

FRENCH INTERIM MALE UAV PROGRAM

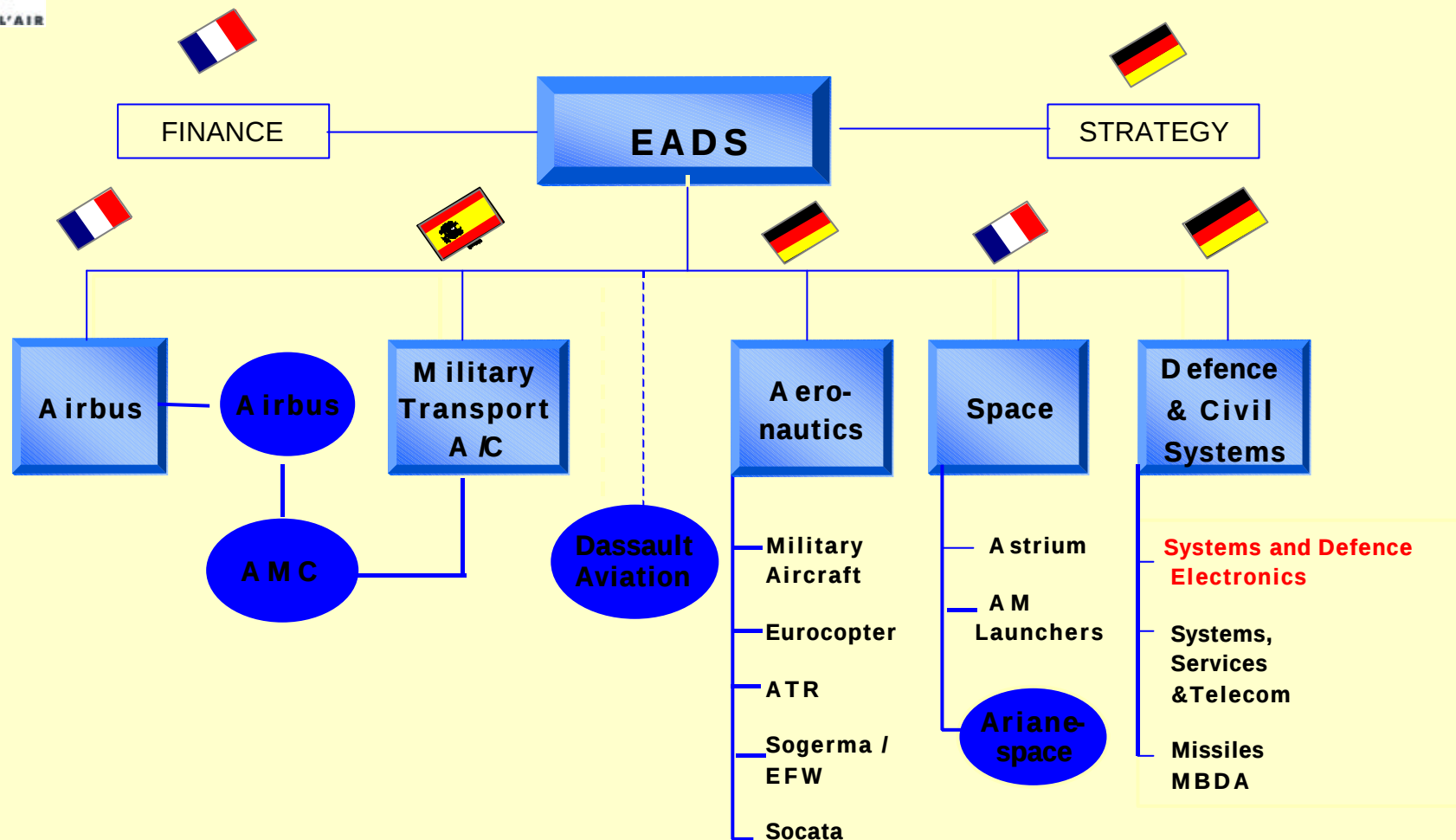


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INDUSTRIAL STATUS

June, 13th 2002

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**EADS S&DE-ISR delivers turnkey solutions
for intelligence surveillance and reconnaissance purposes.**

