



LEGAL FRAMEWORK FOR CYBERSECURITY: INTERNATIONAL TOOLS AND FUTURE WORK

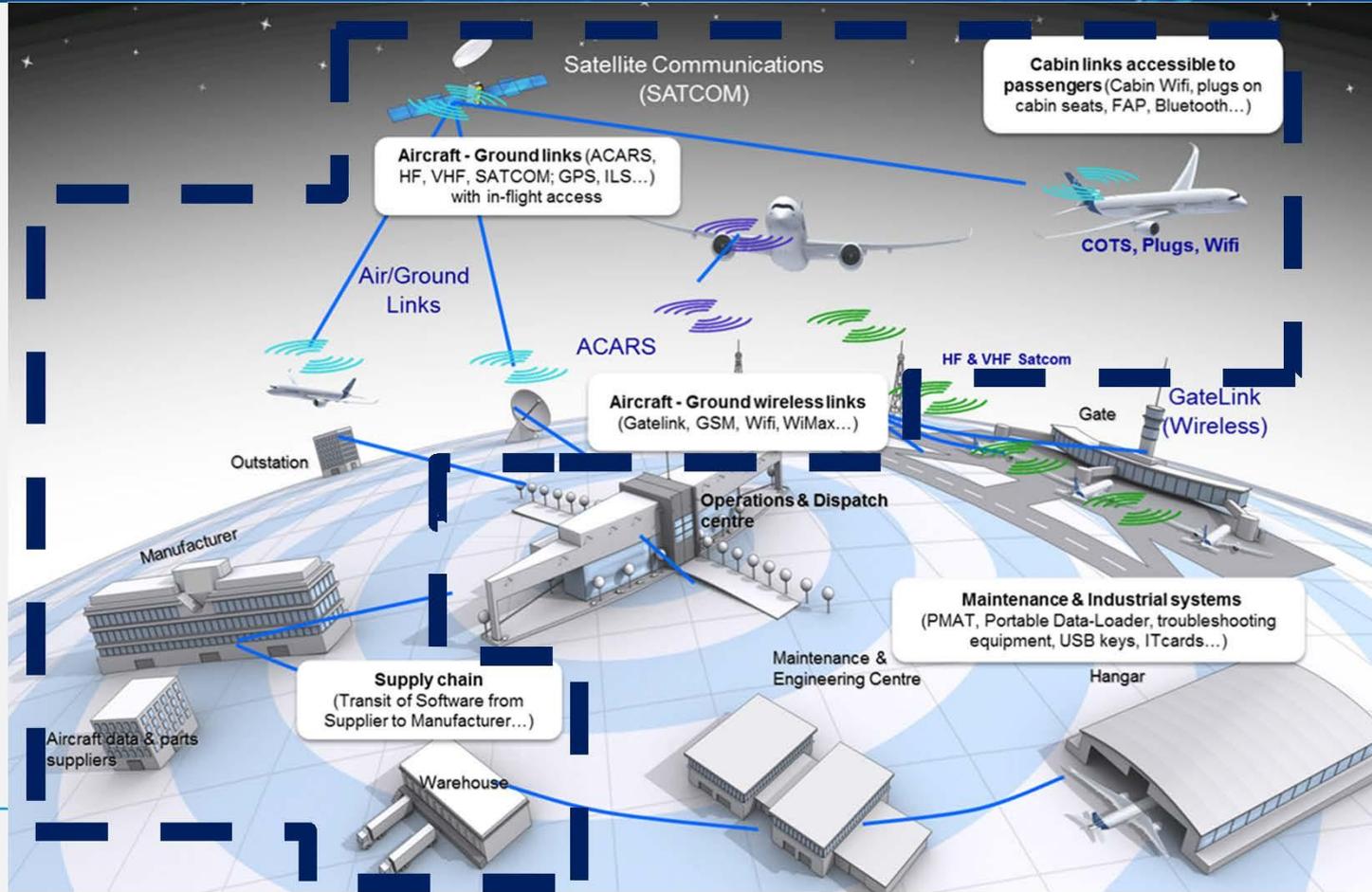
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Complexity of Securing the Aviation Ecosystem

