



Command and Control Battlelab (C2B)

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Organization



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Langley AFB, VA



C2 Battlelab
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C2 Battlelab Mission



“... to identify innovative command and control and battle management operations and logistics concepts and measure their potential to advance the Air Force's core competencies and joint warfighting.”

*Battlelab Task Force 1 Nov
1996 - 1 March 1997*





BATTLELAB GOVERNING PRINCIPLES



Lean

- 15 to 25 people
- 12-18 months
- Limited funding: Borrow or lease , low cost solutions

Unique

- Creating and evaluating ideas, concepts, and solutions– differing from research labs or warfare centers

Focused

- Identifying, planning, & leading Innovation-- leveraging existing expertise, technology, and contracts

Innovative

- Demonstrating revolutionary or ground-breaking operations and logistics concepts which advance AF Core competencies and drive revisions to doctrine, organization, training, requirements, or acquisitions

Output

- Battlelab After-Initiative Report- Proof of Concept
- Concept of Operations
- Initiative- directly fielded, transitioned to a program to be fielded or proof of concept only- time, cost or technology maturity





WebTAS Oriented C2B Initiatives

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JIVE

Information management architecture and visualization system

- Accesses/visualize multiple disparate data sources
- Incorporates static and streaming data

Geo-spatial and temporal data registration



JAOC Information Viewing Environment

- Improve battlespace awareness and decision making by providing disparate data source access and visualization in a common environment
- Decrease critical decision making time
- Reduce man hours for data aggregation
- Improve operator situational awareness



AAFDES

Automate data exchange between the Battlefield Coordination Detachment and the Combat Operations Division in the Joint Air Operations Center



ARMY AIR FORCE DATA EXCHANGE SYSTEM

- Exchange Extensible Markup Language (XML) tagged data between Army and Air Force systems
- Augment Battlefield Coordination Detachment and Combat Operations Division operational pictures
- Integrate existing tools and technologies (Vizier and WebTAS)
- End Goal: Improve situational awareness for Joint Air Operations Center decision makers



MAAP TOOLKIT

Enhance Aerospace Operations Center Master Air Attack Planning process by providing all air and space information in one "user friendly" application



MASTER AIR ATTACK PLANNING TOOLKIT

- Provide the MAAP Team with automated access to planning data
- Automate capability to perform platform/weapon/target pairing
- Automatic transfer of plan into Theater Air Planner (TAP)
- End Goal: "MAAP without stickies"



OPEL

Self-contained capability to build, distribute, and execute the Air Tasking Order (ATO)



OPERATIONS PLANNING AND EXECUTION LITE

- Capability to conduct small-scale operations where an Air Operations Center is not required
- ATO is electronically distributed to/from the unit level for MAAP collaboration and improved situational awareness during ATO execution
- Laptop capability suited for austere, quick reaction contingencies; i.e. Special Operations
- Focuses on electronic data exchanges amongst warfighters



Fast MAAP

Provide a computer-optimized draft Master Air Attack Plan solution for a designated Air Tasking Order (ATO) cycle.



FAST MASTER AIR ATTACK PLANNING

- Consists of three elements: sourcing data required to formulate a solution; warfighter defined parameters; and optimized target/weapon/platform pairing recommendation.
- Provide the user with an initial MAAP Solution for a designated Air Tasking Order (ATO) cycle using all available assets and user-grouped targets/DMPs, while taking into consideration assets that have been allocated to other missions (air defense, close air support (CAS), refueling, etc.)



ARTK

Improve and shorten the development of the air-refueling plan in support of the Master Air Attack Planning (MAAP) process within the Joint Air Operations Center (JAOC)



AIR REFUELING TOOL KIT

- Build on MAAP Toolkit success
- Air Refueling Request De-confliction
- Tanker/Receiver Request Pairing
- Air Space Change Request



ICE-T

Demonstrate a set of data services and software automation for AOC collection managers to synchronize ISR asset planning with the Master Air Attack planning.



INTEGRATED COLLECTION ENHANCEMENT TOOL

- Display sensor locations, status, capabilities, coverage of targets, and availability for tasking
- Generate ISR requests for national systems support
- Reduce manual re-entry of data
- Machine-to-Machine feed of ISR plan into TBMCS
- End Goal: Integrate planning information into single visualization for decision makers



TBONE

Utilizing available technology providing an all encompassing planning system with one common database providing a Multi-Level Security (MLS) environment.



Theater Battle Operations Net-centric Environment

- Utilizes both thick and thin clients
- Scalable from a single laptop to the entire AOC
- Utilizes Oracle's trusted vault technology in a PL-4 environment
- Flexible business rules, Information service layer, and a data gateway
- A continuous/temporal database where the Air Tasking Order (ATO) is a product of the tool, not the driver



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C2 Experimentation

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