ISR
Intelligence, Surveillance & Reconnaissance

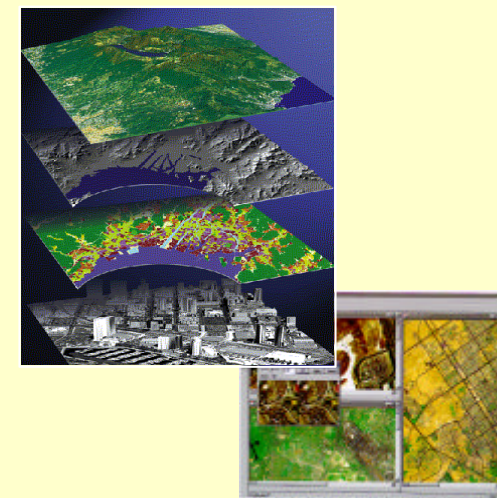
SYSTEMS



**GROUND
SEGMENTS**



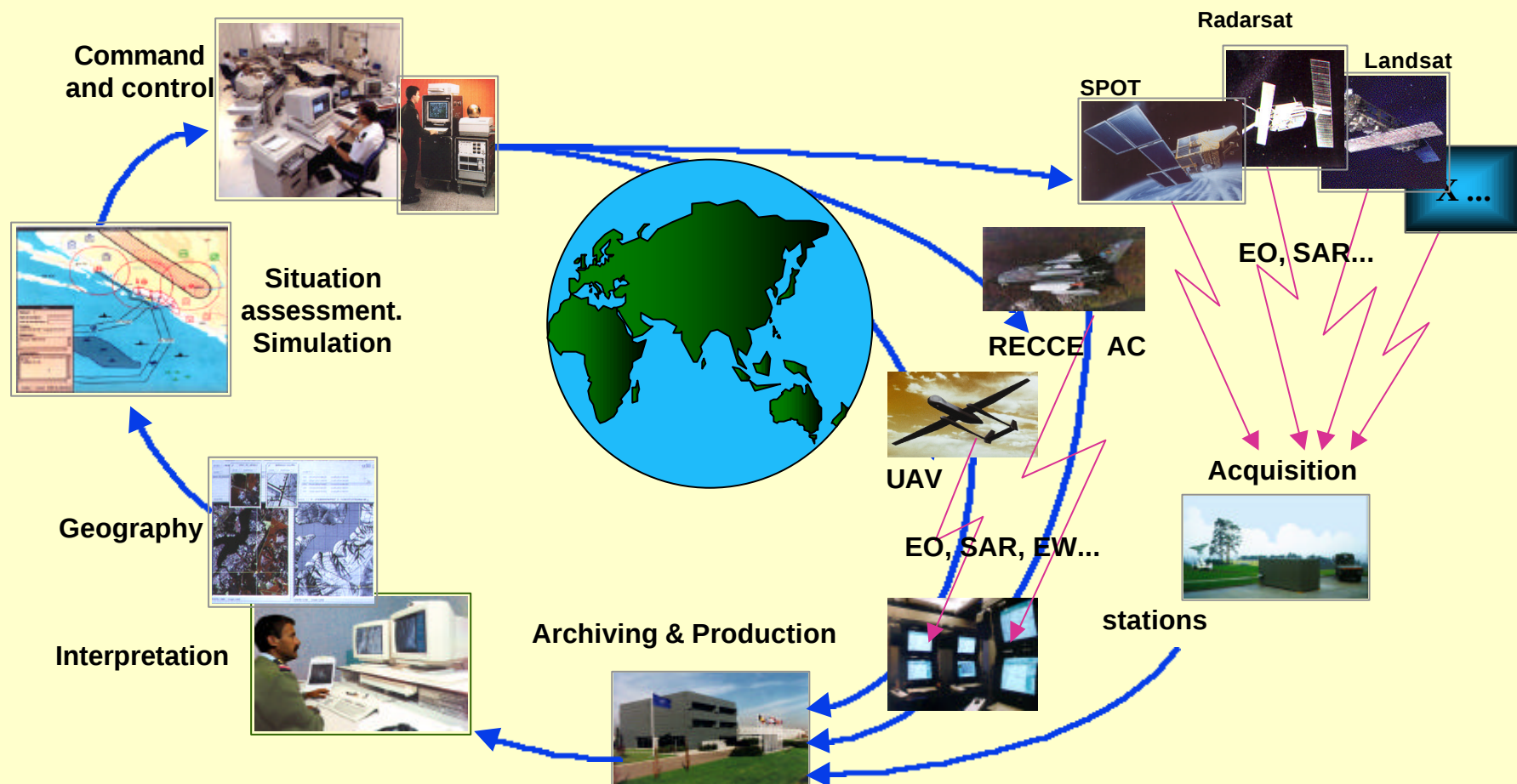
GEOMATICS



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for intelligence surveillance and reconnaissance purposes.**



