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Directors of Civil Aviation (NACC/DCA/14)
St. George's, Antigua and Barbuda, 1 to 5 June 2026**

Agenda Item 4: Collaborative Approaches to Safety

**REGIONAL GUIDANCE FOR THE HARMONIZATION OF FLIGHT SIMULATION TRAINING DEVICES (FSTDs)
QUALIFICATION IN ACCORDANCE WITH INTERNATIONAL STANDARDS**

(Presented by the FSTC Ad hoc Group)

EXECUTIVE SUMMARY

This working paper proposes a way forward to respond to regional challenges, highlighted at the NACC/DCA/10 by conclusion NACC/DCA/10/9, related to the harmonization of flight simulator training devices qualification criteria and the approval for the use of such devices in initial and recurrent pilot training to respond adequately to the growth of airline operations in the North American, Central American and Caribbean (NACC/CAR) and the South American (SAM) Regions. The proposal consists of continuing the development of a regional guidance document for the qualification of Flight Simulation Training Devices (FSTDs) Qualification Guidance Document to implement a harmonized approach in the qualification of such devices and enable the integration of enhanced simulation technologies using the concept of Flight Simulator Capability Signature (FCS) already incorporated in the *Manual of Criteria for the Qualification of Flight Simulation Training Devices* (Doc 9625) and further developed by other regulatory frameworks in the EUR/NAT region. A harmonized implementation of FSTD qualification criteria will support the acceptance of FSTD qualification certificates in the region, enhancing cooperation and creating synergies. It also proposes supporting activities for the implementation of the guidance in the region.

Actions:	Suggested actions are presented in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> • Every Flight is Safe and Secure • No Country Left Behind • The International Civil Aviation Convention and Other Treaties, Laws and Regulations Address All Challenges • The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All
<i>References:</i>	<ul style="list-style-type: none"> • ICAO FSTDs Qualification Guidance Document • The <i>Manual of Criteria for the Qualification of Flight Simulation Training Devices</i> (Doc 9625) • FAA 14 CFR Part 60 • EASA CS-FSTD(A)

	<ul style="list-style-type: none"> • FAA ACT ARC Recommendation 25-1, 25-2, 25-4 and 26-1 • ICAO Resolution A38-10 • Information paper A42-WP/620
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1. Introduction

1.1 The North American, Central American and Caribbean (NACC/CAR) and the South American (SAM) Regions have experienced substantial growth in airline operations, pilot training activity, and the deployment of Flight Simulation Training Devices (FSTDs) of various fidelity levels over the last decade. Simultaneously, significant technological advancements in simulation fidelity, such as the extended reality (XR), have transformed the capabilities of modern FSTDs.

1.2 Despite these advancements, many States within the region continue to operate under outdated or incomplete regulatory frameworks for the qualification of FSTDs and the approval to use such devices in initial and recurrent pilot training. This has limited the efficient use of modern training technologies and created inconsistencies in the implementation of pilot training programs.

1.3 Derived from Conclusion NACC/DCA/10/9, the Flight Simulator Training Ad-hoc Group was established under the ICAO NACC regional office leadership to support the development of a guidance document for the harmonized qualification and acceptance of FSTDs and model regulations for States within the LATAM/CAR Region. The initiative seeks to align regional regulations with the *Manual of Criteria for the Qualification of Flight Simulation Training Devices* (Doc 9625) and evolving international best practices.

1.4 The group concluded its task, and the guidance document was sent to NACC and SAM States Points of Contact (POCs) for comments. Whilst the group refined the guidance document by responding to the States’ comments, new developments in international regulatory standards have emerged, which should be taken into consideration before deploying the guidance document to ensure a future-proof approach.

