

Overview of current Eurocontrol Communications Activities

NASA ICNS Conference
1-3 May 2006, Baltimore

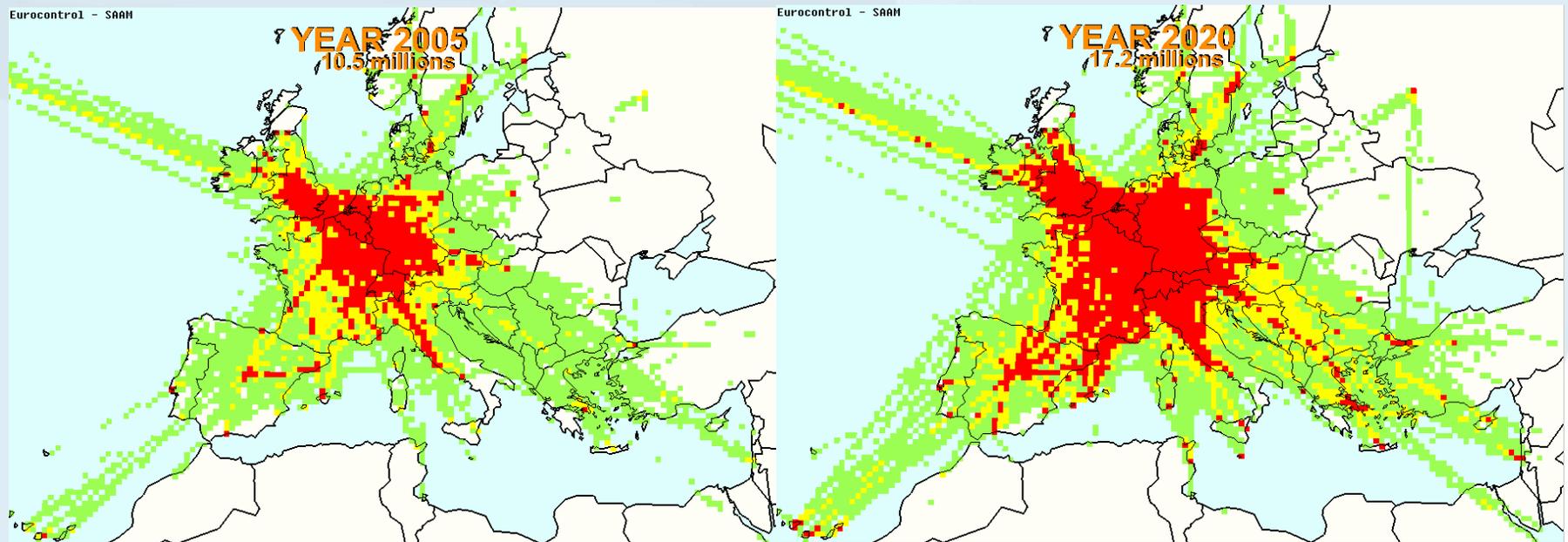
Jacky Pouzet

Communication Domain Manager

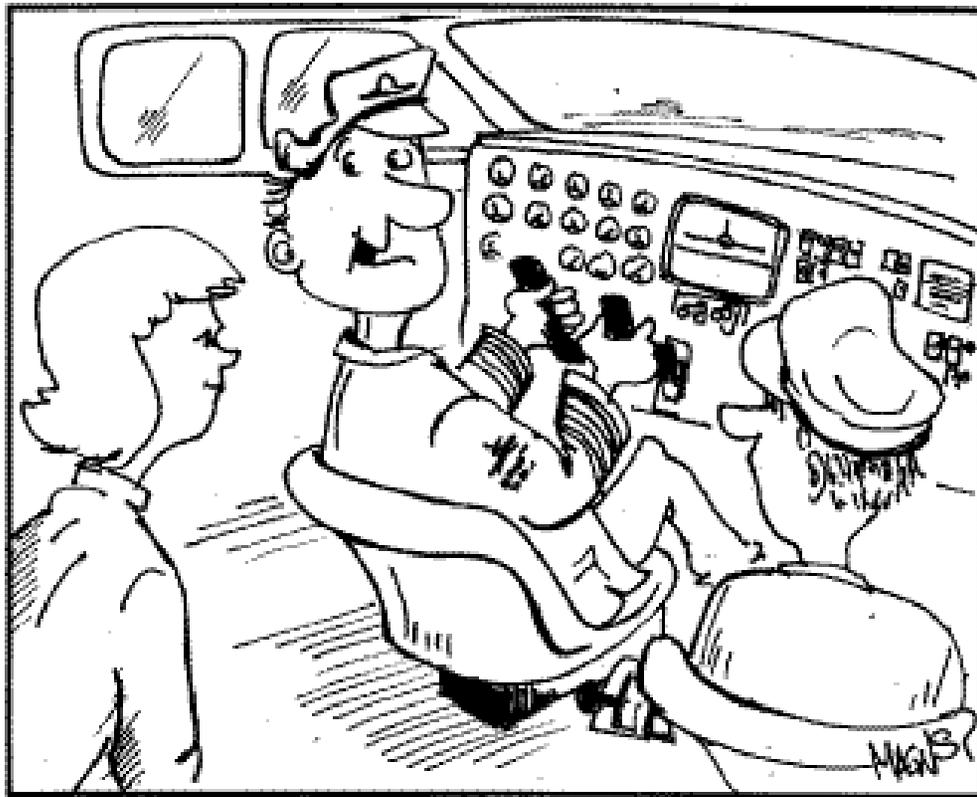
DAS/CSM

Strong Air Traffic Growth in Europe

Air Traffic in Europe will double within the next 20 years (2000 ->2020):



