The Formal Representation of Joint Operational Relationships

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Topics

1. *Introduction – The Global Force Management (GFM) Data Initiative*

2. *DOD Levels of Authority & Command and Support Relationships*

3. *The Organizational and Force Structure Construct (OFSC)*

   - *Organizational Elements & Units*

   - *Associations & Relations*

4. *Relations in the OFSC via the associations:*

   - *Default Relations: ADCON and C2*

   - *Combatant Command Assign / Unassign*

   - *Operational / Tactical Control (OPCON) / (TACON)*

   - *Support (General, Direct Support)*

5. *Summary*

Basic Global Force Management (GFM) Tenet:
"Force structure pulls everything together."
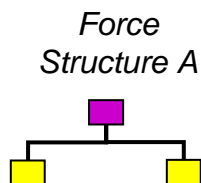
Today

Future

Problem: No common reference

Solution: Common Force Structure representation

Planning
Adaptive Planning
Plans
Capabilities
Risk Assessment

Force Structure A
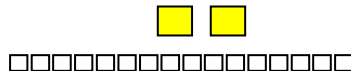
Programming/Budgeting
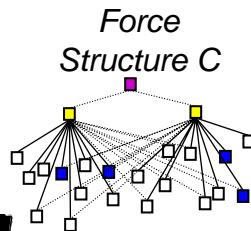Programs
Appropriations

Force Structure B

Execution
Military   Materiel
Civilians
Contractors

Force Structure C

Reporting
Readiness   C2
DRRS/GVC   Metrics

Force Structure D

- Common Force Structure representation for **ALL** Domains and user needs
  - Consistent structure (building code)
  - High resolution
- Based on:
  - Command & Support Relationships
  - Time
- Visible and accessible from a single source in a net-centric environment
- Foundational for net-centricity:
  - Universal key to integrate data
  - Realizes the power of the information

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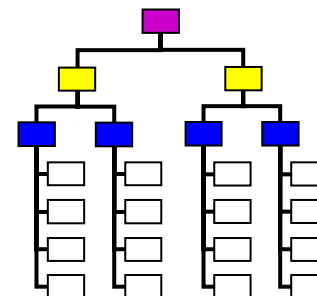
Unity of Command Interpretation

Unity of command means all forces operate under a single commander with the requisite authority to direct all forces employed in pursuit of a common purpose. It is the foundation for trust, coordination, and teamwork necessary for unified action and requires clear delineation of responsibility among commanders up, down, and laterally.

JP 0-2, Section III-A-1-d, pg III-1

From: Air Force Policy Directive (AFPD) 38-1, Manpower and Organization, 1 June 1996, under "The principal characteristics desired in Air Force organizations" - Unambiguous Command:

"Organizational structure should provide a clear chain-of-command running from the President to the most junior airman."

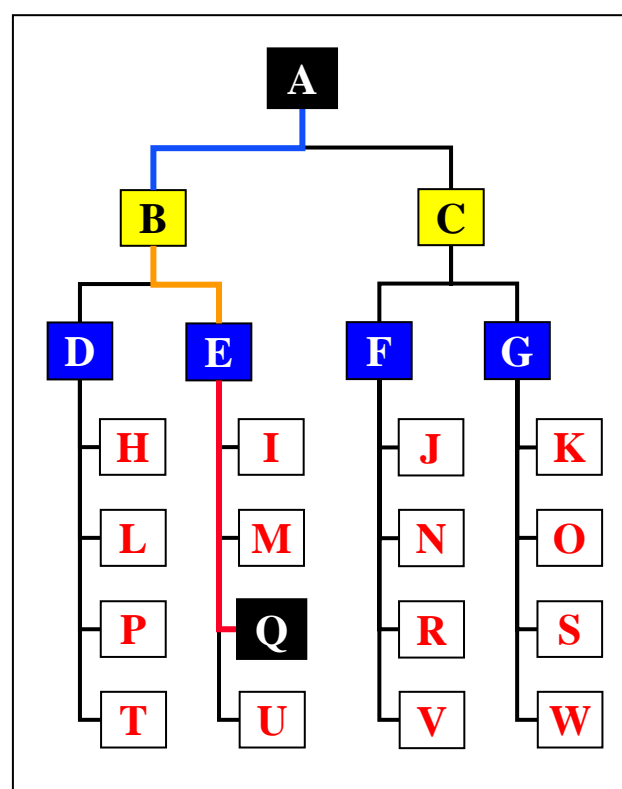### Via the GFM DI, this should be easily computable.

