AIR FORCE SPECIAL OPERATIONS COMMAND
Quiet Professionals

Concepts for Today
Visions for Tomorrow

Lt Gen Wooley
Commander, AFSOC
AFSOC--Specialized Airpower

America’s Specialized Airpower
Air Component to Special Operations
Combat Search and Rescue
AFSOC Weapons Systems

C-130 Operations (8 Variants)
- PSYOP  EC-130E, EC-130J
- Gunship  AC-130H, AC-130U
- Mobility  MC-130E, MC-130H
- Refueling  HC-130N, MC-130P

Helicopter Operations
- CSAR  HH-60G
- SOF  MH-53M

New Platforms
- Predators
- PC-12
- CV-22

Systems Optimized for Night-- Adverse Weather Capable
**Battlefield Airmen**

- Family of Airmen
  - Combat Controllers
  - Combat Weathermen
  - Pararescuemen

- Different customers / Same mission
  - Special Operations Forces
  - Conventional Forces

- Enablers of Air Power
  - Tactically Connects Land/SOF Component with Air Component
Combat Aviation Advisors
Foreign Internal Defense (FID)

6th SOS
Assess
Train
Advise
Assist
Integrate
Our Special Operations forces are the worst nightmare of America's worst enemies...

-President George Bush, June 2004
AC-130H/U Current System

SYSTEMS
- Side-firing weapons
  - 25mm Gatling gun (U model only)
  - 40mm gun
  - 105mm howitzer
- Sophisticated sensors, navigation, and fire control systems
- Extended loiter—air refueling capable
- Operate at night & in degraded visibility

EMPLOYMENT
- Targets: personnel, soft vehicles, small buildings, occasionally armor
- Close Air Support (CAS) and Surgical Strike (Troops in Contact)
- Precise, low yield firepower
- Persistent
- Encompasses entire kill chain process (F2T2EA)
- Excellent Situational Awareness for gunship and ground forces
Gunship Transformation

PSAS

Modified/Upgraded AC-130U
30mm MK44 Bushmaster Cannon
Near-Term

Caliber 30mm
Improved maintainability & lethality for the gunship
Currently being installed on Plus-4,
Delivery of these aircraft in FY06,
install across the rest of AC-130U fleet in FY07

PGU-13 HEI
PGU-15 TP
### 105-mm GUN
- Weight 100 Rounds 4200 lbs
- Recoil Load: ~10,900 lbs
- Gun Recoiling Weight 1,465 lbs
- Muzzle Pressure: 3,560 psi
- Legacy System - Being Phased Out of US Army Inventory
- Little Guided Technology Ongoing
- Lethal Payload Size
- Current System Too Much Gun
- FCS Gun is Separate Loaded

### 120-mm MORTAR
- Weight 100 Rounds 3200 lbs
- Recoil Load: ~5,600 lbs
- Gun Weight 1,315 lbs
- Muzzle Pressure: 1,620 psi
- Leading FCS Fire Support Weapon
- Stryker Brigade Combat Team Fire Support Weapon
- A Lot of Guided Munition Development Work Ongoing
- Lethal Payload Size
- Low Gun Loads
- Lighter Ammunition

---

**Overlay of 3D Blast Pressure Curves on C-130**

105mm 120mm
Enabling Technology
SOPGM

CONCEPT

- Provide Precision Weapon Capability to the AC-130 Gunship
- Examine Technologies relevant to PSAS (Weapons, Battle Management System)
Enabling Technology
Very Small Munition (VSM)

Concept:
Prosecute multiple, simultaneous targets throughout the hemisphere under the aircraft

Undergoing engineering assessment and concept review by AAC/XR & Dahlgren – Candidate weapon for Joint Strike Fighter “point and shoot” concept
Enabling Technology
Off-board Sensors

**CONCEPT**
Facilitates target location, positive ID, and precision engagement beyond range of on-board sensors
Persistent Surface Attack System of Systems
State of the Art (SoA)

AMX Concept

Combat UAV Concept

Source NGG AoA
CSAR-X and CV-22
Near-Term

US 101

HH-47G

CV-22

H-92
“…a future force that is defined less by size and more by mobility and swiftness, one that is easier to deploy and sustain, one that relies more heavily on stealthy precision weaponry, and information technologies”

-President George W. Bush-
Common Operating Picture
Automated Control

Source NGG AoA
Future ISR requirements
“A Family of Systems”

Man–Portable UAV
Small Team Applications
1-4 hour endurance
1-5 lb payload

Micro UAV
Individual Situational Awareness
1 – 3 nm range
Day/fair wx
< 1/2 lb payload

Multi-Mission UAV
Mix of Platforms
Tactical ISR-T
Find-Fix-Finish HVT
Multi-sensor & PSYOPS
Mid – to Long-endurance (8 – 24+ hr)
100 – 2000 lb payload

Air Launched UAV
Off-Board Sensor: Key Enabler for Future Strike Platform
Denied Area Resupply
9 hour endurance
20 lb payload

Layered capabilities support all levels of operations
Precision Resupply

- Autonomous flight with terminal control option
- Transition from Expendable UAV (XUAV) ACTD
- Fills SOF niche in Improved Cargo Airdrop Capability ICD

XUAV Residuals

Transition to scalable team resupply capability
Vision Concepts

- Surgical Weapons
- Discrete Communications
- Compact Systems
It’s a Marathon Fight

SUSTAINABLE

SURVIVABLE

PRECISE