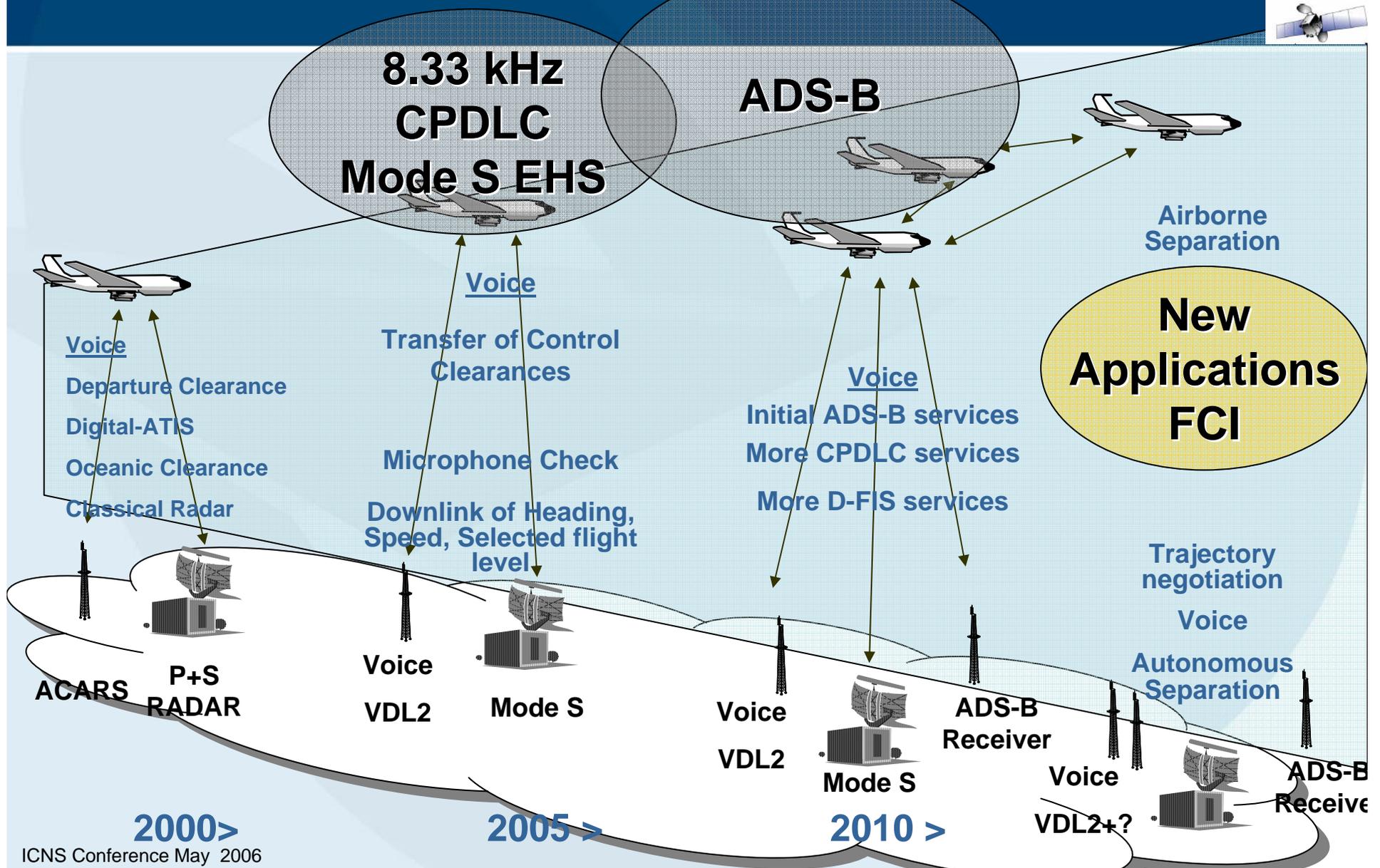
ATC Communications



Ask them to turn off their cell phones! I'm getting a busy signal from the control tower.

ATC Communications
require
Quality Of Service

Strategic Context



Voice Communication

8.33 KHz



8.33 OVERVIEW

FL-245 = 1999



Draft Policy

FL-195 = 15 March 2007

Assessing < FL195

  **2006?**

 **Transport** **2007?**

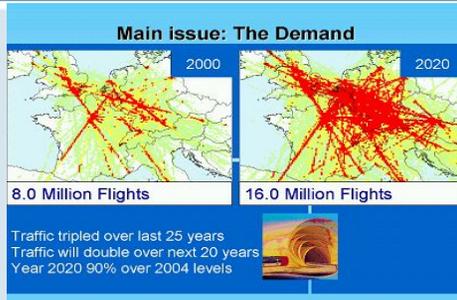
24 AICs



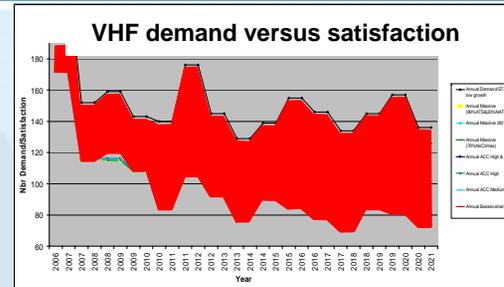
 **Transport**



8.33 CHECKLIST



=



- 8.33 kHz Above FL195 – 15 March 2007
- Eurocontrol assessing below FL195
 - Benefits, costs, safety, alternatives, phasing
 - Operational issues

Negative 8.33



CTR

- Stakeholder participation in decisions essential



2006?

Transport

2007?



CPDLC LINK 2000+



Operational CPDLC in the Cockpit



Overview LINK

- LINK implementation is well underway
- The extra Capacity is required, essential to implement in time
- LINK provides the infrastructure for future datalink enhancements
 - E.g. CASCADE programme
- LINK is seen as a necessary step towards SESAR
- Continued co-ordination with FAA is ongoing
 - Was in place with FAA CPDLC Programme
 - Continues in PARC/ Datalink Roadmap initiative
- Using ATN and VDL2

<http://www.eurocontrol.int/link2000>

Implementing Rule for Data Link Services



Milestones of Data Link Services Mandate

- The European Commission, gave a Mandate to EUROCONTROL for the development of an **Implementing Rule (IR) for Datalink Services** on 30th May 2005

Delivery of Initial Plan	15 July 2005
Delivery of Regulatory Approach	January 2006
Draft final report including proposed draft Implementing Rule	May 2006
Delivery of the final report including the draft Implementing Rule and the justification material	September 2006

