - Supported 6 Tier 2 Exercises in Three Theaters
 - Operational impact – manifested in CCDR feedback and actions taken
 - Changes and improvements in theater policies and instructions
 - Organizational changes and CTP/COP SOP implementation
 - Establishment and routine use of JDN Operations Cell at JTF and CCDR
 - Improvement in theater inputs to global COP
 - Strong CCDR demand signal for continued support
- Transition Challenge
 - Take the next steps to functionally and organizationally address the continual root causes of the problem... and fix them
 - The long term solution requires – organizational ownership, policy, doctrine, exercise support, and training management

Operational Endorsement

Admiral Willard:

- “Commander, JTF 519 approves the JDI Joint Test nomination to improve the COP-CTP... not only in JTF 519 but other forces worldwide.”
- “A common picture is key to my warfighting capability.”
- “The commander’s level of knowledge is the basis for control actions...(he) must review the status of execution constantly...to determine friendly and enemy force disposition...to maintain situational awareness, plan execution, procedures...”
- “We must better understand what the common picture is, (and) how to make it available to all levels of the C2 hierarchy.”



“Ultimately, C2 is the commander’s contribution to winning the fight.”

Operational Impact

- Results:
 - Eliminated 70% of erroneous data
 - Data is timely, accurate, and relevant
 - System availability exceeded 90%

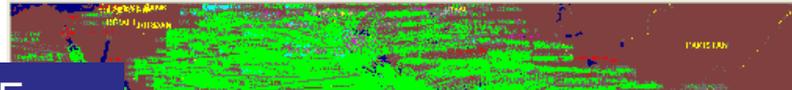


- “Our COP management...has seen significant improvement, providing a great shared situational awareness tool. The Joint Data Network Operations Concept is being incorporated at our JTF capable service components and the Headquarters is coordinating a plus-up in its personnel to support the Theater COP.”
 - Maj Gen Harold Moulton (USEUCOM J3) to Maj Gen David Edgington (USJFCOM J02)
- "The COP is a great tool and the JDN Cell is doing a great job in providing situational awareness with a clear picture. I use the COP in my decision making process as the JOC Director.”
 - CAPT Hawkins, USN, AC-10 CTF JOC Director

Operational Impact

- “In short, the net result of the JFCOM - JTF-519 partnership is a reliable GCCS picture. This has become an "expectation" and an "assumption" and operational decisions within the JTF JOC are supported directly from our "near real time" picture. Through the efforts of your team our Joint C2 system matured beyond just being a concept; it is an "operational necessity" for both the JTF and Pacific Fleet. ”

- Thomas K Shannon, RDML, COMPACFLT, N3N7



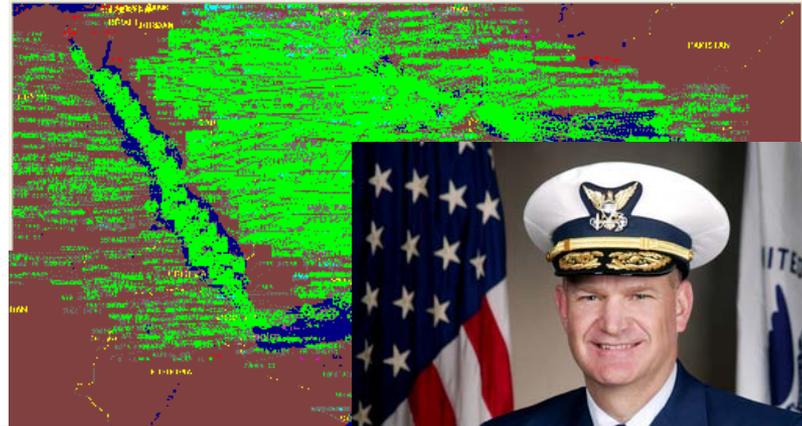
- “As important as the COP is to us, I do not understand why the JFCOM leadership does not understand that. ADM Roughhead said that back in 2005. I have been doing this now for 5 years and the JFCOM JDI team has been a big part of the JTF-519 C2 solution.” "I cannot tell you how many times the JDNO Cell has saved my ass.”

- CAPT Peter Ross, JTF-519 Battle Watch Captain

- “I have no slides today. I am just going to brief from the COP.”