OFSC Terms & Components

Figure 1: A Tree Graph

Math		**OFSC**
Node	{ B }	**Organizational Element (OE)**
Link	{(A,B)}	**Association**
Graph	{Nodes} + {Links} = {A,B,C, …, (A,B),(A,C),…}	**Unit**
Path	{(A,B), (B,E), (E,Q)}	**Relation**

Math: In graph A ,a path exists between nodes A and Q via links (A,B), (B,E), and (E,Q).

OFSC: In unit A, a relation exists between OEs A and Q via associations (A,B), (B,E), and (E,Q).

GOAL: Formally Define Associations and Relations

Definitions Required for the OFSC

- ## <u>Command Authority</u> (*New*):
  The authority that a military commander lawfully exercises over subordinates and confers to assign missions and to demand accountability for their attainment.

  Derived from a statement in JP 0-2 Section III-A-1-a, pg III-1.

- ## <u>Command Structure</u> (*New*):
  The organizational hierarchy through which leadership authority is exercised.

  OFSC – uses composition associations.

- ## <u>Chain of Command</u> (DOD, NATO):
  The succession of commanding officers from a superior to a subordinate through which command is exercised.

  JP 1-02, DOD Dictionary, pg 81;   OFSC – uses reporting associations.

Definitions and Classes of Associations

Command Structure
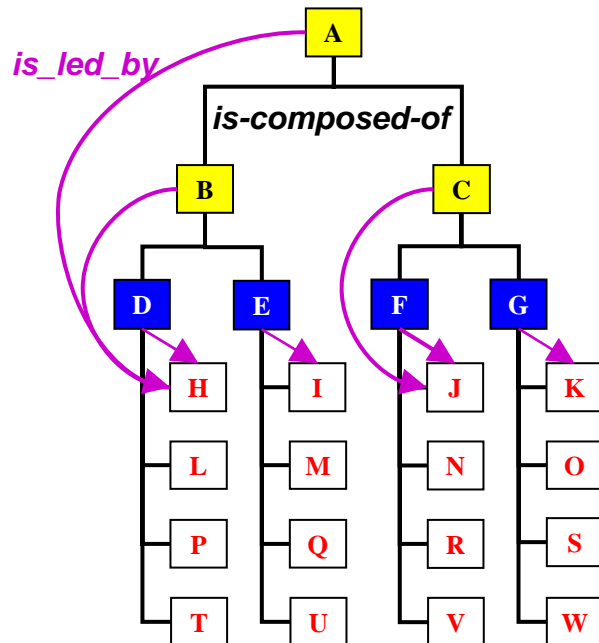
Chain of Command
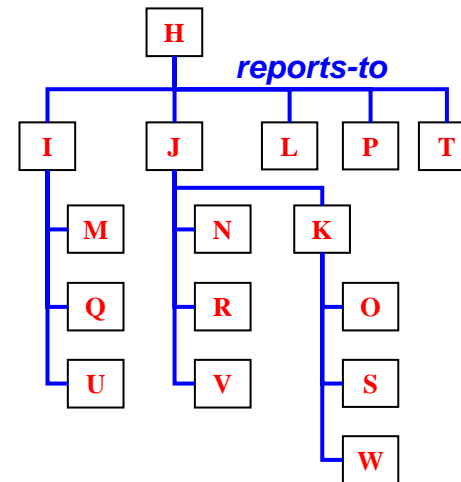
OFSC Association Classes