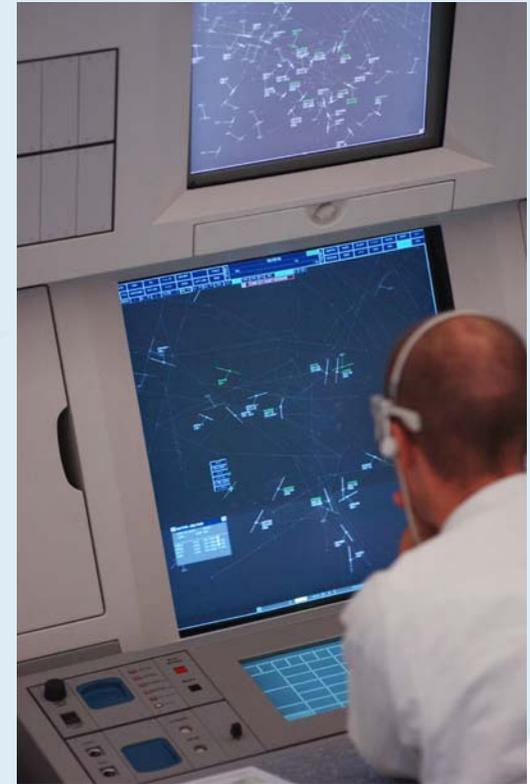
- Current proposed dates: 2009 for new aircraft, 2014 for retrofitted aircraft

CPDLC – ADS-B CASCADE

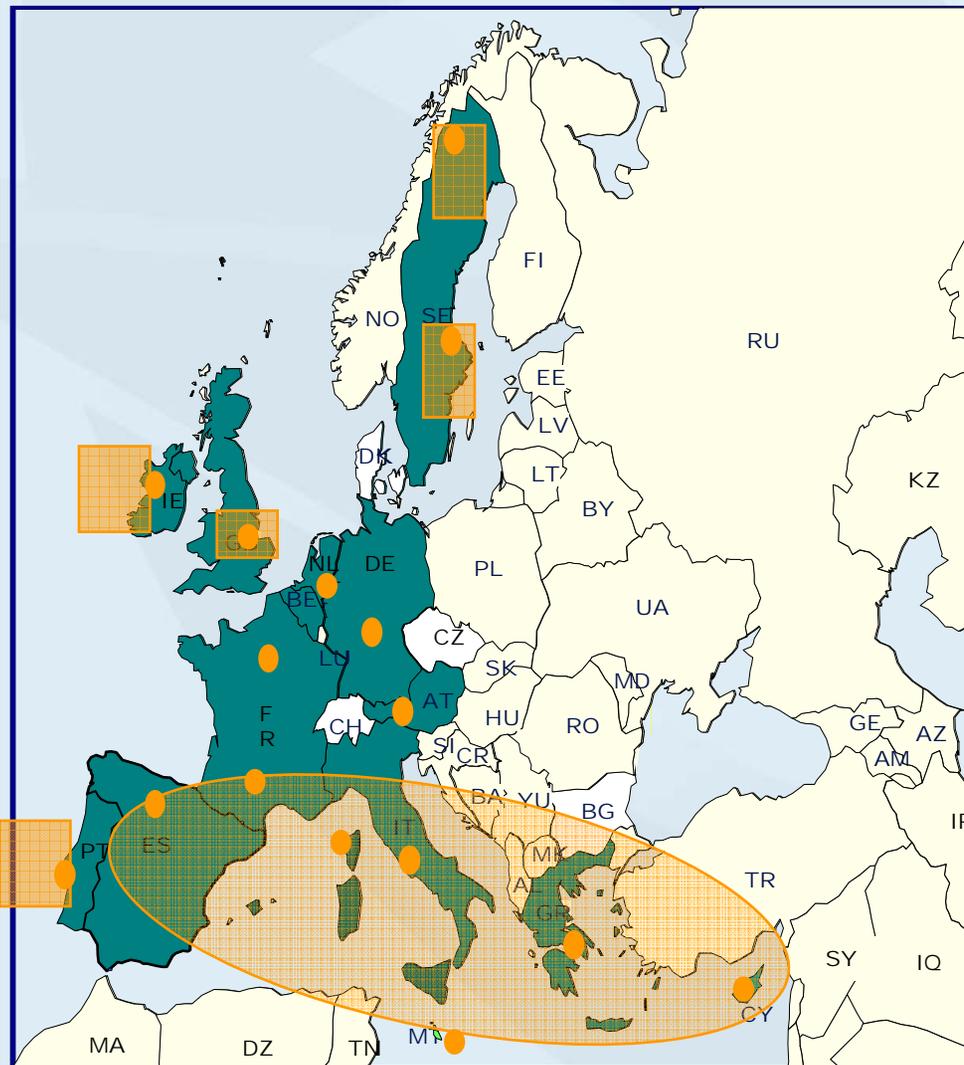


CASCADE Scope & Schedule

- Stream 1
 - ADS-B-out, Auto-CPDLC, D-TAXI and D-OTIS
 - First implementation in 2008
- Stream 2
 - ADS-B-in & out (ATSAW applications) and more advanced CPDLC
 - First implementation in 2011



