Pacific Rim Innovation Symposium

After Action Report

NWDC Innovation Campaign Division
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Note: This report is a pre-decisional draft pending RADM Kraft’s AAR brief to ADM Haney
Context and Desired Outcome

Context

• NWDC hosted the Pacific Rim Innovation Symposium on 10-11 October

Desired Outcome

• Provide leadership and participants awareness of results and observations
• Identify follow-on actions
Contents

• Pacific Rim Innovation Symposium Objectives
• Highlights
• Accomplishments
• Key Lessons
• Breakout Group Discussions
• Actions / Way Ahead
Symposium Objectives

• Educate junior leaders on importance of innovation
• Introduce resources for transforming ideas into capabilities
• Solicit ideas to address current Fleet challenges
Highlights

• Need to move beyond the “tyranny of the Program of Record” mentality
• Must provide compelling story / evidence if you want leadership advocacy for your new ideas
• Learn cyber, even if it's not your primary job
• Use strategic communication vs. shouting louder to move ideas forward
Highlights

• Need realistic, “sweaty palms” training
• Must understand our own EM signature
• Policy is often greatest barrier to innovation
  – Know the regulations better than those who administer them
• Leadership needs to look across the whole organization for good ideas
Highlights

• Periodically revisit “failed” ideas
  – Today’s failed idea may be tomorrow’s solution

• Think inside a new box
  – Most organizations have to function inside a set of parameters
    – Defining new parameters can focus innovation

• Create a dashboard for CGCD (status of concepts and ideas)
  – Need way to track progress
Importance of Innovation

• Innovation bestows initiative in warfighting
  – CNO established new concept development/concept generation process; emphasis on moving ideas from conception to implementation
  – CPF: We need to huddle together to identify problems and solutions

• We need more people who are part of the “right brain Navy” thinking in a “left brain” way
  – Left brain: technical, acquisition-minded, operational
  – Right brain: creative, research, academic
Resources for Transforming Ideas into Capabilities

- **New Concept Generation / Concept Development (CGCD) Instruction** describes the process for transforming ideas into capabilities.

- **The Innovator’s Guide available online at:** [https://www.nwdc.navy.mil/default.aspx](https://www.nwdc.navy.mil/default.aspx)
  - Ways to think about innovation & application to the Navy

- **Navy Center for Innovation Blog site** [https://www.nwdc.navy.mil/ncoi/blog/default.aspx](https://www.nwdc.navy.mil/ncoi/blog/default.aspx)
  - Ask questions, propose ideas, debate & discuss

  - Propose & submit new concepts, ideas
Solicit Ideas to Address Current Fleet Challenges

- Four breakout groups met over two days
- Each group focused on one of four topics of interest to PACFLT
- Groups presented key issues and solutions
- Groups identified additional areas for discussion / analysis
• How does information dissemination need to change IOT enable the force to fight effectively in a limited communications environment?
• How do we prevent white shipping / fishing vessels from giving away our position in a contested environment?
• How can we change the FRTP to account for multiple fleets’ missions?
• If the adversary A2AD network includes subsurface weapons as well as air / missile systems, how can the US maintain momentum into the denied area?
Breakout Group Areas for Further Analysis

- Info Dissemination: IT system supply model, tactical cloud, alternative communications paths
- A2 / AD: Deception, intelligence, force multipliers, non-kinetics, training
- White Shipping: Intel prep (avoidance), deception/obscuration, communication denial, commercial vessel control
- FRTP: After OEF, what can be removed and what should be added to focus workups and evaluations on warfighting, mission and AOR priorities
Breakout Group: Info Dissemination

Analysis of the Subject / Highlights of Discussion

- Navy moving to single system/networks (i.e. CANES)
- Redundancy affects battle effectiveness
- Can’t be tactically blind/down
- Taking away legacy comm systems on newer platforms
- Training challenges
- Replacing parts can be challenging, affects time, readiness, fuel, costs

Recommended Solutions, Fixes, or Take-Aways

- Have server replacement parts/components on supply ships or reinstitute MAMS policy on all ships
- Utilize AVN AIMD supply model
- Implement Tactical Cloud On Demand data replication
  - As long as one ship in a CSG is up, you have capability
  - Need to optimize bandwidth, data compression
- Other alternatives: Optical system, airborne relay
Breakout Group: Information Dissemination

• Other areas of discussion included:
  – Finding new ways to compress data
  – Use of biologics to transmit data
  – Finding time, space, and balance to train sailors on both new and legacy systems
  – Creating a culture of OPSEC (no cell phones off the fantail)
Breakout Group: Momentum in Denied Areas

Analysis of the Subject / Highlights of Discussion

- Assuming capable opponent who can detect and track over large area.
  - How to remain unlocated.

Recommended Solutions, Fixes, or Take-Aways

- Deception
  - Multiple cheap unmanned vehicles as decoys
  - See classified version for additional discussion points
**Breakout Group: Momentum in Denied Areas**

**Analysis of the Subject / Highlights of Discussion**

- Assuming a capable opponent with ability to cover/track over a large area.
  - How do we enable ability to operate when required.

**Recommended Solutions, Fixes, or Take-Aways**

- Intelligence
  - See classified version for additional discussion points
**Breakout Group:**
Momentum in Denied Areas

**Analysis of the Subject / Highlights of Discussion**

- Assuming a situation where US is at a numeric disadvantage.

