



ASSEMBLY — 39TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 36: Aviation safety and air navigation implementation support

COORDINATING CYBERSECURITY WORK

(Presented by the International Coordinating Council of Aerospace Industries Associations (ICCAIA))

EXECUTIVE SUMMARY

Work has been progressed since the 38th Session of the ICAO Assembly adopted a Resolution (A38-15) requesting the Council to direct the Secretary General of ICAO to continue to address cyber threats to aviation security. The Council adopted Amendment 14 to Annex 17 – *Security*, as recommended by the Aviation Security Panel (AVSECP), which included two Recommended Practices on measures relating to cyber threats. On 5 December 2014, the Industry High-level Group (IHLG) partners signed the *Civil Aviation Cyber Security Action Plan* and accompanying Roadmap. In July 2015, the Civil Aviation Cyber Security Conference was held in Singapore. More work lies ahead, focusing on cyber threats, cyber space, cyber attacks, cyber security, cyber safety and cyber resilience. Steering and coordination of this work by ICAO will be needed.

Action: The Assembly is invited to request the Council to have the Secretariat form an expert group, as soon as practicable, to assist and advise ICAO in steering and coordinating the work on cyber security, cyber safety and cyber resilience.

<i>Strategic Objectives:</i>	This working paper relates to the Air Navigation Capacity and Efficiency and Security and Facilitation Strategic Objectives.
<i>Financial implications:</i>	Moderate for ICAO, industry and States
<i>References:</i>	A39-WP/17 A39-WP/99 Annex 17 – <i>Security</i> Doc 10022, <i>Assembly Resolutions in Force</i> (as of 4 October 2013)

¹ English, Arabic, Chinese, French, Russian and Spanish versions provided by ICCAIA.

1. INTRODUCTION

1.1 The International Coordinating Council of Aerospace Industries Associations (ICCAIA) was pleased to contribute within the Industry High-level Group (IHLG) to the draft Resolution on *Addressing Cybersecurity in Civil Aviation*, as presented by the Council of ICAO (A39-WP/17). We also support the views expressed by the United States of America and by Slovakia on behalf of the European Union and its Member States, the other Member States of the European Civil Aviation Conference; and by EUROCONTROL on the subject of *Cyber Resilience in Civil Aviation* (A39-WP/99).

1.2 Recognizing the importance of cybersecurity, ICCAIA works with the IHLG, the Aviation Security Panel (AVSECP), the Working Group on Innovation in Aviation Security (WGIAS) and other ICAO expert groups on cyber security issues. The diverse membership of ICCAIA brings a wide range of technical expertise to support ICAO's work in cybersecurity and to assist ICAO member States by providing information on new or proven technologies, including lessons learned from trials and experimentation.

2. DISCUSSION

2.1 Work has been progressed since the 38th Session of the Assembly adopted a Resolution (A38-15) requesting the Council to direct the Secretary General of ICAO to continue to address cyber threats to aviation security. On 26 February 2014, the Council adopted Amendment 14 to Annex 17 – *Security*, as recommended by the Aviation Security Panel (AVSECP), which included two Recommended Practices on measures relating to cyber threats. On 5 December 2014 the IHLG partners signed the *Civil Aviation Cybersecurity Action Plan* and accompanying Roadmap. The commitments in the Action Plan are aligned with existing best practices and standards on cybersecurity, such as the ones provided by the International Organization for Standardization (ISO) and National Institute of Standards and Technology (NIST), among others. The Civil Aviation Cybersecurity Conference, held in Singapore in July 2015, promoted the collective awareness of cyber threats among airport operators, airlines, aircraft engine manufacturers, ground handlers, security service providers, security equipment providers, international organizations, regulators, and other relevant aviation security stakeholders. This year, in March, AVSECP/27 considered the risk to aviation from deliberate acts of unlawful interference through the means of cyber attacks.

2.2 Cyber attacks on the aviation sector have so far been low-level and caused limited impact, but the consequences of a successful malicious cyber attack on civil aviation operations could potentially be catastrophic. The situation becomes more complicated as airlines, airports, air navigation service providers, and other stakeholders, such as ground handling companies, security service providers, fuel companies, and cargo agents become increasingly reliant on modern and advanced computer and information communications and technology systems for their operations.

2.3 The threat to the aviation system comes from different groups. Terrorist groups look to cyber as a means to attack their targets. Hackers and hacker groups vary greatly but some have demonstrated the ability to conduct both defacement of web sites and denial of service attacks against a wide range of organizations. Organized crime groups have also demonstrated some capability in this area. Skilled insiders are a serious threat due to their specific knowledge and legitimate access to networks and systems.

3. CONCLUSION

3.1 In support of the Assembly Resolution on *Addressing Cybersecurity in Civil Aviation*, and recognizing the actions proposed by the United States and Europe in A39-WP/99, ICAO should, as soon as practicable, form an expert group to assist and advise ICAO in steering and coordinating the work on cybersecurity, cyber safety and cyber resilience.

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