CASCADE Validation



- CRISTAL Ireland & Portugal & Austria focusing on: ADS-B-NRA
- CRISTAL Sweden focusing on: ADS-B-NRA, ADS-B-RAD, ADS-B-APT and ATSA-AIRB
- CRISTAL UK focusing on: ADS-B-RAD
- CRISTAL MED focusing on: ADS-B-NRA, ADS-B RAD and ADS-B APT
- CRISTAL Toulouse focusing on ADS-B certification
- CRISTAL Paris focusing on: ASPA S&M
- CRISTAL Germany: focusing on TIS-B
- Maastricht UAC focusing on Auto-CPDLC
- D-OTIS & D-TAXI at Brussels Airport

Priorities 2006

- Finalise standardisation work for Stream 1.
- Continue trials for Stream 1.
- Establish a 2008 implementation baseline with an operational approval roadmap.

www.eurocontrol.int/cascade

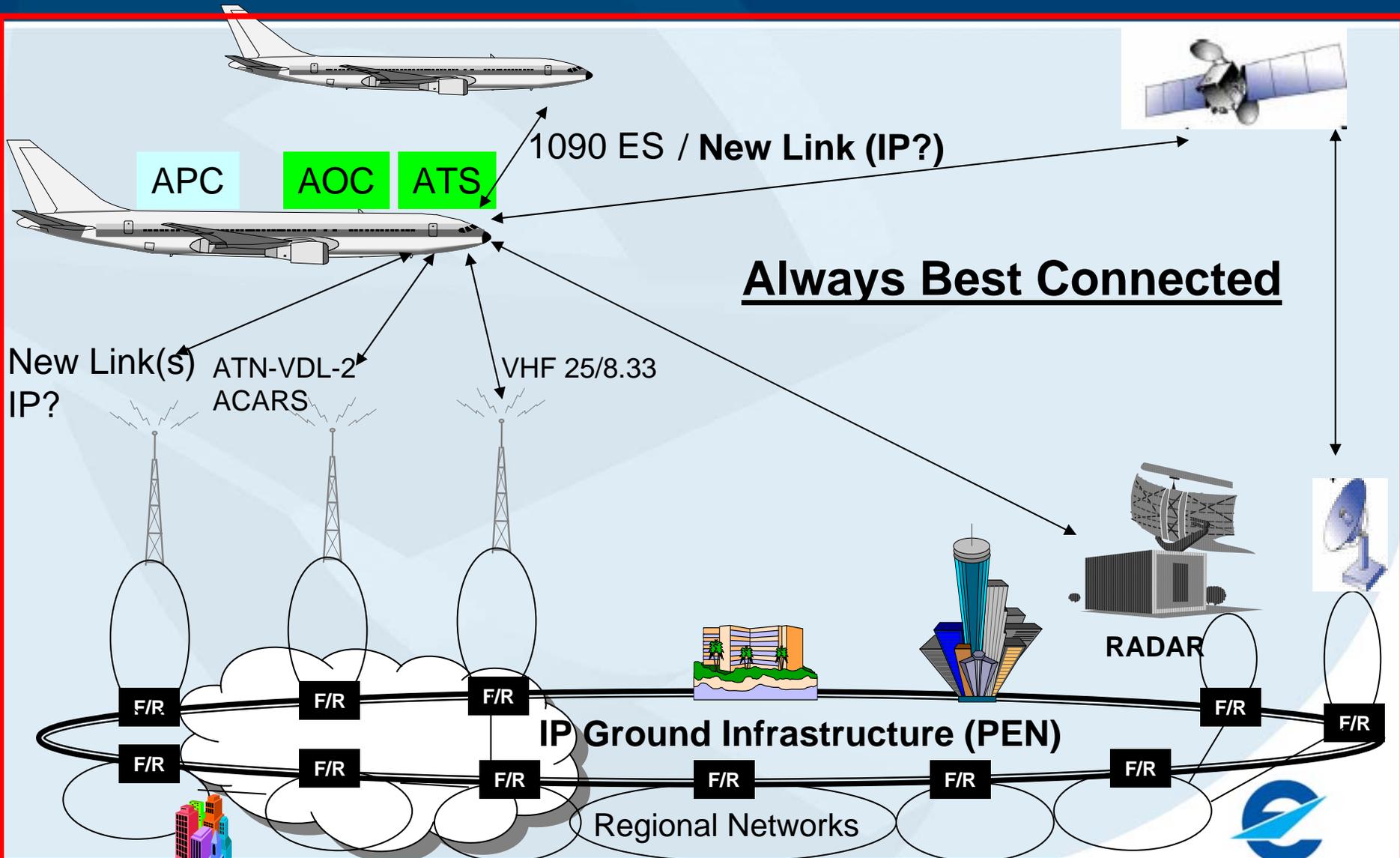


Future Communications



Future Aeronautical Communications

Most likely base on IP protocol



Activities related to the FCI

- Memorandum of cooperation with FAA
 - Requirements and Operating Concepts
 - Investigation into new mobile communication technologies
 - Future Communications Roadmap
 - Maximise utilisation of current spectrum and technologies
 - Industry Buy-in
- SESAR definition phase
- Technology investigation
 - FCI: A set of former and new technologies (ground and satellite based)
