Headquarters U.S. Air Force

Integrity - Service - Excellence

Cyber Squadron Initiative

U.S. AIR FORCE

Lt Col Steve Wieland
SAF/CIO A6
Aug 2018

U.S. AIR FORCE

Current Day in USAF Cyberspace

- All of our warfighting and support systems reside within the cyberspace domain
- Most USAF weapons and support systems were designed to operate in a permissive cyberspace environment
- Cyberspace is contested; the presence of a maneuvering enemy in cyberspace requires a different approach--proactive cyber defense

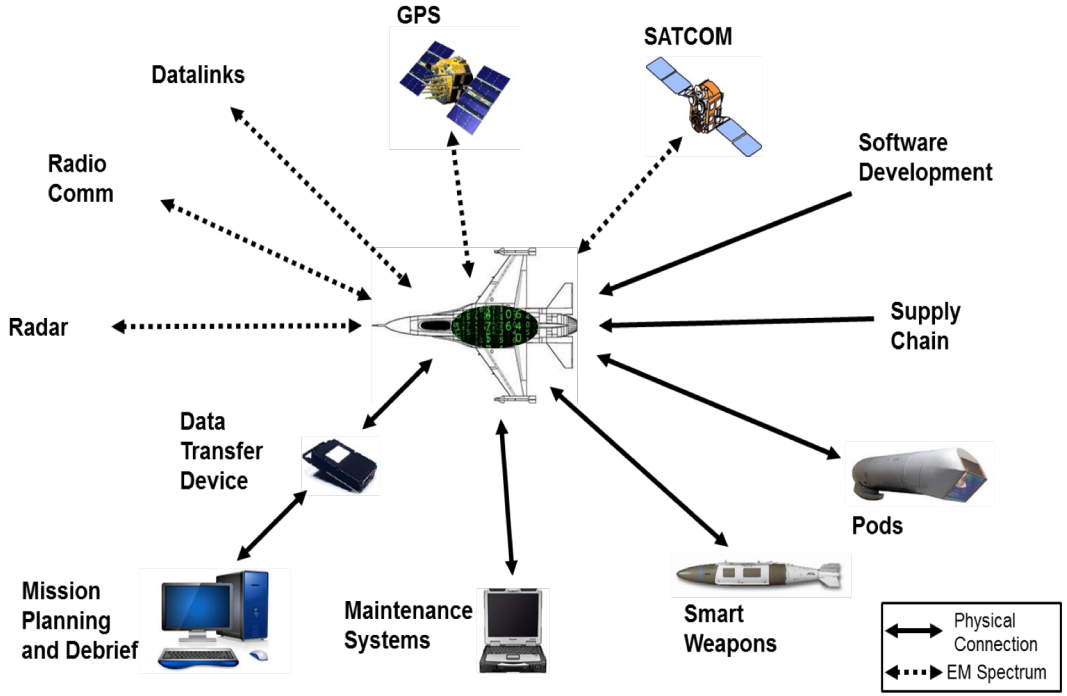
"I grew up flying fighters, and I will tell you, when I see the F-35, I don't see a fighter. I see a computer that happens to fly."

Gen. David Goldfein, Air Force Chief of Staff

U.S. AIR FORCE

Situation

- Changing character of war
  - Future of warfare is networked
  - Persistent engagement is the norm
  - New commercial sector technologies erode USAF's competitive edge
- Communication Squadrons aligned to provide IT services
- Weapon systems and control systems largely undefended



2018 National Defense Strategy

"Department leaders will adapt their organization structures to better support the Joint Force. If current structures hinder substantial increases in lethality and performance…"

Current cyber workforce postured for steady-state, not the high-end fight…not a combat-credible force

U.S. AIR FORCE

Cyber Squadron Overview

- Create squadrons that focus on assuring the mission of its parent wing
- Establish a cyber defense capability for wing commanders
- Provide wing commanders cyber situational awareness for informed risk decisions
- Support to squadrons from “above-the-wing” organizations with capabilities that cannot reside within the squadron
- Integrate cyber into mission owner program requirements and system upgrades

Goal: Provide commanders with mission-tailored Cyberspace Operations capabilities to enable USAF core missions