- LCDR Michelle Stoneking, PACOM Intel Supervisor

Operational Impact



• “What a great team you have! I want to thank JDI for its outstanding support during PANAMAX 10. JDI personnel provided assistance to the 2nd Fleet JDNO Cell who enabled the JTF/MNF to properly manage dynamic track data over the GCCS-J network. JDI also provided a team to evaluate USSOUTHCOM's manning and TTP for presenting a COP at the Combatant Command Headquarters. The team clearly identified shortfalls in the J33 that we are now correcting through hiring actions and SOP updates. Your team provided incredible support and insights which will benefit USSOUTHCOM for a long time to come. Thanks!”

- RDML Steve Ratti, USSOUTHCOM J3

Operational Impact

“Bottom Line”



+



TTP

“Untrained”
GCCS Operator

The long term solution requires an operationalization plan – organizational ownership, policy, doctrine, exercise support, and training management

≠



“Trained”
Operator



+



TTP

“Untrained”
GCCS Operator

+



GCCS and
JDN Ops
Training

=



“Trained”
Operator



+



TTP

“Untrained”
GCCS Operator

+



GCCS and
JDN Ops
Training

+

Theater
COP
Policy



Standardized
Policies
&
JDN Cell

+



Accountability

=



Data
Management
Capability

JDI and TTP Policy Integration

➤ Current

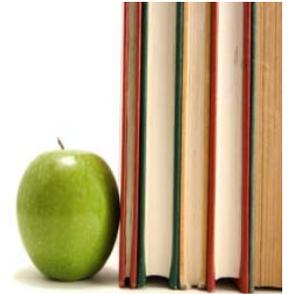
CJCSM 3115.01B: Joint Data Network Operations

➤ Proposed

- ❑ ***CJCSI 3115.01: Reporting Procedures for the CTP***

AND

Series of CJCSM 3115 Volumes



JDN Library

- ❑ CJCSM 3115.01C Volume 1: Joint Data Network Operations
- ❑ ***CJCSM 3115.01C Volume 2 – CTP Data Management***
 - Appendix A: GCCS-J***
 - Appendix B: GCCS-I3***
- ❑ CJCSM 3115.01C Volume 3: Joint Interface Control Officer (JICO)

Overall ROI Results and Forecast

Level 1: Reaction, Satisfaction, and Planned Action

Action: Component and JTF operations staff gauged reaction to and satisfaction with improvements in the quality of the CTP after operator training and use of the developed TTP

Result: 84% of the responses agreed the CTP was improved; 16% disagreed because of conditions outside TTP scope

Level 2: Learning, Confidence, and Attitude Change

Action: Operators agreement regarding the TTP providing sufficient information for conducting tasks effectively

Result: 96% of the responses from the operators agreed

Level 3: Application and Implementation on the Job

Action: Documented visual observations to determine how operators used the TTP during the conduct of their jobs

Result: Observers found the TTP was well received by the operators and attitudes were positively changed due to the training and TTP guidance

Level 4 and 5: Operational Impact and ROI

Operational Impact: Changes and improvements in theater policies and instructions; organizational changes and Common Tactical Picture (CTP)/Common Operational Picture (COP) SOP implementation; establishment and routine use of the JDN Operations Cell at JTF; improvement in select theater inputs to Global COP.

Estimated Annual Monetary Value of Improvements to USPACOM:
\$1,315,679

Estimated Project Costs: Internal (JT&E Program, Service, and Resource Sponsor) - \$10,685,458; External (conferences, lab space, equipment, etc.) - \$1,918,630 = \$12,604,088

ROI: $\$1,315,679 - \$12,604,088 \times 100 / \$12,604,088 = -89.6\%$ (for one-year period only). Highlights the importance of a transition organization.

Forecast

Assuming the transition organization, estimated payback will be in early FY2014 (including Transition Organization costs). The estimated sustained value across all CCDRs is \$10,525,432 per year beginning FY2014.

Conclusions, Intangibles, and Transition

Overview

The goal was to improve the quality of and confidence in the CTP by developing standardized TTP and training to promote commonality and understanding within the joint task force in support of operational level force employment decisions.

