Rapid Fielding:

A Path for Emerging Concept and Capability Prototyping

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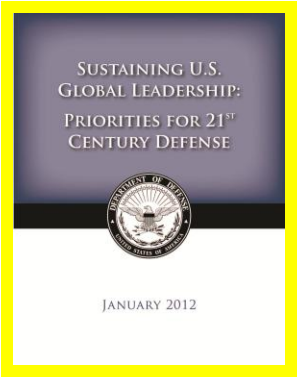
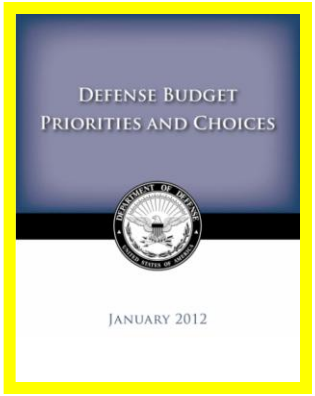
Strategic Guidance



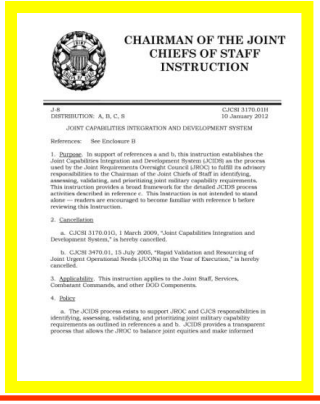
Sustaining U.S Global Leadership – Priorities for 21st Century Defense (January 2012)

- **Leaner, Agile, Flexible Force**
- **Emphasis on Asia-Pacific and the Middle East**
- **Preserve Our Ability to:**
  - **Defeat Violent Extremist Organizations**
  - **Deter/Defeat Aggression / Protect the homeland**
  - **Operate effectively is all domains (air, space, sea, land and cyber)**



Defense Budget Priorities and Choices (January 2012)

- **Greater Disciplined Use of Defense Dollars**
  - **Reduce Operations, Overhead Expenses and Personnel Across the Enterprise**
- **Strategic-Driven Shifts in Force Structure and Modernization**
  - **Rebalance Toward Asia-Pacific and the Middle East**
  - **Confronting Aggression / Protecting New Capabilities and investments**


CHAIRMAN OF THE JOINT CHIEFS OF STAFF INSTRUCTION

J-8 CJCSI 3170.01H
DISTRIBUTION: A, B, C, S 10 January 2012

JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM

References: See Enclosure B

1. Purpose. In support of references a and b, this instruction establishes the Joint Capabilities Integration and Development System (JCIDS) as the process used by the Joint Requirements Oversight Council (JROC) to fulfill its advisory responsibilities to the Chairman of the Joint Chiefs of Staff in identifying, assessing, validating, and prioritizing joint military capability requirements. This instruction provides a broad framework for the detailed JCIDS process activities described in reference c. This instruction is not intended to stand alone -- readers are encouraged to become familiar with reference b before reviewing this instruction.

2. Cancellation

a. CJCSI 3170.01G, 1 March 2009, "Joint Capabilities Integration and Development System," is hereby cancelled.

b. CJCSI 3470.01, 15 July 2005, "Rapid Validation and Resourcing of Joint Urgent Operational Needs (JUONs) in the Year of Execution," is hereby cancelled.