2. Discussion

2.1 Conclusion NACC/DCA/10/9 stipulated the following:

CONCLUSION NACC/DCA/10/9		HARMONIZED APPROVAL GUIDANCE FOR SIMULATOR/TRAINING DEVICES
<p>What:</p> <p>That, considering the benefits that flight simulations and the recent training technology for aviation is offering to States and the aviation industry for pilot training and States inspector, while keeping the necessary safety assurance of these type of Training; States and ICAO:</p> <p>a) analyse the common needs and requirements that flight simulators can offer in expediting pilot and aviation training by the NACC/DCA/11;</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Operational/Technical</p>	

b) develop a guidance document on a harmonized approach on amending national regulations and procedures to make use of the flight simulation as a valid tool/ media for this training by the NACC/DCA/11; and c) make use of good practices and lessons learned of similar deployment for its adoption in the CAR Region to include it as part of the guidance by NACC/DCA/11.	
Why: Reduce costs and resources on pilot and CAA staff training with the use of Flight Simulations and the Training Technology for Aviation	
When: NACC/DCA/11	Status: <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed
Who: <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input checked="" type="checkbox"/> Other:	United States, Central American States (COCESNA) and ICAO

2.2 The Flight Simulator Training Ad-hoc Group, led by the ICAO NACC regional office, was created to develop the guidance document material to provide support to States to update or develop regulatory frameworks, harmonize them with ICAO provisions, and/or provide an alternate means of compliance to States in the certification and oversight of FSTDs, in line with Doc 9625 and international standards. The status of the guidance document, titled “Flight Simulation Training Devices (FSTDs) Qualification Guidance Document”, is that it is ready to be released and adopted by States in the region. Due to recent developments in international regulations, the ad hoc group sees the need to make significant modifications to that document at a later stage, once it has been published and after collecting comments from the States.

2.3 Recent International Regulatory Developments

2.3.1 Doc 9625 already incorporates an “a la carte” method for the qualification of FSTDs, based upon a task-to-tool philosophy of building and qualifying an FSTD with the capabilities required to conduct specific sets of training tasks, rather than adhering to broadly defined FSTD levels which may not adequately capture the capabilities of custom-built FSTDs. It introduces the concept of Flight Simulator Capability Signature (FCS), a multi-dimensional capability profile for each FSTD, that describes exactly what training tasks and competencies a device can support, rather than assigning a single overall simulator level. The FCS concept has recently gained more adoption amongst FSTD and pilot training experts.

2.3.2 **The European Union Aviation Safety Agency (EASA)** has formally adopted its new FSTD regulatory package into EU law through Commission Implementing Regulation (EU) 2026/781, released April 8th, 2026. The EASA framework modernizes the qualification and use of FSTDs through the implementation of the FSTD Capability Signature (FCS) concept, originally derived from ICAO Doc 9625. The Regulation entered into force on April 30th, 2026, with full applicability following a two-year transition period from April 30th, 2028.

2.3.3 The timeline for full implementation of the EASA new regulations is as follows:

- a) The Certification Specifications CS-FSTD, Acceptable Means of Compliance (AMC) and Guidance Material (GM) are expected to be released in June-July 2026.
- b) Implementation support is estimated to start in Q3 of 2026. This support includes:
 - i. internal training;
 - ii. manual, based on practical examples; and
 - iii. workshops with different stakeholders (ATO, AOC, FSTD).

2.3.4 **The United States' Federal Aviation Administration (FAA)** Air Carrier Training Aviation Rulemaking Committee (ACT ARC) has released a series of recommendations that support the adoption of the FCS concept and the modernization of qualification standards through flexible regulatory frameworks, international harmonization, and recognition of innovative technologies. The following recommendations could be noted:

