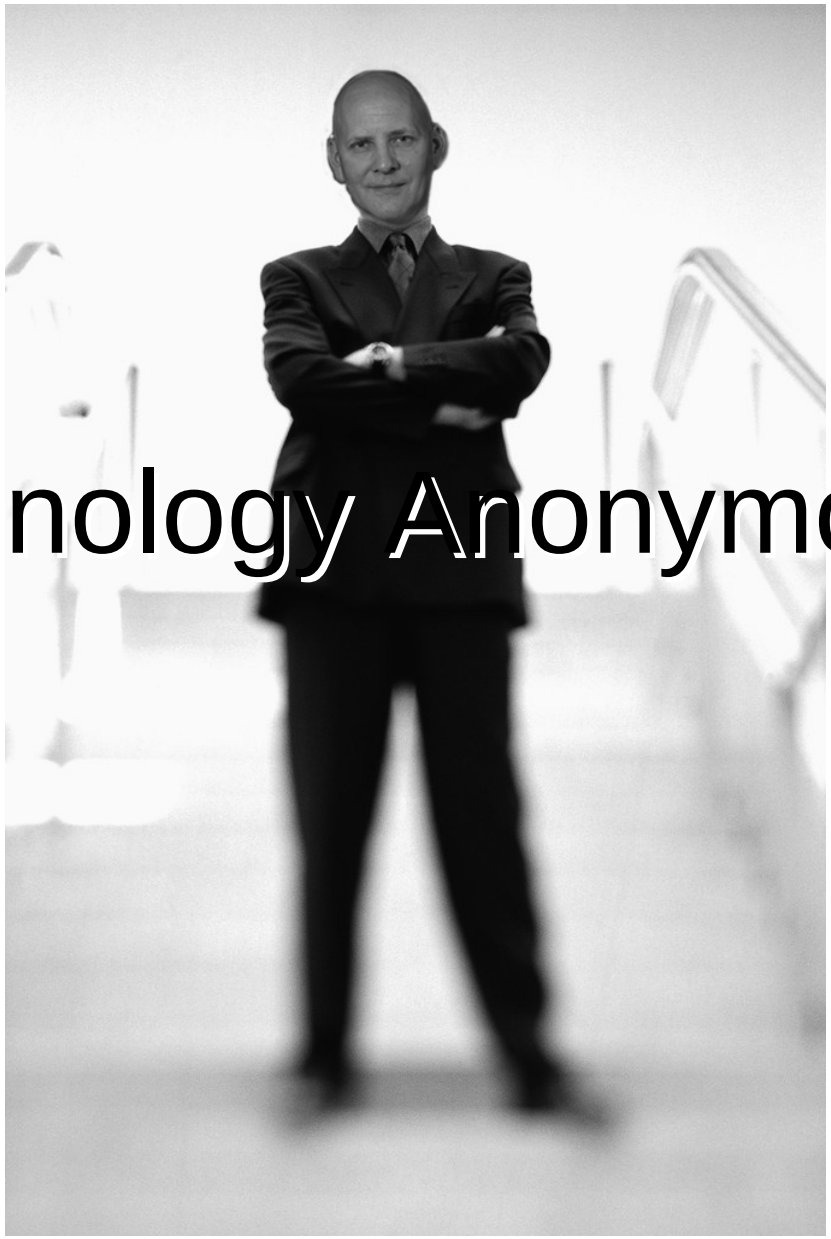
Technology Anonymous



How the SOCOMs see themselves

How the Services view the SOCOMs

