



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



Global Developments in Aviation Cybersecurity & Resources



NAME

Title

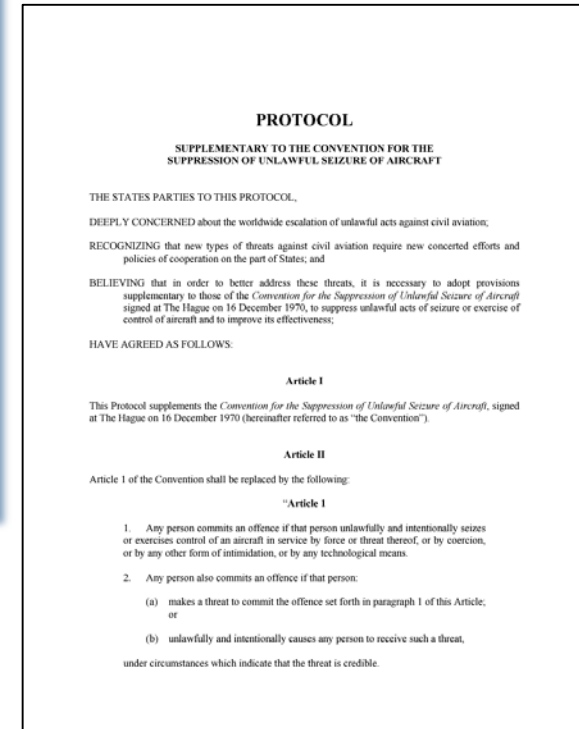
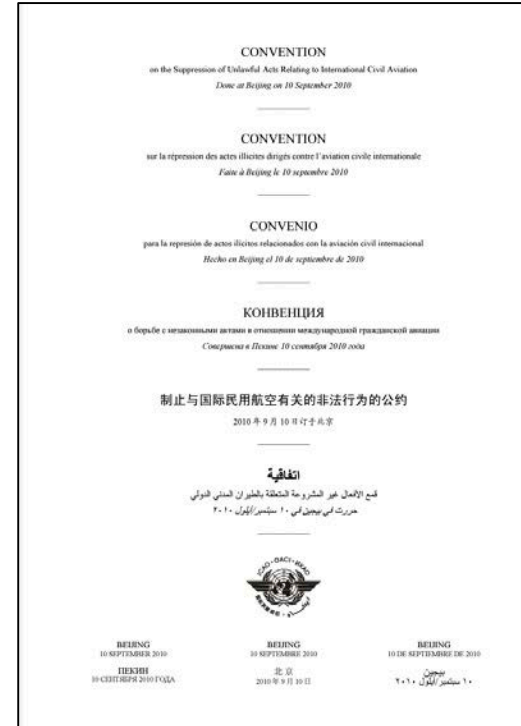
Cooperation is key to address cyber threats to civil aviation



