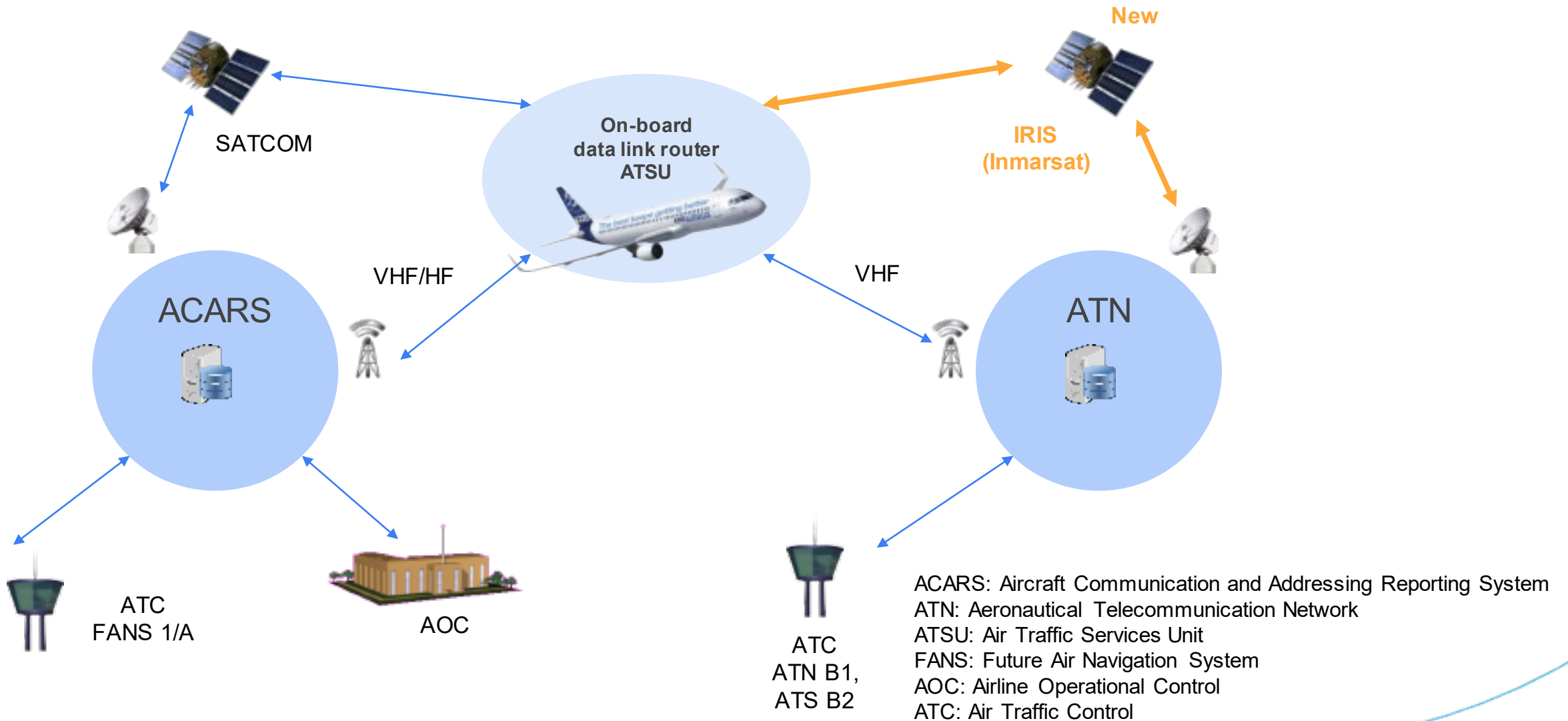


VDL2 / SATCOM COMPLEMENTARITY

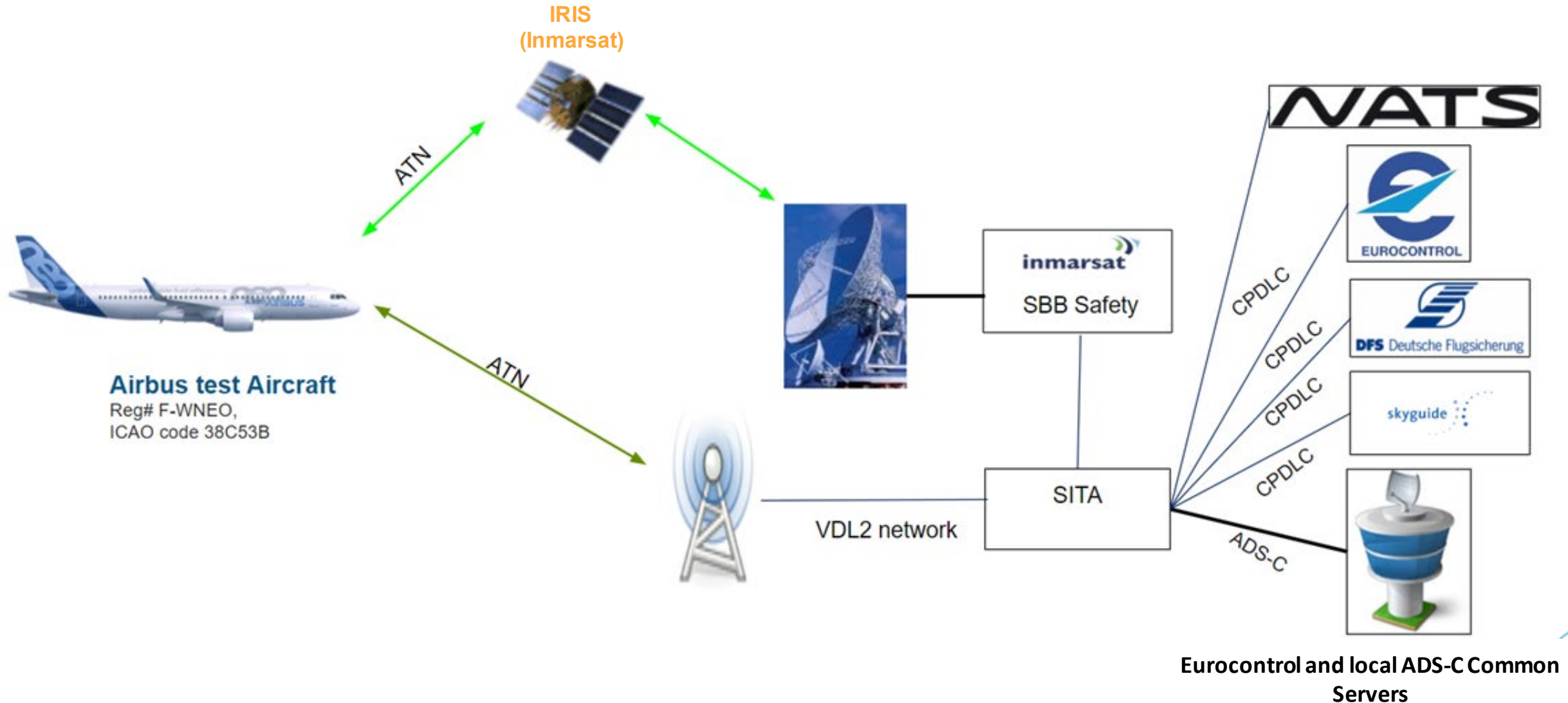
Thierry HARQUIN, AIRBUS
DISSEMINATION EVENT, EUROCONTROL, 21st MARCH 2023

These projects have received funding from the SESAR Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreements No 101017626 and 872320

