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# Joint Unmanned Aircraft System Center of Excellence

## NDIA CONFERENCE

26 Oct 06

# *Background*

- 
- ✍ **Jun 05 – JROC directs creation of two organizations:  
JUAV COE and JUAV MRB**
  - ✍ **Sep 05 – JROC approves JUAS COE re-stated mission,  
charter, and manpower construct**
  - ✍ **Oct 05 – JUAS COE reaches Initial Operational Capability**
  - ✍ **Nov 05 – JUAS COE Charter formally approved by CJCS**
  - ✍ **Dec 05 – PBD 704: Funding and Manpower Reprogramming**

# *Vision*



- ✍ **Provide the first point of entry for UAS OPERATIONAL issues requiring joint consideration, analysis, and resolution.**
- ✍ **Harmonize / Optimize operational efforts of the Services, COCOMs, OSD, and agencies/entities.**

*“ Joint Lens ” that promotes increased standardization, reduction of overlapping efforts, and resolution of interoperability challenges*

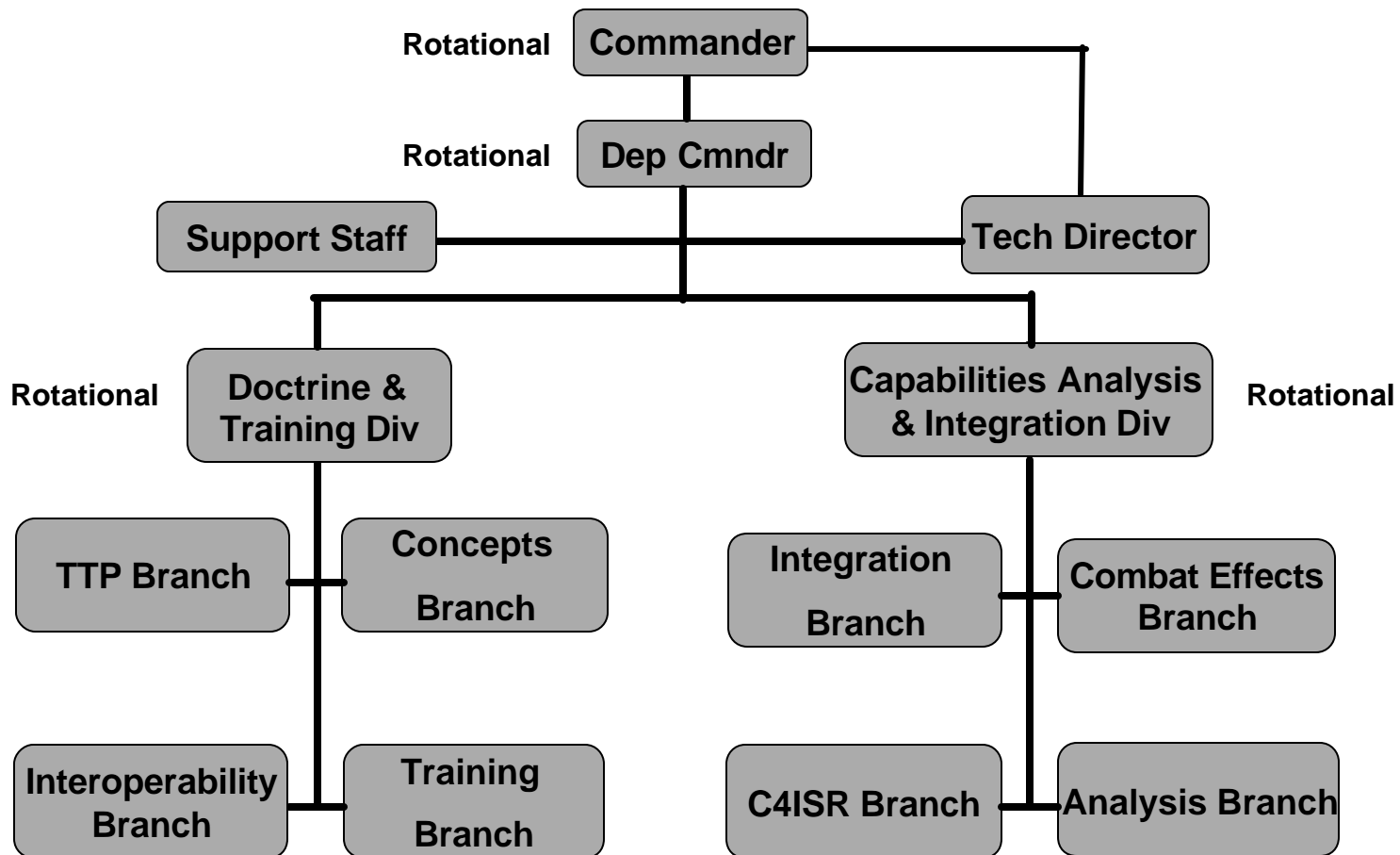
# *Mission Statement*



**JUAS COE provides support to the Joint Operator and Services by facilitating the development and integration of common unmanned aircraft system operating standards, capabilities, concepts, technologies, doctrine, tactics, techniques, procedures and training.**