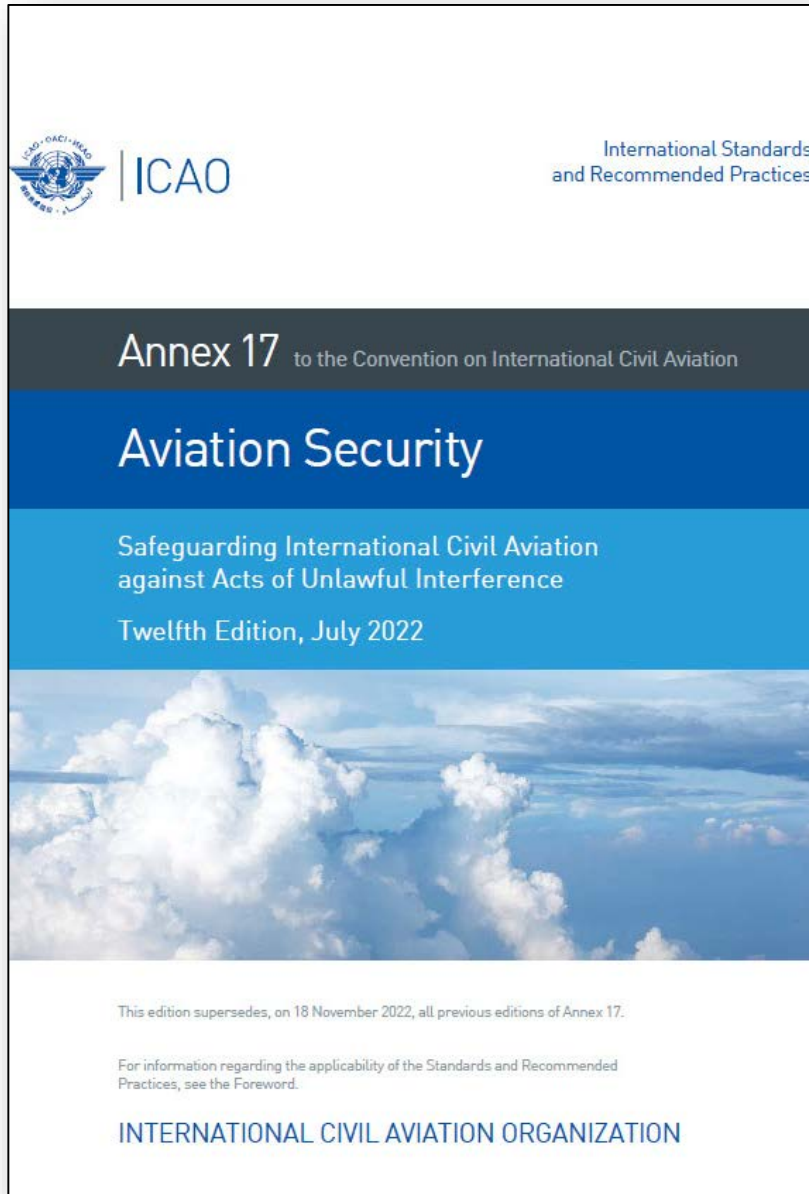
ICAO's Work on Aviation Cybersecurity

- The Beijing Convention (2010)
- The Beijing Protocol (2010)

Governments' Adoption of the Beijing Instruments is an Important **DETERRENT** of Cyber-Attacks Against Civil Aviation



ICAO's Work on Aviation Cybersecurity



Annex 17 to the Chicago Convention – Aviation Security Standard 4.9.1

- Each Contracting State shall ensure that operators or entities as defined in the national civil aviation security programme or other relevant national documentation identify their critical information and communications technology systems and data used for civil aviation purposes and, in accordance with a risk assessment, develop and implement, as appropriate, measures to protect them from unlawful interference