U.S. AIR FORCE

Comm Sq vs Cyber Sq

Comm Sq

- Primary Role: Service provider
- AFNET
- Compliance culture
- Success metric: Uptime / tickets
- IA

- Provide vital IT services
- In-garrison & expeditionary
- No Comm, no bomb

Cyber Sq

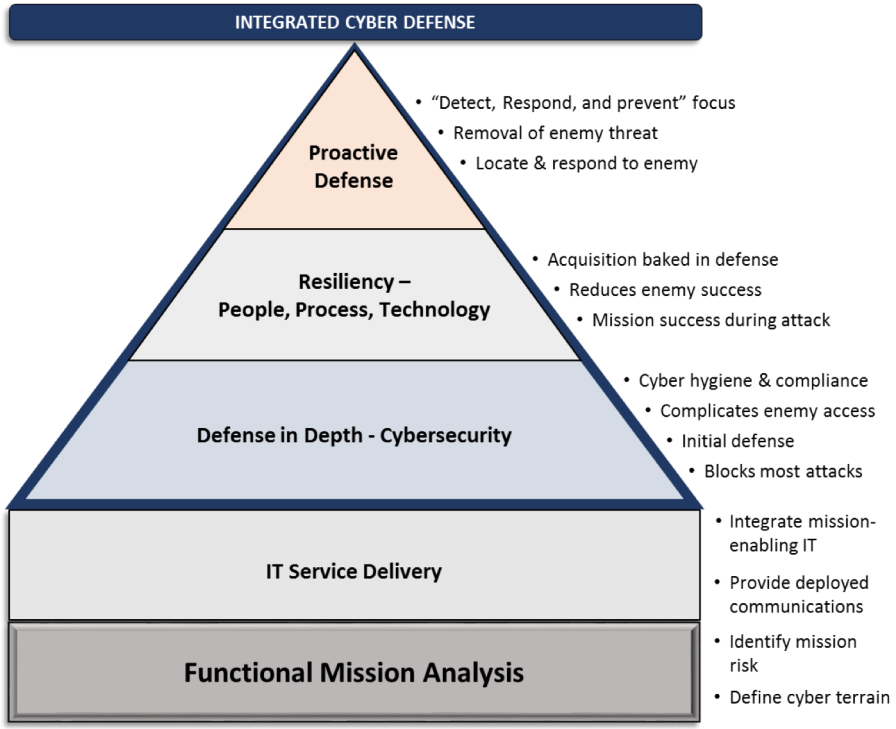
- Primary Role: Mission assurance
- AFIN ops/Wing's weapons platform
- Risk management culture
- Success metric: Sortie generation
- Cyber defense & cyber security

- Provide vital IT services
- In garrison & expeditionary
- No Comm, no bomb

Revolution of how cyberspace operations are provided to the wing!

