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UNIFIED QUEST 2016 FUTURE FORCE DESIGN II FINAL REPORT



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INTRODUCTION

The purpose of the Unified Quest 2016 Future Force Design II (FFD-II) Seminar was to examine how theater armies, corps, and divisions operate in 2030 across the range of military operations – including the ability to serve as Army Forces (ARFOR) Commander, Combined Joint Force Land Component Commander (CJFLCC), or Commander, Joint Task Force (JTF) – to inform development of operational and organizational (O&O) concepts. Four regionally aligned working groups staffed with Army service component command (ASCC), corps, and division planners, red team personnel, personnel from Army Training and Doctrine Command (TRADOC) G-2, and representatives from the Army Centers of Excellence (CoE)/Capability Development Integration Directorates (CDID) addressed Army Warfighting Challenges. Using four scenario extracts, these working groups examined assigned and emerging tasks by organizational echelon to determine gaps and opportunities affecting the performance of the 2030 force. Because of these activities, this event yielded insight into the roles, functions, and tasks of future echelons above brigade, described interdependencies by echelon, and contributed to the CoE CDIDs' further operational and organizational (O&O) concept development.

In addition to results focused on O&O concept development, FFD-II also considered the strategic outlook for 2030. Seminar participants conducted a broad review of political and technological trends across the globe, considered emerging and enduring security demands these trends will place on the United States, tested the implications of employing expeditionary forces in the future environment, and identified emerging insights into the needs of the future force. This context will be critical for broader thought-experiments during the Deep Future Wargame.

METHOD

Future Force Design II participants used a problem-solving approach to envision theater-strategic, operational, and high-level tactical roles, functions, and tasks in 2030. The four working groups considered scenario extracts featuring security challenges in notional operational environments generated for the exercise in Europe, the Middle East, Asia-Pacific, and North America. Given these scenario extracts, the approach to warfare described in the Army Operating Concept, and their own background and expertise, participants identified theater-strategic, operational, and tactical tasks by theater army, corps, and division echelons. This allowed derivation of results under the broadest possible set of conditions. Assuming current organizational echelons will persist, these results provide sufficient context for O&O concept writers across the Army to develop their work; assuming echelons above brigade may themselves need revision, tasks which must be performed to generate integrated solutions for future security problems were identified.

The Future Warfare Division (FWD) Integration and Analysis (I&A) cell recorded and analyzed the aggregate professional military judgment of participants in six ways. First, facilitated discussions elicited participant insights, which a rapporteur recorded. Second, participants entered their comments and observations directly into Facilitate Pro (FACPRO), a web-based collaboration tool, providing data for further analysis. Third, highly qualified experts (HQE) and Army O-6 workgroup leads from each working group

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met frequently to integrate results across working groups. Fourth, analysts in each working group collected over-arching insights, which were shared and reviewed in the I&A cell. Fifth, analysts conducted text mining of discussions as they occurred. Sixth, stakeholders in O&O concept development received in-progress insights to solicit immediate feedback and to generate further research objectives. The I&A team will evaluate results from this event against results of the November 2015 FFD-I Seminar to assess the internal validity of the insights. Future Warfare Division will brief insights to current and former operational leaders to assess the external validity of the study.

RESULTS

A. O&O Concept Insights

1) Assuming a future operational environment as described in seminar scenario materials, this seminar found theater army, corps, and division responsibilities will expand beyond those presented in Field Manual FM 3-94, *Theater Army, Corps, and Division Operations*. Further research is required to determine the necessity of current command structures – theater armies, corps, and divisions – for future conflicts.

