



# UN Aviation: Some Basics

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*16 June 2011*

# UN Aviation Types

## Humanitarian Air Service

- World Food Program (WFP) coordination
- Non-peacekeeping emergencies but sometimes in conjunction with peacekeeping

## Peacekeeping

- **Department of Field Support (DFS)**  
in cooperation with the  
**Department of Peacekeeping Operations (DPKO)**
  - Commercial (contracts)
  - National military contingents (letters of assist)

# Humanitarian Air Operations

## “Humanitarian Air Service” (UNHAS)

- Managed by World Food Program through inter-agency “UN Joint Logistics Centre, “Rome, Italy
- Commercial assets by lease, as needed
- Avoids military assets:  
*“should be requested only where there is no comparable civilian alternative and only the use of military assets can meet a critical humanitarian need”*

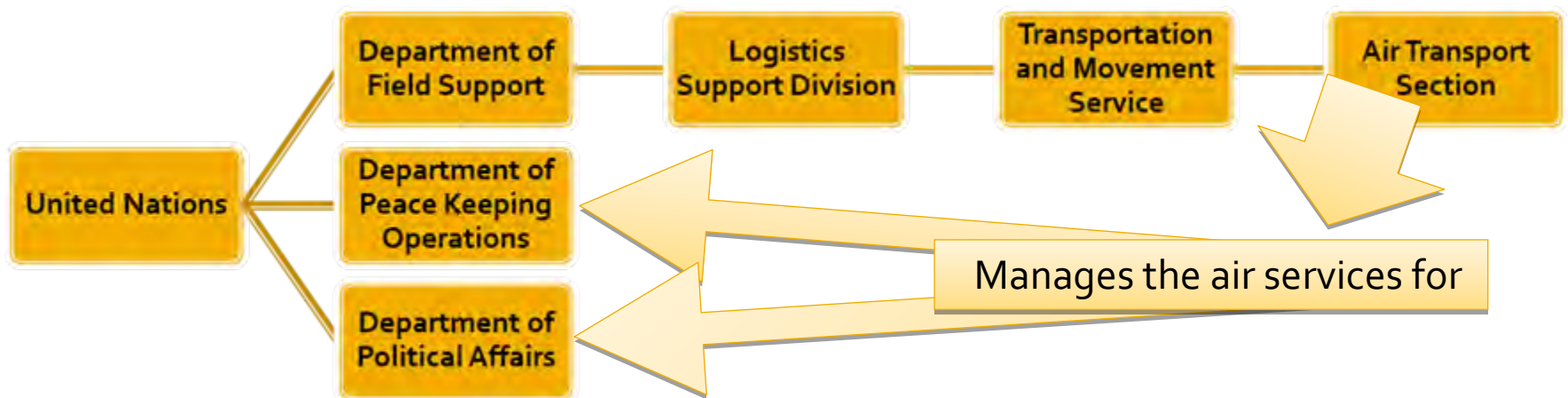


# DFS Air Operations

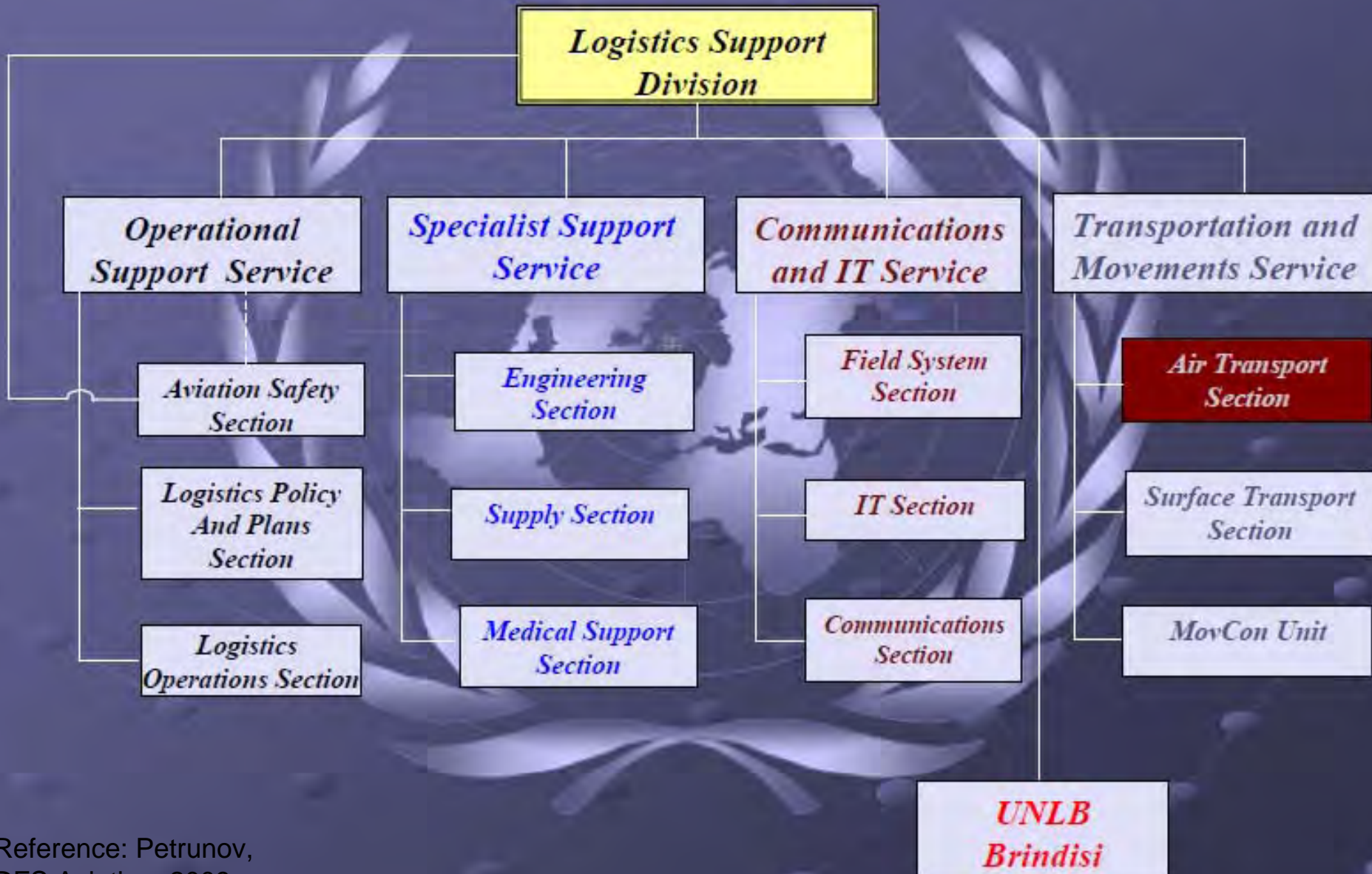
## Air Transport Section

- For UN peacekeeping (and peacebuilding) missions

*"The mission of the DFS aviation programme is to provide uninterrupted aviation services that are safe, effective and reliable anywhere and anytime."*



# *The Department of Field Support*



Reference: Petrunov,  
DFS Aviation, 2009

Subsequently, ATS reports directly to DFS Assistant-Secretary-General (LSD)



# Air Assets in UN Peacekeeping Missions

Current as of February 2009



