



TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 6: Future direction

6.2: Standardization – approach to SARPs development in support of One Sky

A HARMONIZED STANDARDS FRAMEWORK TO SUPPORT A GLOBALLY HARMONIZED AIR TRANSPORT INFRASTRUCTURE

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

SUMMARY

This paper presents the industry's view on how industry-supported standardization processes and organizations may assist ICAO in establishing a coherent and efficient system of standards necessary for the implementation of the aviation system block upgrades and future air transport infrastructure upgrades on a regional and global level.

Action: The Conference is invited to:

- a) note the content of the paper; and
- b) agree on the recommendations presented in paragraph 3.4.

1. INTRODUCTION

1.1 The purpose of this document is to outline how industry-supported standardization processes and organizations may assist ICAO in establishing a coherent and efficient system of standards necessary for the implementation of the aviation system block upgrades (ASBUs) and future air transport infrastructure upgrades on a regional and global level.

2. BACKGROUND

2.1 Minimum performance standards expand the marketplace of solutions, providing information needed to understand rationale for operational goals, requirements and typical applications. In addition to their role as key enablers for technical interoperability, standards often serve as a partial basis for regulatory certification, invoked by national and regional regulatory bodies and referenced in regulatory documents.

2.2 Today's standards are well-recognized and utilized by the stakeholder community as they are developed in open, consensus-based environments, in which all stakeholders can participate.

*The following organizations support ICCAIA's conclusions and recommendations as expressed herein: European Organization for Civil Aviation Equipment (EUROCAE), International Air Transport Association (IATA), International Federal of Air Traffic Control Associations (IFATCA), RTCA, Inc., and SAE International.

2.3 Standards development organizations (SDOs), such as EUROCAE, RTCA, the Aerospace Industries Association (AIA), ARINC, the AeroSpace and Defence Industries Association of Europe (ASD-STAN) and SAE International, cover a broad range of systems and equipment standards required by the worldwide aviation community, including standards that support many of the ASBU modules and their enablers, especially for Blocks 0 and 1. SDOs provide different members of the aviation community specializing in various areas of expertise (communication, navigation, surveillance, etc.) with organizational membership and committee/work group membership. These groups, comprised of a multitude of stakeholders, including equipment and airframe manufacturers, regulators, civil aviation authorities, air navigation service providers (ANSPs), airlines, airports and other users, attract expertise and thus grow further in membership. The needs of these stakeholders drive the various groups' activities, which are based upon openness, transparency and consensus.

2.4 Furthermore, SDOs have established strong links with the major air traffic management (ATM) modernization programmes in Europe and the USA—SESAR and NextGen, respectively. These links are bi-directional, in that standards are being used as a basis for research and development work; stakeholders then use the results to validate standards and to support their further development.

2.5 An effective, collaborative planning mechanism for standards development will help guarantee their relevance, timeliness and high quality. The endorsement and subsequent implementation of the ASBU framework presents a unique opportunity to analyse ICAO's current working processes and reap benefits of greater collaboration with SDOs. Those benefits include:

- a) acceleration of ICAO's SARP development process;
- b) access to broader expertise through standardization bodies;
- c) ensure stakeholder buy-in and increased value of standards to participants;
- d) avoid redundancy and duplication of effort; and
- e) allocate resources appropriately.

2.6 Industry supports the intention to keep ICAO's Standards and Recommended Practices (SARPs) and guidance material at a high level, while relying on other SDOs to develop more detailed technical specifications to complement the ICAO material through reference to such specifications. Such principles will increase the stakeholder engagement and buy-in and also provide ICAO with access to a broader pool of expertise than is available through its own staff resources.

2.7 However, this new approach requires a timely and reliable coordination of the standardization process. In order to ensure that necessary standards can be developed in a timely fashion whilst preserving the high level of quality required, it is of utmost importance that ICAO establish and lead an effective coordination body comprised of the appropriate SDOs to enable iterative and accurate planning of the standardization processes, avoid duplication of work, and provide a more efficient use of ICAO and industry resources. The increased visibility will allow ICAO and SDOs to plan their work efficiently, including the identification of missing standards and the definition of necessary timeframes for their development. Such a cooperative planning mechanism should be formally embedded into ICAO's processes beginning with the ASBU framework.

2.8 Furthermore, in light of Assembly Resolution A37-15 Appendix A, ICAO needs to establish a validation and verification process to validate the relevant results of the industry-supported SDOs to ensure legal clarity and certainty of the status of the referenced material. Configuration management of the referenced documents will also require clarification.

3. CONCLUSION

3.1 The supporting organizations welcome ICAO's intention to make more and better use of industry standards to complement its SARPs and guidance material. This is a further step in promoting and facilitating stakeholder participation in and contribution to ICAO processes.

3.2 The ASBUs present a unique opportunity for ICAO to establish new, more efficient working relationships and an effective cooperation mechanism with other SDOs, including a strong planning component to ensure timely availability of relevant standards.

3.3 Through the standards development activities within EUROCAE, RTCA, AIA, ASD-STAN, SAE International, and ARINC, industry will be available to support ICAO's standardization efforts. State regulatory bodies such as the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA) are actively involved in this process and are committed to such work.

3.4 The Conference is invited to recommend that ICAO:

- a) make greater and better use of industry standards by reference to complement ICAO material (i.e. SARPS, guidance documents);
- b) establish and lead a body comprised of relevant industry standards development organizations (SDOs) and other industry stakeholders, to provide effective coordination and planning of industry and ICAO standard production and formalize this mechanism within the ICAO structure; and
- c) establish an ICAO mechanism as per A37-15 to create a validation process for the work generated by recognized standards making organizations.

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