3. Applicability. This instruction applies to the Joint Staff, Services, Combatant Commands, and other DOD Components.

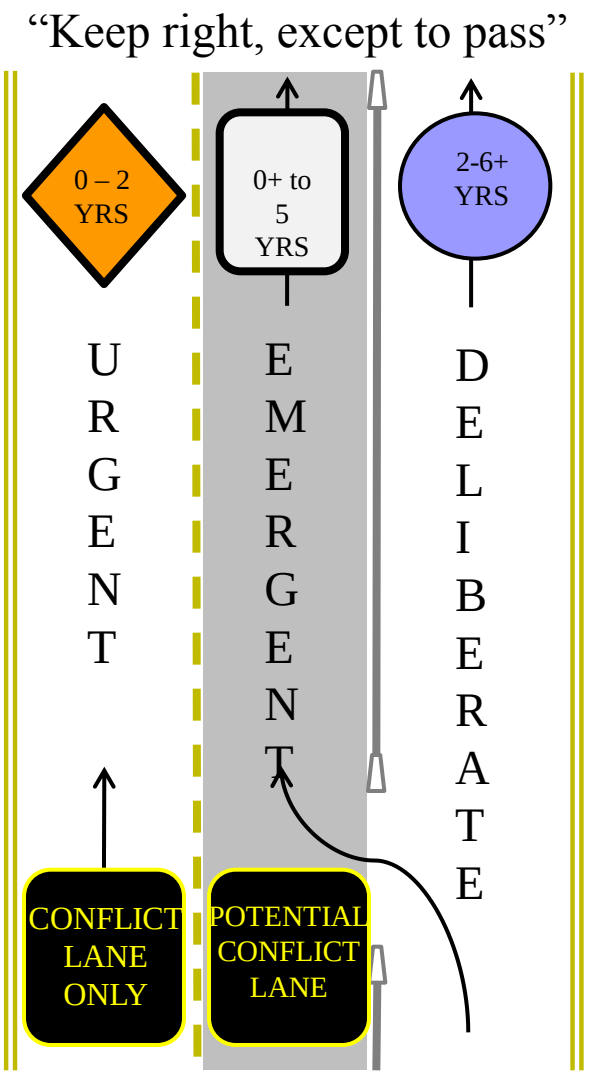
4. Policy

a. The JCIDS process exists to support JROC and CJCS responsibilities in identifying, assessing, validating, and prioritizing joint military capability requirements as outlined in references a and b. JCIDS provides a transparent process that allows the JROC to balance joint equities and make informed

CJCSI Joint Capabilities Integration and Development System (January 2012)

- **Revised Process for Identifying, Assessing and Prioritizing Requirements**
  - **Streamlining Documentation / Enforcing Faster Timelines**
  - **Portfolio Reviews Across Services and COCOMs**
  - **Ensuring Proper Degree of Analytical Rigor**

Three Requirements "Lanes"



- **Deliberate Requirements**
  - Service, CCMD or Agency Driven
  - Traditional route for capabilities that require significant tech development and/or are not urgent or compelling in nature
- **Emergent Requirements**
  - CCMD Driven
  - Supports accelerated acquisition of capabilities needed for an anticipated or pending contingency operation
  - Vice Chairman, Joint Chiefs of Staff (VCJCS) verifies, Joint Capability Board or JROC validates
- **Urgent Requirements**
  - CCMD Driven
  - Urgent and compelling to prevent loss of life and/or mission failure during current operations
  - Require little tech development and can be resolved in less than two years
  - J-8 Deputy Director for Requirements (DDR) validates

Acquisition Community Challenges

To be responsive to time sensitive needs …

"The Department needs a means to quickly prioritize and quantify requirements and to ensure that the resources are available to enable rapid fielding of capabilities inside of the Department's Planning, Programming, Budgeting and Execution System (PPBES) cycle." [Quadrennial Defense Review 2010]

To build innovative structures to address the unanticipated …

"The Department must not only prepare for those threats we can anticipate, but also build the agile, adaptive and innovative structures capable of quickly identifying emerging gaps and adjusting program and budgetary priorities to rapidly field capabilities that will mitigate those gaps." [Quadrennial Defense Review 2010]

A Framework for Rapid Fielding

Identify, Develop and Demonstrate Concepts and Capabilities that Satisfy Priority, Time-Sensitive, Operational Needs

- **Ensure Responsive Processes (JCTD, QRSP, FCT)**
  - Identify existing solutions capable of satisfying new JUONs within 12 months, or
  - Work with the Research & Engineering Enterprise (e.g., Services, Labs, FFRDCs, etc.) to develop solutions for JUONs that can be resolved within 12- 24 month range

- **Conduct Anticipatory Efforts to Positively Impact Operational Readiness (QRSP, JCTD, ECD)**
  - Engage stakeholders to help identify technology trends, potential vulnerabilities and disruptive threats
  - Expand problem/solution space to include interagency, non-kinetic, human social culture, and dual use technologies

- **Make Efficient Use of the Instruments at our Disposal (ECD, FCT, DAC, JCTD, QRSP)**
  - Employing the use of fieldable prototypes (organically / industrially);
  - Providing operationally representative integration venues (JERC, Stiletto, Thunderstorm, etc.); and,
  - Expanding supplier base to include to non-traditional performers

Examples Of Our Ability to Respond

Rapid Reaction Tunnel Detection (R2TD) JCTD

- Initially fielded in 15 months, provides capabilities for finding and interdicting tunnels
- April 2011 - deployed to US CENTCOM to meet an urgent need
- August 2011 - used to discover three tunnels on the US southwest border; 17½ tons of drugs seized

Fire Resistant Ghillie Suit & Accessory Kit - DAC

- Flame-resistant sniper uniform with 17-item accessory kit; provides improved counter-surveillance, flame and thermal protection
- Following successful evaluation, 1000 suits and kits were purchased for the Army Sniper School and the Marine Scout Sniper program. Evaluation start to delivery in less than one year.