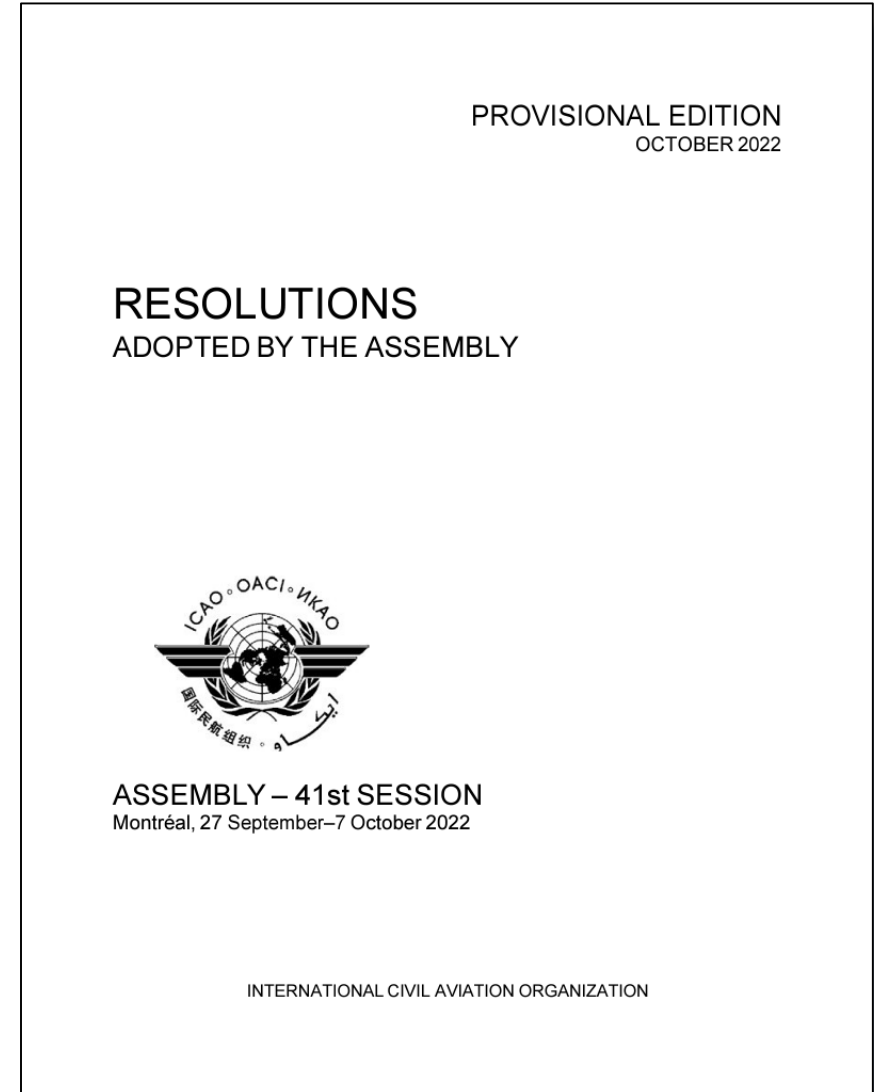
Recommended Practice 4.9.2

- Recommendation— *Each Contracting State should ensure that the measures implemented protect, as appropriate, the confidentiality, integrity and availability of the identified critical systems and/or data. The measures should include, inter alia, security by design, supply chain security, network separation, and the protection and/or limitation of any remote access capabilities, as appropriate and in accordance with the risk assessment carried out by its relevant national authorities*