**Recommended Solutions, Fixes, or Take-Aways**

- Force multipliers
  - Leverage cooperative nations capabilities.
  - Numerous unmanned vehicles capable of autonomous operations to
    - Detect and report
    - Decoy
    - Tag high interest vessels
  - Distributed sensors
Analysis of the Subject / Highlights of Discussion

- Distance will provide logistic issues for ammo resupply.
- GPS/Internet/Satellite

Recommended Solutions, Fixes, or Take-Aways

- Non-kinetic weapons
  - Directed energy
  - Jammers/soft kill directed at missile acquisition.seekers
- Training
  - Lost capabilities need to be revisited
  - Timing source independent of GPS
Breakout Group: White Shipping

I. Visual Compromise: How to Avoid

1. Innovation in Intelligence Preparation of the Sea Space
   A. Satellite
   B. Existing AIS / routes of merchant shipping
   C. Thermal
   D. Human Intelligence

2. Obscuration
   A. Smoke screen
   B. Leverage Weather / atmospheric conditions
   C. Night
   D. Use of terrain / shipping as cover
   E. Light / lasers
Breakout Group: White Shipping
II. If Compromised, then…

1. Disrupt / Deny Communications
   A. Electro-Magnetic Pulse, Directed
   B. Using a UUV / USV / UAV delivery

2. Misinformation
   A. Intercept, Repeat, Alter Transmissions
   B. Psyops / Media misinformation campaigns
   C. Confusion via friendly white shipping via signals

3. Physical Control of Vessel, via USV / UUV
   A. Foul rudder
   B. Redirect ship
   C. Slow ship
1. Near Term
   A. Disguise – physically changing the profile of the ship
      i. Deceptive lighting enhancements
      ii. False masts
      iii. Shading (color, etc)

2. Far Term
   A. Angled mirror surfaces. “All you’d see is more ocean and sky” THE GREAT CHROME FLEET
   B. Lower profile in design
   C. Concealment via holograph
   D. Use of USVs / buoys for deception e.g. false radar hits and holographic ships, decoys
Breakout Group: FRTP & Experimentation

Analysis of the Subject / Highlights of Discussion

- Time constrained – Little capacity for more than minimum requirements to be met.
- Inspection driven process – Units are always “cramming” for the next event vice maintaining a steady-state proficiency.

Recommended Solutions, Fixes, or Take-Aways

- Workload analysis – Prioritize and eliminate selected requirements to enable more focus on the highest priorities, e.g., warfighting.
- Tailor workups and evaluations for specific AORs and the most probable missions within that AOR.
Recommendations

• Demonstrate resolve to remove obstacles
  – P4 to Commanders to lead / inspire discussion on tactical creativity
  – Condense admin / training requirements to allow time for tactical discussion and development
  – Overhaul Navy web sites / software tools with focus on user
  – Expand strategic comms campaign on innovation through publications, blogs, and speeches by senior leaders
  – Identify and address policy constraints affecting innovation

• Energize broad, top-down advocacy for innovation
  – Create "executive level team" (Qualcomm model) to gain awareness of innovation activities across the Navy enterprise
  – Conduct innovation outreach events directly with the Fleet
  – Formally instill innovation into training and educational classrooms across the career spectrum

• Leverage private sector technology and processes
  – Build relationship with industry leaders, invite to future Innovation events
  – Explore use of VBSS teams for benign engagement and tracking of high interest ships / personnel / cargo

• Enhance realism in training by finding ways to inject stress / pressure into our Fleet training
NWDC Actions and Way Ahead

• Engage senior Navy leadership to sustain support for innovation campaign
  – Deliver AAR to COMPACFLT & COMUSFF
  – Recommend innovation actions to CNO – innovation CEB, “innovation month”, etc
  – Utilize Rhumb Lines to get innovation message / process out

• Future efforts and events
  – SIPR blog site under development, Nov 2012
  – Partnering with Naval Post Graduate School for online crowd-sourcing wargame, Winter 2012 (MMOWGLI Event)
  – Work with ONR to investigate development of a digital seabag “app”
  – Navy Center for Innovation website & blog, updated weekly
  – Determine optimum mix of innovation symposia and smaller, more focused events
  – Continue NWDC efforts to partner with industry leaders, such as Maersk, to leverage their ship tracking and forward area sensor information

• Continue to encourage Sailor engagement and feedback
  – Post symposium products on Pacific Rim Innovation Symposium website
  – Advertise NWDC as innovation resource (NWDC_NRFK_INNOVATIONS@navy.mil)
  – Strive to make it easier to innovate
NWDC Actions and Way Ahead

- Move out on products
  - 24 proposals submitted to date; several are in the review pipeline right now
  - The Innovator’s Guide is being read both inside and outside the Naval Service
  - Number of "hits” on Navy Center for Innovation Blog and subpages averages 100/day
  - Google, USNI, SPAWAR and Navy.mil all help push audience to our sites
  - Recommendations from Junior Leader and Pacific Rim Innovation Symposiums are being incorporated into follow on events and products

- Develop incentives for innovation
  - Create an essay / innovation contest

- Find effective ways to engage with junior members
  - Shipboard, schoolhouse, internships
  - Key challenge: why innovate when you can “work around”

- Define innovation audience(s)
  - Develop plan to pursue and engage appropriately, effectively