**247 Aircraft ( 185 Rotary Wing, 62 Fixed Wing ). Helicopters fleet represents about 75% of Peacekeeping long term lease fleet.**

Reference: Petrunov,  
DFS Aviation

# MISSIONS ADMINISTERED BY THE DEPARTMENT OF PEACEKEEPING OPERATIONS



\* political mission

# DFS Air Transport Section

- Strategic aviation planning
- Policy, guidelines, procedures, standards, quality assurance
- Fleet management, technical assessment and inspection
- Training
- Budget analysis and development



# DFS Air Ops

- Approximate cost: **\$1 billion** per year
- Nearly **300 aircraft** on long-term charter
- Some **120,000 flight hours** per year
- UN **owns no aircraft**
- Roughly **550 support staff** deployed
- **725,000 passengers** per year
- **141,000 tons** of cargo
- **Second largest cost in PKO**, after personnel

2009 audit found DFS *“runs an aviation operation quite unlike any other in the world [...] subject to significant variables that impact staffing, management, and operations”*

# Commercial Aircraft

Air Transport managed over 70 commercial charter contracts (2006), supporting:

- Transportation
  - Troop rotations
  - Logistics
  - VIP transport
- Observation & monitoring
- Aero-medical evacuation
- Command and control
- Search and rescue



UNSG Annan (left) arrives in N'djamena, Chad, for refuelling of his aircraft; greeted by Chadian PM Moussa Faki Mahamat