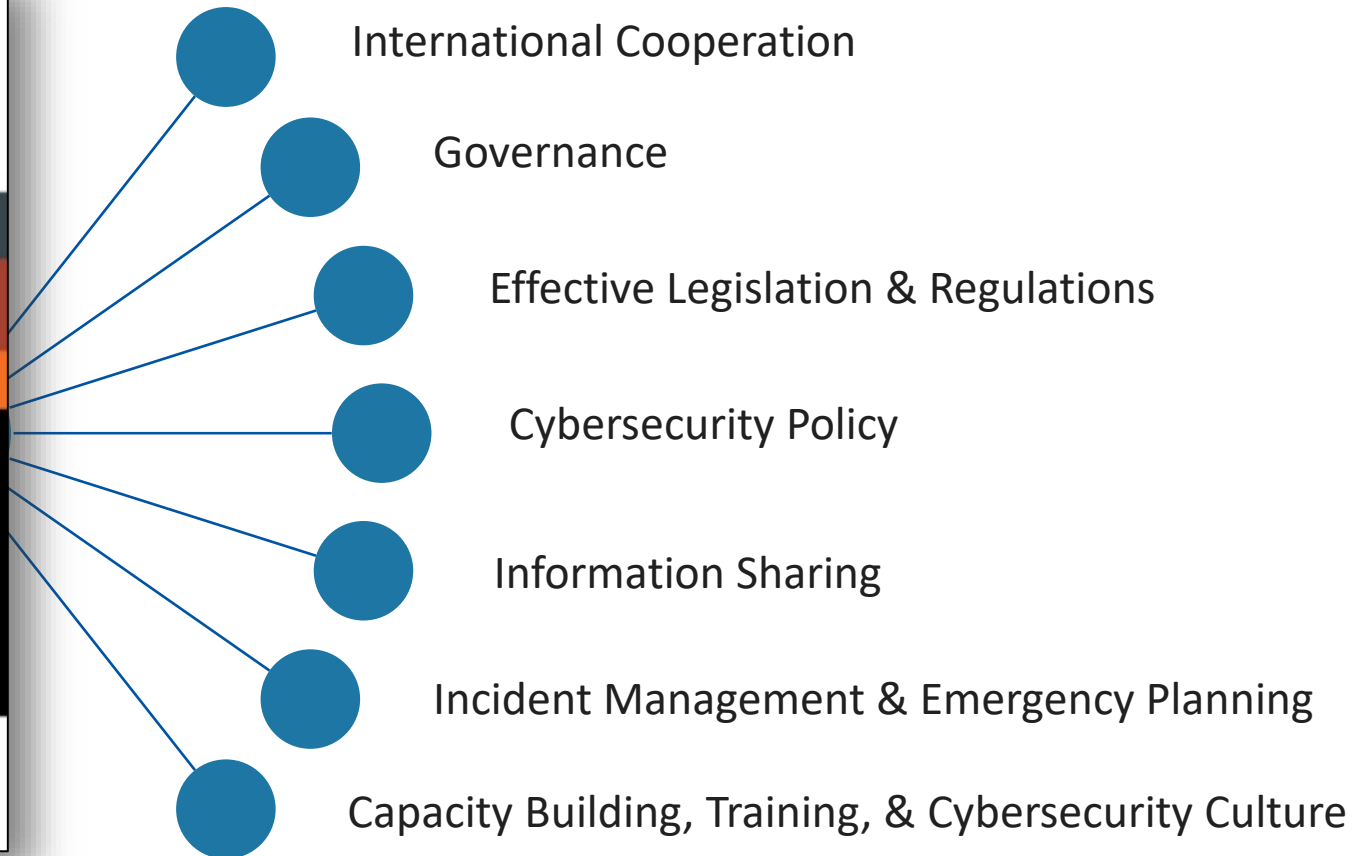
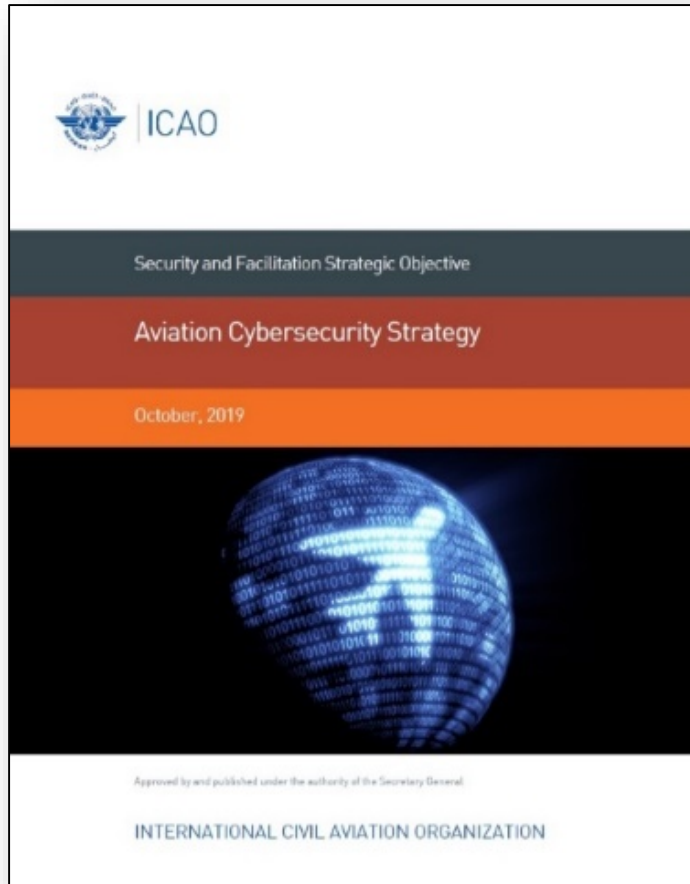
ICAO's Work on Aviation Cybersecurity

ICAO 41st Assembly Resolution A41–19: *Addressing Cybersecurity in Civil Aviation*