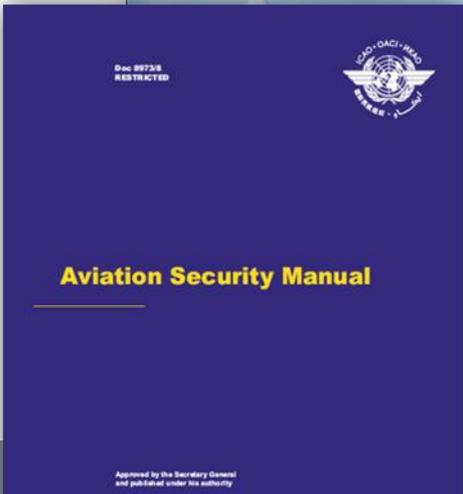




4.9 Measures relating to cyber threats

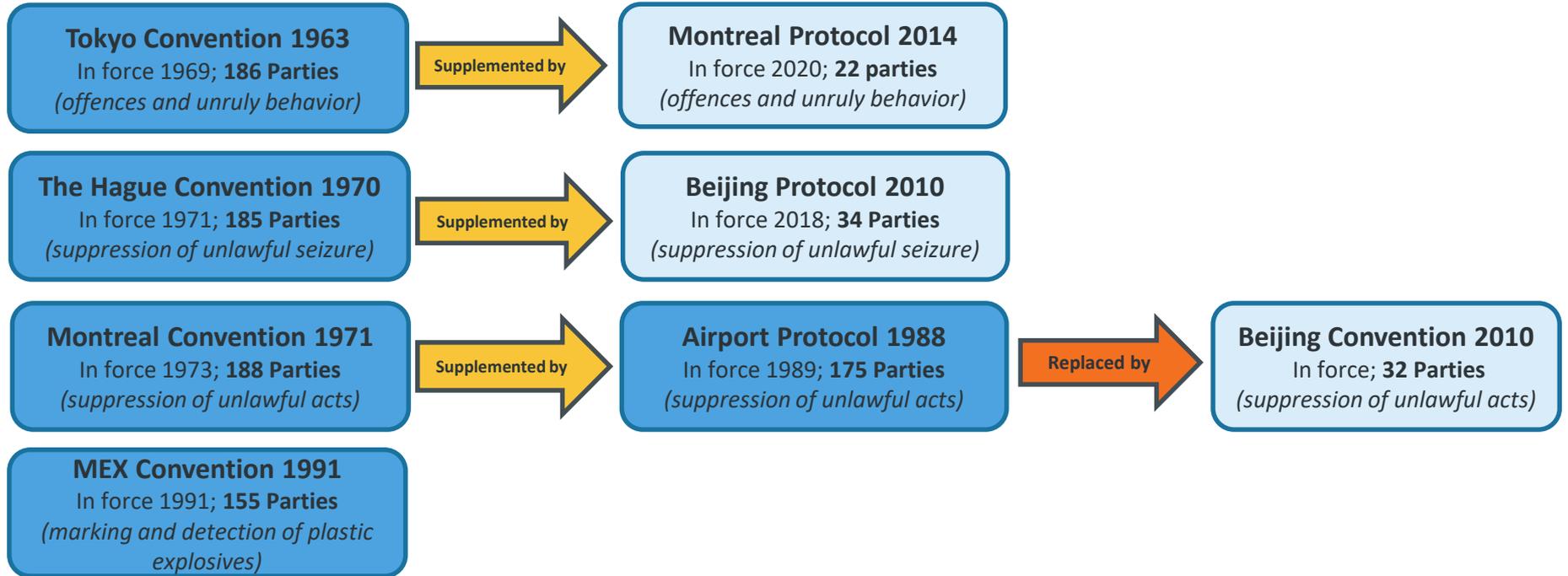
4.9.1 Each Contracting State shall ensure that operators or entities as defined in the national civil aviation security programme or other relevant national documentation identify their critical information and communications technology systems and data used for civil aviation purposes and, in accordance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