——————— **Composition** Association (*is-composed-of*)

——————— **Leadership** Association (*is-led-by*)

——————— **Reporting** Association (*reports-to*)

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GFM Version of the US DOD Levels of Authority (JP 0-2)

I. **Command Authority**

    A. **ADCON** **[Administrative Control]**

    B. **Command Relationships (Operational in Nature)**

        1. **COCOM [Combatant Command (Command Authority)]**

        2. **OPCON [Operational Control]**

        3. **TACON [Tactical Control]**

        4. **Support**

            a. **General**

            b. **Mutual**

            c. **Direct**

            d. **Close**

II. **Coordinating Authority**

III. **DIRLAUTH [Direct Liaison Authorized]**

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Definitions from JP 0-2

The **Combatant Command (Command Authority)**, or **COCOM**, command relationship allows:

- Budget and Planning, Programming, and Budgeting System Input
- Assignment of subordinate commanders
- Relations with Department of Defense Agencies
- Convene courts-martial
- Directive authority for logistics
- *Plus all OPCON Command Authority (OPCON is inherent in COCOM)*

The **Operational Control**, or **OPCON**, command relationship allows:

- Authoritative direction for all military operations and joint training
- Organize and employ commands and forces
- Assign command functions to subordinates
- Establish plans and requirements for intelligence, surveillance, and reconnaissance activities
- Suspend subordinate commanders from duty
- *Plus all TACON or Support command authorities.*

The **Tactical Control**, or **TACON**, command relationship allows:

- Local direction and control of movements or maneuvers to accomplish mission

The **Support** command relationship allows:

- Aid, assist, protect, or sustain another organization

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Assignment: Not in the DoD dictionary (JP 1-02), but a well-known term.   Defined in Title X. Invoked via the COCOM Relation.

Allocation: In a general sense, distribution of limited resources among competing requirements for employment. Invoked via the OPCON Relation.

Apportionment: In the general sense, distribution for *planning* of limited resources among competing requirements.

What Is Assignment?

Proposed term: Assignment - The process of assigning forces.

<u>**Assigned Forces:**</u>
**Those forces and resources that have been
placed under the <u>Combatant Command (Command Authority)</u>
<u>of a Unified Commander by the direction of the Secretary</u>
in his "Forces for Unified Commands Memorandum"
IAW Title 10 USC §162. Forces and resources so assigned are
available for normal peacetime operations of that command.**

From: Global Force Management Guidance, 4 May 2005, p. A-2-1

Title 10 §162(a):
Assignment of Forces. --
*(1) Except as provided in paragraph (2), the Secretaries of the military
departments shall assign all forces under their jurisdiction to unified
and specified combatant commands … to perform missions assigned
to those commands.*

ADCON, COCOM, and Assignment

Associations
- ——— ADCON Default
- — · — · — · · COCOM Assign
- — — — — · COCOM Unassign
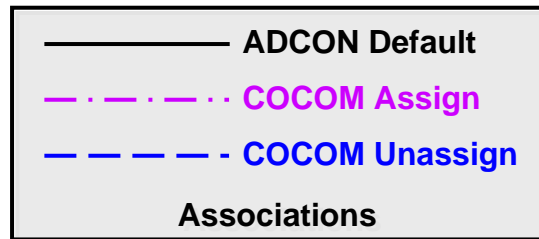
Simplistically, Assignment (*COCOM relation*) propagates down *ADCON Default relation* unless other specified.