- Highlights the need for global adoption of the Beijing Instruments
- Recognizes the need for aviation cybersecurity to be harmonized
- Calls upon States to (*not an exhaustive list*):
 - ✓ implement ICAO Aviation Cybersecurity Strategy, and make use of the ICAO Cybersecurity Action Plan
 - ✓ encourage government/industry coordination with regard to aviation cybersecurity strategies, policies, and plans, as well as sharing of information to help identify critical vulnerabilities that need to be addressed
 - ✓ develop and participate in government/industry partnerships and mechanisms, nationally and internationally, for the systematic sharing of information on cyber threats, incidents, trends and mitigation efforts
 - ✓ design and implement a robust cybersecurity culture across the civil aviation sector

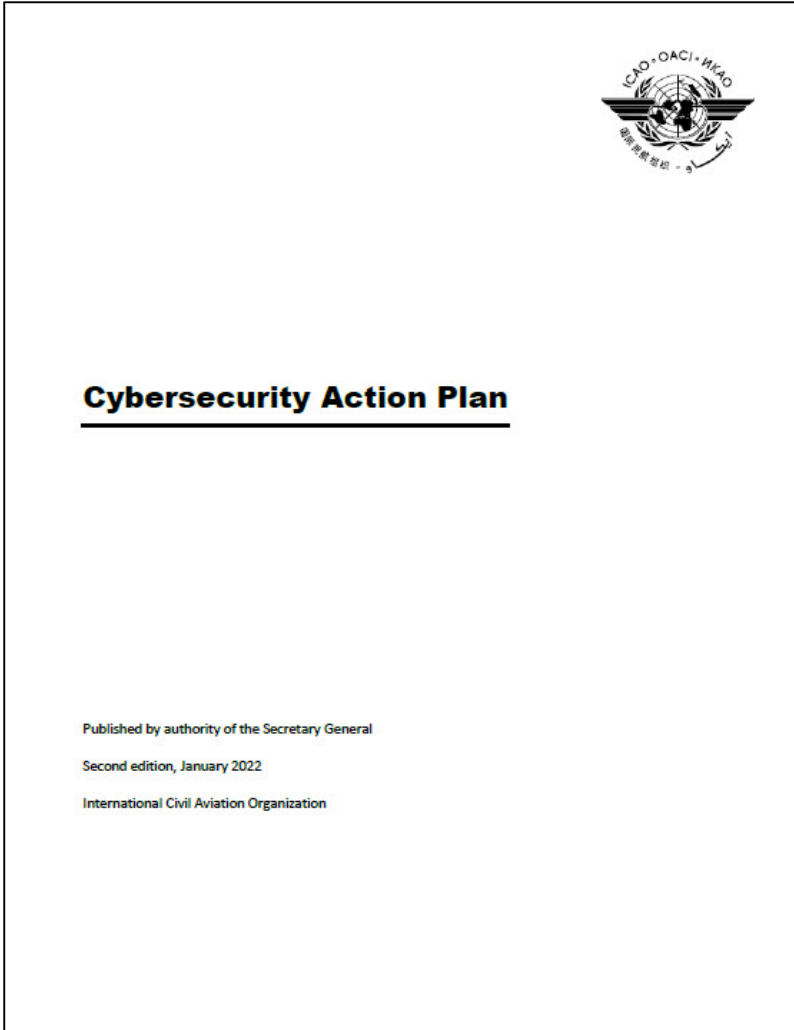


The Aviation Cybersecurity Strategy



<https://www.icao.int/aviationcybersecurity/Pages/Aviation-Cybersecurity-Strategy.aspx>