**JUAS COE leverages existing Service initiatives and activities to provide joint integrated solutions and improved interoperability.**

# Organization Framework and Manning



*Jointly Manned Activity – 38 Military / 6 CS / 20 Contractors (Core)  
Currently in place – 12 Military / 20+ Contractors*

# Goals and Objectives

## DJ8 Goals

- ✍ Sustain strong interaction with COCOMs
- ✍ Advise CJCS on joint warfighting capabilities by reviewing and assessing Service programs
- ✍ JROC – provide early capability development guidance


## JCOE Process

- ✍ Develop/establish a body of expertise (personnel)
- ✍ Develop/establish body of knowledge
- ✍ Develop/establish expertise with processes

## JCOE Output

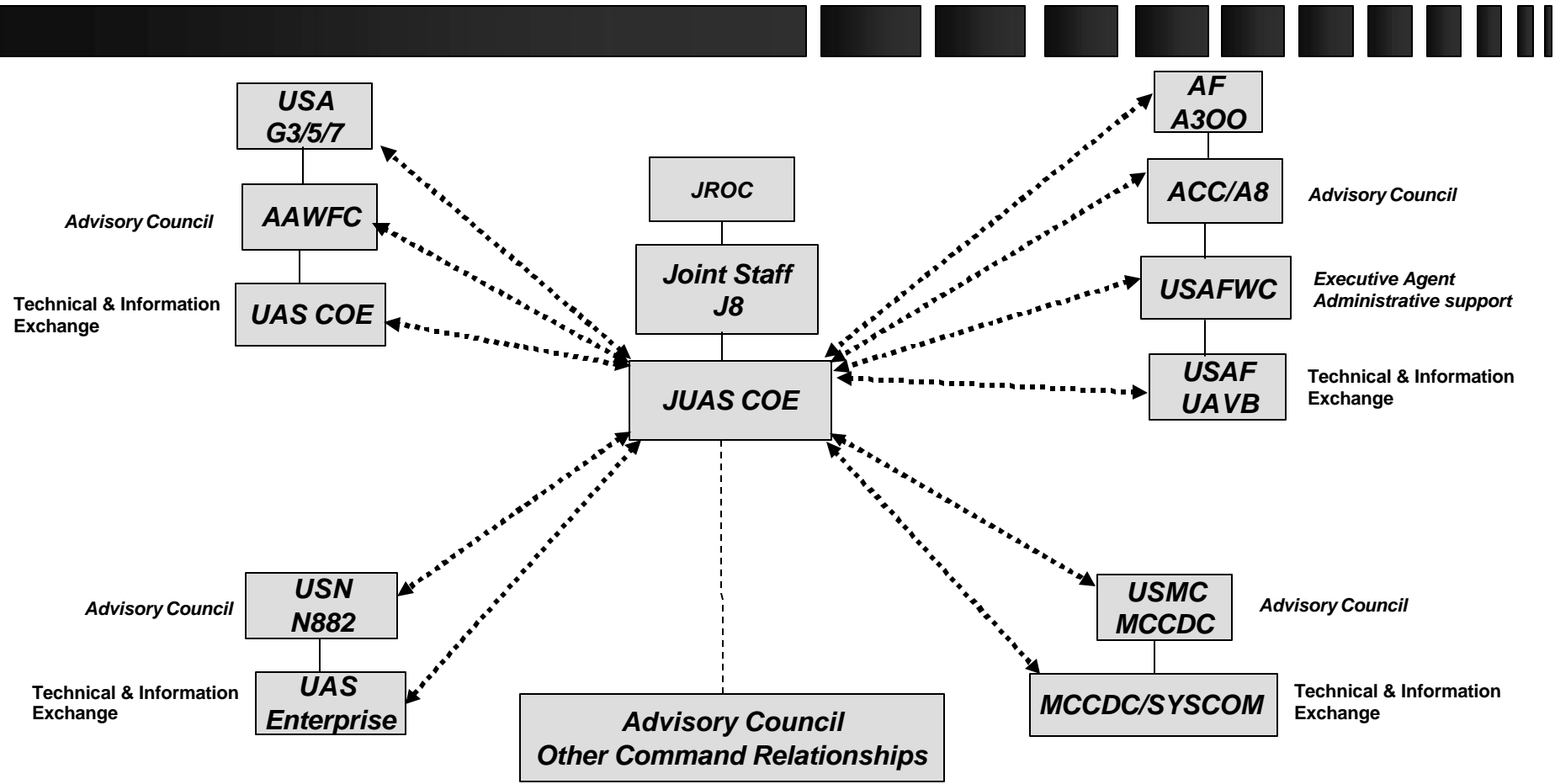
- ✍ Affect DOTmLPF operational changes
- ✍ Solidify Service and COCOM relationships / teaming
- ✍ Operational enhancements for the joint Warfighter

