Aviation package

Towards a truly Single European Sky
EC Aviation Timeline

- Single Market Air Transport – 1992
- EASA – 2002
- First ATM Package – 2004
- Second Package + EASA extension - 2008
Looming crisis in the air

- Traffic growing faster than capacity
- Emissions growing faster than any other transport sector
  » Some 90% growth since 1990
- Fuel crisis coupled with high cost of air traffic services
- Implementation of original Single European Sky (SES)
  » Fragmentation
  » Cost of inefficiencies 4.4bn€/year
Fragmentation of airspace

Sectors are mainly designed according to national borders rather than to traffic flows.
Not straight “as the crow flies”

Routes have to avoid military areas in the core area.
Routes are on average 49 km too long

Just 2 km per year improvement would cancel effect of traffic growth!

Inefficient routes (Blue=straight, Red=actual)
Current system cannot cope with growth.
Delay costs money, time, and emissions.
Choke points of the air traffic management (ATM) system.

SOURCE: Eurocontrol
Safety risk quadruples when traffic doubles

Traffic (million flights)

SOURCE: Eurocontrol
Four pillars of Single European Sky 2

- Single European Sky legislation on ATM
  - Binding performance targets
  - Network management functions
- Extension of EASA competences to ATM and aerodromes
  - Fill the missing link in EASA & address key safety issues
- SESAR – upgrade technology of ATM
- Airport capacity
  - Co-ordination between air & ground bottlenecks
SES 2 - Legislation

- **Performance regulation**
  - Enforce binding performance targets on ANSP’s (safety, cost efficiency, environment, capacity)

- **Network management**
  - Bring high level network management into
    - Flow management & slots
    - Route design
    - Frequencies & codes
    - New SESAR tech functions…

- **Technical updates to regulations**
SES 2 – SESAR technology initiative

- Much of today’s technology decades old
  - NDB,s from 1920’s, VOR’s from 1930’s…
  - Traffic about to double or triple by 2025
  - Same situation in US, Australia…

- SESAR initiative to modernise technology
  - Public-Private partnership (joint undertaking)
  - SESAR Master Plan approval by Council
  - New technologies & concepts
    - Satellite navigation (Galileo)
    - System Wide Information Management
    - Datalinks etc.
SES 2 – SESAR structure

Three phases:

- Definition phase (2005-2007),
- Delivering the European ATM Master Plan.

Development phase (2007-2013):
Develop the new systems

Implementation phase (2014-)
Deploy the new technologies
SES 2 – EASA extension ATM & Airports

- The missing links in the safety chain
  - Airworthiness of aircraft, operations etc are already part of EASA’s remit
  - Airport and air traffic management not yet
    - Identified as top threats by IATA
    - Runway incursions top threat for Eurocontrol

- Lays the final stone in foundation for “a total systems approach”
- Detailed implementing rules later by EASA
But improvements are possible - example

Just one example of improving routings:

- Daily distance saving: 2165 kilometres
- Daily time saving: 168 minutes
- Daily fuel saving: 6598 Kg
- Daily CO2 saving: 20777 Kg
Example of defragmenting airspace:

- Currently 28 major service providers in EU
- Functional Airspace Block initiatives defragment ATM service provision
- Firm commitments by 2012