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“Single European Sky”
Implementation Plan - SESAME

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- Aviation is in full expansion
- Traffic demand up by 5%
- Some Eastern European Countries with spectacular increases of 20% +
Single European Sky

- High Level Group 2000
- Proposals for Single European Sky 2001
- Conciliation concluded in 2003
- Legislation passed end 2004
- Memorandum with Eurocontrol (Implementing Rules)

- Commission in charge of implementation, supported by:
  - Single Sky Committee
  - Industry Consultation Body

**Air Traffic Management Package**
- Airspace
- Service Provision
- Charging regime
- Equipment (interoperability)
SESAME Background

Following Single European Sky Legislation

- Eurocontrol – AECMA (ASD) implementation road mapping
- Air Traffic Alliance – “DEPLOY” proposal to EC (SES implementation support)
- EC referral to Eurocontrol
- TEN-T proposal (SESAME Initiation “was DEPLOY”)
  - Accepted for funding by EC TEN-T committee
  - Single tender received by Eurocontrol
  - Negotiation complete – contract ready for signature
- Long term programme from late 2007 – EC funded
A European ATM Master Plan
To Unlock Air Transport

SESAME
EC initiative to support Single European Sky (SES) technical/operational implementation, in addition to the regulatory framework

2 Phases:
- Definition of a European ATM Master Plan (⇒ mid-2007), geared to, & followed by...
- Implementation (2007-20)

ONE, Common Master Plan for Research and Implementation
- ATM industry, operators & users, civil & military, together in defining, committing to, and carrying out the plan
- Based on future requirements & current plans
- Agreed change steps

Actions & means to make change happen

Converging analyses & initiatives from Industry, EC & EUROCONTROL

Needs:
- **Turn off** the fragmented approach
- **Accelerate** European ATM evolution & respond to Air Transport challenges
- **Synchronise** & integrate plans from research to operations
- **Synchronise** airborne and ground deployments
Concept Elements

- ATM2000+ and Eurocontrol Operational Concept Document
  + Portfolio of concept and performance documents
detailing an integrated ATM system
Addressing Different Timeframes

Building upon an evolving institutional & regulatory framework
Financing

- Initiation: 60 million Euro / 2 years (100% funding for industry consortium)
  - European Commission TEN-T
    - 30 Million Euro
  - Eurocontrol
    - 10 Million investment
    - 10 Million in kind (deliverables)
    - 10 million staff effort
    - 30 Million Euro

- Programme: Financing to be agreed
Opportunity

- Manage European Research according to SESAME
  - Joint Undertaking launched by EC
  - Targeted EC finance
  - Eurocontrol aligned accordingly

- ACARE SRA1/2 supported through the 7th Framework Programme from 2007
  - Joint Technology Initiative

- New working arrangements:
  - EATM - support of SESAME
  - Experimental Centre - strategic alliances
‘Group of Aeronautics Personalities’ goal for Europe

- World class leader in the field of aeronautics.
- Through:
  
  Coordinated collaborative effort, strengthened and guided by a single shared vision & creation of a common framework for research and technological development.
- To better serve the needs of European society:
  
  Safety, Capacity, Efficiency, Flexibility & Predictability
- Responding to issues of public interest including:
  
  Noise & emission reduction, reduced travel delays & security.

The EUROCONTROL Air Traffic Management 2000+ strategy and the Vision 2020 are aligned together with the ACARE Strategic Research Agenda.
Strategic Research Agenda 2 (SRA 2):
- A holistic and integrated view of the European Air Transport System
- Meeting societies needs whilst seeking global leadership
- High level target concepts - extreme challenges for leading edge research

ATM – a main pillar in SRA 2
- Operational concept vision
- Input to each “High Level Target Concept”
- Lines of research
- Air Traffic Management Challenge -
  The key infrastructure baseline for the Air Transport System
  Safely catering for 2 / 3 times traffic growth scenarios > 2020
Highly time efficient

Highly customer oriented

Highly cost efficient

Ultra secure

Ultra green

Supported by a High Level ATM Concept

Five High Level Target Concepts

High Level ATM Concept
Main themes from the ATM concept: - searching for the “Paradigm Shift?” – challenge the “capacity wall!!”

- Safety is “non-negotiable”
- Modes of Operation
  - Dependent on Levels of Service
  - Density of Traffic
- Exploiting
  - Network wide managed system
  - Integrated Air Ground approach - System Wide Information Management
  - 4D Trajectory Management and precision navigation
  - Aircraft Autonomous Operations / Airborne Separation Assistance System
  - Human System Automation Support – decision support tools
  - Exploiting Aircraft Communication and Navigation capability
  - Integrated Airport and ATM processes with environment considerations
Effect on European ATM - Safety

- Air / Ground integration – data exchange
- Autonomous Aircraft Operations – self separation
- UAV in civil airspace
- 4D Trajectory Management
- Ground system automation

Certification issues for both aircraft and ground systems
Leading, and Cooperating

- Europe - positioning as Leader, Competitor, and Innovator in global aviation
- But Global Cooperation required on:
  - Concepts
  - Standards
  - Systems
- Working with the US through Memorandum of Cooperation with FAA
- Working inside ICAO
  - ATM Concept
  - Performance based
  - SARPS …