# ***JUAS COE Charter***

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- Develop** Joint CONOPS, TTPs, and doctrine*
  - Review** service and COCOM capabilities requirement submissions into Joint Capabilities Integration and Development System (JCIDS) process*
  - Facilitate** integration of UAS capabilities into joint and component training and exercises*
  - Address** airspace integration, joint command and control, and spectrum management issues*
  - Coordinate** efforts with the Joint UAS Material Review Board (JUAS MRB)*
  - Develop** and orchestrate experiments, exercises, and demonstrations*

***COCOM and service UAS operational requirements and priorities determine JUAS COE work plan***

# Command Relationships



*Advisory Council O-6 level representation from all services and COCOMS*



# Advisory Council

## 0-6 Advisory Council

### Needs

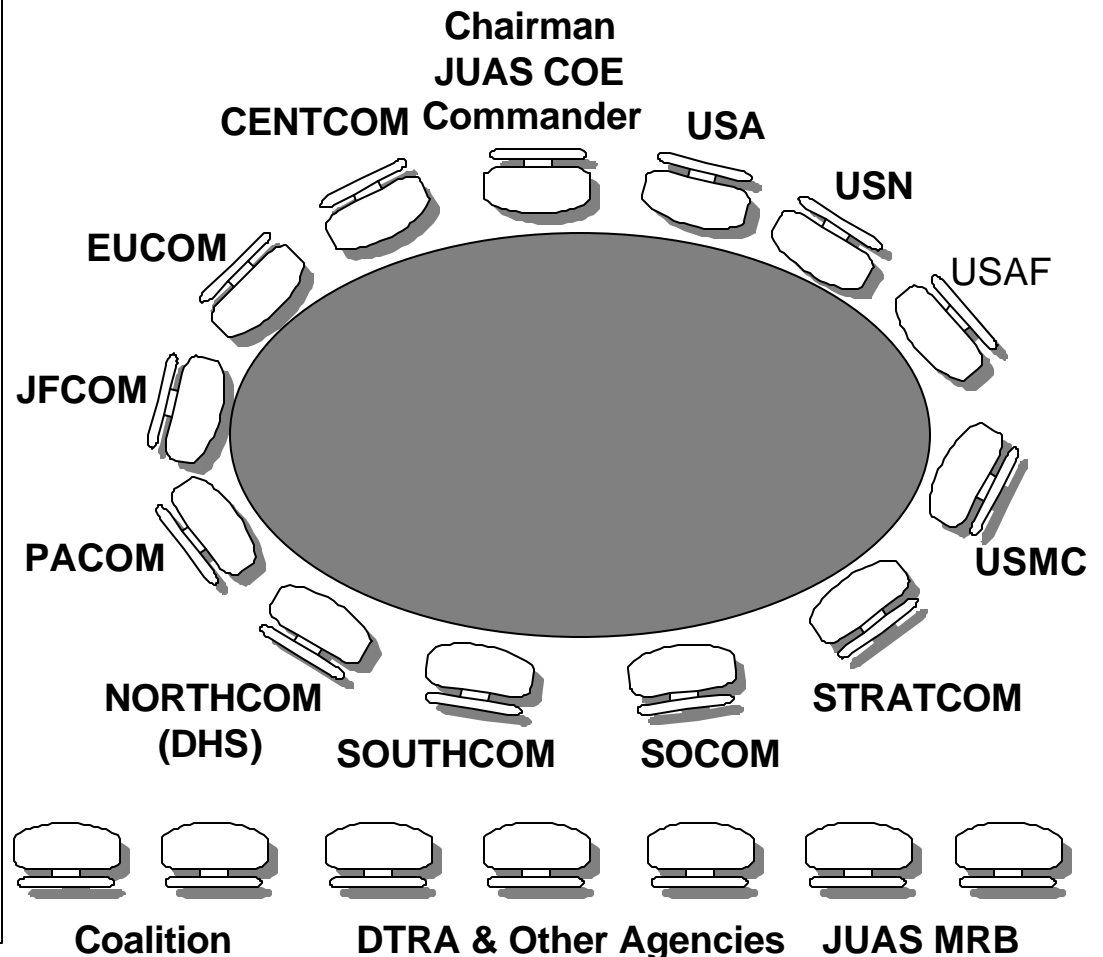
- Bring operational issues to table
- Set a Top 5 or Top 10 list of COCOM issues requiring Joint solutions
- Identify Joint initiatives where the JUAS COE requires assistance or teaming with Service COE/Battlelabs
- Identify Service issues with Joint implications requiring JUAS COE assistance