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**EADS S&DE-ISR delivers turnkey solutions
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OPERATIONAL MISSIONS COVERED

**GROUND SURVEILLANCE
AEW (Airborne Early Warning)
AIRBORNE COMMAND & CONTROL
ELECTRONIC WARFARE
RELAY
SPECIAL OPERATIONS
FLYING TEST BEDS
ACTD (feasibility demonstrations)**

**THE BEST SYSTEM
AT THE RIGHT TIME
DEDICATED TO THE
CUSTOMER & HIS BUDGET**

**MANNED AND/OR UNMANNED AIRBORNE SYSTEMS +
ASSOCIATED GROUND SUB-SYSTEMS (HW,SW)
SENSORS (FROM EADS OR PARTNERS)
FIXED OR MOBILE SATELLITE RECEPTION STATIONS**

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EADS S&DE-ISR delivers the Eagle system to FAF

System capabilities



AUTONOMY : + 24 h, or 18 hours at 1000 km @ 15000 feet with mission payload to achieve :

IMINT Missions

- All Weather Surveillance
- All Weather Reconnaissance
- Battle Management
- Battle Damage Assessment

Support Missions

- Radio Relay
- Target designation / illumination

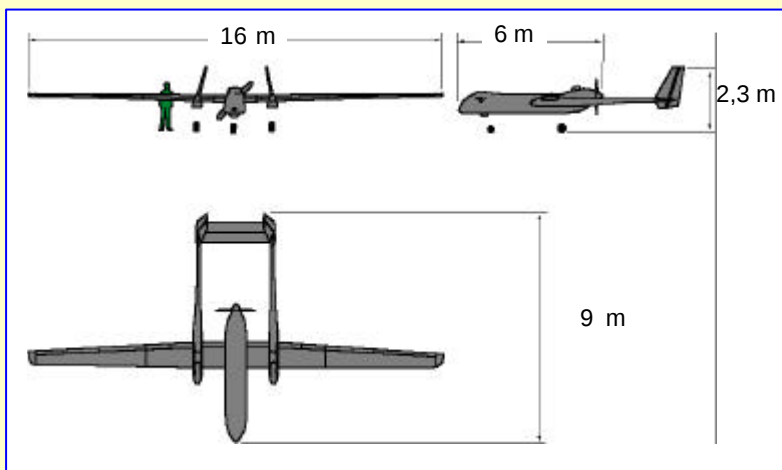
MISSION RELIABILITY : Over 100 000 hours between two uncontrolled losses.

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Air Vehicle characteristics



Max Take-off weight	1150 kg
Max. Payload capacity	250 kg
Max. Fuel capacity	300 kg
Max altitude	32 000 ft
Operational altitude	> 20 000 ft
Time of climb	50 mn (20 kft)
Max speed	125 ktas
Cruise speed at OA	90 ktas
Total mission time	30 h
Loiter capability at 550 NM	18 h
Maximum range (1 h loiter)	1700 nm