The Cybersecurity Action Plan



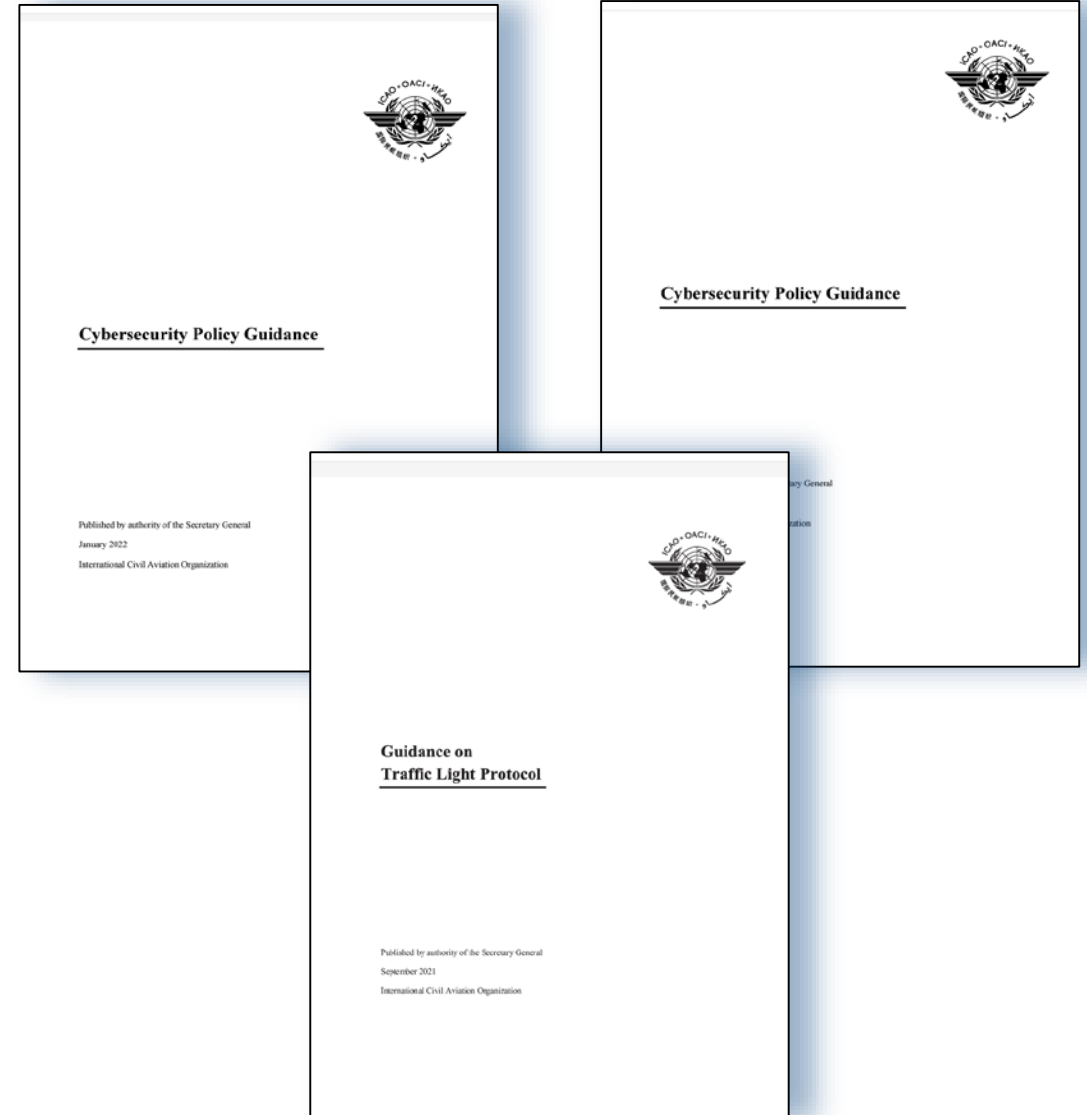
- **First Edition** published in November 2020
- **Second Edition** published in January 2022
- Available on **ICAO Public Website**
- Provides the **Foundation** for ICAO, States and stakeholders to work together
- Develops the **7 Pillars** of the Aviation Cybersecurity Strategy into **32 Priority Actions**, which are further broken down into **51 Tasks** to be implemented by ICAO, States, and Stakeholders

<https://www.icao.int/aviationcybersecurity/Pages/Cybersecurity-Action-Plan.aspx>