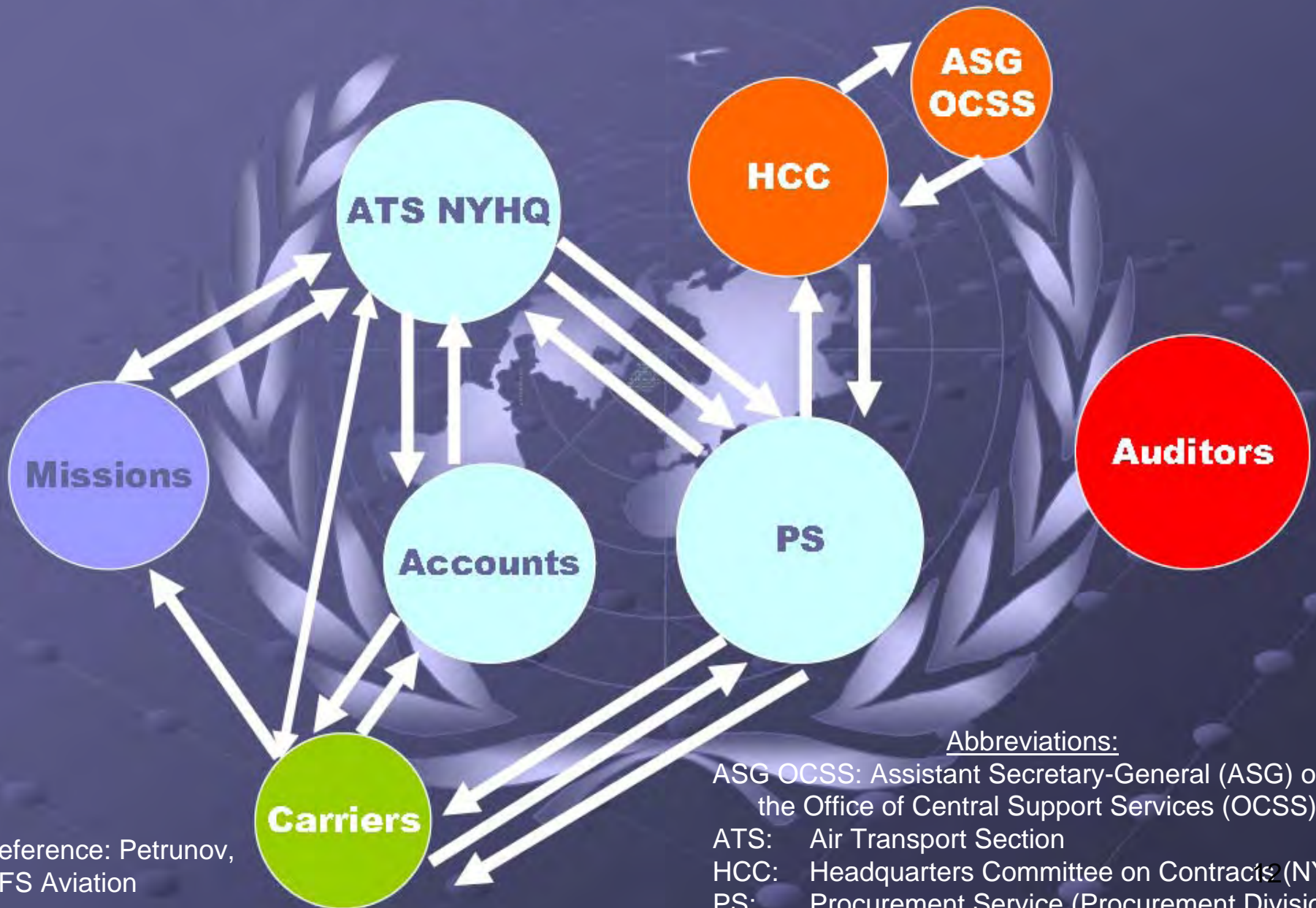


Canadian civilian helicopter, provided first to African Union Mission in Sudan (AMIS), flies wounded UNAMID personnel to treatment centre

Cargo airplane containing equipment and vehicles for the Jordanian contingent of the United Nations Operation in Côte d'Ivoire (UNOCI) at Air Force Base in Abidjan, Côte d'Ivoire



# DFS Aircraft Procurement Process



## Abbreviations:

ASG OCSS: Assistant Secretary-General (ASG) of the Office of Central Support Services (OCSS)

ATS: Air Transport Section

HCC: Headquarters Committee on Contracts (NY)

PS: Procurement Service (Procurement Division)



# Military Aircraft

- Deterrence
- Air cover and close air support
  - Congo 1961-63: air strikes and air-to-air combat
- Troop insertion and extraction
- Armed patrols, reconnaissance
- Armed escorts and response
- Resupply and air drops under hostile conditions
- Logistics
- Casualty evacuation (Casivac)

Over 20 military letters of assist from 11 troop contributing nations (2006)  
for aircraft

Uses Contingent Owned Equipment (COE) with Self-Sustainment (SS) for  
personnel

# UN Challenges: Audit Findings

*"[A]n aviation operation quite unlike any other in the world"*

- Highly dispersed theatres of operation in difficult environments, often with limited or no local support
- Significant number of deployed aircraft that can *change quickly* based on mandate evolution & availability from contributing countries
- Wide range of aircraft origins, variable regulatory regimes in host countries & contracted aircraft operators

# *Runway Challenges*



# Challenges (cont`d)

- Lack of a formal integrated peacekeeping aviation strategy
- Management framework required to effectively manage air operations missing
- Need to increase aircraft utilization, including extending strategic relationship with the *Humanitarian Air Service*
- Air charter acquisition strategy needs development along with procurement procedures