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.*





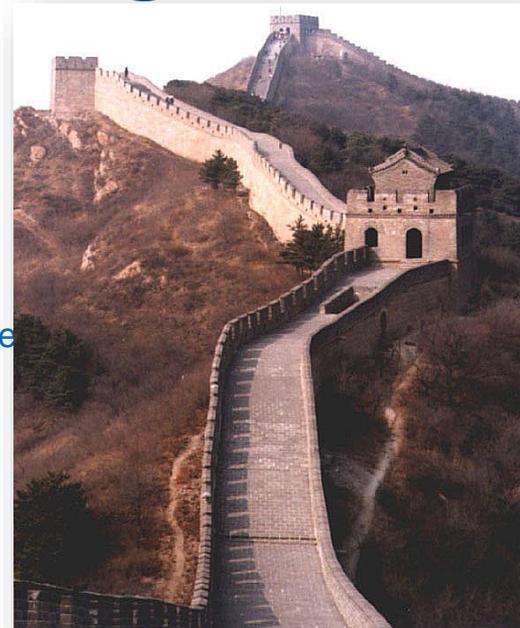
Summary of International AVSEC Treaties



Beijing Instruments 2010: The New Wall Safeguarding Aviation

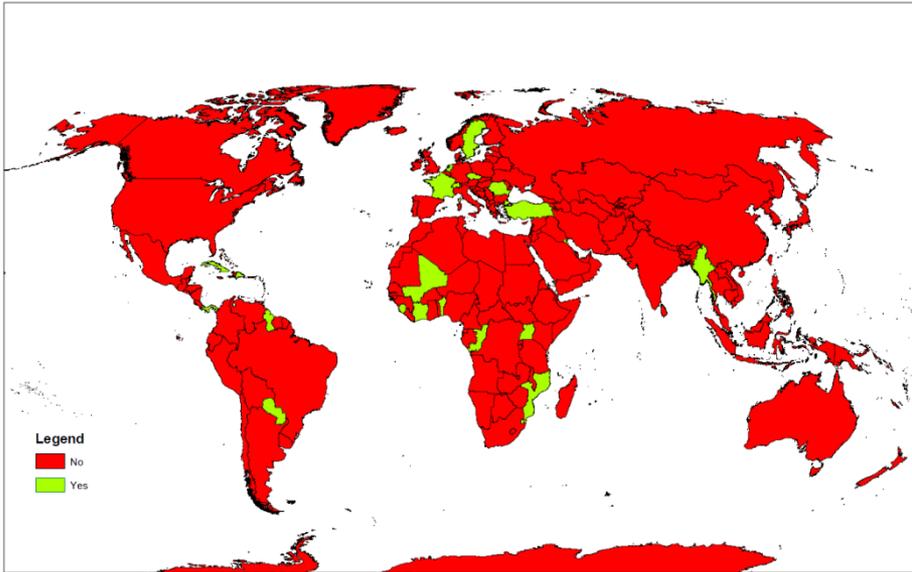
Adopted further to 9/11 events

- **Beijing Convention (Article 1):**
 - aircraft as weapon
 - spread of BCN
 - organisers, directors, financiers, accomplices
 - credible threat
 - transportation of WMDs (BCN, explosives and nuclear materials)
 - air navigation facilities (signal, data, information, systems)
- **Beijing Protocol:**
 - Coercion and threats
 - Technological means
 - Organisers, directors, financiers



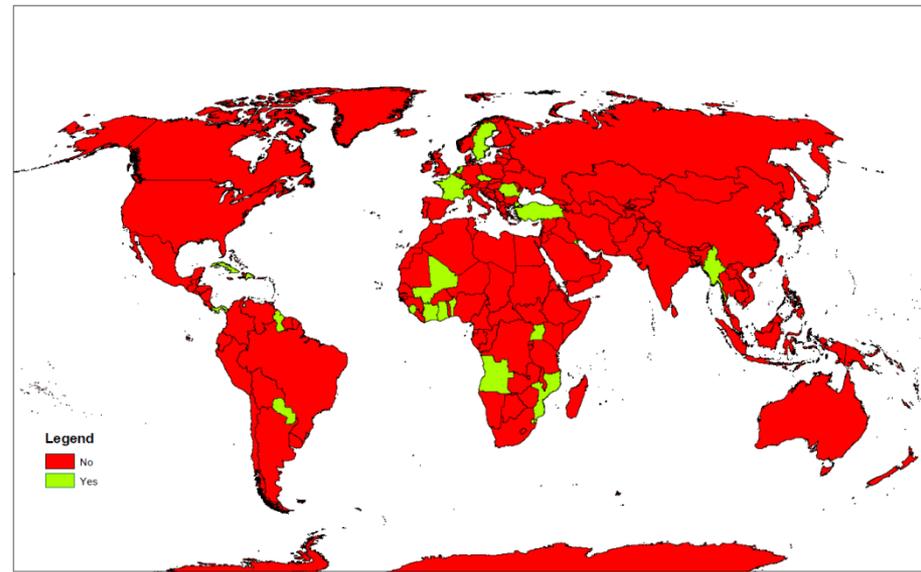
Status of ratification of the 2010 Beijing instruments