DOD

Service UC #1 UC #2

MAJCOM M

Unit A Unit B Unit C

Unit X Unit Y Unit Z

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What Is Allocation?
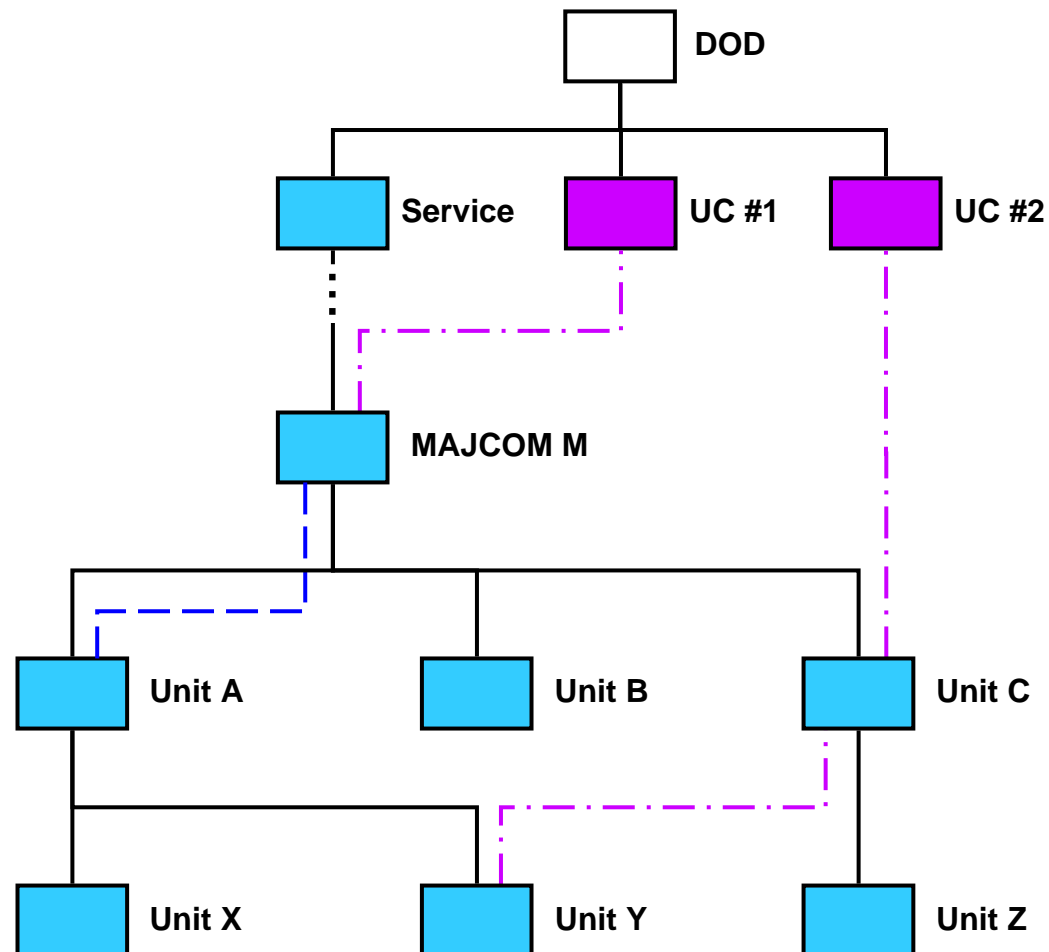
Allocation of Forces:

The temporary transfer of forces to a joint force

(that are not assigned to the Combatant Command of the joint force).

Derived from statements in JP 0-2.

Other statements:

When transfer of forces to a joint force will be permanent (or for an unknown but long period of time) the forces should be reassigned.

When transfer of forces to a joint force will be temporary, the forces will be attached to the gaining command and JFCs [Joint Force Commanders] will normally exercise OPCON over the attached forces.
(Note: a Combatant Commander is a Joint Force Commander.)

Changes in allocation do not result in corresponding changes in assignment.