# Military Helicopters Deployed by Country and Mission

MISSION	MINUSTAH (8)	MONUSCO (10+4+4)	ONUCI (3+6 IMC)	UNAMID (5)	UNFICYP (3)	UNIFIL (8)	UNMIL (8+2) + 6 IMC	UNMIS (16)	Total
<b>TCC</b>									
Argentina	2				3				5
Bangladesh		6	3						9
Chile	4								4
Ethiopia				5 armed					5
Ghana			3						3
India		4 obs + 4 armed							8
<i>Italy</i>						4			4
Pakistan								6	6
Russia								8	8
South Africa		2							2
<i>Spain</i>						2			2
Ukraine			2+3 armed				6		11
Uruguay		2							2

**53 Mil Utility Heli + 4 obs + 12 Attack Heli (69 tot.)**

# MILITARY HELICOPTERS IN PKOs

West Africa:

**MINUSTAH**

FR : 10  
Dep: 6  
Gap: 4

**UNOCI**

FR: 6 + (5 IMC)  
Dep : 6 + (5 IMC)  
Gap: (3 IMC)

**UNMIL**

FR: 11  
Dep : 11 – (5 IMC)  
Gap: 0 – (5 IMC)



**Total military fleet**  
Force Requirement: 111  
Deployed: 69 (54 in Africa)  
Gap: 42 (32 for Africa)

**UNFICYP**

FR : 3  
Dep: 3  
Gap: 0

**UNIFIL**

FR : 12  
Dep: 6  
Gap: 6

**UNAMID**

FR : 24  
Dep: 5  
Gap: 19

**UNMIS**

FR: 16  
Dep: 14  
Gap: 2

**MONUSCO**

FR : 29  
Dep: 18  
Gap: 11

The boundaries and names shown and the designations used on the map do not imply official endorsement or acceptance by the United Nations.