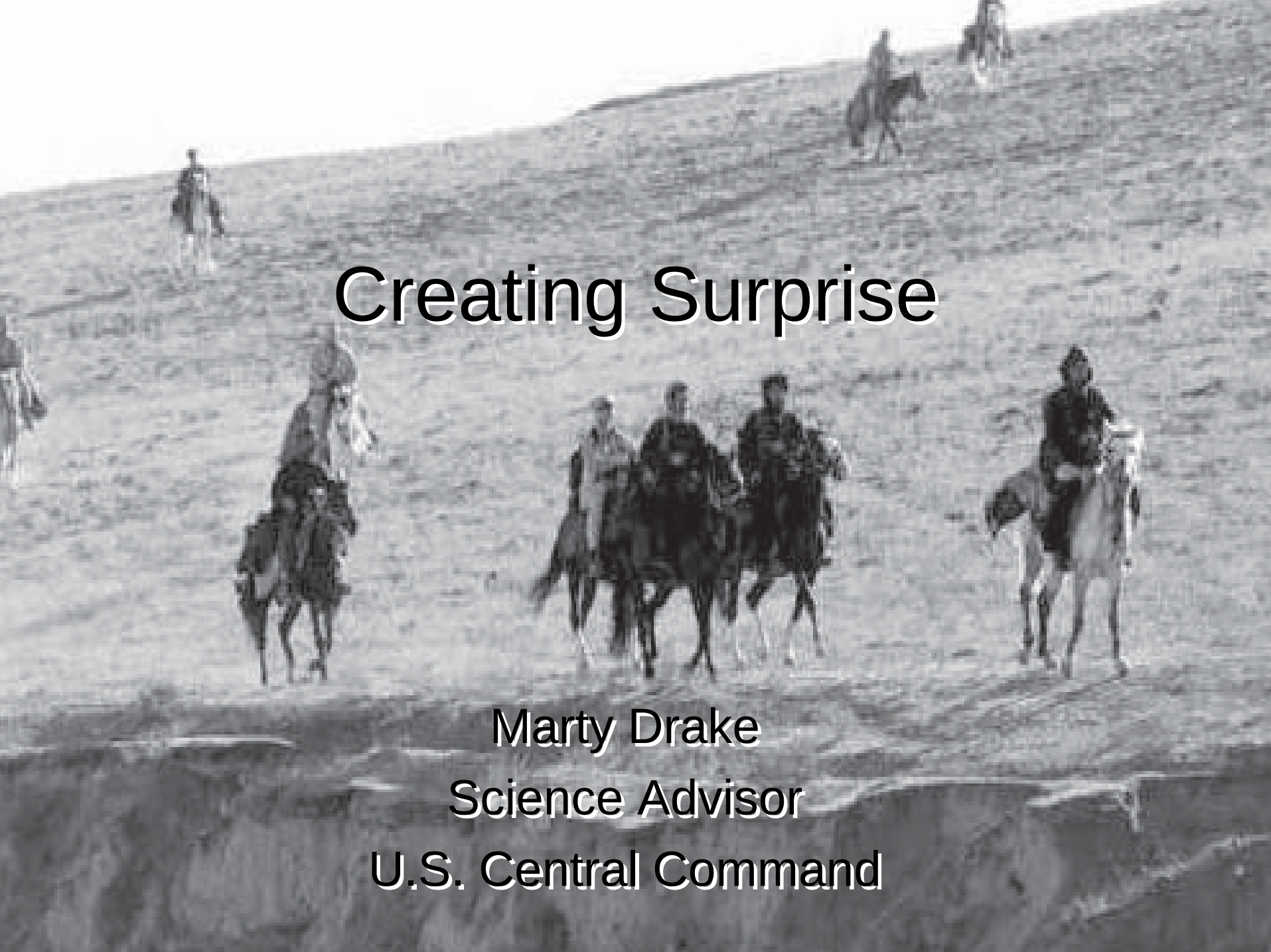
How the Services see themselves

How the COCOMs see themselves

Who's Both Right?

