Who Is Right?

How the Services view the COCOMs

How the COCOMs see themselves

How the Services see themselves

How the COCOMs view the Services

How the Services view the COCOMs
Creating Surprise

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Surprising Three Domains
(Overmatch vs. Capability Surprise)

The peer, or negligible overmatch
Well studied – analyzed failure points
Predictable behavior / operations
Generally, easier to create surprise
Surprise has the greatest impact

The 3rd world competitor
More effected by overmatch than surprise
Even open-source capability creates ‘surprise’

Non-state sponsored asymmetric threats
Hardest to effect through overmatch or surprise
AQAM: A Threat in All Realms

- Recruitment and Education
- Internet and Proselytizing
- Sympathetic Members of Legitimate Govt’s
- Front Companies
- Safe Havens
- Training Camps
- Technical Expertise, Weapons Suppliers
- Human Capital, Fighters and Leaders
- Media and Propaganda
- Ideologically Sympathetic NGO’s
- Financiers
- Facilitators, Smugglers
- Ideologically Sympathetic NGO’s
- Technical Expertise, Weapons Suppliers
Warfighter:
- They did WHAT???!!!
- Quick, I need more / better [fill in the blank]

Operational:
- Current CONOPS / TTP won't work
- Call in the Planners and scrub the OPLAN
- Issue a FRAGO

Strategic:
- The assessment is flawed
- Planning assumptions are no longer valid

THE FOG OF WAR
Two Sides of ‘Surprise’

(RED disrupting BLUE – BLUE countering RED)

- RED
  - Generally low tech
  - Easily assembled from common parts
  - Streamlined acquisition and fielding strategy
  - Only has to work once to achieve its effect
  - If ‘it’ fails, move to another strategy – not bound by legacy systems approach
  - Generally well resourced

- BLUE
  - High tech
  - Complex multi-function systems
  - Lengthy acquisition process
  - Must work every time against all threats
  - Failure is not an option, but if it does we first attempt to ‘improve’ the legacy system
  - Resource limited
A Disruptive Technology Creates ‘Surprise’ When Employed
Surprise doesn’t need to be an action we employ on an adversary.

It can also be removal of an impediment to our operations.
A sampling of Blue challenges

- Identifying the “combatant”
- Detecting explosive material or assembled explosive devices at tactically significant distances
- Creating C4ISR persistence in underdeveloped environments with less resources
- True sharing of information across the entire battlespace, independent of existing infrastructure
- Making sense of the data we obtain, and feeding timely & relevant information to the tactical edge
- Being first with the message … in the right context
What if …

• Virtual presence could replace physical presence … with the same effect
• Bandwidth was made irrelevant
• Intent could be pre-determined
• Language was no longer a barrier to effective communication
• Warfighter equipment drew its power from the environment – day or night – making power storage devices optional
• Tagants in common-use items, when combined during an attempt to build an explosive device render the device inert
• Force fields existed
• Cloaking worked
• …
Where to go for information

• There’s the traditional:
  • Integrated Priority List (IPL - COCOMs)
  • Warfighter Challenges (WFCs – JFCOM J9)
  • Purple Slides (Joint Staff (JS))
  • Joint Quarterly Readiness Review (JQRR – JS)
  • . . . To name just a few

• New effort sponsored by OSD to create a S&T IPL
  • DDR&E directed the COCOMs to review their IPLs and feed back their technical challenges
  • Not a comprehensive look at the full spectrum of challenges; but a good start
Customer – Supplier Interface
U.S. Central Command Focus

• We focus on the JOINT solution that has the potential to satisfy a JOINT validated need
• Separate from the many technology needs of our customer(s) those technology needs which:
  – Do not have a readily available solution
  – For high-impact needs there is insufficient activity pursuing a solution
• Seek out game-changing technologies which our customer(s) don’t know they need
Some technology areas we “pursue”:

- Detection of CBRNE at tactically significant distances; with emphasis on the “E”
- Pre-shot counter-sniper, counter-mortar, counter-RPG technologies; with emphasis on automated systems
- Technologies which enable the transfer of information more securely, more quickly, to a wider set of users, to include the warfighter when it makes sense, with less bandwidth and dedicated support resources, e.g.:
  - Multi-level Security over single architectures
  - Bandwidth compression / reduction techniques
  - Data reduction \[\text{data}=>\text{info}=>\text{knowledge}=>\text{understanding}=>\text{wisdom}\]
- Through automation, remote action, new and novel techniques, technologies which reduce risk and / or stress on the force and / or improve the efficiency and effectiveness of our action(s)
- Technologies which allow for greater persistence over the battlespace with fewer platforms; employing improved sensor technology providing greater fidelity of information
Common thematic areas of concern
(not in priority order)

- **Detect / Defeat:**
  - IED initiators / initiator systems
  - Buried / concealed IEDs
  - Production and assembly of IEDs
- HME production standoff detection
- Culvert access denial / alerting
- Persistence in surveillance
- Biometrics
  - Identity dominance
  - Force protection / access
- Non-lethal vehicle / vessel stop
- Reduce stress on the force:
  - Force Protection requirements
  - Increased automation
- Anti-swarm lethal / non-lethal
- More efficient / effective / timely training
- Predictive analysis techniques
- Voice to text technologies

- **C4ISR systems:**
  - Info sharing between system
  - Multi-level security
  - Cross domain solutions
  - Faster … Better sorting / retrieval
  - On the move w/ GIG access to tactical edge
    - SATCOM, WiFi, WiMax, etc.
- Tagging, Tracking, and Locating (TTL)
- Lightweight “x” with greater “y”
- More power per unit of weight
- Scalable effects – non-lethal to lethal
  - Directed Energy
  - Kinetics
- True SA for Blue … Fused Red
- Sustaining the force – reduced size, weight, amount, and retrograde
- Holding all targets at risk
- Any sensor … any shooter; the Soldier as a sensor; any adversary … any battlespace … anytime
Raise your Hand
Charter

Conduct \textit{discovery, research, analysis,} and \textit{sponsor development} of new and emerging technologies which have the potential to provide \textit{material solutions} to Headquarters and Component validated Joint needs.

\textit{Review} USCENTCOM and Component \textit{plans, operations,} programs, policies and activities for areas where technology will improve efficiency and effectiveness.

\textit{Integrate} across USCENTCOM headquarters and Component staffs for transformational, integrating, and experimentation activities.
CCJ8 Directorate
[From the Technology Perspective]

Director
Resources and Assessment

Assessment and Requirements
IPL, JQRR, WFC, etc.

Financial Management
Quick Reaction Branch

Science and Technology
Science & Advanced Concepts

Transformation & Integration
JUON

Needs
Solution
Tech Search
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(not in priority order)

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