Aviation Cybersecurity Guidance Material

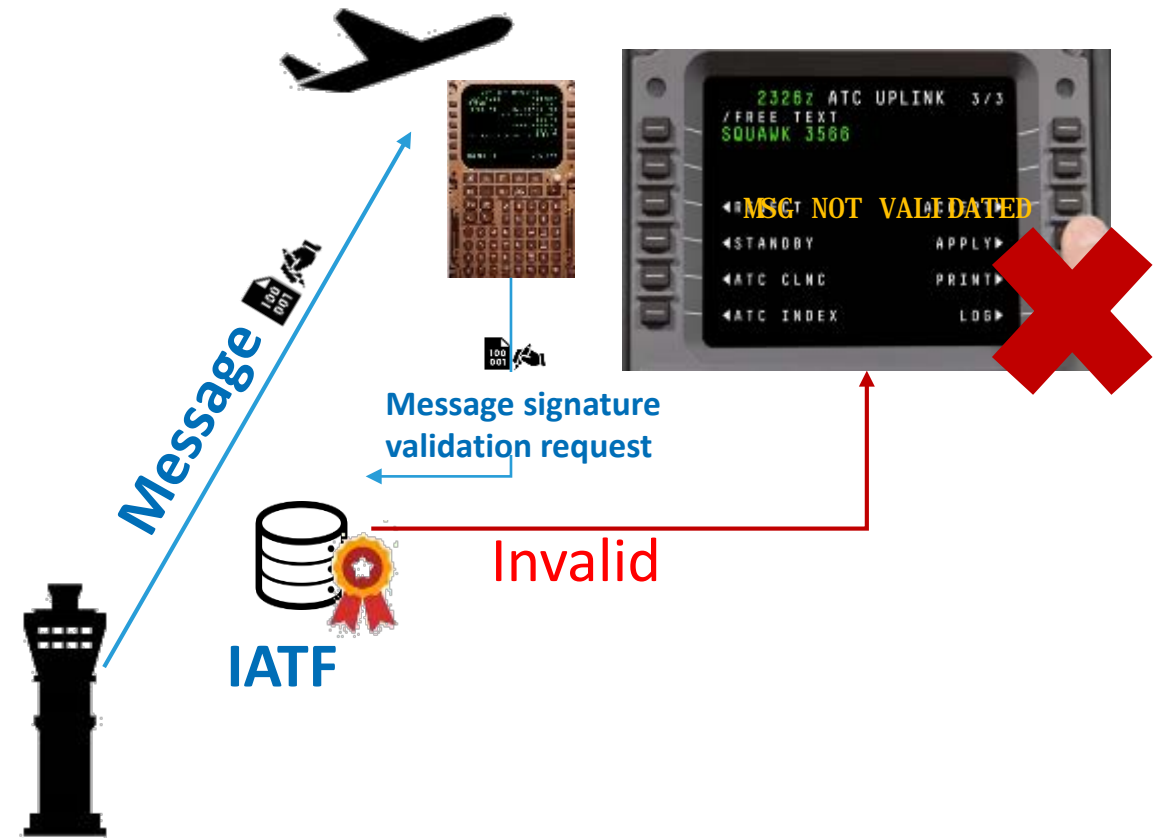
- **Doc 8973** – *Aviation Security Manual*
- **Doc 9985** – *ATM Security Manual*
- Aviation Cybersecurity Strategy
- Cybersecurity Action Plan
- **Using Traffic Light Protocol**
- **Cybersecurity Culture in Civil Aviation**
- **Cybersecurity Policy Guidance**

<https://www.icao.int/aviationcybersecurity/Pages/Guidance-material.aspx>



International Aviation Trust Framework (IATF)

A set of principles, policy, and guidance, and a transition strategy for a globally harmonized framework that will enable a trusted exchange of information among aviation stakeholders with the level of security, resilience, and interoperability needed to support the demand for capacity and efficiency while ensuring the continued safe, secure, and sustainable operation of the civil aviation system



ICAO Aviation Cybersecurity Capacity Building

Current Aviation Cybersecurity Training Portfolio:

- Foundations of Aviation Cybersecurity Leadership and Technical Management (in partnership with Embry-Riddle Aeronautical University)
- Cybersecurity Oversight in Aviation (in partnership with UK CAAi) – **in final phase of development, delivery begins in 2023**

Thank You