Conclusions

Testing to Date: All measures exceeded thresholds for TTP effectiveness and improved quality of the Common Tactical Picture (CTP).

Delivered: Relevant, tested, and usable products to the operational sponsors/stakeholders.

Intangible Benefits

Intangible benefits are very important, but may be too time-consuming or difficult to credibly assign a monetary value. Some of the major ones include:

- Improved leadership situational awareness and confidence in the CTP
- GCCS-J now being used operationally
- Trained operators react and respond quicker to events as they occur
- Intelligence to Operations coordination is improved
- Increased channel availability in the GCCS-J system

Transition

There is strong CCDR demand signal for continued training/exercise support. The challenge is to take the next steps to functionally and organizationally address the continual root causes of the problem... and fix them.

Contact

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Way Ahead

- Coordination with JFCOM J7 identified six program enhancements to address systemic JC2 problems and effect a holistic JDI solution to provide Ccdrs with a deployable, responsive, and scalable JC2 data management capability
 - JC2 Training Management
 - JC2 Training Needs Analysis
 - JC2 Governance Coordination
 - JC2 Exercise Support
 - JC2 Joint Doctrine and Policy
 - TTP Maintenance and Refinement
- Meeting between DUSD P&R, OSD DOT&E, JDI JT, and JFCOM J7 on 10 Jan identified way-ahead for near term gap funding
 - DUSD P&R supported allocation of resources pending Ccdr demand signal at WJTSC
 - DOT&E petitioned Ccdrs and Services to support the issue at the WJTSC
 - JFCOM J7 sponsoring the issue at WJTSC SLT
 - JDI JT socializing w/ Ccdrs as part of scheduled Closedown briefs

Summary

- Conducting Closeout Briefs with JDI JT Customers and Stakeholders
 - PACOM/EUCOM/AFRICOM – Completed (Week of 14 Feb)
 - SOUTHCOM – Completed (2 Mar)
 - PACFLT – Completed (4 Mar)
 - STRATCOM – Completed (8 Mar)
 - NORTHCOM/TRANSCOM/CENTCOM – Working
 - JFCOM/JS/DISA/Services - Working
- CCDR support of JDI Transition (JC2 Training Issue) voiced at Worldwide Joint Training and Scheduling Conference 20-25 March 2011 (CoC, and SLT venues)
 - Secures resources for FY-11 Shortfall
 - Need assistance with PACOM Support
- Transition JDI capability (JC2 training management) as part of the Joint Interoperability Division (JID) within USJFCOM “To Be” organization
 - Secures transition and out year funding
- Incorporate and Distribute CJCSM 3115.01C Vol 2, CTP Data Management (TTP)

Questions?

Back Up Slides

JDI Charter

August 5, 2008

Thirty-two (32) month test directed to:

- RESEARCH, IDENTIFY, DEVELOP, TEST and EVALUATE new TTP used to enable the Joint Force Commander and supporting forces to DEVELOP and SHARE the Common Tactical Picture (CTP)
- PRODUCE C2 DATA MANAGEMENT PROCEDURES needed to improve the quality of the CTP used by the JTF Commander and Component Commanders to support operational level force employment decisions

TRANSITION products; CLOSDOWN 29 April 2011

Transition Challenges

What organization(s) will lead follow-on efforts?

1. Create a JC2 Training Management organization
2. Charter and complete a JC2 Training Needs Analysis
3. Direct needed JC2 Governance Coordination
4. Continue JC2 Exercise Support
5. Be responsible for Joint Doctrine and Policy
6. Continue JC2 TTP Maintenance and Refinement

1 – JC2 Training Management

- Description
 - Single office responsible to integrate and operationalize GCCS-J FoS at the joint level
 - Will coordinate support across the training continuum
 - Will be advocate for collective JC2 training, training effectiveness, and training assessment
 - *CJCSI 3265.02, Training Systems Management* (unsigned & unfunded), identifies many of the Joint Force trainer and integrator duties, responsibilities and authorities required
- OPR -TBD (JS, USJFCOM)
- Status – *CJCSI 3265.02* on hold (or in coord?)
- Recommendation
 - Approve near term USJFCOM approach, acceptance
 - Push for *CJCSI 3265.02* release (with funding to execute)
 - Expect TNA will support in principle