2) For many tasks, theater armies are operating in Phase I (Deter) today. Theater armies conduct security activities including reception of rotational forces; employment of intelligence, surveillance, and reconnaissance assets; and development of mission-tailored command and control, intelligence, force protection, and logistic requirements to support the geographic combatant commander's (GCC) concept of operations. With growing complexity in the operational environment (e.g., hybrid warfare tactics), GCCs will expect the theater army – as the theater joint or combined land component commander (JFLCC or CJFLCC) – to conduct continuous robust shaping operations, including engagements with partners and populations, cyber operations, logistic preparation, and mission command of maneuver elements deployed to the theater on a rotational basis. When transitioning from deterrence phase (Phase I) to seize the initiative or dominate phases (Phases II and III), the theater army will need to assume mission command of deploying units during the transition from Phase I to Phase II. Participants agreed the theater army should expect to manage ground combat operations for up to 180 days until additional mission command headquarters organize and deploy from the continental United States (CONUS).

3) The corps will always operate as a joint headquarters and must therefore be trained, manned, and equipped as such. Participants agreed GCCs require JTF-capable headquarters upon the onset of a crisis. Sourcing organizations identify, train, and evaluate joint, interorganizational, and multinational (JIM) staff augmentees and enablers at home station. Further, the demands of multi-domain warfare will compel the corps to add additional capabilities for both mission command and effects generation in cyber, missile defense, and surface-to-surface attack.

4) Participants agreed the division will continue to function as a tactical, warfighting headquarters, providing enabling capabilities to subordinate units. The division is also likely to perform the role of a JTF in some operations, as was the case during the Ebola crisis. All seminar working groups emphasized a division performing the role of JTF will require considerable augmentation. Participants suggested attempting to constitute a JTF in-stride during a major transition in a campaign poses risks to

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uninterrupted mission command as augmentees gain understanding of the situation and plan.

5) Divisions in 2030 require the ability to fight in multiple domains. Some adversaries will match or exceed the United States in cyber capabilities and ability to deny air supremacy. Therefore, the division in 2030 must have the ability to fight in the cyber domain; defend itself against the expanded air, missile, and unmanned aerial system threats; and provide the commander with land-based maneuver and fires forces that can provide required effects in other domains.

6) Future enemies may achieve overmatch in key areas, such as precision and hypersonic weapons, electronic warfare, high-yield conventional strategic weapons, and unmanned, self-contained and robotized arms and equipment. The Army must combine capabilities across domains to preclude successful enemy employment of tactics and technologies.

B. Army Warfighting Challenge (AWFC) Insights

Participants and analysts in FFD-II used Facilitate Pro software to capture participant comments and observations over the five-day seminar. The I&A cell summarized and linked this data to applicable AWFCs and subordinate learning demands. Integration and Analysis provided this data to FWD's AWFC manager for distribution to the Centers of Excellence. The following paragraphs provide four major force design insights derived from the data. Annex A provides a more detailed discussion on each insight.

1) The Army must have mission command, intelligence, and sustainment network capabilities that enable integration of joint, interorganizational, multinational (JIM), coalition, and special operations partners. (AWFCs 1, 14, 16, 19)

2) The Army must organize the theater army, corps, or division to rapidly transition to or deploy as a JFLCC or JTF. Headquarters should include permanent joint billets and the capability to integrate seamlessly additional augmentation. (AWFCs 12, 19, 20)

3) The theater army, corps, or division must be able to protect their networks and conduct offensive and defensive cyber operations. (AWFCs 7, 19)

C. Operational Environment

1) A 2030 Operational Environment created and managed by the TRADOC G-2 formed the basic scenario for this event. Of particular importance in this event was the ability of adversary forces to degrade key U.S. technologies – for example, groups focused considerable attention on the adversary's ability to target space-based positioning, navigation, and timing (PNT) capabilities; maneuver aggressively in the cyber domain; and employ long-range precision fires to limit friendly freedom of maneuver and constrain strategic options. Future Warfare Division should sustain this approach to problem-generation, which was successful in eliciting conversation and insight.

