Spaced based ADS-B

Introducing Global Air Traffic Surveillance

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ADS-B at a glance

Existing Technology

Automatic data broadcast every second

Unexpected disruption of broadcast indicative of a critical event

Equipment becomes mandatory in the US, Europe and Australia over the next 6 years

Surveillance Data

Position

Identity

Category

Speed

Altitude

existing terrestrial infrastructure in place to handle ADS-B data

ADS-B transponders are ***already installed*** on over 90% of all airliners

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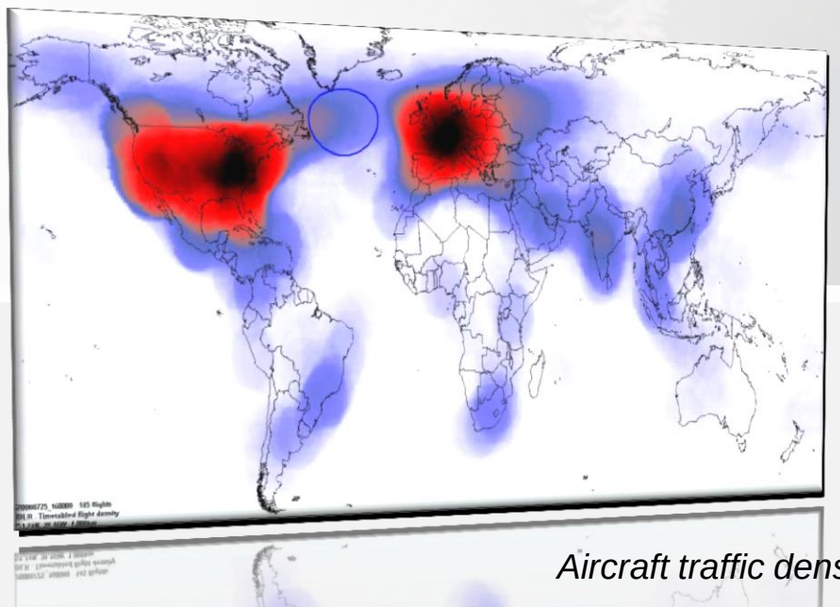
Satellite ADS-B

Takes ADS-B-technology to space

Update interval of at least 15 seconds,
data provided in near real time

Invented by TAS-D,
patented in most countries incl. US, Europe, Russia, Australia

Existing aircraft equipment is fully compatible with space-based ADS-B



Aircraft traffic density

Key Benefits

Almost 100% global coverage

Turns NRA into radar controlled airspace

Brings surveillance to oceans
and scarcely populated areas

More efficient use of airspace
to save fuel and reduce carbon emissions

Improved safety and security
through global flight tracking.

