Functional Mission Analysis Concept

Proficiency Code: A

The Air Force's base-level Communications Squadrons are engaged in a cultural and technological transformation through the Cyber Squadron Initiative (CSI). Once focused solely on delivering government-run information services and hardware maintenance, Communications Squadrons today are sharpening their focus to include active cyber defense and mission assurance as core competencies to enable operational advantages and out-maneuver our adversaries in cyberspace.

While CSI covers a broad mission set, *Functional Mission Analysis (FMA)* and Mission Defense Team (MDT) capabilities are vital means toward success in enabling active cyber defense of Air Force missions and algorithmic responses to intrusions and other breaches endangering information dominance. Unfortunately only a handful of the CSI units in FY16 saw their MDTs successfully execute, implement and sustain an FMA process. The #FMA4CSI design sprint brought together over 40 experts from government and industry to focus on this shortcoming and ways to accelerate the needed transformation, uncover lessons learned, and distill a plan to revector or to harden the CSI support structure.

Highlighted during the sprint was that FMA is not simply a cyber tool; FMA within CSI is about understanding how cyber impacts the AF missions and how using FMA to tailor cyber defenses assures operational missions and decision superiority for Airmen. Cyber FMA will present cyber to the base and wing commanders in terms of mission assurance and mission impact. Cyber FMA is in support of a commander delivering warfighting capability to our nation.

Functional Mission Analysis: Functional Mission Analysis is the foundational Cyber Squadron competency. It identifies a core mission's key terrain in cyberspace. Functional Mission Analysis provides a methodology to analyze the unit's operational mission to understand how cyberspace systems contribute to success and how cyber vulnerabilities translate to mission risk. Key terrain in cyberspace is found across traditional information systems, control systems, platforms, and weapon systems. Functional Mission Analysis is a continuous effort. Key terrain in cyberspace regularly changes due to shifting factors (e.g., mission changes, shifting priorities, cyber infrastructure changes, changes in threat picture) and must be continually adjusted, especially in the expeditionary environment.

Source Material: Air Force Cyberworx Report 17-001, Operational Success, Page 4 Ref FMA Para 1. https://apps.dtic.mil/dtic/tr/fulltext/u2/1032933.pdf

Cyber Squadron Enabling Concept (15 March 2018). https://usaf.dps.mil/teams/10445/LPL/Documents/3DXXX%20-%20Cyberspace%20Support/Cyber%20Squadron%20Enabling%20Concept%20v1.0%20FINAL.pdf