D. Enduring Security Demands

[See FFD-II Final Report version "For Official Use Only" for specific observations]

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E. Implications for an Army Conducting Expeditionary Maneuver

1) Participants identified four pools of tasks which must be performed to achieve the missions described in the scenario extracts – to restore internationally recognized borders and the return of functional governance to areas of conflict: tasks performed continuously in CONUS; tasks performed continuously in theater; tasks performed in-theater by expeditionary forces during a crisis to achieve effects on the adversary; and, tasks performed linking those effects with the desired strategic end state. This chain of tasks is necessary and jointly sufficient to address the enduring problem described previously. Two of these task pools – those conducted in-theater – have implications for an expeditionary force.

2) The first are those continuous *in-theater* tasks related to shaping the security environment. The forward element and coalition partners must have the capability to counter an adversary's offensive actions until additional U.S. forces arrive, must be able to receive those forces in theater and employ those forces against an adversary immediately upon arrival. The forward element must demonstrate capability through continuous engagement and exercises with multiple partners to demonstrate U.S. resolve regarding vital national security interests and the ability to rapidly integrate U.S. forces with partner forces. A credible force – able to convince the enemy he cannot succeed – requires capabilities supporting expeditionary maneuver, such as rapid sealift, ultra-heavy vertical lift, seabasing, prepositioned equipment and sustainment, and mission command on the move.

3) The second pool of *in-theater* tasks identified are those the Army executes to employ assigned forces in crisis. These tasks assume the capabilities themselves either have arrived at their point of employment or operate from CONUS. The question then becomes: *How does the Army commander synchronize the employment of land-based forces to achieve effects in the air, maritime, space, and cyber domains?* The commander must also synchronize air, sea, cyber, and space-based forces achieving effects in the land domain. Participants argued extensive mission command and JIM C4ISR collaboration resources and cross-domain weapons (air-to-ground, ground-to-air, surface-to-air, etc.) are required to create true cross-domain operations employing capabilities in one domain to create options or dilemmas in another. Moreover, each region poses unique political, military, economic, social, infrastructure, and information (PMESII) considerations affecting the application of U.S. capabilities to problem-sets, requiring the ability to rapidly integrate and employ in-theater expertise.

4) Finally, discussions with workgroup leads and HQEs yielded a third set of tasks enabling the planning and conduct of campaigns across land, air, sea, cyber, and space domains. Campaign-level tasks require an understanding of the in-theater political and military terrain, national objectives at stake, and the forces operating to alter the adversary's will or affect adversary capabilities.

F. Emerging Insights into Future Requirements

1) Participants placed heavy emphasis on engagement with host nations, regional partners, and indigenous populations and the requirement for influence operations to shape perceptions and influence adversaries' and allies' behavior. The GCC will need a forward-based, enduring capability to operate in contested physical and

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cyber domains, with the regional expertise to maximize the impact of signals to adversaries and allies.

2) GCC and coalition partners require sufficient forward capability to employ forcible entry and follow-on forces projected from CONUS in a crisis and maintain uninterrupted mission command throughout transitions of headquarters. Both initial and follow-on forces must be deployable in integrated force packages providing a balance of combat, combat support, sustainment, and mission command capabilities across the services.

3) Army land-based forces must operate in multiple domains – land, air, maritime, space, and cyberspace – and be able to affect other domains from the land. Army forces must be rapidly available to employ their capabilities in a joint, multi-national environment. In order to respond rapidly in a crisis, Army headquarters must have the means to integrate Army forces with all partners.

4) The future Army will fight in the cyber domain to create options in other domains. Concepts must clearly describe the effects a commander may expect from cyber operations, even when classification precludes describing specific methods. Concepts should consider two ways of thinking about employment of Army cyber forces: (1) cyber operations in support of joint and Army commanders and (2) warfighting in the cyber domain. For example, Army cyber forces provide offensive and defensive cyber capabilities – delivery of effects – to joint and Army commanders to support their schemes of maneuver. Alternatively, Army cyber forces may conduct cyberspace operations for the sake of competing with an adversary in the cyber domain. Commanders must control and synchronize offensive cyber operations with operations in the land, air, maritime, and space domains to maximize intended effects and decrease the probability of cyber fratricide.