 - Software Defined Radios
 - Internet Protocol (IPv6)



SESAR

Single European Sky ATM Research

- Directorate ATM Strategies
- EUROCONTROL

Where does the SESAR ATM Master Plan fit ?

SESAR is a European ATM Implementation Programme:

Air Navigation Service Providers, Airlines, Airports, Manufacturing Industry, Military users/providers, Professional Associations, Regulators, EUROCONTROL and Research Organisations



A Strategic Programme for the Single European Sky

Air Traffic Management Master Plan: The Concepts

Ten years of research indicate the new system will have:

- **Airspace** configured according to operations
- **Automated** control functions
- **Air-Ground datalink**
- **Advanced airport tools**
- **Satellite navigation & communications**
- **Autonomous airborne separation**



Definition Phase: The Contract

EUROCONTROL contract with an industry-wide consortium

Airspace Users
Airports

Manufacturing Industry
Air Navigation Service Providers

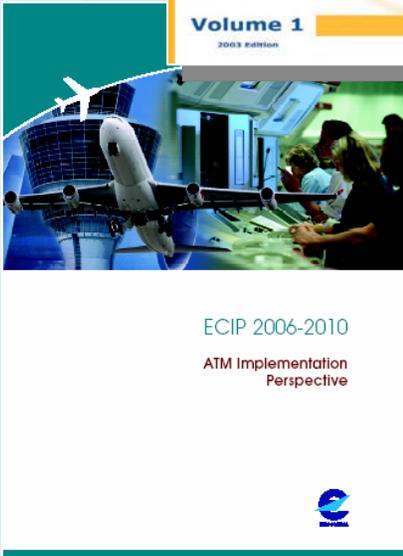
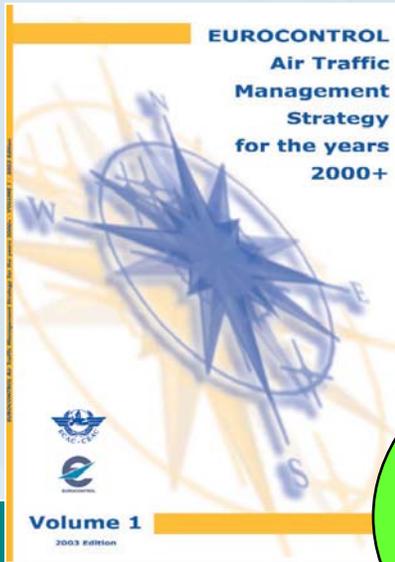


+ Project Associates:
ATM Research Centres, UK CAA, EURAMID, ECA, IFATCA, ETF, ATC-EUC, IFATSEA, US Industry (Boeing, Honeywell, Rockwell)
+ Sub-Contractors

