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Cyberspace Training Initiative (CTI) Modeling & Simulation

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Purpose of Briefing



- **Provide overview of Joint Staff DDJ7 Joint and Coalition Warfighting (JCW) Joint Live, Virtual, and Constructive (JLVC) requirements process**
- **Identify milestones met and those remaining**
- **Discuss framework to meet future milestones for CTI Modeling and Simulation (M&S) requirements**

JCW JLVC Requirements Process



- **Training Gap Analysis Forum (TGAF)**
 - Meets once a year (Feb) with mid-year (Aug) IPT
 - Combatant Command and Service representation
 - Entry point for six step/five phase JLVC process
 - Stakeholder voting and training gap (TG) prioritization (Feb)
 - Sponsor Identification

- 1) Provide a production level LVC architecture that can support Joint and Service Level Training exercises at reduced cost**
 - **Capability is in use and must support immediate exercise requirements as well as long range goals**

- 2) Provide a useful technical specification to support efforts across the training community**
 - **Support Combatant Command (CCMD) and Joint Task Force (JTF) Exercises**
 - **Support Cross-Service Training**
 - **Enable Home Station LVC Training**

Capability Development

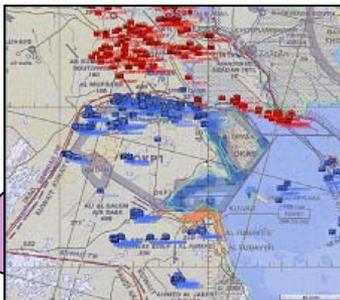
Modeling & Simulations (L-V-C Training Environment)



Live/Range Actions



Virtual Simulators

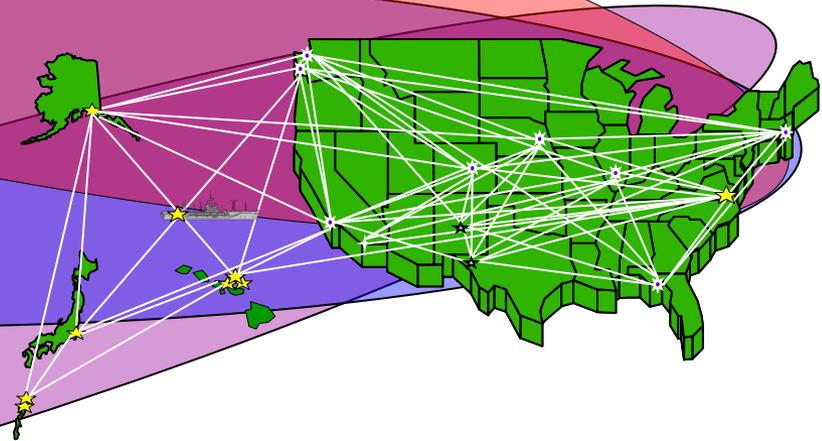


Constructive Simulations

JLVC Federation

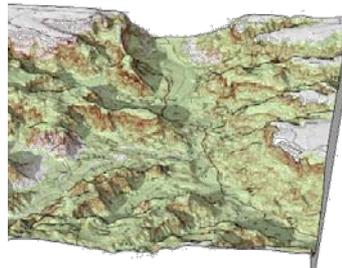
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Global Joint Training Network