2 – JC2 Training Needs Analysis

- Description: Joint data integration and JC2 issues
TNA required to validate the training requirement
 - Must address:
 - Who will be trained? – Where trained?
 - When training needed? – How delivered?
 - Training standards? – Effectiveness assessments?
 - What are the training requirements (syllabus)?
 - Etc.
 - Requirements must be validated to definitively clarify training support needed
- OPR – USJFCOM J7
- Status – Unfunded
 - TNA can be used to underpin a long term program to support (eventual) transition from GCCS-J to a follow-on JC2 System
- Recommendation
 - Approve TNA
 - Funding TBD

3 – JC2 Training Coordination

- Description – Need Training coordinating to support C2 CPM
 - USJFCOM's Joint Combat Capability Developer (JCCD) serves as the focal point for Joint C2 capability needs and integration across the DOTMLPF and policy spectrum and action arm to execute operational sponsorship overseeing Joint C2 Capability
 - Draft CJCSI 3265.02 Joint C2 Systems Training Manager and Training Working Group functions provide a basic structure for addressing Joint C2 systems training needs
 - Need a USJFCOM/J7 focal point to work closely with the JCCD to advocate for Joint C2 non-material needs and to develop and synchronize efforts across the entire training continuum
- OPR – USJFCOM J7
- Status – TBD
- Recommendation
 - GOSC approve appropriate agency in the short term
 - Long term solution informed by TNA

4 – JC2 Exercise Support

- Description – Just in time collective training for CCDR staffs and deployed operators
 - Provides collective training support to JC2 training objectives for CCDR staffs and deployed operators
 - Assists with development of CCDR theater guidance and SOPs to enable JC2 training objectives in joint exercises
 - Develops and use of interagency and coalition TTP
 - Three CCDRs expect continued Joint Data Network (JDN) operations cell support for FY11
 - Provides already requested levels of support; TNA will identify continued exercise support requirements
- OPR – USJFCOM J7
- Status – USJFCOM will fund first 2 qtrs of FY11
- Recommendation
 - Near term (FY11), USJFCOM support CCDR exercises
 - Long term – Exercise support organization (JFCOM follow-on) assume responsibility and fund

GOSC/Tiger Team Recommendation

- Include each of the six program enhancements as component parts of the solution.
 - ***Joint C2 Training Management / Joint C2 Training Needs Analysis / Joint C2 Governance Coordination / Joint C2 Exercise Support / Joint Data Network Operations Institutionalization / Joint C2 TTP Maintenance and Expansion.***
- Assign a team to reinforce (and leverage the expertise of) existing organizations to: provide immediate benefits, as a stop gap measure and; complete transition, while the long term solution is identified and verified by the Training Needs Analysis (TNA).
 - Core personnel will come from JDI JT / JFCOM J684 Team who become available as test team is ramped down
 - Responsible for program enhancements 3-6
 - Provide SME support to program enhancements 1&2
 - Leadership provided by Joint Interoperability Division (JID)
- A Training Needs Analysis is essential to confirm long term goals and scope.