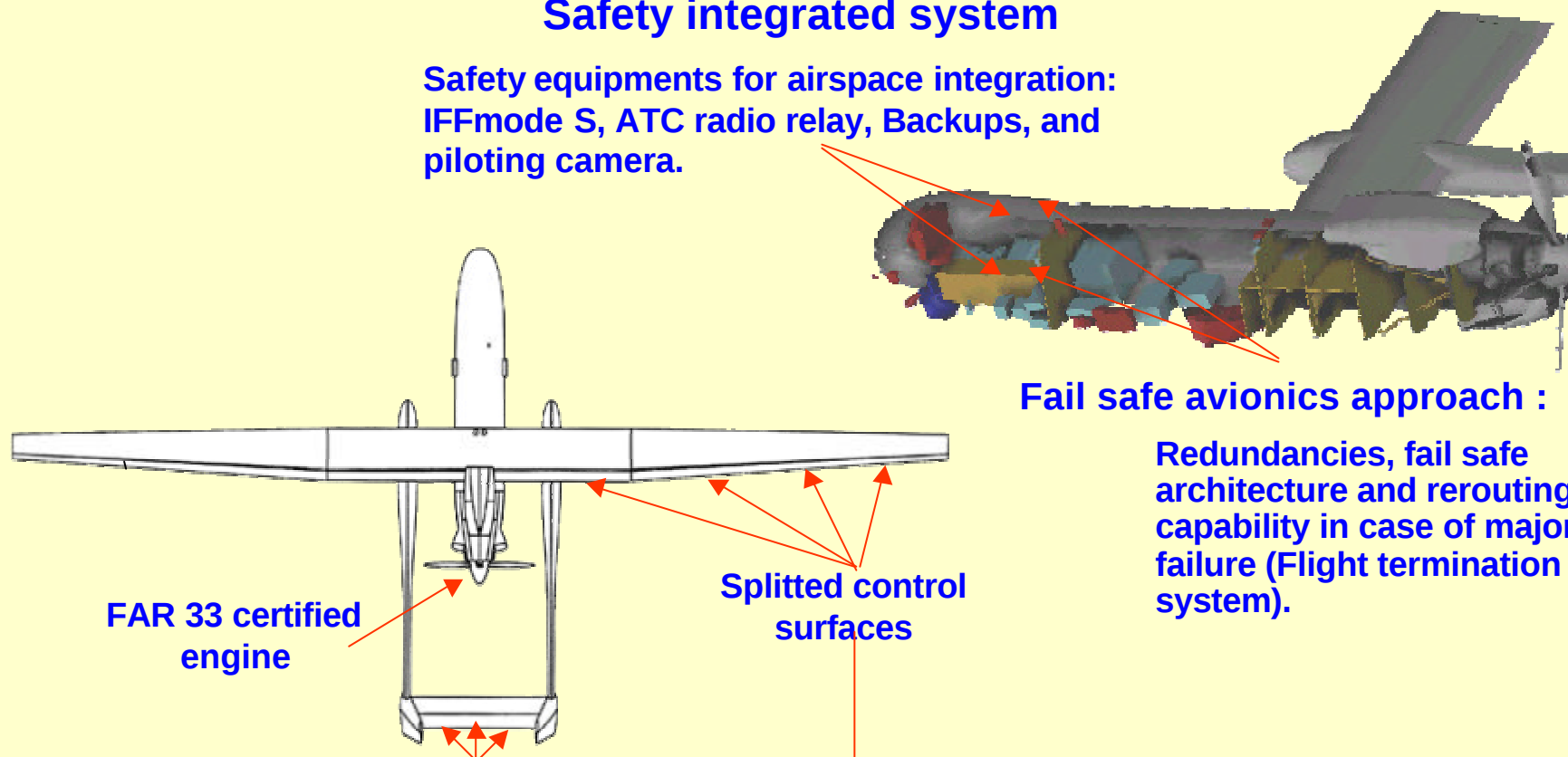
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Safety integrated system

Safety equipments for airspace integration:
IFFmode S, ATC radio relay, Backups, and
piloting camera.



Fail safe avionics approach :

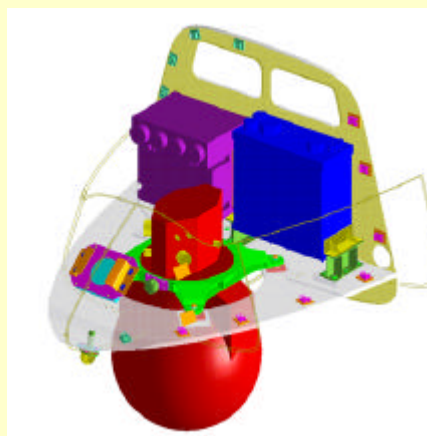
Redundancies, fail safe
architecture and rerouting
capability in case of major
failure (Flight termination
system).

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EO/IR/LR COTS Payload



Turret already in production :