Some Properties of OFSC Associations and Relations

- **For Unity of Command, the following associations (and relations) can not have concurrent multiple instances (e.g., only a single parent at a time):**
  - **ADCON & C2 Default**
  - **COCOM**
  - **OPCON**
  - **TACON**

- **Support is a different type of relationship and is:**

  … by design, a somewhat vague but very flexible arrangement. The establishing authority (the common superior commander) is responsible for ensuring that both the supported and supporting commander understand the degree of authority that the supported commander is granted.

  can have concurrent instances, but they must be somehow distinguishable. However, we suspect that Direct Support also fits in category at top.

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More Properties of OFSC Associations and Relations

Operational relations propagate down ADCON Default relations (based on Title X), <u>unless otherwise specified</u>:

- ADCON Default implies OPCON,

- COCOM implies OPCON

- COCOM, OPCON, TACON all propagate

- Currently, support does not propagate.

- **A direct association always <u>over-rides</u> an inferred relation (one that has propagated).**

- *Assignment* **and** *allocation* **are different property that depends on COCOM Assignment per Title X and OPCON orders from the SecDef.**

Example – OPCON Does Not Over-Ride COCOM
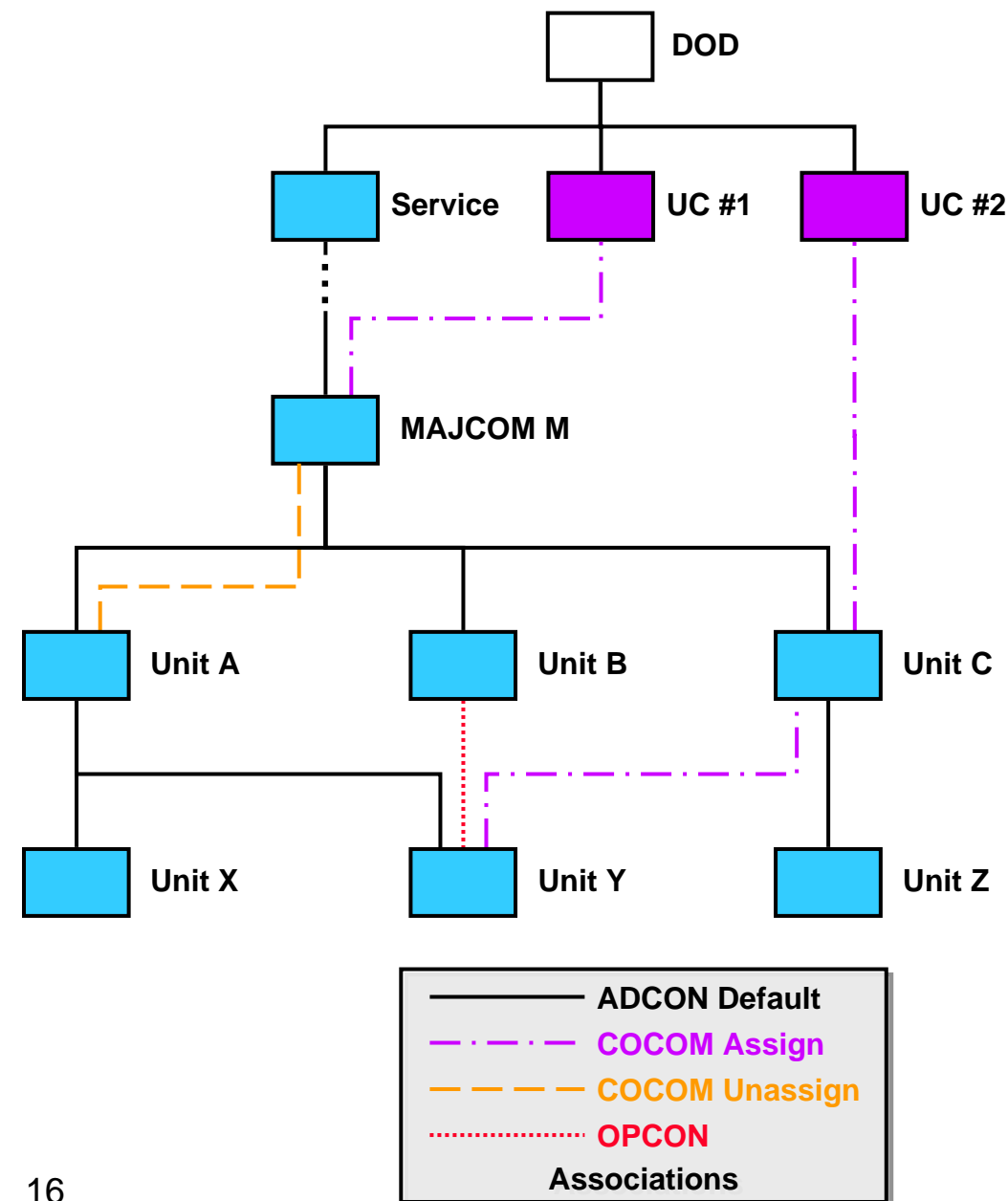
Test:

Who's assigned to UC #1:
   M, B

Who's assigned to UC #2:
   C, Y, Z

Who is not assigned:
   A, X

Who is allocated?
   Y to UV #1

Note:

   The CCO Association between Y and B does not over-ride the assignment of Y to UC #2.

Legend:
- ADCON Default
- COCOM Assign
- COCOM Unassign
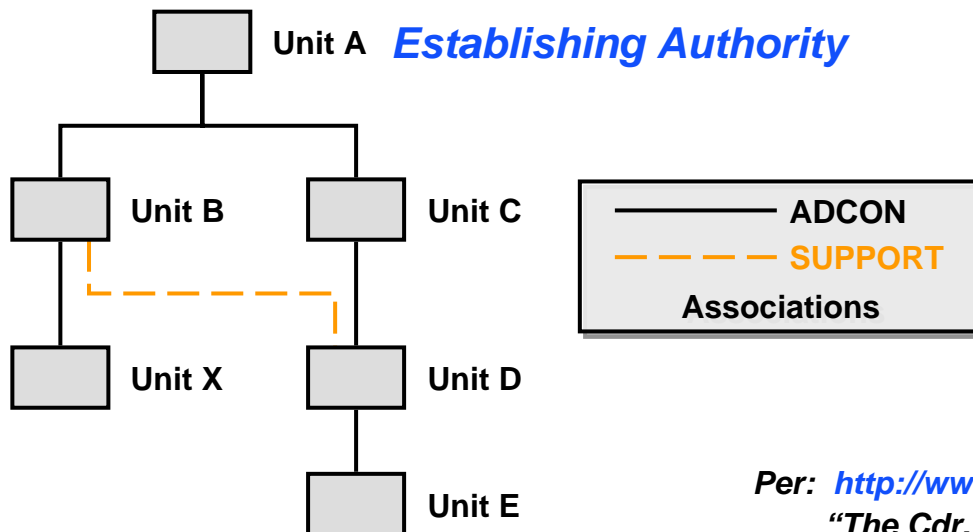- OPCON

