Technology Transition Experience

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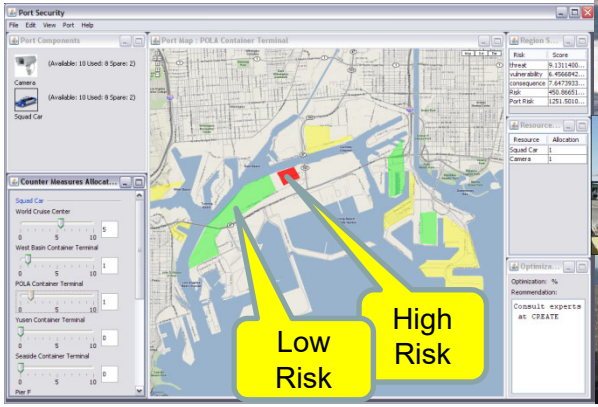
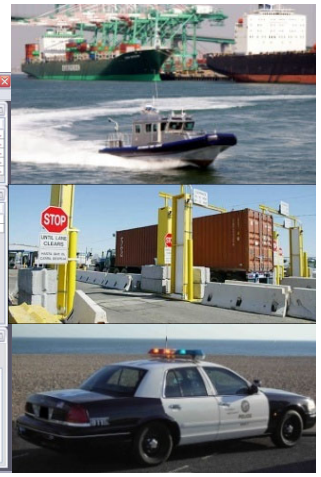
Tech Transition Observations

- Need a good understanding of the target domain (e.g., Operations)
- Need to decide early (or have at least an idea) who will be a partner in the tech transition
- At least one member of the research team will need to be heavily involved in the tech transition
- Get IP ownership/licensing details addressed up front (if possible)
- Sometimes only portions of the technology will transfer

PortSec - Port Security Risk Management and Resource Allocation (2009-2015)





The Problem:

- **Protection of the ports**:
  - Provide jobs (locally and nationally)
  - Critical component of the Nation's supply-chain.
  - **They are major, high-value terrorist targets**
- **Economic viability**:
  - Goods must flow
  - Need to minimize interruptions to business, avoid increasing costs of doing business

Solution:

- **Apply risk analysis:** Given available intelligence and security assets, estimate areas of high risk of terrorist attack
- **Resource Management**: Reallocate security assets to reduce high risk without introducing new high-risk areas

PortSec – Tech Transition Process

- **Developed & Installed Prototype at POLA Police Headquarters**
  - Immersion into day-to-day operations (POLA & POLB)
  - Multiple evaluation versions of prototype
  - Discussions with various venders on funding to “harden” technology into a sustainable product
- **Outcome**
  - PortSec technology heavily influenced the development of a POLA Police-funded solution
  - Solution is in use today

CACE ACTD/CARTE: R&D Transitioned to USMC CACE Program / JSF (2001-2006)

The Goal:

- Manage Squadron and Group Air Operations
- Maximize effectiveness, ensure safety, and guarantee logistical supportability

The Challenge:

- Flight Ops and Maintenance are often on different timelines with different priorities
- Scheduling, assigning pilots to aircraft to missions is a manual operation
- Operation is heavily dependent on the experience of the personnel
- The process is considerable challenging in a war-time 24/7 operation

- **Maintain schedules that balance:** Pilot skills, readiness goals, aircraft condition, ordnance, maintenance staff availability, command intent and safety issues
- **Concerns from long-term to immediate**
  - Six-month to year goals
  - Monthly, weekly and daily schedules
  - Repair on minutes notice

CACE ACTD/CARTE: R&D Transitioned to USMC CACE Program / JSF

Transition Process:

- Started as experiment with Marine Air Group 13
- Group CO requested fielding to all 4 squadrons, then sent it on deployments, then took it into combat
- Result: USMC-wide adoption formally recommended
- **USMC program of record established for adoption, portions transitioned to Joint Strike Fighter Program**
- **Established company to transition technology to JSF and other platforms**

USS Bonhomme Richard, USS Belleau Wood, USS Peleliu, USS Essex, Iraq, Japan, Afghanistan, in Garrison, Yuma, AZ