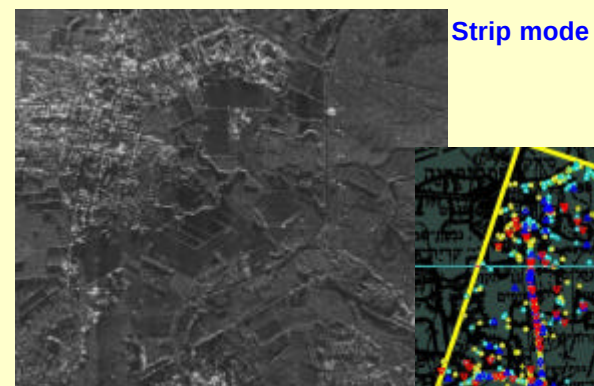
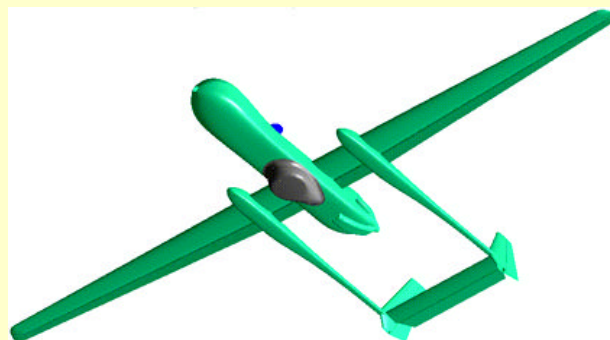
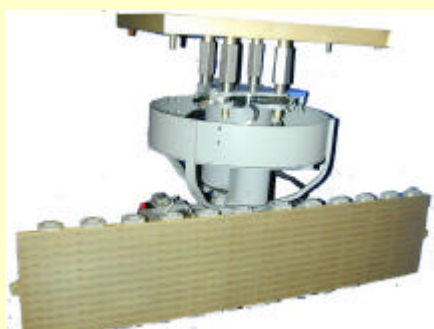
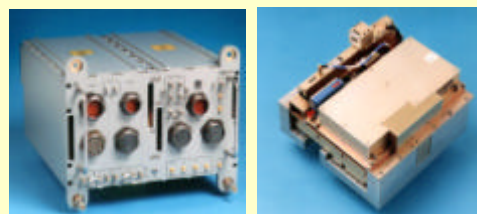
- EO (20-280 and 55-770 mm)
- IR (32, 150 and 600 mm)
- Laser (stabilisation => + 8km)

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SAR COTS Payload



Strip mode



GMTI mode

Spot mode

Range: > 30 Km in adverse conditions
Resolution: up to 30cm
Modes: strip, spot, MTI

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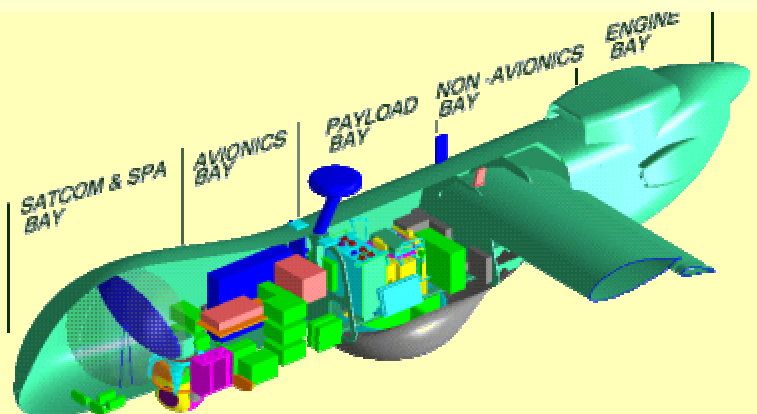


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COTS Avionics + innovative developments



MPCA*
(Modular Central
Processing Assembly)