### Solutions

- Identify ongoing activities working solutions to issues
- Monitor progress of ongoing initiatives
- Establish/update recommended list of initiatives for the JUAS COE

### Next Meeting

- Nov 06 – SOCOM/CENTCOM - Tampa



# *Relationship with Material Review Board*

## *MRB Mission*

“ Provide a forum to identify or resolve requirements and corresponding material issues....Regarding interoperability and commonality, prioritize potential solutions....”

## *MRB Goals*

- ✍ Facilitate JCIDS...coordinate with and make recommendations to the FCB, JCB, and JROC:
- ✍ Improve commonality of payloads/GCS
- ✍ Improve interoperability through adoption of common standards

## *MRB Objectives*

- ✍ Identify/resolve and/or mitigate materiel issues at the earliest opportunity in the JCIDS process
- ✍ Coordinate UAS materiel initiatives with the support community
- ✍ Coordinate government/industry UAS issues

*JUAS COE will provide a non-voting representative to the board and provide representatives to working groups as required*

# ***Capabilities, Analysis, Integration Div Update***

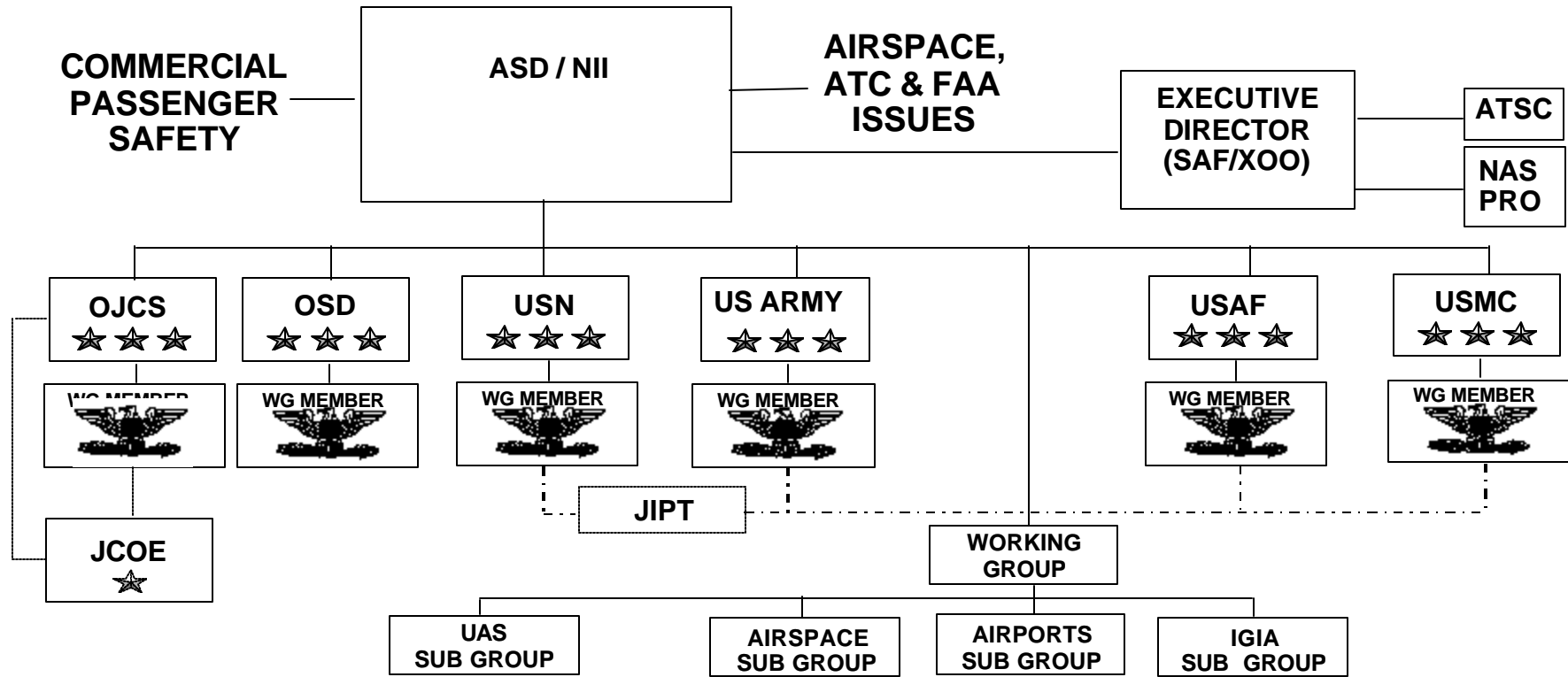
## **✍ JROCM 283-05: MQ-1 Orbits Demand**