U.S. AIR FORCE

Cyber Squadron Competencies



Cyber Squadron Competencies

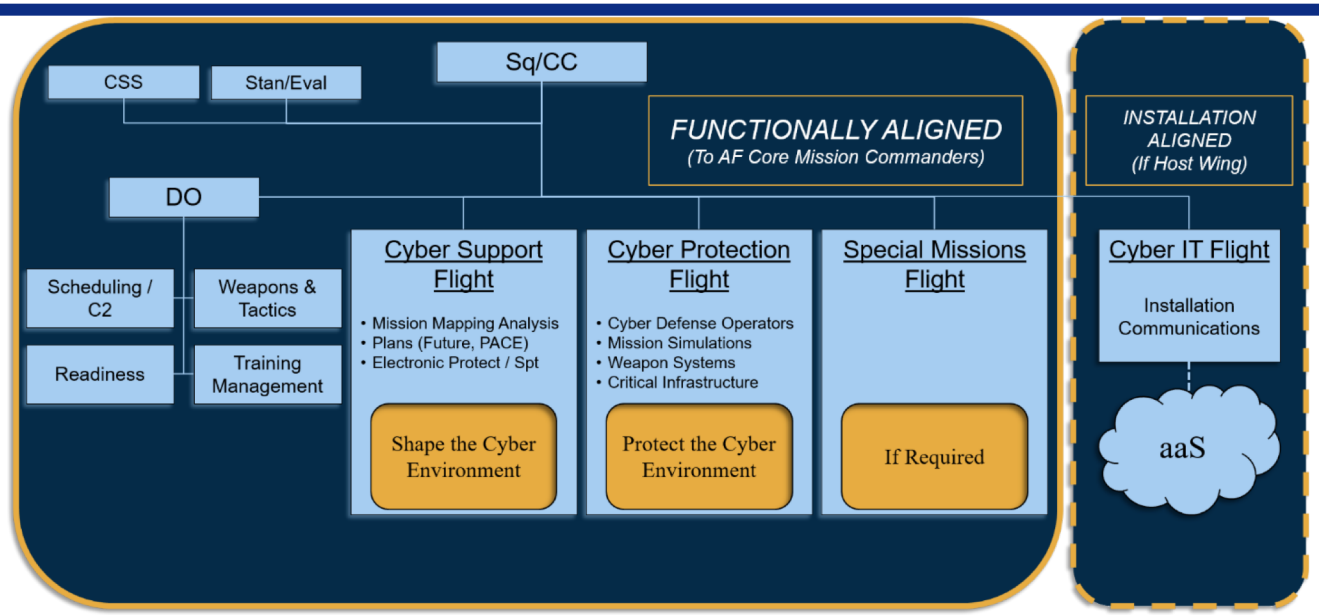
- **Establish cyber defense capability for wing commanders**
- **Acknowledge that enemy will get through static defenses**
- **Provide wing commanders cyber situational awareness for informed risk decisions**
- **Integrate cyber into mission owner program requirements and system upgrades**
- **Defend IT, control systems, and weapon systems**

Goal: Provide commanders with mission-tailored Cyberspace Operations capabilities to enable USAF core missions

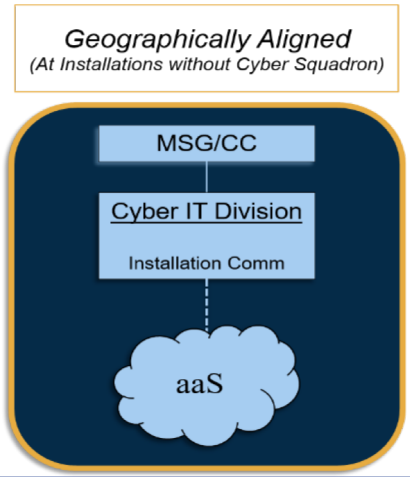
U.S. AIR FORCE

Proposed Objective Structure

Wings with a Cyber Squadron



Host wings without a Cyber Squadron



U.S. AIR FORCE

Supporting Organizations

- Cyber Squadrons can not "do it alone"…gaps include:
  - Requirement to integrate cyber operations
  - Incident response
  - Intelligence support
  - Engineering-level expertise
  - Coordination with system owners and authorizing officials
- DRAFT *Cyber Squadron Support Construct* proposes:
  - 624th Operations Center:
    - Serve as the central control authority
    - Synchronize efforts
    - Assess cyberspace threats
    - Enable mission assurance across USAF cyberspace
  - Cyber Defense Correlation Cells:
    - Aligned to portfolio of weapon or mission systems
    - Reachback technical expertise
    - Nexus between lead command, program offices/system owners, authorizing official, and cyber defenders
    - Correlation across assigned systems
    - Coordinates pre-approved actions
  - Lead Cyber Squadrons
    - Pilot units for defense of assigned weapon system
    - Assist the lead command with training development, STAN/EVAL support, and TTPs

U.S. AIR FORCE

Progress Thus Far

- ✓ 2-year Pathfinding effort
  - Gathered lessons learned from 44 MDTs
- ✓ Formal Cyber Concept
  - Signed 15 Mar 2018
- ❑ Formal Cyber Squadron Support Construct
  - In final coordination…ECD Aug/Sept 2018
- ❑ Draft Program Action Directive (PAD) in coordination
  - Expected release for initial coordination in Aug 2018
- ❑ SECAF/CSAF sign PAD

U.S. AIR FORCE

Next Steps (aka "Big Rocks")

- **Cyber Squadron PAD Development**
- **Normalize Access to Defended Systems**
- **Incorporating Lessons Learned**
- **Sustainable Training Pipeline**

Questions

- POC: Lt Col Steve Wieland
- NIPR email: steven.t.Wieland.mil@mail.mil
- Comm Phone: 703-695-6140