

View of Regulatory Activities

EASA High Level Meeting

Stefan Schwindt,
Principal Product Security Leader, GE

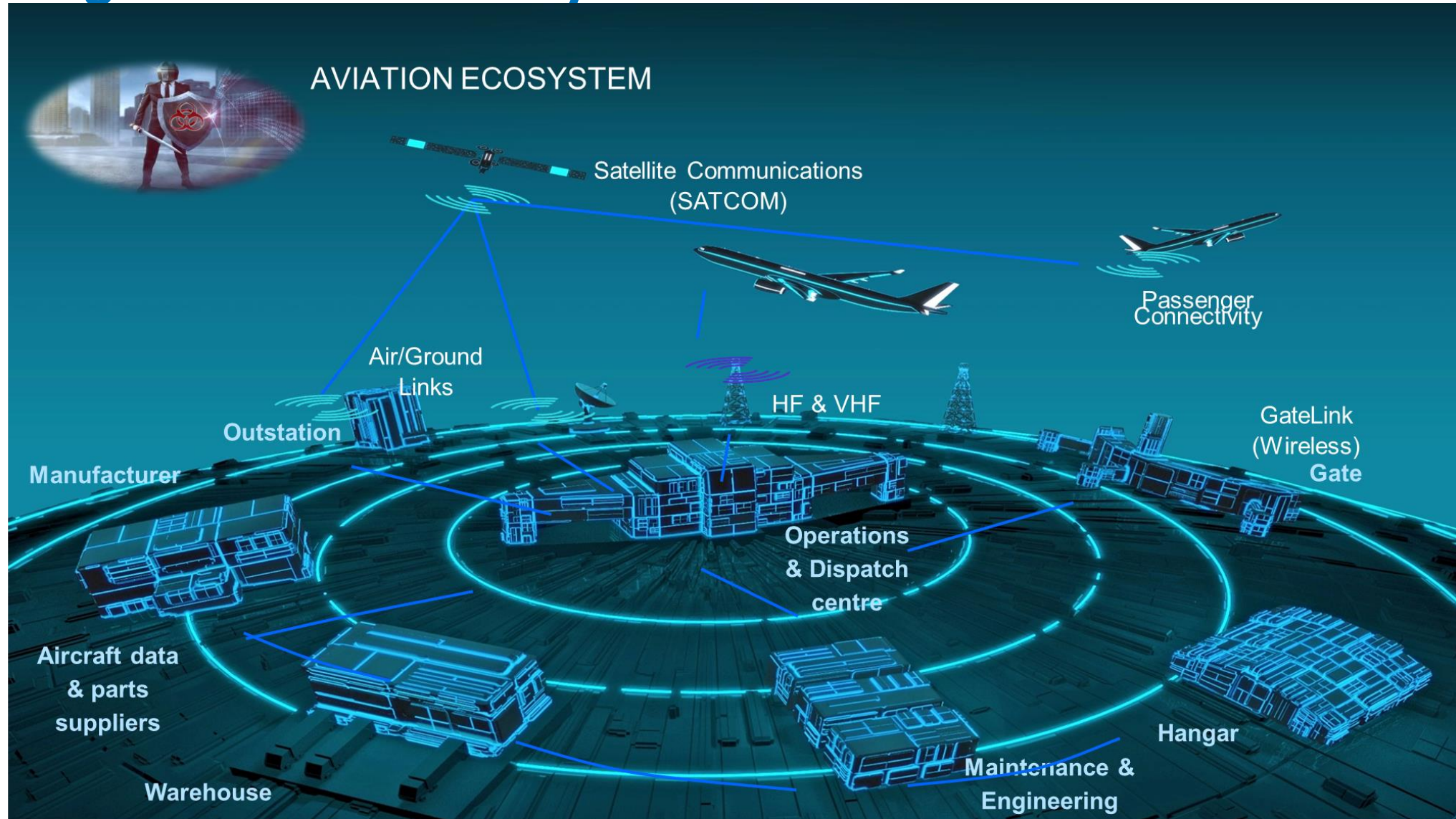
15 November 2018



Table of Contents

- The Problem Statement
- Current situation
- Path forwards
- Supporting the specific rule
- Supporting the horizontal rule
- Industry supporting each other
- Global activities
- Desired outcome

Securing the Aviation Ecosystem



Evolution of aircraft (perspective cybersecurity)



Electric / analogue
electronic

Digital electronic
Integrated
Modular Avionics
Specialised
avionics bus
e.g. A629, A664

Wireless Avionics Bus?
Internet of Aircraft?
Real time update of
aircraft?
Automated flight plan
change from ops
centre?

Exponential
internal and
external data

Linear Time

Purely mechanical



Digital electronic
Single purpose
federated systems
Mainly
unidirectional bus
(1 Tx / Mult. Rx) or
with bus controller
e.g. A429, MIL-
STD-1553



Digital electronic
Integrated
Modular Avionics
COTS avionics bus
e.g. Ethernet



TODAY

Airplanes are safe

- Design Guidance by manufacturers
- FAA Issue Papers / EASA Certification Review Items → Special Conditions
 - Layered protection
 - Domain separation
 - Configuration control

Regulatory approaches for a connected future

- Specific Rule (CS 25.1319 and others)
 - Objectives to demonstrate analysis, architecture and testing of complete design
- Horizontal Rule (Part AISS)
 - Organisational requirements to secure the operational environment of all actors in the ecosystem
 - Ensure trust framework for relying on others
- Manufacturing industry is not impacted by other similar non-EASA regulations in Europe (e.g. NIS Directive)