How the COCOMs view the Services

How the Services view the COCOMs



Creating Surprise

Marty Drake
Science Advisor
U.S. Central Command

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

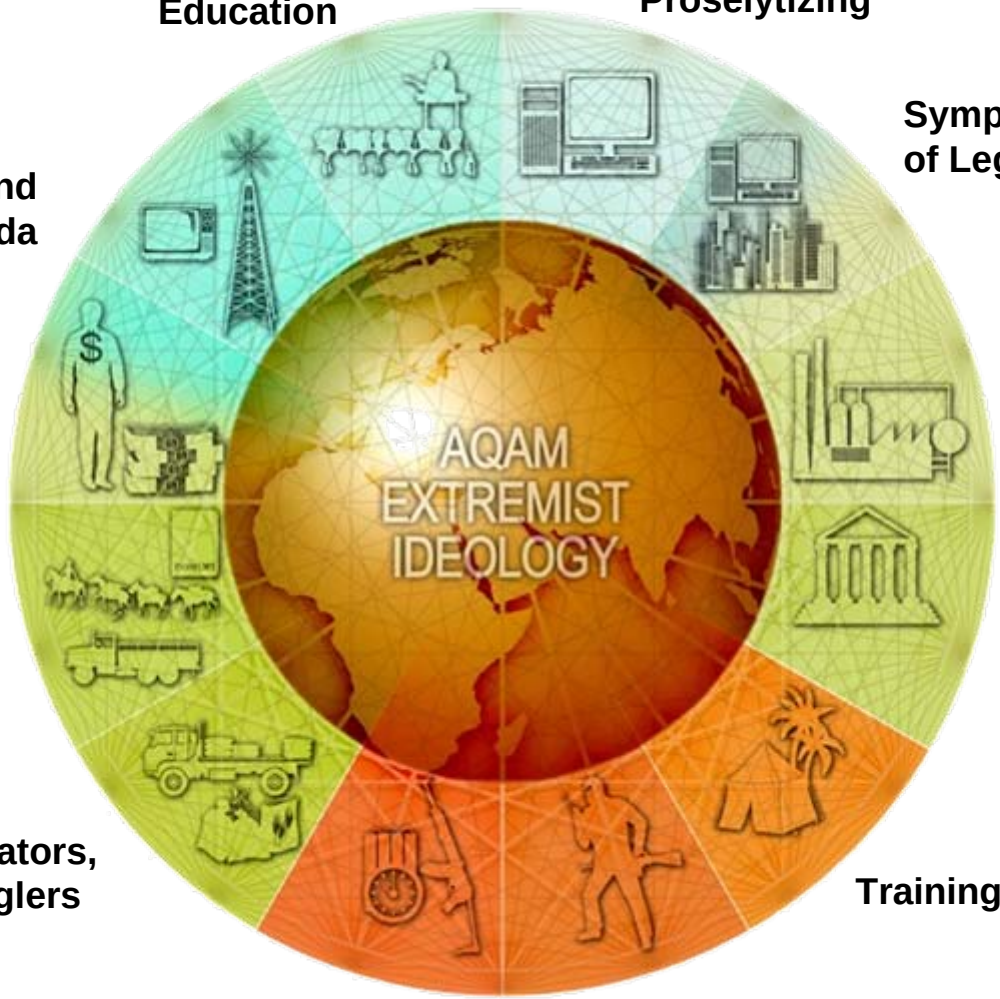
The 3rd world competitor

- 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

Human Capital, Fighters and Leaders

Technical Expertise, Weapons Suppliers

Facilitators, Smugglers

Financiers

Ideologically Sympathetic NGO's

Media and Propaganda

Warfi… T…

Ta…

- Pla… …Vale…

THE FOG OF WAR

Two Sides of 'Surprise'

(RED disrupting BLUE – BLUE countering RED)

- **RED**
  - G
  - Ea on
    co
  - St rocess
    ar
  - O e
    ac
  - If on, but if
    st pt to
    le system
  - G