MONUC AVIATION SECTION  
1999 - 2006 AND BEYOND

*Celebrating 150,000  
hours of safe operations*



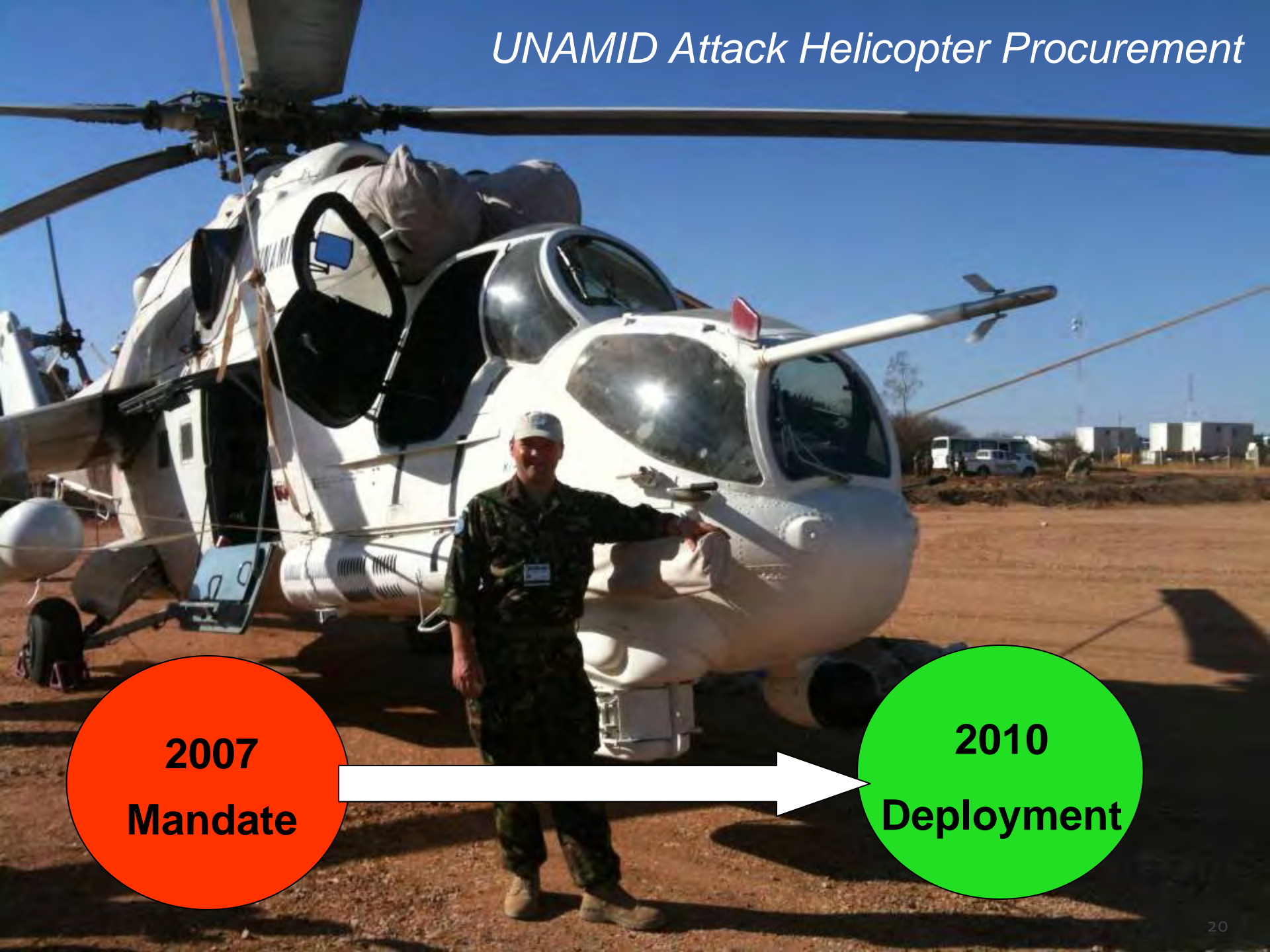
*MONUC Aviation Family*

## MONUC Aviation

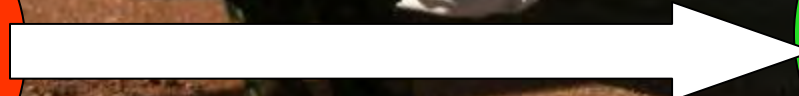
- Over 100 aircraft
- 1,600 personnel
- Helicopters:
  - Lama (Alouette III)
  - to Mi-76
  - MI-35 (Mi-24/25)
- Runway rehab.
- \$200 million of 1.1 billion MONUC budget
- 20,000 personnel flown annually
- 175,000 hours with no fatalities
- MONUC, 2006



# *UNAMID Attack Helicopter Procurement*



**2007  
Mandate**

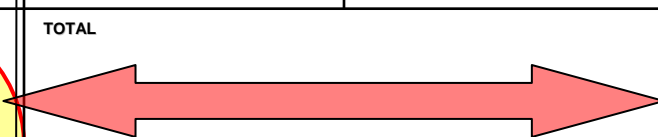


**2010  
Deployment**



# Reimbursement Differences

CIVILIAN HELI (8 Mi-8)			MILITARY HELI (8 Mi-8)		
	Rate	Annual Cost		Rate	Annual Cost
Average Annual guaranteed Cost 80 men	300 000 -350 000 USD/ per 1 helicopter monthly	28 000 000 - 33 600 000USD	COE (approx) cost)*	81 000 USD/ monthly	972 000 USD
			SS (approx cost)*	46 500 USD/ monthly	558 000 USD
			Personnel	200 peacekeepers	2 947 000 USD
			Rotation of unit personnel (200 people, 2 times a year)	350 000 USD/ per rotation	~ 700 000 USD
			Rations and water*	6-12 USD/ 1 soldier daily	~ 438 000 - 876 000 USD
Average Flight hours (33 FIHr/ per 1 helicopter monthly)	<b>1000-1200 USD/hour</b>	3 168 000 – 3 801 600 USD	Average Flight hours (33 FIHr/ per 1 helicopter monthly)	<b>2100 - 2600 USD/hour</b>	6 652 800 - 7 603 200 USD
<b>TOTAL</b>		<b>± 35 Million USD</b>	TOTAL		<b>± 13 Million USD</b>
			+ Additional TCC expenditure		Unit salary back home, cost of preparations for rotation, helicopter rotation



# Examples from UN aviation history



*Congo, 1961*



## **United Nations Peacekeeping Force in Cyprus**

A Danish pilot flies a UNFICYP Gazelle helicopter, November 1990





“Black Hawk Down”

“The Mogadishu Line”:  
US Forces Somalia & UNOSOM II



## **CF Hercules “life-line” in Rwanda**

1994

Two CF Hercules crews braved fire to sustain the UN force and saved the lives of tens of thousands of Rwandans with humanitarian aid



## **UN Interim Force in Lebanon (UNIFIL)**

A helicopter and a ship's crew of UNIFIL prepare to take-off.

2007



## **UNAMID Receives Long-Awaited Helicopters**

2010

The African Union-United Nations Hybrid Operation in Darfur (UNAMID) holds a ceremony in Nyala, Sudan, to celebrate the arrival of five tactical helicopters from the Federal Democratic Republic of Ethiopia. Pictured is one of the long-awaited helicopters.