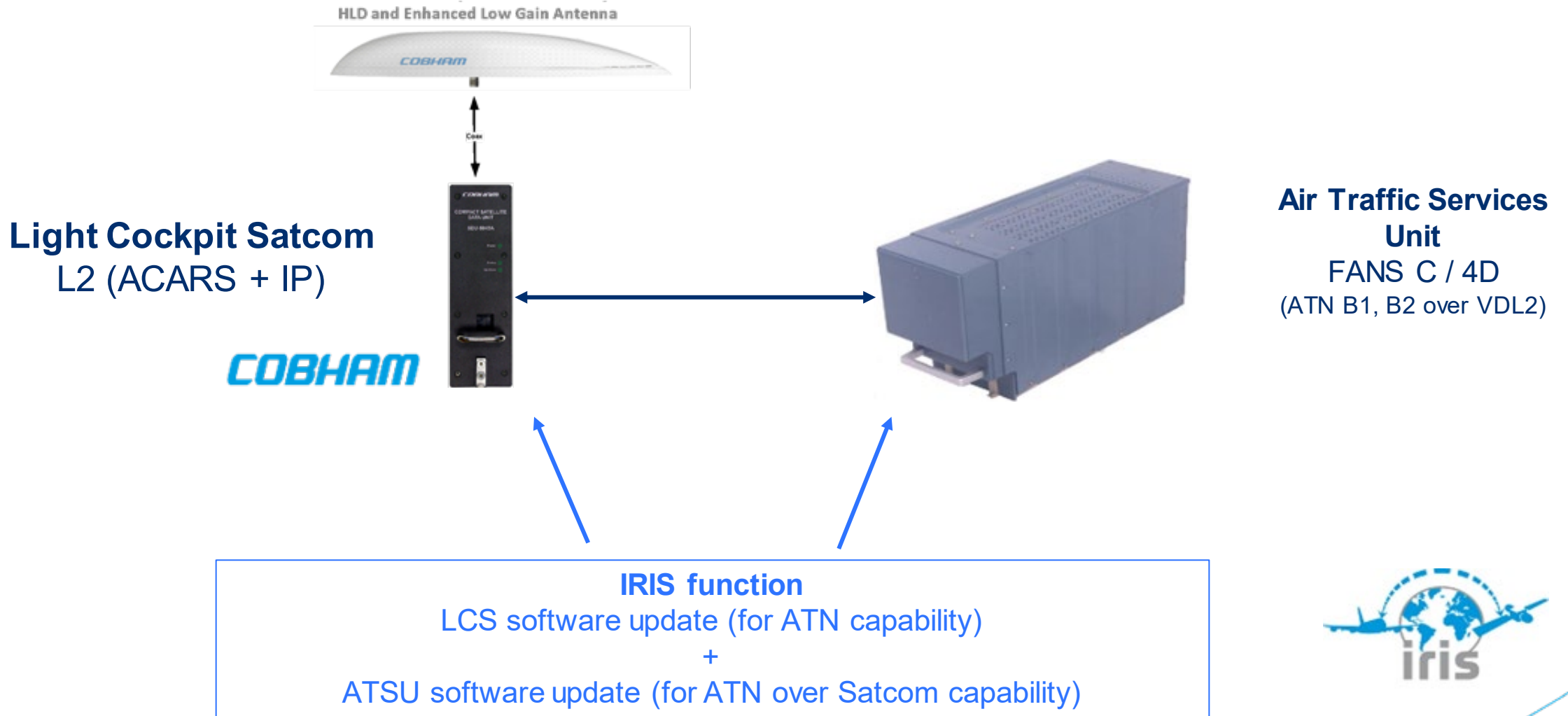
Evolving European datalink architecture



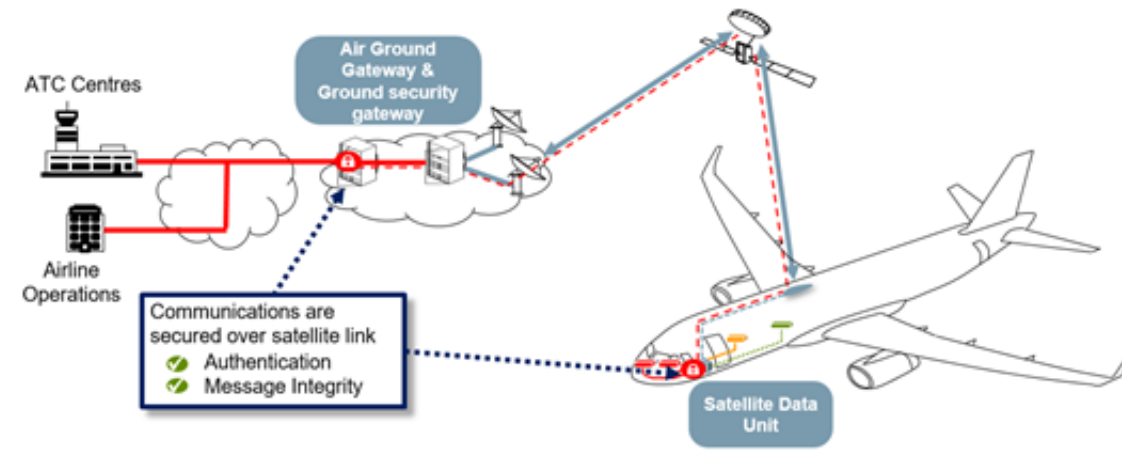