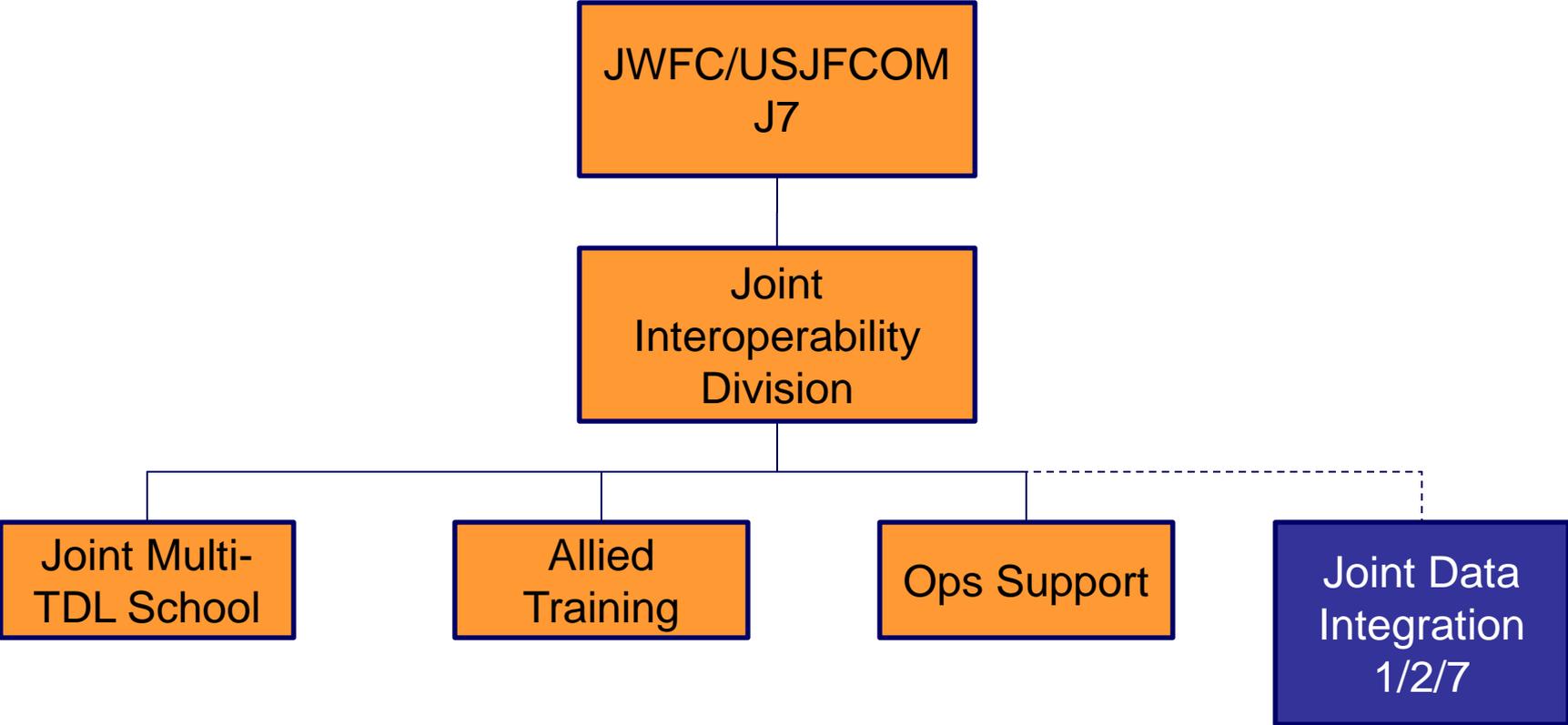
5 – Joint Doctrine and Policy

- Description – JS J3 will integrate JDI developed GCCS-J/JDN Ops TTP into chairman policy documents this year
 - TTP will be transitioned to joint policy, and reside in appropriate CJCSM 3115 series
 - Joint Staff J36 owns this series of documents – keeping the documents updated will require subject matter expertise and assistance
 - JC2 doctrine will be matured and maintained to ensure CJCS policies are operationally focused and JDN operations are integrated into extant doctrine
- OPR – JS J3
- Status – Transition plan is fully coordinated
- Recommendation – Long term responsibility and funding be accepted by JS J3
 - Need to expand beyond TTP, JP, CJCSI/Ms all need to reflect JDI related definitions / explanations to affect institutionalization

6 – JC2 TTP Maintenance and Refinement

- Description – Continual TTP maintenance and refinement is required for the TTP to fulfill user requirements and remain relevant
 - TTP maintenance includes:
 - Effect of updates to software, hardware and operational changes
 - Correlation and development of individual and collective learning and training materials
 - TTP refinement includes incorporation in appropriate documents for multinational, coalition, and interagency use
- OPR – Joint Force Trainer and Integrator
- Status – Unfunded
- Recommendation
 - Near term – Exercise support team pick up as additional duty
 - Long term – Appropriate trainer/integrator be tasked to support

Notional Organization



 - Existing

 - Proposed Element

JDI / JC2 Training Management

Issue 11-xxx: No single organization responsible for Joint C2 Training Management, Governance Coordination, Exercise Support, Joint Data Network Operations, TTP Institutionalization, Maintenance and Expansion to address the Joint Task Force (JTF) Commander and Component Commanders lack C2 data management procedures needed to improve the quality of the Common Tactical Picture (CTP) used to support operational level force employment decisions.