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

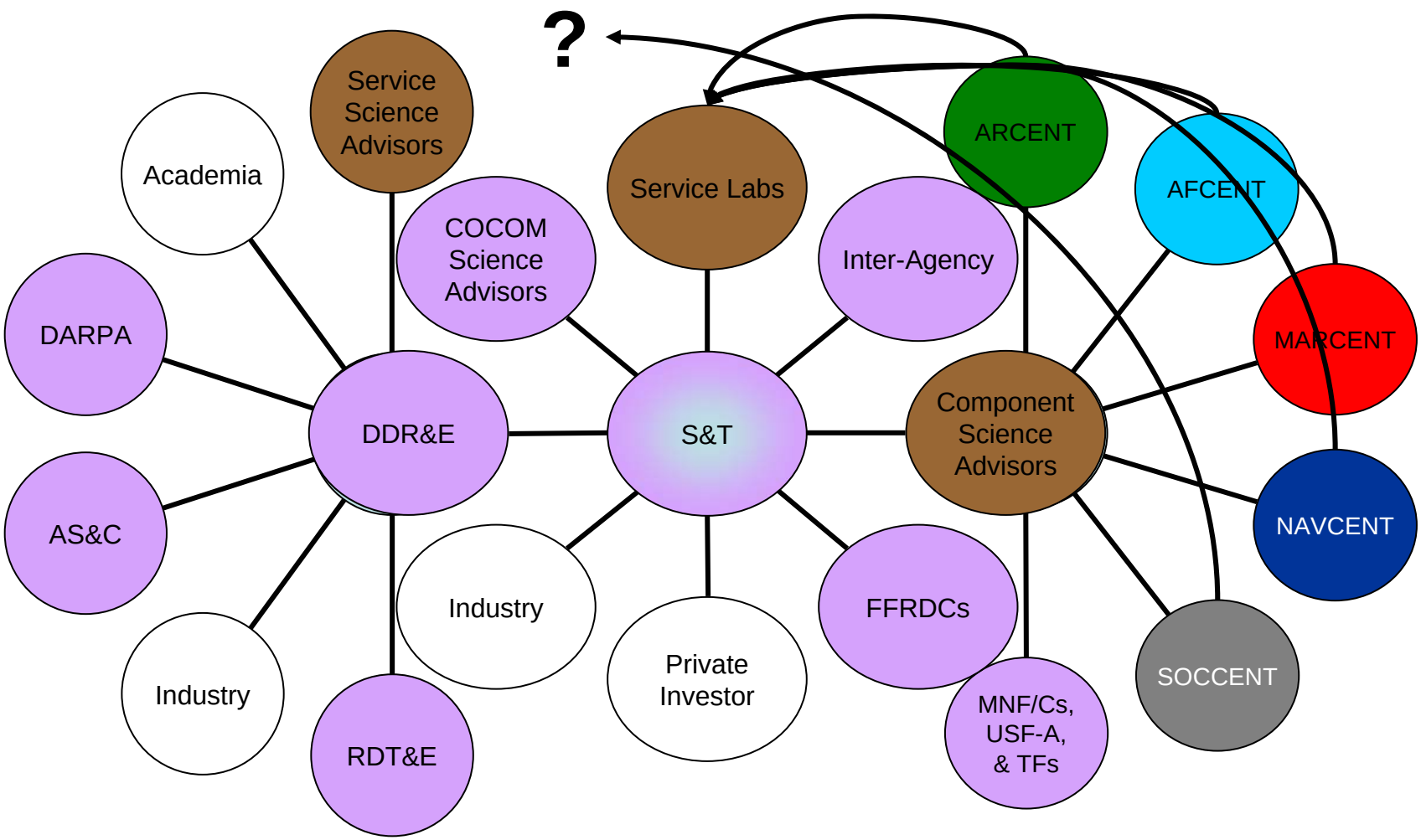
What if …

- 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

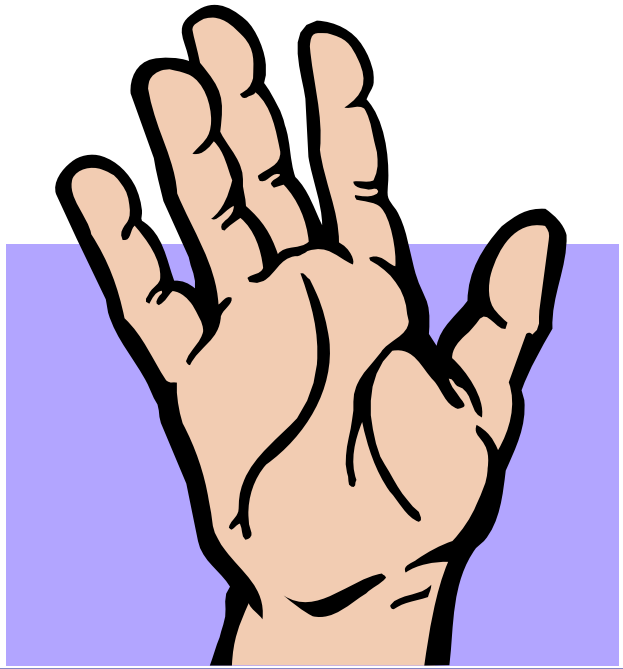
Some technology areas we "pursue":