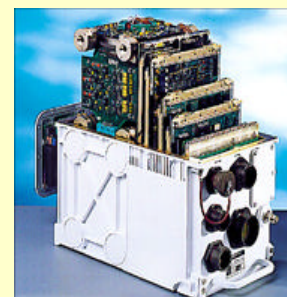
Data Manager*



Radio relay*



Recorder*



INS/GPS*



IFF*

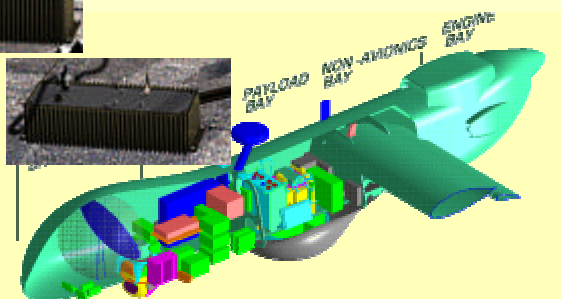
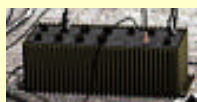
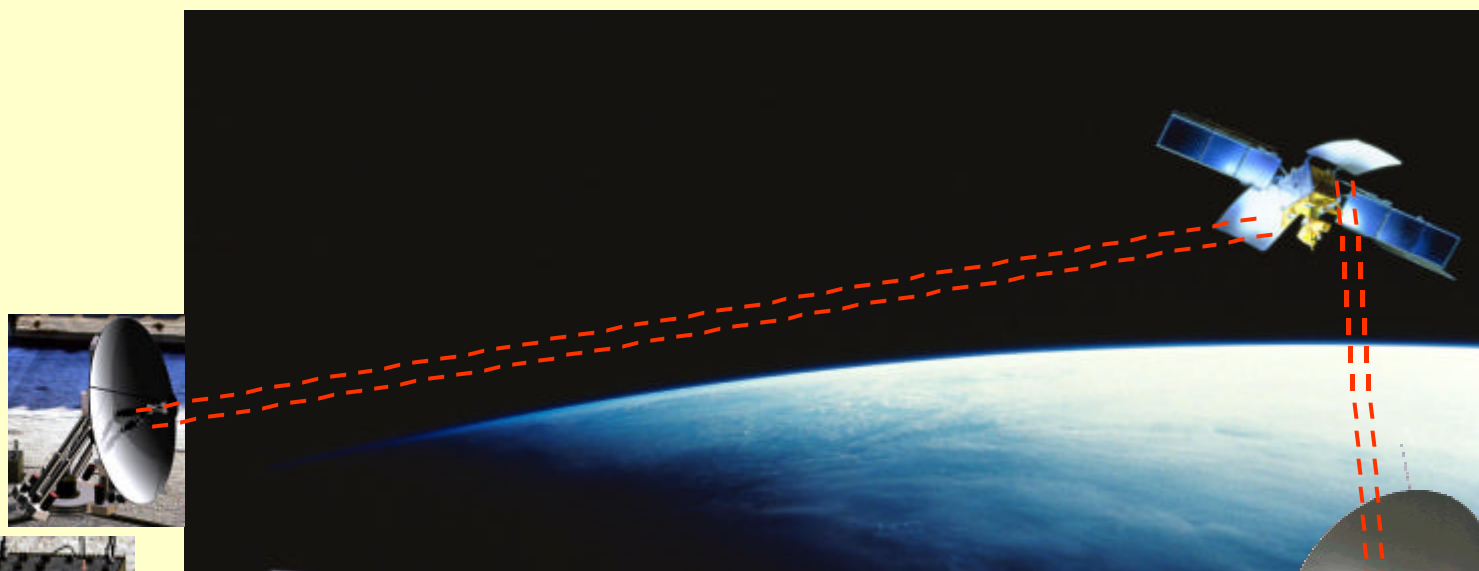