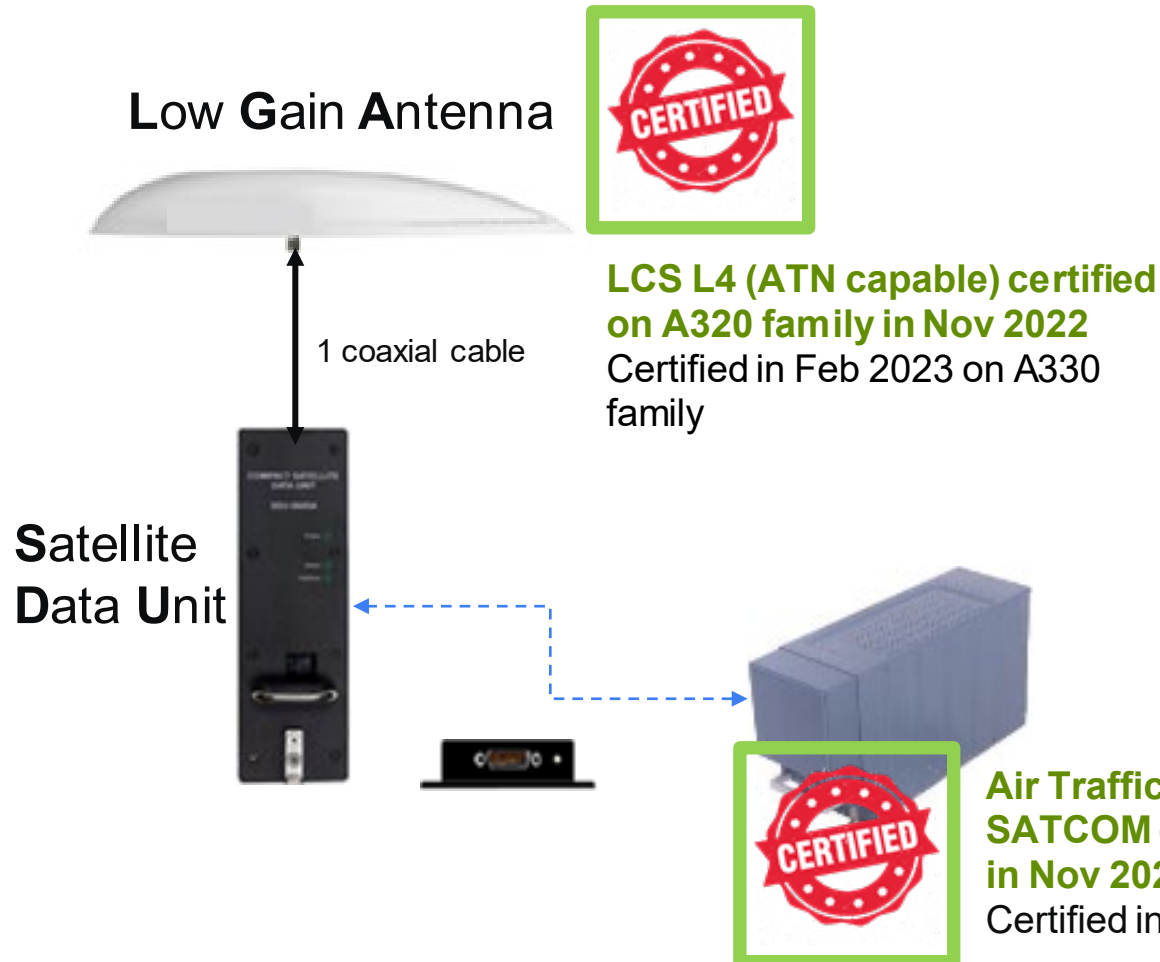
Interoperability architecture tested in PJ38