CLOUDBREAK Campaign

- Requirement : an agile, net-centric, common architecture across networks with coordination among DoD CIO, DISA, COCOMS and the Intelligence Community
- Migrate from closed, operator based, one-of-a-kind systems to a toolset of “composable”, rapidly fieldable, plug-and-play capabilities
- Demonstrate mature capabilities to Joint Warfighters in conjunction with COCOM Exercises on a 9-12 month basis. Initiate in FY12 at PACOM’s Exercise Terminal Fury/ Valiant Shield

Military Predictive Analysis
Historically Poor

Long-term strategies should be built not on 'visions' of the future but instead on the premise that longer term predictions, however presently credible, will probably prove wrong.

- In 1910, Britain's age-old enemy, France, is now its ally against a new enemy, Germany
  - By 1920, Britain is engaged in a naval arms race with its former allies, the U.S. and Japan
  - By the 1940s, Britain and the U.S. are allied again, now fighting Japan and Germany

- Armored vehicles before 2001 were designed for fighting in Europe
  - But when called upon for the Iraq and Afghanistan conflicts, an alternative platform was required

From *Driving in the Dark* by Richard Danzig, Center for New American Security, October 2011

Military Predictive Analysis:
Incredibly Challenging

"The interplay of economic trends, vastly different cultures and historical experiences, and the idiosyncrasies of leaders, among a host of other factors, provide such complexity in their interactions as to make prediction impossible."

Joint Forces Command's 'Joint Operating Environment', 2010

Prepare for predictive failure by, among other things:

- Increasing the agility of production processes
- Prioritizing equipment that is most adaptable
- Build more for the short term
- Nurture diversity and create competition

From *Driving in the Dark* by Richard Danzig, Center for New American Security, October 2011

Looking Ahead: Areas of Interest

- **C4/ Cyber**
  - Open-architecture, software reconfigurable payloads (Comm, C2, EW, munitions)
  - Capability to mediate legacy and core C2 data to ensure data is usable at the tactical, operational and the strategic level
- **Force Logistics**
  - Over-extended supply; IED threat and weight limitations due to terrain/road conditions; limited numbers of cargo/utility helicopters available
  - Ensuring survivability of operational activities and critical infrastructure against newer threat weapons through use of hardened structures
- **Battlespace Awareness**
  - Discovery, generation and dissemination of 3D products of urban and close quarters combat conditions is time-consuming and costly
  - Long endurance, stealthy UAS with high quality real-time or stored video, capable of being launched from a submerged platform

Looking Ahead: Areas of Interest

- **Force Protection**
  - Countering revolutionary developments in biotechnology that allow attackers to quickly modify pathogens or create entirely new ones
  - Fielding lower cost capability with a reduced in-theater footprint
- **Force Application**
  - Maritime capability to swiftly and decisively engage and destroy a multi-axis fast intruder attack craft assault
  - Low collateral damage, line-of-sight (LOS)/beyond-line-of-site (BLOS) precision guided aerial weapon, air deployable from a tactical UAS (TUAS)
- **Operational Energy Demands in Theater**
  - The ability of today's warfighter to command, control, deploy, and sustain forces is adversely impacted by a fragile, aging, and fossil fuel-dependent electricity grid
  - Enhancing first responder capability to quickly provide energy, water purification and other disaster relief resources to partner nations

Rapid Fielding Points of Contact

- **C4/ Cyber**
  - Mr. Bill Reyers, 703-601-3677, william.reyers@osd.mil
- **Force Logistics**
  - COL Nancy Grandy, 703-601-2122, nancy.grandy@osd.mil
- **Battlespace Awareness**
  - Mr. Fritz Schulz, 703-601-4045, fritz.schulz@osd.mil
- **Force Protection**
  - Mr. MK Tribbie, 410-601-2124, m.tribbie@osd.mil
- **Force Application**
  - Mr. Scott Stephens, 703-601-4069, scott.stephens@osd.mil
- **Operational Energy**
  - Mr. Elmer Roman, 703-607-5019, elmer.roman@osd.mil

Questions?

U.S. Marines wearing the Future Immersive Training Environment (FITE) Joint Capabilities Technology Demonstration (JCTD) virtual reality system