Discussion: There are several factors contributing to this situation, to include: no single system satisfies all tactical and operational data management requirements; uncoordinated duplication of effort among systems; redundant data generation and transmission; and design limitations requiring man-in-the-loop solutions. This results in battlefield data production that outpaces control mechanisms and introduces a heightened risk of operator/user information overload, unmanaged and duplicative data, and an adverse effect on the commander's decision cycle. To provide Joint Force Commanders with a rapidly deployable, responsive, and scalable joint C2 data management capability, funding enhancements for JDI are required. The JDI program will ensure joint C2 operators at all levels are trained to interpret and manage joint C2 data from multiple sources enabling accurate and rapid display of information supporting operational level force employment decisions. To complete a successful JDI JT transition and effectively mitigate risk the following program enhancements are required; *Joint C2 Training Management, Joint C2 Training Needs Analysis, Joint C2 Governance Coordination, Joint C2 Exercise Support, Joint Data Network Operations TTP Institutionalization, Joint C2 TTP Maintenance and Expansion.*

Endstate: A single organization responsible for managing the training and integration of current and future C2 systems at the joint level established. This organization will mitigate aspects of selected CCDR integrated priority list issues, provide training and operationalization of a rapidly deployable, responsive, and scalable C2 data management capability to develop accurate, decision-quality information enabling positive JC2 during all phases of operations.

OPR: USJFCOM J7 OCR: JDI Joint Test



Major actions that must occur to resolve the issue / problem.



Used to depict actions on the timeline that have been completed.



End state achieved

Action / milestone



SEP 10

10 Jan 11

26 Jan 11

4 Feb 11

TBD

23 Feb 11

23 Mar 11

Issue proposal presented

Meeting w/ USD T&R

Meeting w/ Mr Knapp/ MG Holman

Issue Submitted

MG Layfield COS

Training CoC

WJTSC

ROI Background

Where is the list of things... where it is getting applied and producing the kinds of return on investment that make this worthwhile to continue?

Brig Gen Gregory Brundidge
USEUCOM/J6
GOSC Meeting (15 Nov 10)

Could we credibly defend such a list?

Tangible and Intangible Benefit Examples

• Tangibles...

- Operational (JTF-519)
 - Briefings directly from CTP
 - More timely decision-making using CTP
 - Answering questions using CTP
 - Technical robustness
- Joint Test Technical
 - Remote data collection: saved TDY and equipment costs
 - JJAM used test data
 - Use of captured Exercise data: saved scenario development costs
- Outside Agencies
 - NSWC, San Diego, used RICS data collection capability
 - MITRE, 'Maintaining the COP in a Denied Environment' used test data

Intangibles

- Increased Situational Awareness
 - Reduced FOG of war
 - Broader Understanding
- Future JT and QRT Savings

Need to Capture ALL Costs

- JT&E contract, facility, administrative
- Future transition organization
- Joint test military and government salaries
- Use of “no cost” military facilities for testing
- Outside organization participation in JWAGs, GOSC, etc.

Cost verification – week of 7 February

ROI Payback Assumptions

- Payback goal of 3 - 5 years (monetary return)
- Other CCDRs will realize similar gains to USPACOM JTF-519 upon receiving and using the TTP and training
- Expected payback NLT FY 2014

Highlights importance of the JDI Transition effort.

JDI Joint Test Products

- **JDI Developed TTP** = CTP Data Management Handbook in a Quick Reference Guide format that provides:
 - Core (Baseline Configuration and Troubleshooting Procedures)
 - C2 systems (Data Integration)
 - C2 joint operations (Data Management)

- **Doctrine**
 - Provided updates to CJCSI 3151 & CJCSM 3115
 - Assessed standards and data sets for Joint OPTASK COP-CTP (USMTF)
- **Training and Education**
 - Provided JDI training materials to training communities
 - USJFCOM J7 Deployable Training Team (DTT)
 - Joint Deployment Training Center (JDTC)
 - Joint Interoperability Division (JID)
- **Materiel**
 - Recommendations to acquisition community on system improvements e.g., C2 Capability Portfolio Manager (CPM)
- **Personnel**
 - Recommendations on improving manning for JDI operations