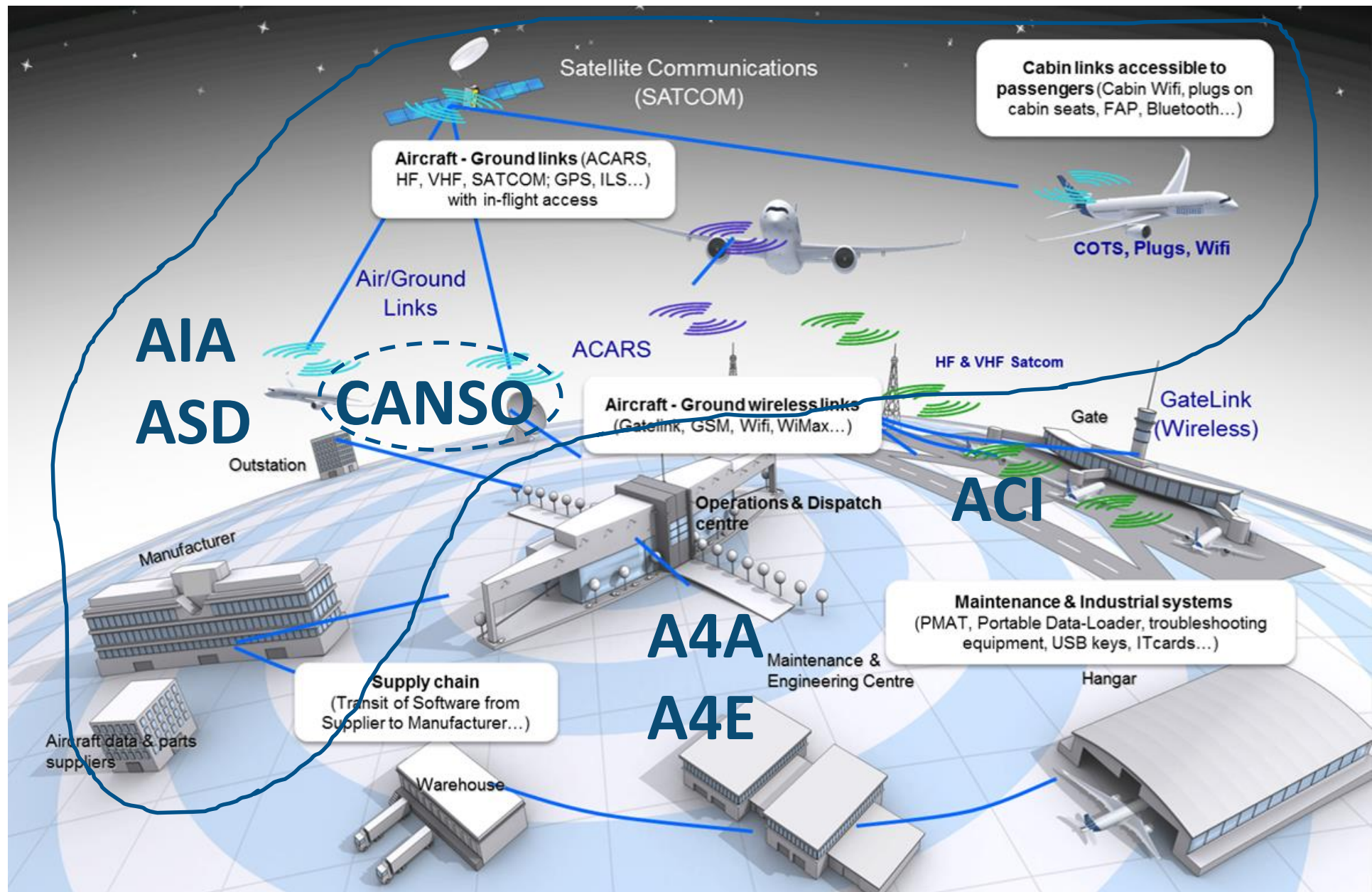
Developing Industry Standards

- Specific Rule should have one set of Acceptable Means of Compliance (AMC)*
- Industry has agreed on process and methods for securing aircraft in collaboration with FAA and EASA
- Outcome is ED-202A/DO-326A and ED-203A/DO-356A
- CS 25.1319 and related rules soon to be published using the industry standards as AMC

* Alternative Means of Compliance can be negotiated

European Strategic Coordination Platform

- Meeting of all aviation stakeholders to agree on common rules
- Currently three main work streams
 1. Charter/Strategy
 2. Regulatory Processes
 3. Shared Trans-Organizational Risk Management
- Expect new rules and generation of industry standards for AMC
- Open and transparent rulemaking



Activities

- Members are active in many forums to advocate security and collaborate on improving process, methods and trust
- Members share information to make everyone secure



ECSCG



Desired Outcomes

- Members are active at national, regional and international levels in shaping civil aviation sector response to cyber-threats
 - General awareness and education of civil aviation community
 - Harmonised regulations and compliance standards
 - Threat intelligence and information sharing framework(s)
- Civil aviation sector response shall be:
 - **Global**, no actors left behind (security chain)
 - **Balanced**, fair and level playing field
 - **Harmonized** (ideally common) to avoid duplication: Locally approved, globally accepted
 - **Adaptive**, threats permanently evolve so the response must be accordingly

Security is a journey, not a destination..... Effort must be maintained and developed in a context of digitalization and growing connectivity



Thank you



**AeroSpace and Defence Industries
Association of Europe**

ASD

rue Montoyer 10 | 1000 Brussels, Belgium
info@asd-europe.org | www.asd-europe.org