Beijing Convention



32 Parties and entered into force on 1 July 2018

Beijing Protocol



34 Parties and entered into force on 1 January 2018



What we try to prevent

Article 1 (d) and (e) of the Montreal Convention 1971

Article 1

1. Any person commits an offence if that person unlawfully and intentionally: ...

(d) destroys or damages air navigation facilities or interferes with their operation, if any such act is likely to endanger the safety of aircraft in flight;

(e) communicates information which he knows to be false, thereby endangering the safety of an aircraft in flight.

Article 1, para. 1 (b) VIA Protocol 1988

Article 1

“1bis. Any person commits an offence if he unlawfully and intentionally, using any device, substance or weapon:

(b) destroys or seriously damages the facilities of an airport serving international civil aviation or aircraft not in service located thereon or disrupts the services of the airport.”



Beijing Convention (2010)

Article 2, paragraph c):

“Air navigation facilities” include signals, data, information or systems necessary for the navigation of aircraft.

Beijing Protocol (2010)

Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft

- In force 1 January 2018
- Adds to the offences criminalized in the Hague Convention to reflect modern dangers
 - New forms of ancillary offences
- Aircraft must be “in service”
- Two additional grounds of jurisdiction:
 - Offence is committed in State’s territory
 - Offence is committed by its national





Changes to the offence of “Hijacking” from Hague to Beijing Protocol

Any person who on board an aircraft in flight: unlawfully, by force or threat thereof, or by any other form of intimidation, seizes, or exercises control of, that aircraft, or attempts to perform any such act, or is an accomplice of a person who performs or attempts to perform any such act commits an offence.

Any person ~~who on board an aircraft in flight:~~ commits an offence if that person unlawfully and intentionally, seizes, or exercises control of an aircraft in service by force or threat thereof, or by coercion or by any other form of intimidation, or by any technological means.



Conclusion

Wide ratification of the Beijing instruments is a step forward in creating the adequate international legal framework addressing cyber threats.



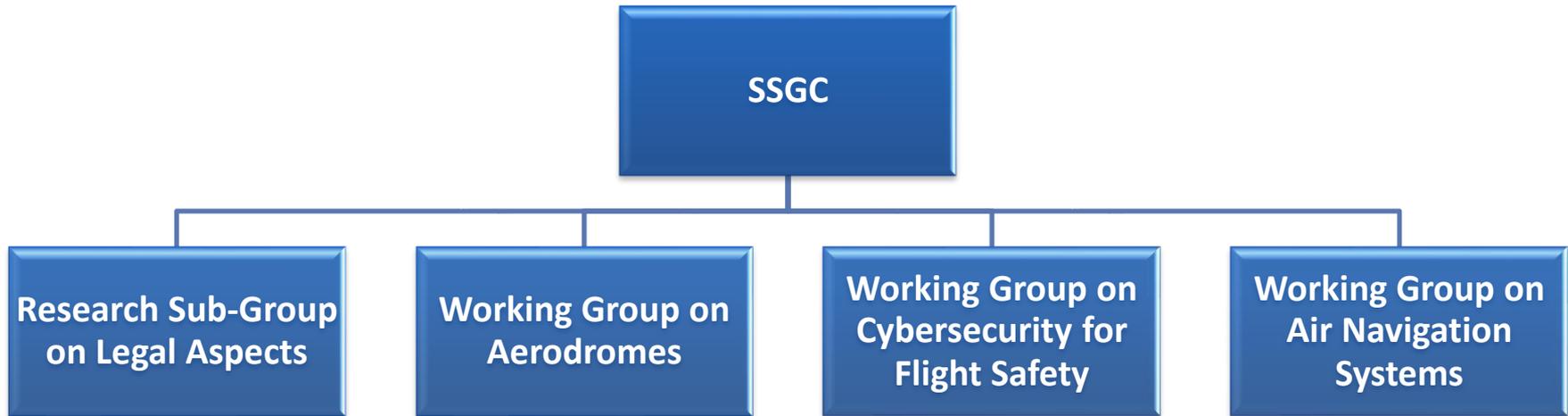


ICAO Assembly Resolution A39-19 (now updated in 2019 as A40-10), 2016 - Addressing Cybersecurity in Civil Aviation