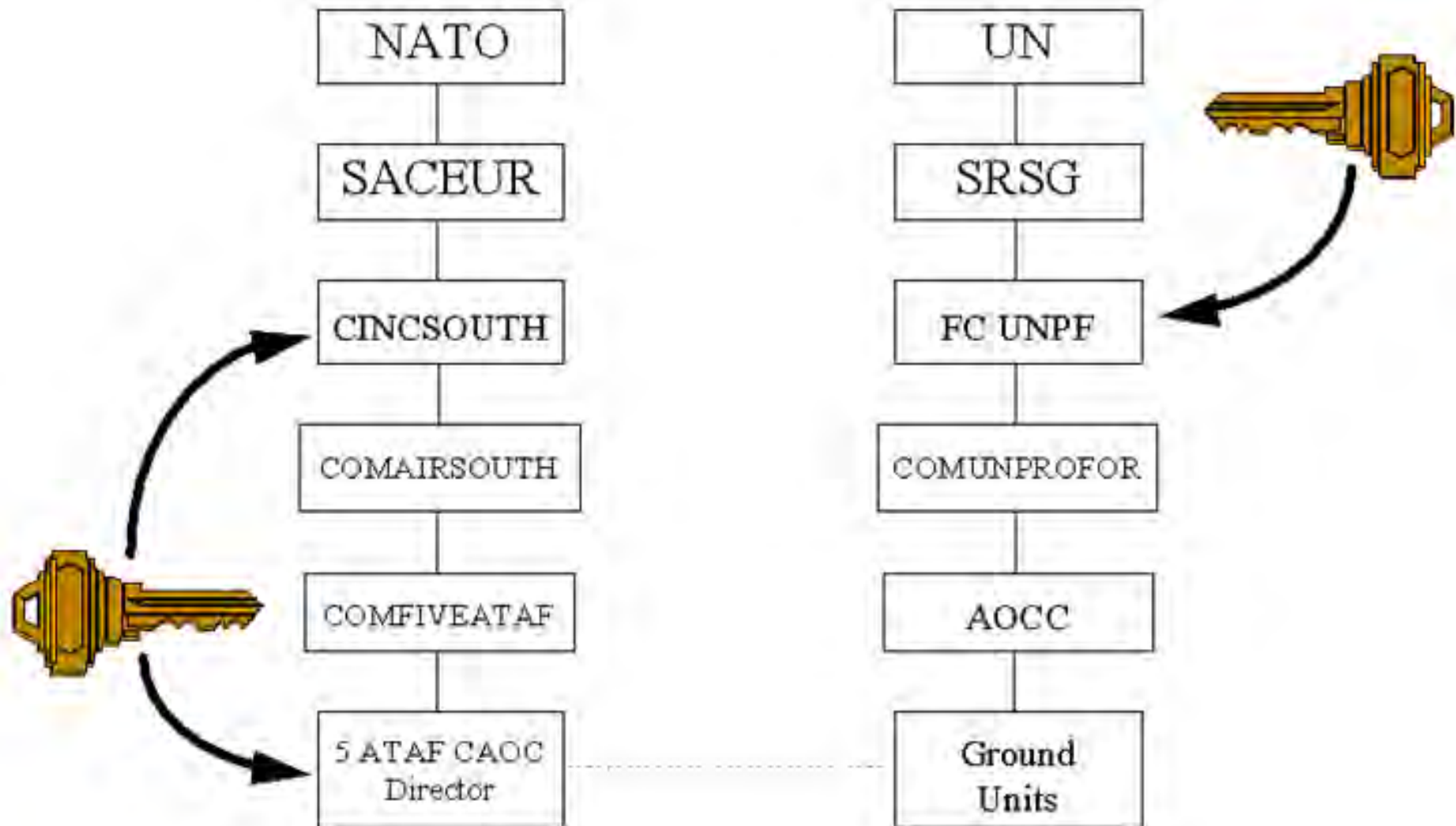
# Cooperating with Partners



## Operation Deny Flight

- Bosnia, Apr'93 to Dec'95
- 100,420 sorties
- Many Challenges

# NATO and UN "Dual Key" C2 Structure



# Aerial Reconnaissance

*Traditional observation was ground based*







## Traditional Tools

The Human Eye ...  
sometimes aided by  
binoculars

Making use of raised towers

...