RECOMMENDATIONS:

A. Develop near- to mid-term O&O concepts enabling echelons above brigade to become robust, joint-capable headquarters.

Discussion: Stakeholders should review FFD-II insights and incorporate appropriate insights into O&O concepts and Army Warfighting Challenge running estimates.

Implementation: Continue study to refine O&O concepts, incorporating FFD-II results in accordance with TRADOC research standards and best practices.

B. Focus operational environment and scenario products on generating PMESII problem-sets for participants. Advance understanding of the range of long-term problem sets even if it diminishes near-term scenario plausibility.

Discussion: A primarily CONUS-based Army will face significant challenges conducting expeditionary maneuver throughout a contested maritime domain, a littoral megacity, non-CONUS continental regions, and even in the homeland. The multiple scenario extracts presented in FFD-II were key to creating definable, tractable problem sets for participants to address and identify those challenges and requirements for the future Army.

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Implementation: Develop a suite of unclassified scenarios assessing a variety of PMESII, adversary, and realistic human and geographical settings. Maintain the flexibility to manipulate key variables of interest to evaluate the range of possible futures. Introduce a refined set of scenario extracts in the Deep Future Wargame.

C. Tasks conducted at echelons above brigade must connect to achievement of national and theater strategic aims. Use the How the Army Fights series of events to create conceptual linkages between the ideas in the Army Operating Concept and the near- to mid-term solutions generated for the Army Warfighting Challenges and O&O concepts. Test suitability of long-term solutions against various problem-focused operational environment configurations at the Deep Future Wargame.

Discussion: The task pools discussed in results paragraph E above connect political outcomes with employing the military. Through a general discussion about what the Army must do in the near- and mid-term, decision-makers can consider the deep future to determine how the Army will accomplish those tasks across echelons. This ensures continuity of effort and maximizes the return on investment for the event.

Implementation: O&O Operational Planning Team consider insights from this event in further development of echelon above brigade O&O concepts. Construct the Deep Future Wargame around consistent problem types and varying PMESII operational environments to induce variation in the solutions developed by participants. Evaluate solution sets for consistency across groups and events, and extract tasks and solutions for potential investment.

D. Engagement with host nations, regional partners, and indigenous populations and the requirement for influence operations to shape perceptions and influence adversaries' and allies' behavior are critical in the future operational environment. Commanders require measures of effectiveness to assess these operations requires and would benefit from the capture of best practices.

Discussion: The 2015 *Fighting on the Battlefield of Perception* seminar allowed the influence operations community to better define itself and articulate its importance in current and future military operations. However, the community continues to emphasize measures of performance to assess both friendly and adversary activities, and struggles to articulate a relationship to the cyber and digital environments. The influence operations community must focus on creating measures of effectiveness enabling commanders and policy-makers to reasonably assess the effect of influence operations and allocate resources accordingly.

Implementation: Develop measures of effectiveness and articulate capabilities required for influence operations in various future environments. Conduct appropriate experimentation to evaluate these measures of effectiveness.

E. JIM and Title 32 operations and capabilities are key elements of the future operational environment.

Discussion: JIM and Title 10 (Armed Forces)-Title 32 (National Guard) friction was a unifying theme at both FFD-I and FFD-II. The Army understands operations in multiple domains and with multiple partners are essential; however, the Army must

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articulate how future operations must include representatives from partners across the JIM community. Future events should include a substantial JIM/Title 32 component.

Implementation: Conduct JIM-focused events in FY17. Include JIM/Title 32 contributions to the scenario and development of the future operating environments. Integrate insights from JIM/Title 32 wargames and events.

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For additional information on Unified Quest Future Study Plan
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