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OTS SATCOMM + innovative developments



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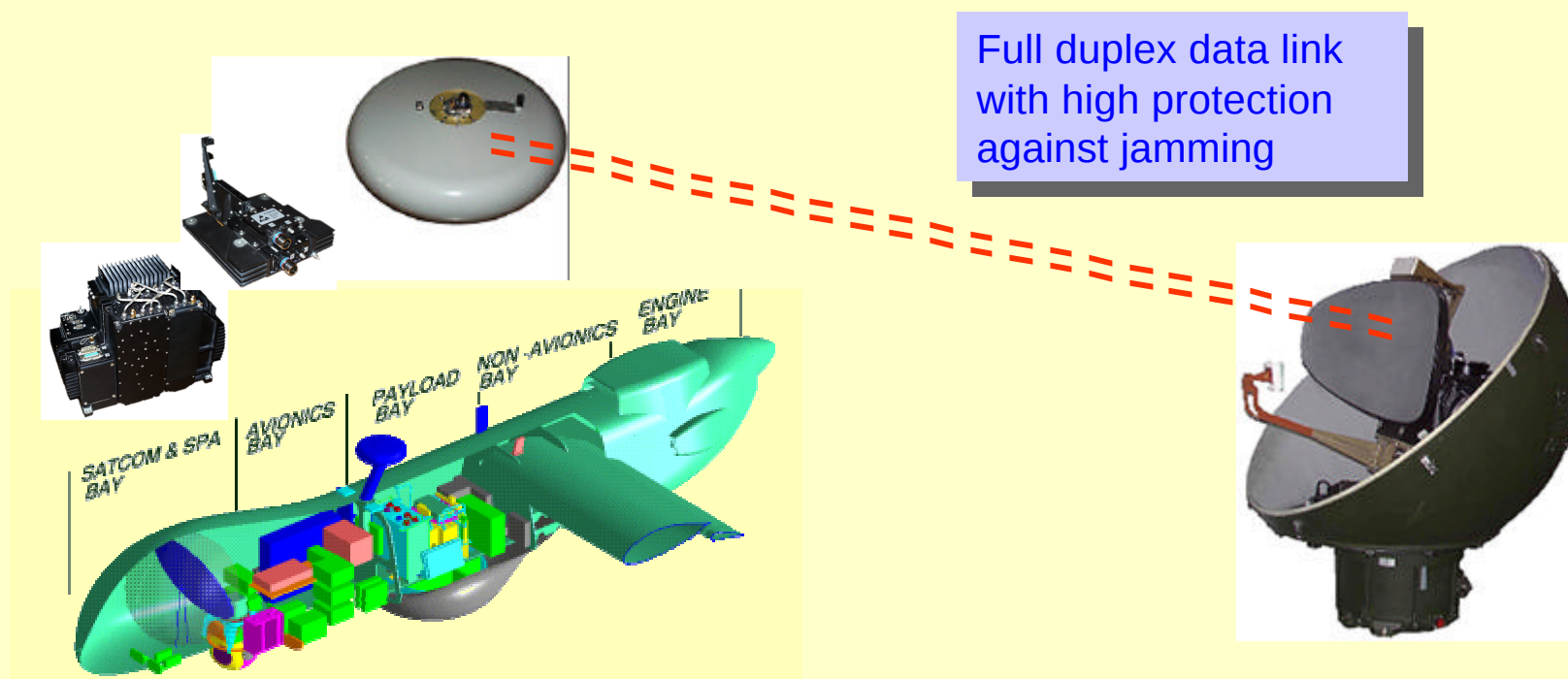