- calls upon States and industry stakeholders for systematic sharing of information on cyber threats, incidents, trends and mitigation efforts
- among others, calls for development and implementation of the ‘best practices’



Structure of the Secretariat Study Group on Cybersecurity (SSGC)





SSGC/7



Legal Aspects of Pilotless Aircraft

Review Rules for Settlement Differences

Article 12 of Chicago Convention

Adequacy of IAL instruments for Cyber Threats and other acts or offences

Guidance on Conflicts of Interests

Promotion of Ratification of air law treaties

Article 21 of Chicago Convention

Legal issues related to GNSS

Work Programme of the Legal Committee
Adopted at the 218th Council Session

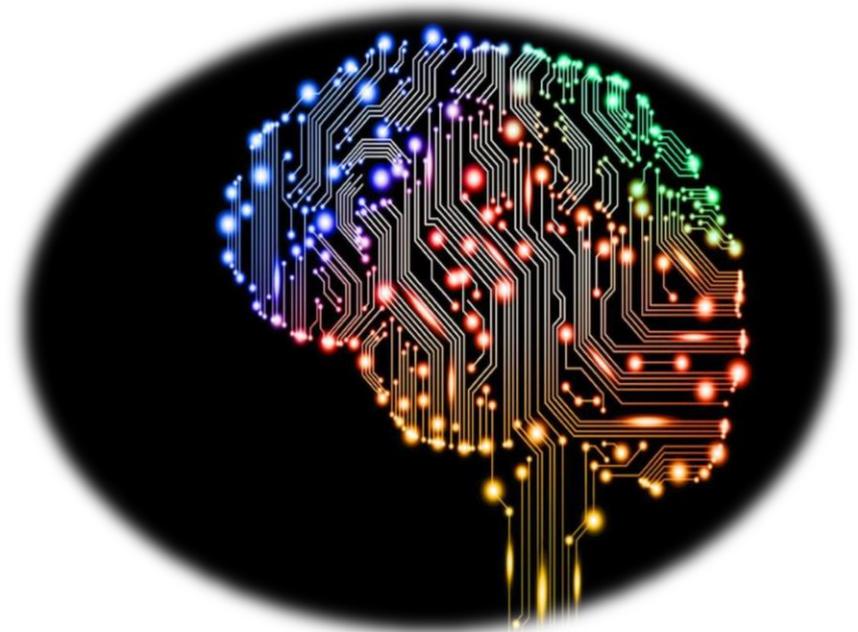


RSGLEG

- review international instruments to see if such instruments are sufficient, or whether there is a need to fill in the gaps.
- Report findings to the 38th ICAO Legal Committee in 2021.

Possible elements of the Legal study

- Identifying and understanding the cyber threats facing States
- Identifying the threats that have not been addressed in legislation and require more regulatory attention
- Assessing whether there are any gaps in legislation that could be addressed in an international instrument
- Assessing the need or desirability for harmonization of rules





Examples of key measures for legal consideration

Reporting and
information
sharing

Protection for
cyber
vulnerability
research and
testing

Supporting
business
continuity and
recovery from
disruption
following a cyber-
attack

means for legal
attribution of
cyber-attacks



CHINA

- Law on Cybersecurity of the People’s Republic of China
- Interim Measures on the Regulation of Network and Information Security in Civil Aviation
- Measure on the Inspection of Network and Information Security in Civil Aviation; and
- Measures on the Notification of Information Relating to Network and Information Security



GHANA

Civil Aviation Authority (Security Directives – Security of Operation)



MEXICO

Federal Police Law



TANZANIA

Regulation 46B of the Civil Aviation (Security) Regulations, 2015 regarding “Protection of Critical information Technology and communication system”.



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Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
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THANK YOU