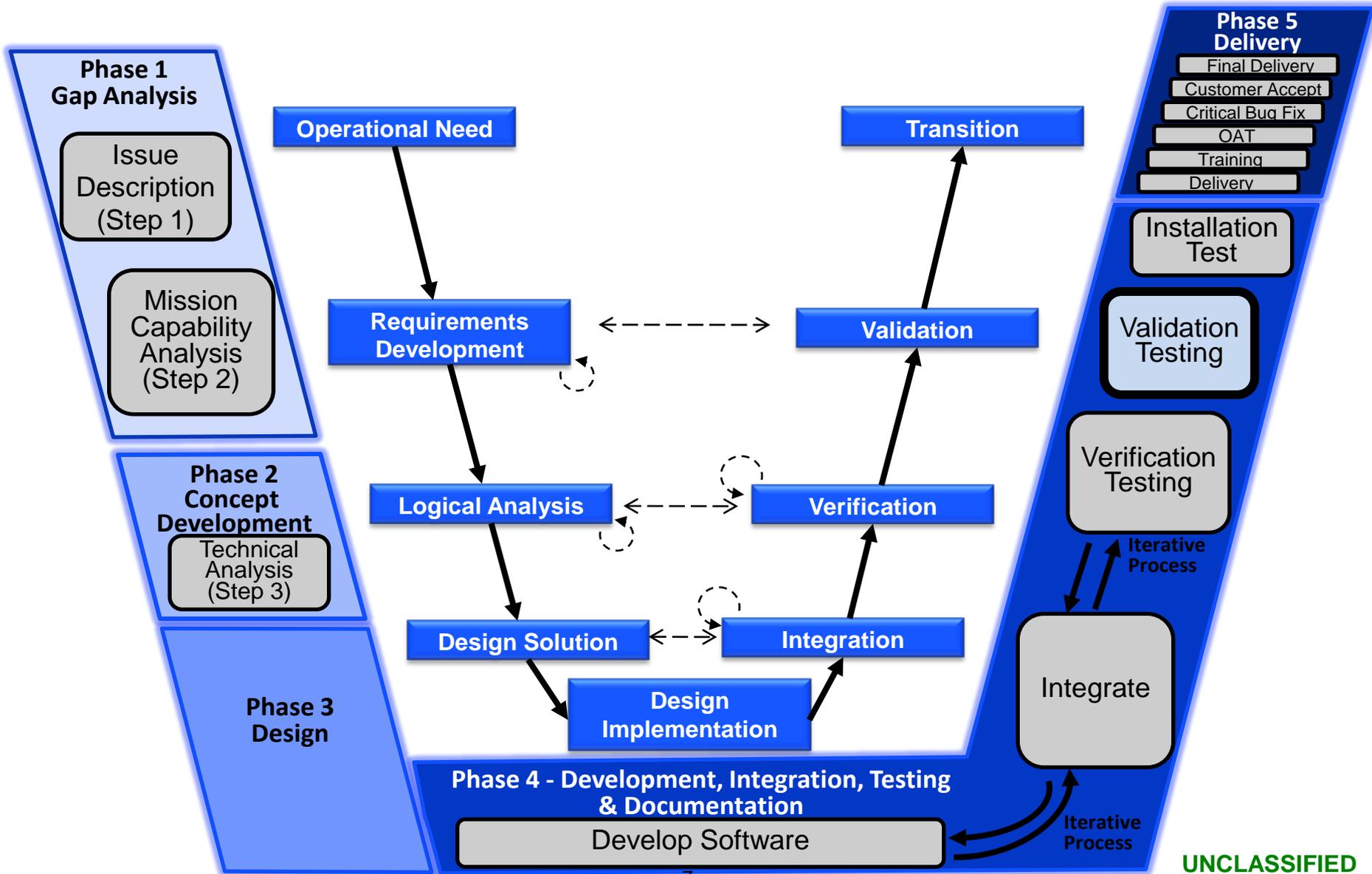


Joint Live Virtual Constructive (JLVC) Federation

- **Modular Set of Joint and Service Simulations and Software Tools integrated to represent Joint Forces in support of Training**
- **JLVC is capable of representing over 250,000 individual platforms (people, vehicles, aircraft, and ships) with realistic behavior and signatures**
- **Integrates Live instrumented forces and Virtual simulations**
- **Supports Multi-tier training audiences in one exercise environment, strategic to tactical level**



JLVC Systems Engineering & Development Process



- **Step 1 - Issue Gathering / Front-End Analysis**
 - Map issue to Training Gap and Problem Area (as applicable)
 - JCW facilitates completion of “Description of Training Issue” template w/stakeholders (operators, planners, and trainers)
 - Issue stakeholders validate input
- **Step 2 - Mission Capability Analysis**
 - JCW facilitates completion of “Mission Capability Analysis Report”
 - Develop Operational Mission Level Models (MLMs)
 - Full description of issue, training tiers, and capability requirements
 - Develop Architecture Documents (OVs, AVs, SVs, etc)
 - Stakeholders review all documents prior to submission

Steps 3-6 of the JLVC Process are facilitated by the Environment Development Branch of JCW

Current Status of Cyber Training Gap

- **Training Gap 45 (TG45) identified by the TGAF as “Train Forces on Cyberspace Operations”**
 - **TG45 has not been prioritized by TGAF**
 - **Description of Training Issue (Step 1 document) to be completed via Working Group 6-8 Dec @ USCYBERCOM**
 - **Step 2 documents (OVs, AVs, MLM, etc) require Step 1 completion and validation by stakeholders**
 - **STRATCOM has drafted the Cyberspace Modeling and Simulation Way-Ahead/Roadmap and identified related Universal Joint Tasks (UJTs)**
 - **Proposed name of effort:**
 - **Cyberspace Training Initiative (CTI) Modeling and Simulation (M&S)**

DoD will fully integrate a complete spectrum of cyberspace scenarios into exercises and training to prepare U.S. Armed Forces for a wide variety of contingencies.
DoD Strategy for Operating in Cyberspace, 2011

- **Define participants for 6-8 Dec WG**
 - Focus on operators and planners
 - CCMD, Service and CSA J3, J5, J6 and J7? Others?
 - Leverage existing Cyberspace communities of interest (Cyber Integration Team (CIT), etc) to participate
 - Strike a balance between
- **Three sub WGs (Offensive Cyber Ops, Defensive Cyber Ops and DoD GIG Ops) w/ daily plenary sessions**
- **Announce via record message**
- **Complete Step 1 Document (via working group) prior to next TGAF voting session (Feb 2012)**

Proper documentation and participation from stakeholders will assist in elevating TGAF prioritization



Questions?

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