Lcl Monsterleet FAF Staff
 J. Caron EADS S&DE-ISR



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COTS LOS Data-Link



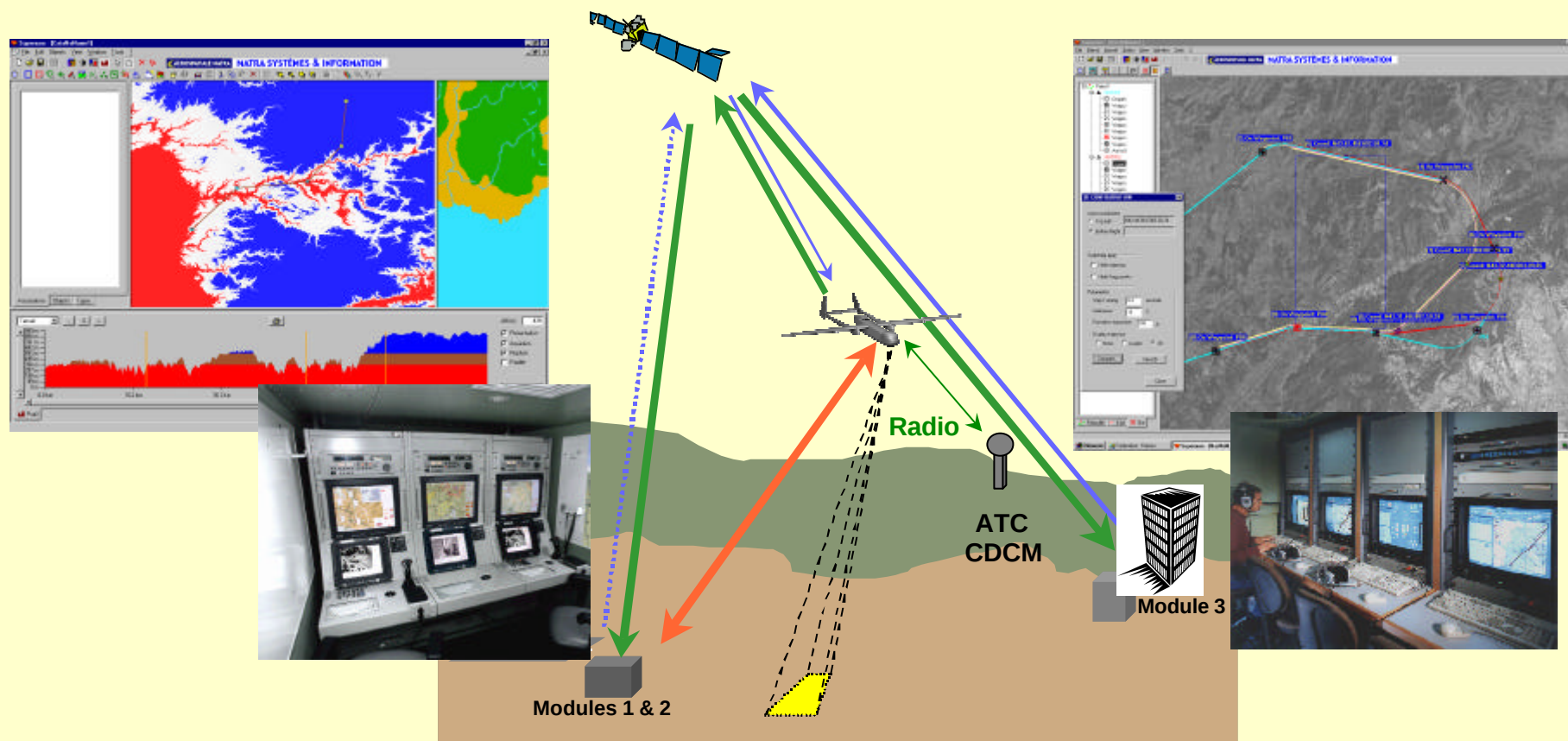
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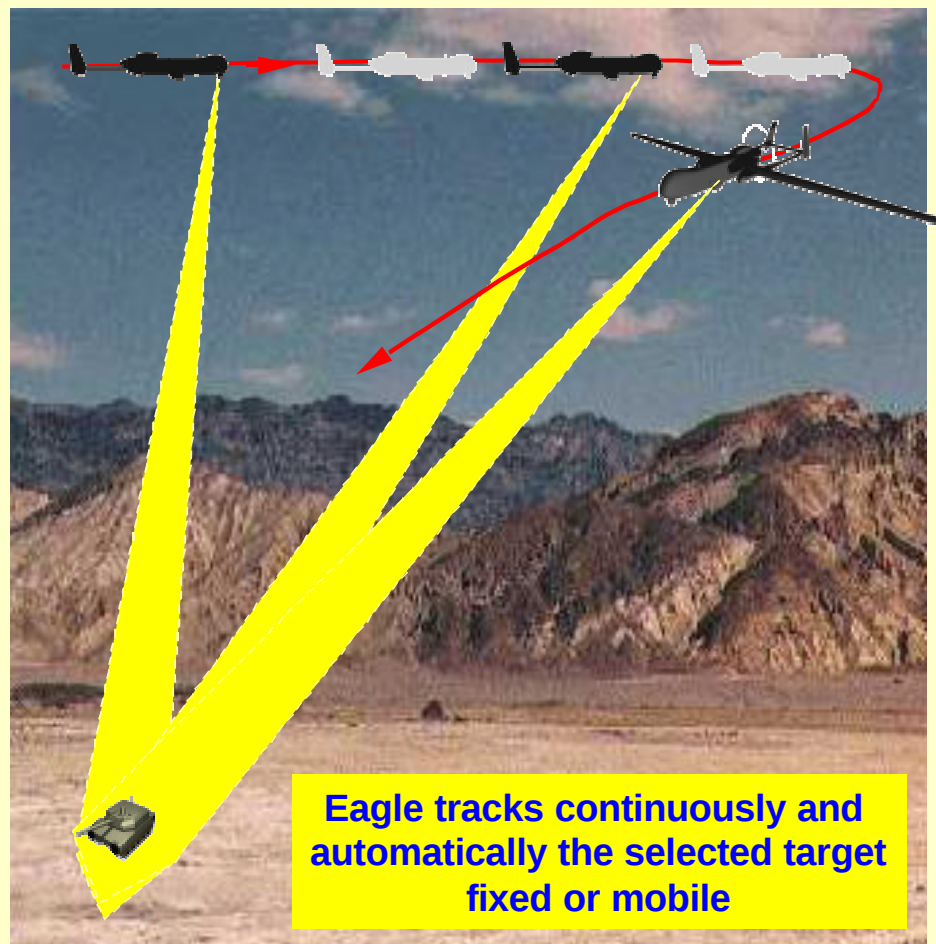
SYSTEM ARCHITECTURE



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Example of smart system function : the “camera guided” mode

- The trajectory of the aerial vehicle is slaved to the EO/IR camera in order to track continuously the selected target
- This mode allows the operator to focus on the monitor by controlling only the EO/IR payload.
- When the selected target is fixed, the aerial vehicle will hold around the target or at a predefined offset from this target.
- When the selected target is on the move, the aerial vehicle will automatically track the moving target either above or at a predefined offset from this target.

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More questions ?

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