Additional redundancy layer with integration into global ATM systems

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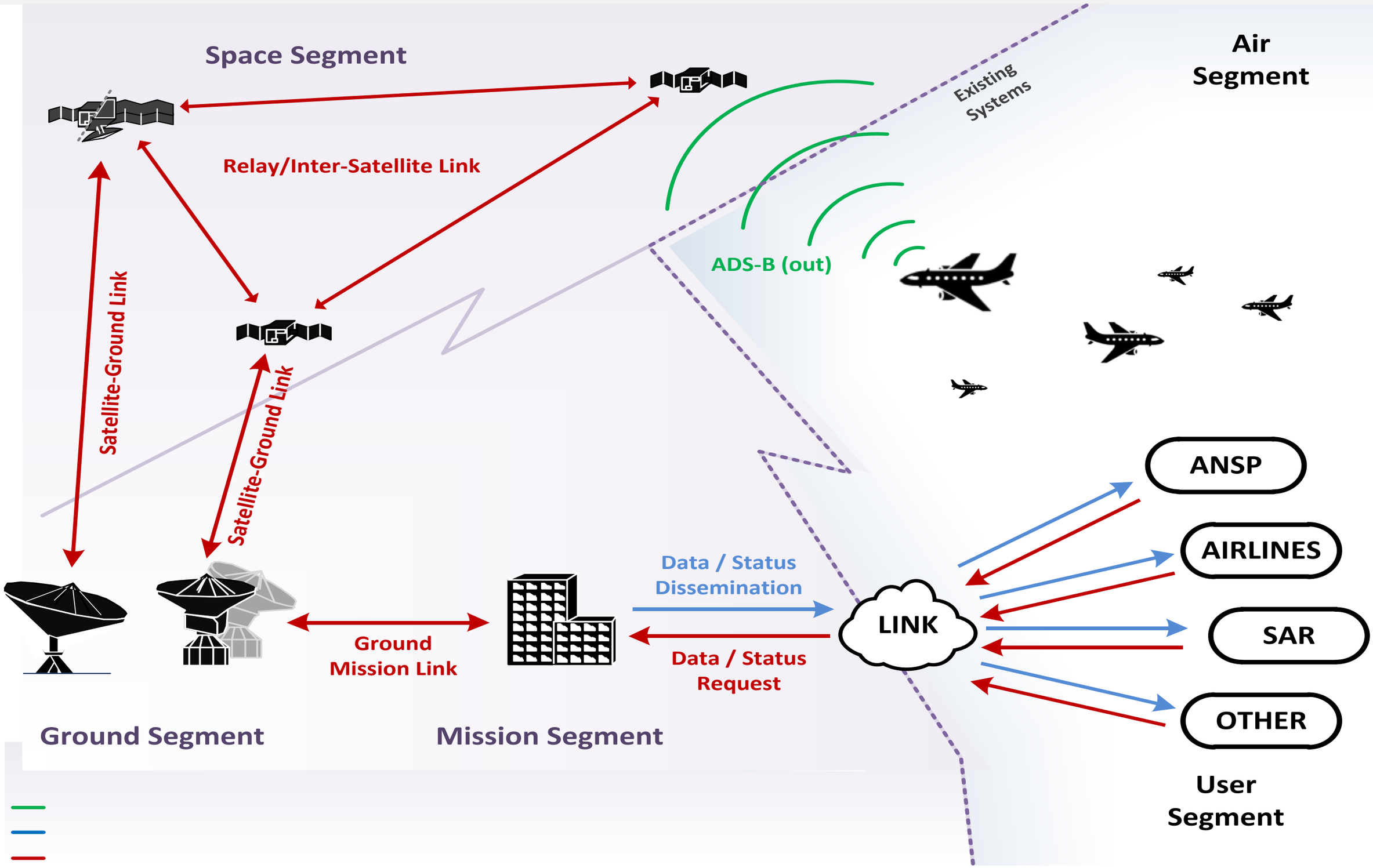

System Architecture designed to provide data like any other surveillance sensor for easy system integration!

Key Advantages

Primary mission focussed on ADS-B
Constellation designed to ATS, Airlines, ICAO standards and specifications

Independent
from technical and commercial constraints of another payload

Safety Layer
complementary to other space based global flight tracking systems

Opportunities

Secondary payload
space available for compatible payloads

Tailored
to customer specifications

Complementary
to other surveillance systems in already radar controlled airspace

Only a primary payload can guarantee the operational safety and availability required by air navigation services!

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Welcome

To Europe’s Global Surveillance Team

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Team Facts

Thales Alenia Space Deutschland

SES TechCom,

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Consortium formed through MoU in October, 2013

With equal rights and responsibilities

Objectives

To jointly develop
the world’s next generation surveillance system

To combine our expertise

To complement
other surveillance solutions

To enhance surveillance
and reliability worldwide

To increase flight safety
even further

Prototype of constellation payload under development, funded by TAS-D and ESA**.**