- 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 [data=>info=>knowledge=>understanding=>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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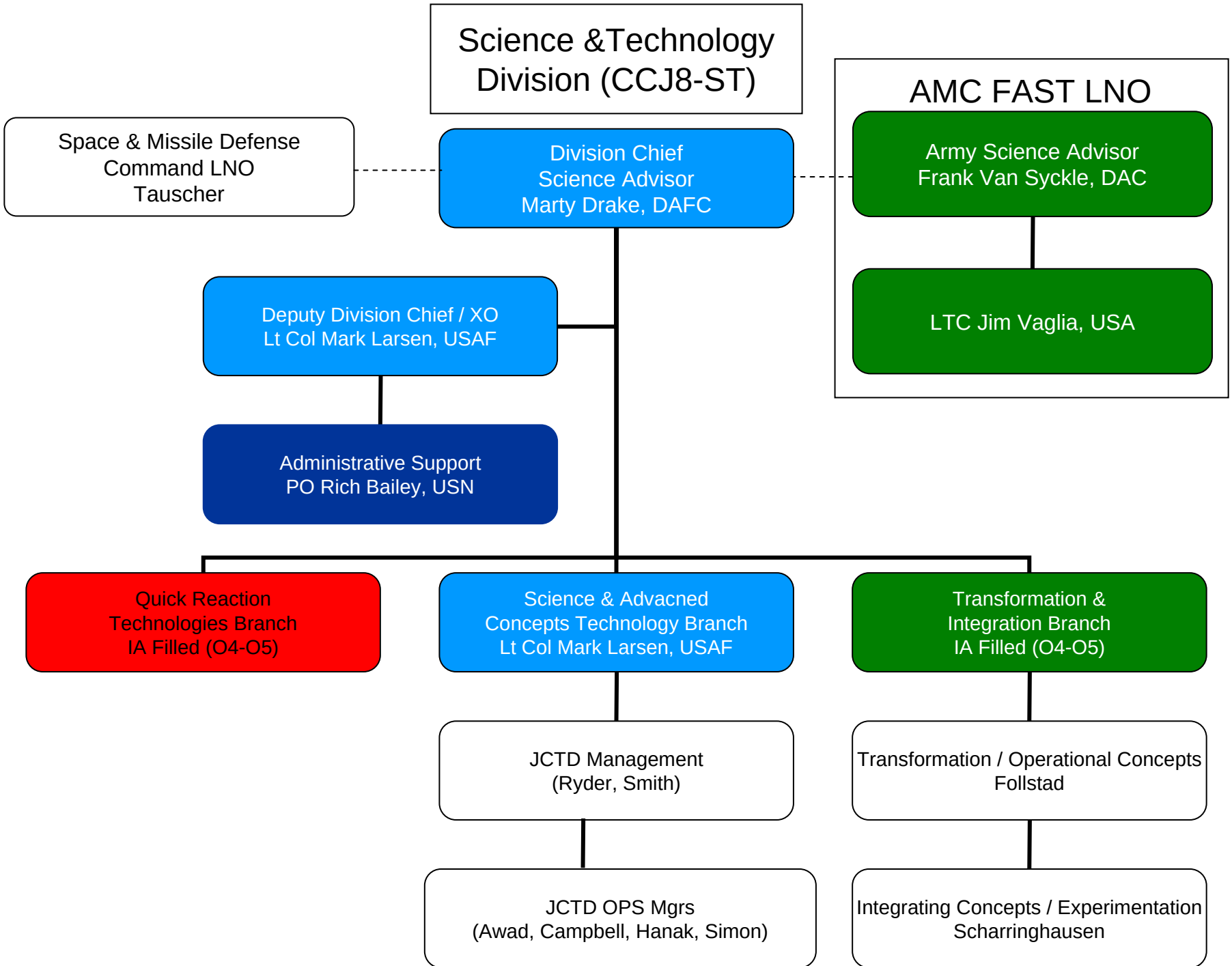
[Your Name Here]
Honorary Deputy Science Advisor
Contact Info
Blah, Blah, Blah

Charter

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

Review USCENTCOM and Component ***plans, operations***, programs, policies and activities for areas where technology will improve efficiency and effectiveness.