- ✍ Methodology – Requirements / Analysis / Wargaming**
- ✍ Study complete / Briefing through JCIDS process**

## **✍ Airspace Integration**


- ✍ FAA acknowledging importance of UAS integration by forming dedicated section at HQ in DC**
- ✍ PBFA tasked as lead agency for interface between DoD and FAA**
- ✍ JUAS COE unique position to promote efforts of all Services to leverage manpower, money and ideas for joint effort**
- ✍ Demonstrating an equivalent level of safety as manned aircraft will be the key**

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**DOD Policy Board on Federal Aviation**  
**(PBFA)**

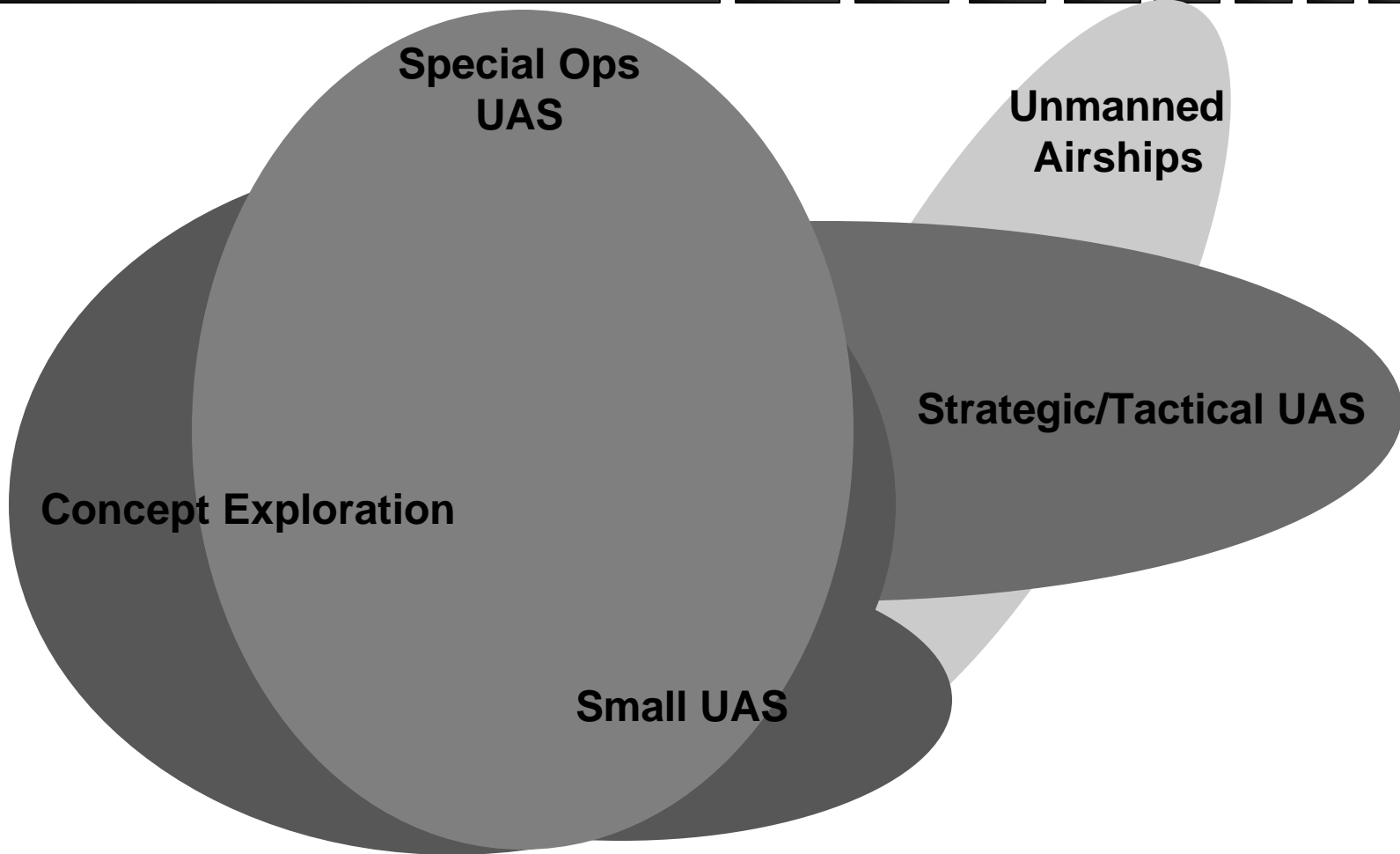


**DRAFT PROPOSAL**  
**Policy - PBFA**  
**Technology – AT&L**  
**Operational Issues - JCOE**

# ***Doctrine and Training Division Update***

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- ✍ **Tactical Employment of UAS MTTP – ALSA Publication**
    - ✍ **Signature / Release – 18 Aug 06**
    - ✍ **Transition of document to JUAS/COE**
  
  - ✍ **JCAS ESC Issue #9 – UAVs in JCAS Operations**
    - ✍ **Current: Adjudication of JTTP UAS Focus Group comments**
    - ✍ **Sep 06: Projected completion of JTTP UAS Working Paper and change of applicable Joint CAS publications**
  
  - ✍ **JROCM 197-05: Joint Overarching CONOPS Development**
    - ✍ **Three CONOPS Working Groups Complete**
    - ✍ **Initial CONOPS document complete – 30 Sep 06**
    - ✍ **World-wide review / Adjudication of Comments – Oct - Dec 06**