IRIS-Avionics detailed installation for IRIS function



Airbus A320 family / A330 family architecture



FANS C with ATN over SATCOM capability certified on A320 family in Dec 2022
A330 planned in Q2 2023.



Specific Airbus flight tests connecting to ATN B1 & ATS B2 centers



05 April 2022

ATN Over SATCOM with Airbus ATC Sim Center, NATS and MUAC. Reversion to VDL mode 2 in MUAC Airspace until landing.



20 May 2022

ATN Over SATCOM with Airbus ATC Sim Center, MUAC (in B2), DFS and Skyguide.

Supporting Performance demonstration (over 13 flights)

PBCS requirements (Performance Based Communication and Surveillance)

		ED228A - RCP 130 / A1	
		RCTP Required Communication Technical Performance	
ATC center type	Count of CPDLC	95% (<20sec)	99,9% (<32sec)
ATS ATN B1	299	99,33%	100%
ATS B2	467	100%	100%

		ED228A - RSP 160 / A1	
		RSMP Required Surveillance Monitored Performance	
ATC center type	Count of ADS-C with EPP	95% (<90 sec)	99,9% (<160 sec)
ATS B2	674	98,96%	99,11%


99.9 % objective could not be reached due to ADS-C exchanges during an event of SAT interference.

Conclusion for Airbus activities

- FANS C function “with ATN over SATCOM” was tested with success during the development and the certification flight tests.
- The flight tests demonstrated the good behavior of the airborne systems operating the capacity to perform air/ground ATN exchanges using the SATCOM media/subnetwork for ATN B1 and ATS B2 datalink operations.
- The flight tests have also demonstrated the good behavior of the airborne systems operating in a high-density VDL2 environment, with exposition to Multi-Frequency implementations.

What's next: IRIS project



2021		2022		2023	
	▲ Light Cockpit Satcom entry into service		▲ EASA FANS C over Satcom certification A320 family	▲ IRIS service certification granted to ESSP (May)	
Light Cockpit Satcom (LCS) software L4 : IRIS development					
Data Link Router (ATSU) software 10 : IRIS development					
				 June IRIS pre-commercial flights in EU	

IRIS pre-commercial flights starting in June

Easyjet launch customer (up to 11 aircraft)

ITA just joining IRIS

LCS; Light Cockpit Satcom
 ATSU: Air Traffic Services Unit
 ATN: Aeronautical Telecommunications Network

THANK YOU FOR YOUR ATTENTION

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