# Problems of Unaided Monitoring

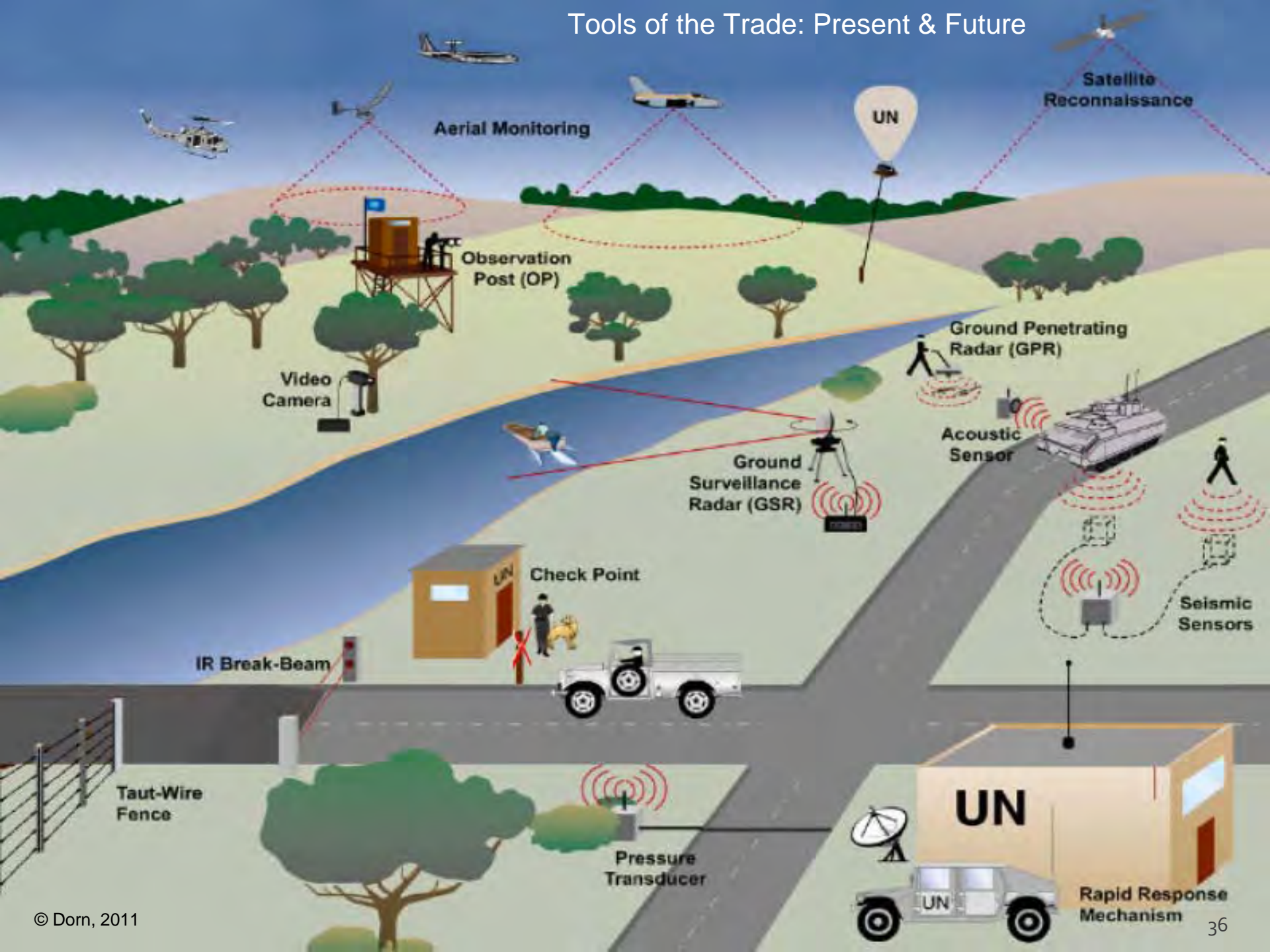
Limited capabilities ...

- over large areas
- at night
- for underground detection
- in remote/difficult terrain
- information recording, analyzing, sharing and storage

# Benefits of Monitoring Technologies

- Increases *range* and *accuracy* of observation
- Permits *continuous* monitoring
- Increases *effectiveness* (including *cost-effectiveness* in some cases)
- Decreases *intrusiveness*
- Enhances *safety* of staff in field
- Provides *recordings/evidence*

# Tools of the Trade: Present & Future





# Heliborne Observation in Cyprus



# Forward-looking Infrared (FLIR) pod



# Detecting Violations: Illegal farming in former minefield





# Non-announced military briefing at new bunker



# Congo

MONUC/MONUSCO:  
United Nations (Stabilization) Mission in the  
Democratic Republic of the Congo





# MI-35 Attack Helicopter



UN Photo, C. Herwig

MI-35 in MONUC, No.104 Helicopter Unit of the Indian Air Force, 21 January 2006;

URL: [http://www.bharat-rakshak.com/IAF/Images/Special/Features/Congo/Photo\\_2006123102447578.jpg.html](http://www.bharat-rakshak.com/IAF/Images/Special/Features/Congo/Photo_2006123102447578.jpg.html)

UN Helicopter on Aerial Patrol:

MI-24 [export version: MI-35] helicopter of the



UN

GROUND

FOOTBOARD

AGGREGATE WTB - 20

AIR CONDITIONING

PIST-STATIC TUBE

# Distributing Leaflets



## **MONUC Launches Disarmament and Repatriation Information Campaign**

Members of the military component of the United Nations Mission in the Democratic Republic of Congo (MONUC) distribute information leaflets on the disarmament, demobilization, rehabilitation, reintegration and repatriation programme throughout the stronghold areas of the Forces Démocratiques de Libération du Rwanda.