    - ✍ **Submission for CJCS approval – 10 Jan 07**

# ***UAS Relationships in DOD Schema***



# Proposed NAS UAS Levels

<u>Category</u>	<u>Airspeed (Kts)</u>	<u>Weight (Lbs)</u>	<u>Operating Altitude (AGL)</u>
L 0	< 250	< 2	<1,200 BATCAM
L 1	< 250	2 - 20	< 3,000 Raven / Pointer
L 2	< 250	21 – 1,320	< 18,000 Shadow / Scan Eagle
L 3	< 250	1,321 – 12,500	< 18,000 Hunter / Predator
L 4	> 250	< 12,500	< 18,000 Killer Bee
L 5	UNL	> 12,500	> 18,000 Global Hawk

# Proposed DoD UAS Categories

<u>TYPICAL USERS</u>	<u>JOINT CATEGORY</u>	<u>OPERATING ALTITUDE</u>	<u>LAUNCH METHOD</u>
TACTICAL SOF/Small Unit	T 1	<1000	Hand Launched Raven
TACTICAL Batt / Brigade	T 2	< 5,000	Mobile Launched Scan Eagle
TACTICAL Division / Corps	T 3	< 10,000	Conventional / VTOL Hunter
OPERATIONAL JTF	O	< 40,000	Conventional Runway Predator
STRATEGIC National	S	> 40,000	Conventional Runway Global Hawk
AIRSHIP National	A	UNLIMITED	VTOL JLENS



# DoD / NAS UAS Categories



Joint UAS Categories		Domestic Use UAS Levels
Tactical 1		L 0
		L 1
Tactical II		L 2
Tactical III Operational Strategic	Airships	L 3
		L 4
		L 5

# ***JUAS COE Priorities***



- ✍ **Joint CONOPS Development**
  
- ✍ **Airspace**
  - ✍ **Access / Integration into NAS**
  
- ✍ **Spectrum Management / Bandwidth Availability**
  
- ✍ **C2 / Interoperability**
  
- ✍ **Other**
  - ✍ **Joint DoD UAS Operator Training Standards**
  - ✍ **Weaponization of UAS**



# Questions?