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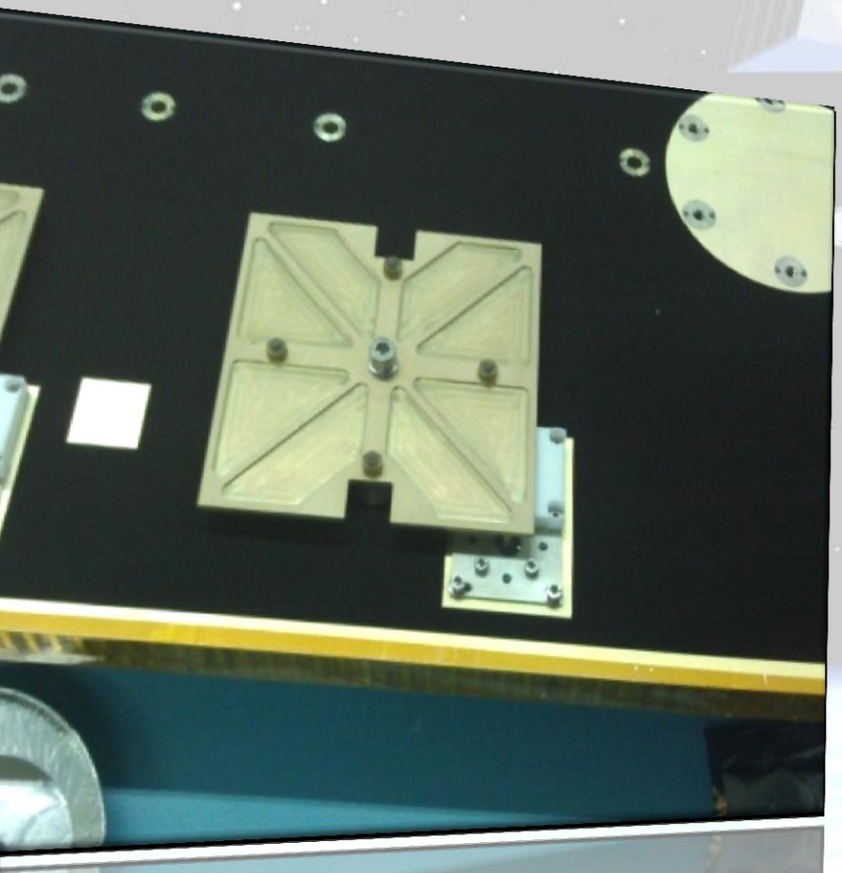
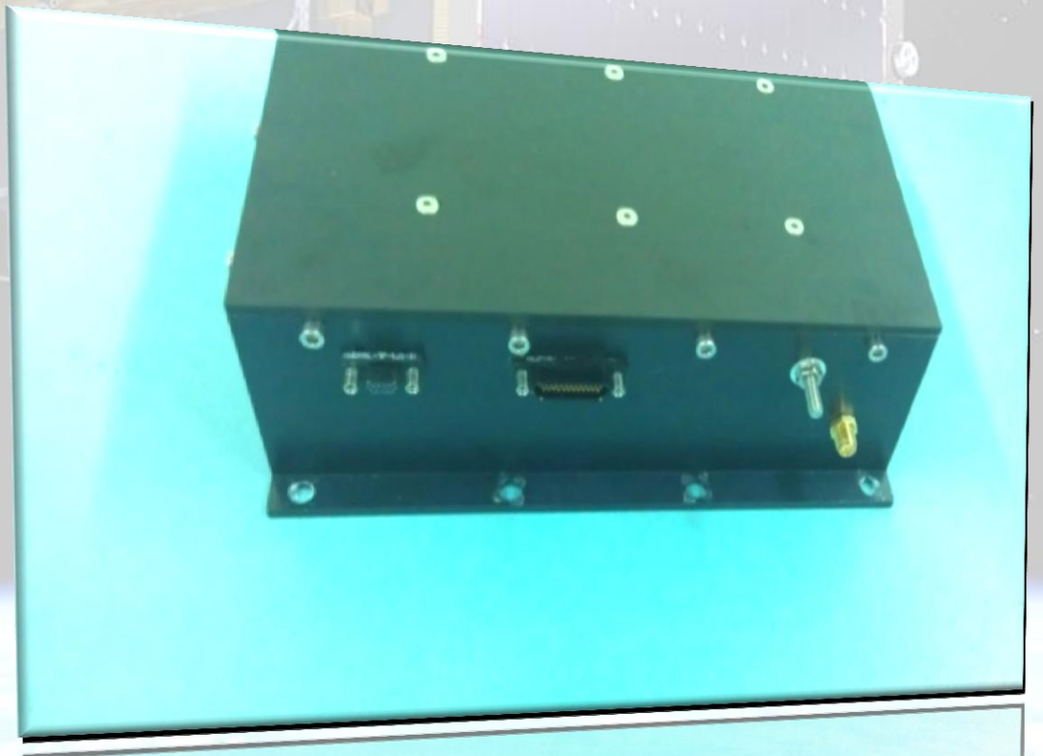
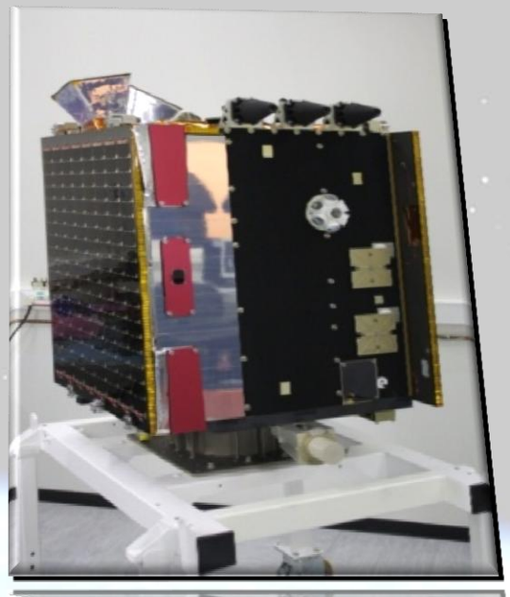
DLR flight test







Experimental payload already flying
on ESA's ProbaV satellite

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Satellite ADS-B data gathered by ProbaV confirms feasibility !

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Thank You
for your attention!

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Questions?