Integrate across USCENTCOM headquarters and Component staffs for transformational, integrating, and experimentation activities.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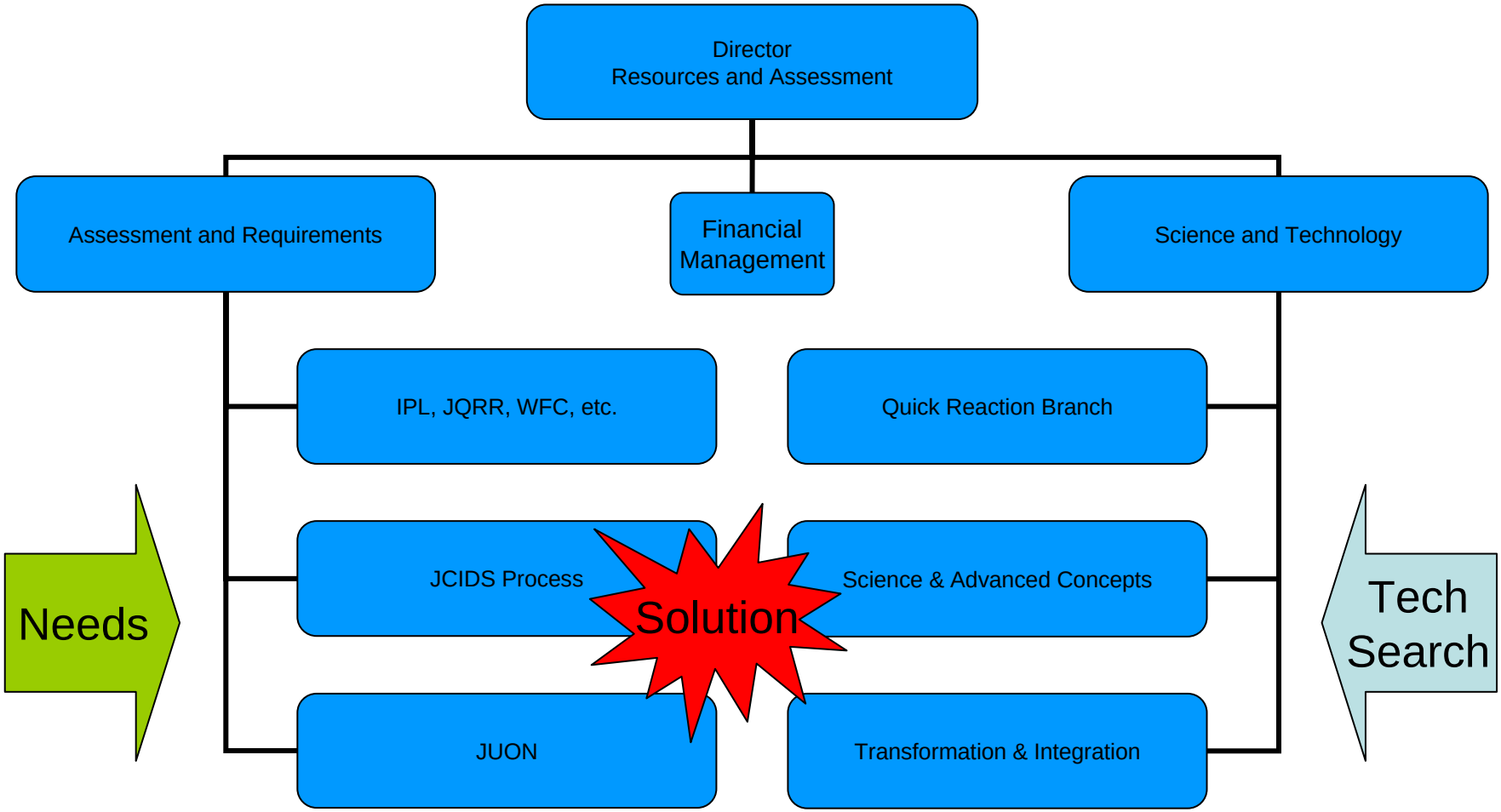
Science & Advacned Concepts Technology Branch Lt Col Mark Larsen, USAF
Transformation & Integration Branch IA Filled (O4-O5)
JCTD Management (Ryder, Smith)
Transformation / Operational Concepts Follstad
JCTD OPS Mgrs (Awad, Campbell, Hanak, Simon)
Integrating Concepts / Experimentation Scharringhausen

CCJ8 Directorate

[From the Technology Perspective]



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