17 July 2008, South Kivu, Democratic Republic of the Congo  
UN Photo/Marie Frechon, Photo # 202011

# Haiti – Aerial Recce Essential

United Nations Stabilization Mission in  
Haiti (MINUSTAH)

2007

2009

2010





3,0 m

2,8m deep

4,8 m



**(False) Surrender Indicated**

MINUSTAH operation against gang leader Evens Jeune, February 2007



Real-time transmission from military helicopter to airfield and mission HQ



Uruguayan CASA-212 Aviocar for observation, transport, medevac  
in MINUSTAH (Dorn in khaki pants)

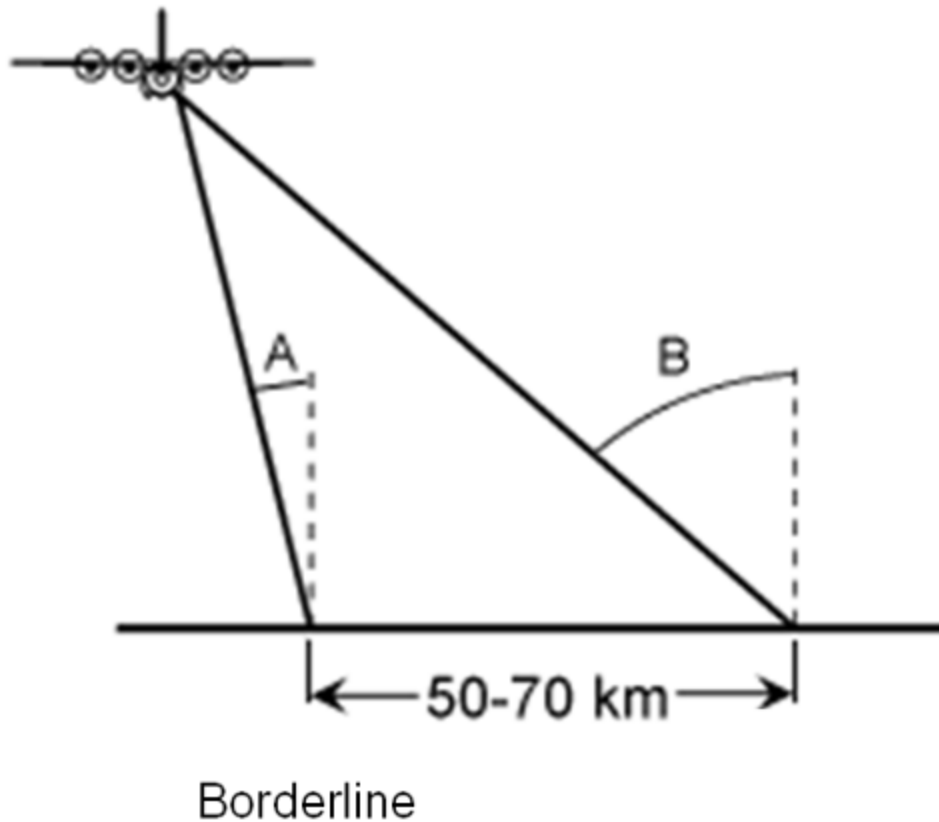


# Observation from CASA-212





# Aerial Advantage: Oblique Viewing Across Borderlines



**Slant angles A & B**

# UAVs in Peace Ops ? Lots of Options



Israeli



Australian



Japanese



Canadian

American



Hand launched



# Conclusion

# Assessment - Negative

- Chronic shortage of military air assets in UN PKO
- Commitment gap of Western Nations
  - Exception: Lebanon
- Limited/obsolete capabilities
- Insufficient interoperability
- Command and Control (C2) problems
- Reimbursement issues and complaints
- Limited outreach to other strategic partners (e.g., NATO)
- Slow deployment/employment
- High risk aversion
- Little or no collateral damage permitted
- Lack of military air operations doctrine, SOPs
- Limited military staff capacity in UN HQ New York

# Assessment - Positive

- Large “fleet” of almost 250 aircraft
  - Larger than ever (5-fold increase 2000 to 2010)
- Improved safety record since 2000
- Robust deployments (Mi-35) in Congo, Liberia, Côte-d'Ivoire, Darfur
- Increased use of night-flying
  - Still rare and restricted requiring FLIR & NVG
- Break-throughs in aerial intelligence (ISR)
  - Digital age
  - Initial attempts to deploy UAVs



# Assessment – Positive (cont`d)

- Cooperation from over 100 countries
  - Many constraints to overcome
  - Enhancing international norms
  - Huge number of constraints
- An impressive accomplishment!

*To be continued ...*



## Credits:

OIOS, UN Office of Internal Oversight Services (2009). "Management of peacekeeping air operations". *Audit Report AP2008/600/03*.

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<http://usun.state.gov/documents/organization/141055.pdf> (accessed 8 June 2011).

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Pictures from UN photo library ("free reproducible") or Dorn personal collection, unless otherwise indicated.

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