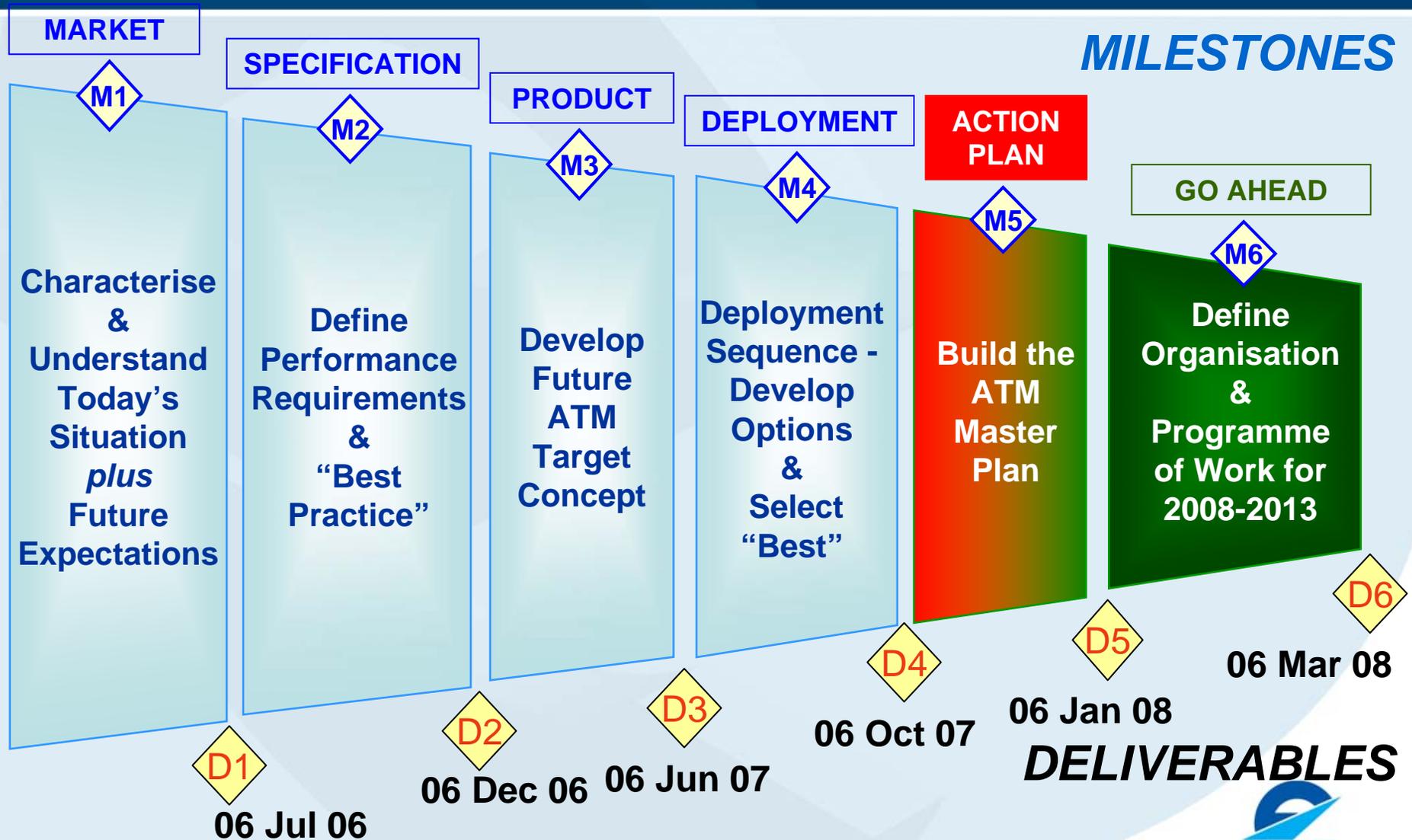


One Common Plan towards the Future System

**European
Air Traffic Management
Master Plan**



Milestones through Project Definition Phase



Key Objectives at each Milestone

At M₁ – will have Status of Current Situation & Future Expectations (D1)

At M₂ – will have Set of Requirements for Future ATM System Network (D2)

At M₃ – will have Definition of Future ATM Target Concept (D3)

At M₄ – will have a “Best” Deployment Sequence (D4)

At M₅ – will have the SESAR ATM Master Plan (D5)

At M₆ – will have Basis of SESAR Implementation Programme of Work for 2008-2013 (D6)

SESAR definition phase is ...