Associations

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Properties of OFSC Support Associations and Relations
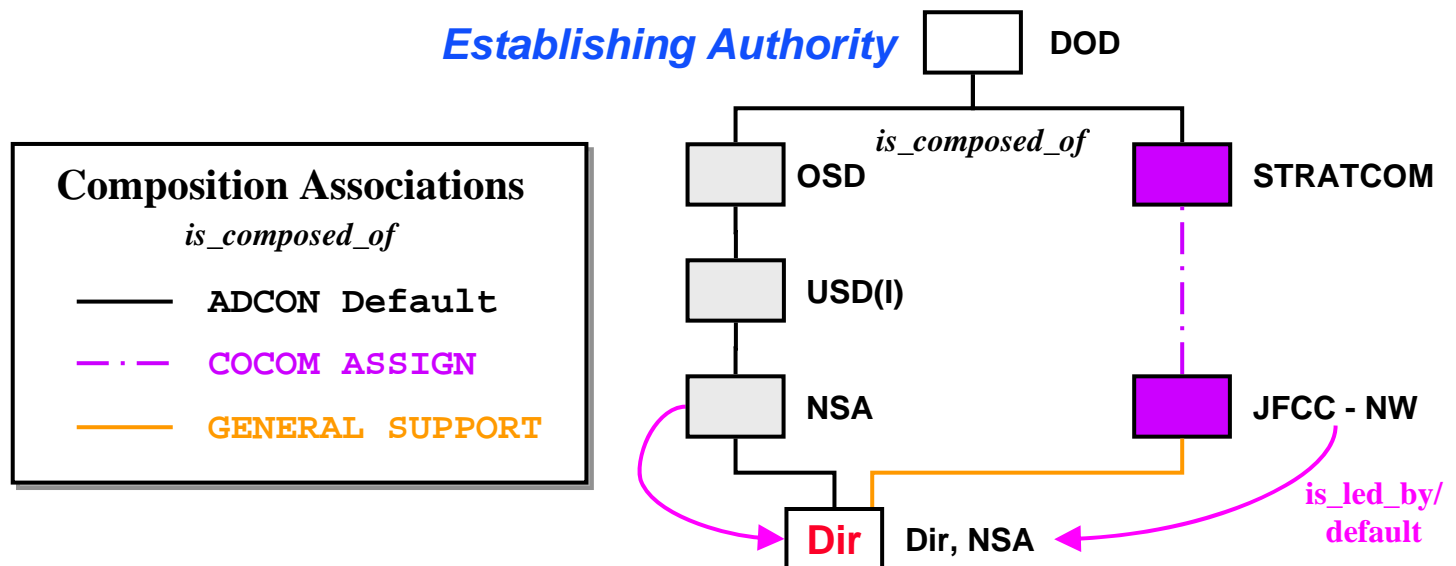
- **Per the GFM Guidance Document:**

    A Service component commander may be tasked as a supporting commander for more than one combatant command, but this arrangement does not constitute a COCOM relationship. Unless otherwise specified by the Secretary of Defense, the commander tasked as a supporting commander to additional combatant commands maintains a *general support* relationship for planning and coordinating regarding the combatant commands assigned missions and forces.

- **To define a Support relationship, three entities are required:**

    - **the supported unit,**

    - **the supporting unit**

    - **the establishing authority (must be in the command structure of these units, preferably the lower – the better).**

    - **establishing authority is responsible for details.**

Support Relations

Unit A *Establishing Authority*

Unit B   Unit C

———	ADCON
— — —	SUPPORT
Associations	

Unit X   Unit D

Unit E

Per: http://www.stratcom.mil/organization-fnc_comp.html :
"The Cdr, JFCC-NW is dual-hatted as
Director, National Security Agency."

Establishing Authority   DOD

Composition Associations

is_composed_of

——— ADCON Default

—·—·— COCOM ASSIGN

——— GENERAL SUPPORT

is_composed_of

OSD   STRATCOM

USD(I)

NSA   JFCC - NW

Dir   Dir, NSA   is_led_by/
default

Summary

1. *"Force structure pulls everything together."*

2. *The GFM Organizational and Force Structure Construct (OFSC) provides the semantics for formally defining force structure and is being used to formally define the US DOD joint processes of Assignment, Allocation, and Apportionment.*

3. *Command Structure: "The organizational hierarchy through which command is exercised." The default (composition) association in an OFSC command structure is ADCON Default (via Title X).*

4. *The US DOD Command Relationship COCOM defines assignment and propagates down the ADCON Default relation unless otherwise specified.*

5. *A direct association overrides a propagated relation of like kind.*

6. *The US DOD Command Relationship OPCON defines allocation and does not interfere with the process of assignment.*

7. *Support relations are intestinally vague (flexible) and require additional guidance by the establishing authority.*