

*INTERNATIONAL CIVIL AVIATION ORGANIZATION***FIRST MEETING OF THE REGIONAL AVIATION SAFETY GROUP -
ASIA AND PACIFIC REGIONS (RASG-APAC/1)***Noumea, New Caledonia, 10 - 11 October 2011***Agenda Item 4: Member State Presentations****IMPROVING INTERNATIONAL VALIDATION PROGRAMS;
RELIANCE ON DATA-DRIVEN REQUIREMENTS***(Presented by the United States of America)***SUMMARY**

Multiple sets of similar yet differing certification requirements among Civil Aviation Authorities can lead to a significant burden when importing and exporting aeronautical products and parts. The United States supports harmonization of requirements throughout the international aviation community, assuming that those requirements are data-driven and feasible for implementation. In specific regard to validations of foreign certificated products and parts, the United States would like to encourage increased international cooperation in ensuring that these validation activities incorporate safety management principles to ensure their utmost efficiency and definitive safety focus. A common understanding of the intention of validation activities is an integral part of international safety management, and would allow Civil Aviation Authorities to ensure resources are allocated in areas most critical to safety.

1. INTRODUCTION

1.1 The United States supports a harmonized regulatory system in which airworthiness standards and the certification processes to ensure compliance to these standards are based on universally accepted data and feasible for implementation. Harmonization of rules and processes amongst the increasing number of international aviation regulators should be a goal for all Civil Aviation Authorities (CAA), as common requirements facilitate global acceptance. However, while the aim needs to be to harmonize regulations, Contracting States should aim to harmonize based on data that addresses potential safety consequences, and not for the purpose of expediency.

1.2 Identifying the balance between safety risk management and safety assurance are key components of safety management systems, whether as an industry purveyor or as an aviation regulator. As international trade between States flourishes, and products and parts are subject to increased scrutiny under multiple regulatory systems, CAA's must identify those activities that require the most attention and resource expenditure for the purpose of accident and incident prevention. The United States supports harmonization of requirements, and specifically would like to see increased international cooperation in the validation of certified products and parts between States.

1.3 Many in the aviation industry believe the validation process has become increasingly burdensome for validating and certifying authorities, and arduous and costly for the manufacturers of the product. The use of harmonized airworthiness Standards, with a framework based on Annex 8 (*Airworthiness of Aircraft*), will lead to a more efficient and effective validation process.

1.4 Validation involves trust, communication and cooperation between both the importing and exporting authority. The purpose and technical scope of the activity should be established before beginning the validation, and the Validating Authority should focus their efforts on unique technical issues that may have an impact on the safe operation of the aircraft on their registry.

2. DISCUSSION

2.1 Both Civil Aviation Authorities and the aviation industry have access to finite resources; therefore, these resources must be focused where the greatest safety benefit may be gained. The justification for harmonization requirements must be based on safety data and potential for decreased risk. The United States recognizes that development of requirements is both a technical and political action, and all Civil Aviation Authorities are bound to comply with varying degrees of autonomy from their governing authority. However, Contracting States should work together to the utmost extent possible to coordinate the development of requirements, with the common foundation of these requirements being universally recognized data.

2.2 Safety management is based on the principle that people and resources should be focused on areas with the greatest safety gain. Effective management of these people and resources would include a regulatory system in which the CAA is able to prove that the cost to society of implementing a regulation is repaid through the avoidance of fatalities, injuries, and potential loss. Multiple sets of similar yet different certification requirements have the potential to complicate the validation process and digress from the principle safety focus. By maintaining the balance between safety assurance and safety risk management and by harmonizing the requirements for a validation, safety will remain the common goal.

2.3 The United States supports a position in which the objective of the validation process is to achieve the maximum safety benefit. If the Validating Authority is satisfied that the design is compliant to international standards and meets national airworthiness requirements, then the Validating Authority can be assured of the acceptable level of safety of the product or part. Additional testing or documentation should be requested based on unique technical or operational issues of the State of Registry. Requesting information from the Certifying Authority beyond what is needed in assessing specific safety-based concerns shifts the principal focus of validation from risk mitigation. This then has the potential to increase undue burden on all parties involved, wasting both time and resources on activities that are not safety related. Resource expenditure for validation activities should be based on evaluation of prioritized safety risk, an essential component of effective safety management.

2.4 The role of both authorities in the validation process must be clearly established to ensure that safety remains the principal focus of the activity. The Validating Authority should seek to regulate products entering their registry with the utmost degree of reliance on Certifying Authorities with demonstrated expertise in product design and production, with systems that are compliant and exceed safety standards set in Annex 8. This cooperation and trust in the abilities of proficient Certifying Authorities will allow for Validating Authorities to identify high priority areas and assess safety risk management, and to provide support for continued operational safety and assure the safe usage of the product or part. Establishing a validation process based on mutual understanding about which activities are essential to determining the safe operation of a product or part will prove mutually beneficial for all parties involved in the import and export of aeronautical products and parts between Contracting States.

2.5 The United States encourages a commitment from Contracting States to agree on the focus of safety for validation activity, in which the primary aim is the mitigation of risk and the assurance of safety. As some Civil Aviation Authorities may be bound to regulatory systems that do not allow a prioritization of risk into a validation process, the United States encourages ICAO to work with these Contracting States on incorporating these principles into their rules and processes. The ability to balance these two components, both assuring and managing safety, is dependent on the capability to effectively implement a successful validation program. Rules and processes must reflect this balance. The United States has discussed harmonization of validation with other Civil Aviation Authorities and many have expressed willingness to a streamlined, standardized approach.

2.6 If agreement can be reached on the purpose of validation, the United States encourages agreement on the needs of the Validating Authority in regard to basic data and other information critical to support continued airworthiness of the aircraft. A commitment towards harmonization of international requirements, assuming those requirements are data-driven, will facilitate a more effective validation program.

2.7 There are many certification requirements that could potentially save lives if implemented. However, safety requirements must be prioritized based on achieving the greatest safety benefit for resources expended. An effective safety management system focuses on decreasing the potential for risk; by prioritizing certification requirements with inherent risk factors through data-based methods, aviation regulators can more easily harmonize requirements amongst the international community.

3. **ACTION BY THE MEETING**

3.1 The Meeting is invited to note the information contained in this Paper.

- a) Commit to a common purpose for validation activities;
- b) To agree upon the necessary information needed for validation.
- c) Ensure adoption of requirements based on universally accepted data that are feasible for worldwide implementation.

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