- a) Recommendation 25-1: *“Enable the Use of the FSTD Capability Signature (FCS) Concept”*. It was submitted by the Flight Simulation Training Device Workgroup and adopted by the ACT ARC Steering Committee at F2F-35 on September 24–25, 2025. It recommends the adoption of the FCS concept as an alternate means of compliance and to leverage the work in ICAO Doc 9625 and the EASA CS-FSTD.
- b) Recommendation 25-2: *“Replace Part 60 Qualification Performance Standards (QPS) with Consensus Standards”*. Also adopted and submitted at the same September 24–25, 2025 F2F-35 meeting. Its main objective is to transition outdated FAA-specific simulator standards with internationally recognized consensus standards.
- c) Recommendation 25-4: *“Review of FAA Regulations and Guidance Material on FSTD Qualification and Usage”*. Also adopted and submitted at the same September 24–25, 2025 F2F-35 meeting. Its main objective is to conduct a comprehensive review and cleanup of FAA regulations and guidance governing simulator qualification and usage, correcting inconsistent and ambiguous terminology surrounding the evaluation, qualification, and use of simulation training devices.
- d) Recommendation 26-1. *“Creation of Guidance for Qualification of FSTDs Under Part 60 Deviation Authority or with Additional Capabilities”*. It was adopted at the ACT ARC Steering Committee at F2F–36, January 21-22, 2026, meeting. Its main objective is to create FAA guidance explaining how innovative simulators can qualify using existing regulatory flexibility mechanisms.
- e) Recommendation 26-2. *“Creation of Guidance for the Approval of FSTDs and Other Training Devices for Use in Pilot Training”*. Also adopted at the same F2F–36, January 21-22, 2026, meeting. Its main objective is to standardize and clarify how simulators and other training devices are approved for operational training use.

2.3.5 **The Personnel Training and Licensing Panel (PTLP)**, a panel of experts of the Air Navigation Commission, is tasked through job card PTLP.002.05 to work on the update of the Doc 9625 to merge with recent regulatory developments and set it as the consensus standards for reference by all States. The estimated timeline to release the next edition of Doc 9625 edition (Q2 2028) and reach global adoption is expected to take approximately three (3) to six (6) years and will include the release of other guidance documents proposing a system-based approach to regulatory oversight of FSTDs, provisions for FSTD operators and providing States and operators' staff competencies required for the operation, maintenance and oversight of FSTDs. ICAO is also looking at the development and execution of workshops and implementation support activities for States and operators related to those new or updated guidance documents to reach global adoption.

2.3.6 The ICAO Secretariat would like to investigate the interest in the submission of a Working Paper to 43rd Assembly (A43 – 26 September – 6 October 2028), co-sponsored by interested States, proposing to review and reinforce ICAO Resolution A38-10 to reach global acceptance of Doc 9625 as an internationally accepted flight simulation training device (FSTD) standard and solutions to improve international harmonization and responsiveness to innovation through a consensus standards approach.

3. Conclusions

3.1 Modern flight simulation technologies have evolved significantly beyond the limitations of traditional fixed qualification levels, enabling more efficient and effective pilot training methodologies. Many training tasks that historically required high-end Full Flight Simulators can now be effectively conducted in lower-level devices equipped with advanced visual systems, modern motion cueing, extended flight modelling, and extended reality technologies. The LATAM/CAR region has operators acquiring these technologies to enhance pilot training, but are facing difficulties with their States to operationalize their devices due to a lack of adherence and harmonization to the latest international standards in their respective regulatory frameworks.

3.2 In the past year, there have been significant international regulatory developments and initiatives to better align FSTD qualification criteria and processes to reach global harmonization and facilitate FSTD qualification certificate acceptance whilst enabling the inclusion of the latest technologies in pilot training. Therefore, there is a need for the ICAO Flight Simulator Training Ad-hoc Group to further enhance the guidance document to incorporate those new standards, which would become the consensus standards for all States.

3.3 The envisaged evolution of Doc 9625 and the FSTD Capability Signature (FCS) concept, already acknowledged by other regions as the way forward, represents a major advancement in the qualification, approval, and operational use of FSTDs, ensuring a performance-based qualification process and enabling an agile approach to the use of enhanced fidelity technology to deliver safe and effective initial and recurrent pilot training.

3.4 The refinement of the Flight Simulation Training Devices (FSTDs) Certification Guidance Document prepared by the Flight Simulator Training Ad-hoc Group, led by the ICAO NACC Regional Office, based on the foreseen evolution of Doc 9625 and recent regional or national regulatory frameworks developments, would adequately support the States in the region in meeting the objectives set in the conclusion NACC/DCA/10/9.

3.5 A comprehensive implementation plan, including workshops and training material, should be developed to support States in implementing and adapting their regulatory frameworks to the recent evolutions in the FSTD domain.

4. Suggested actions

4.1 The Meeting is invited to:

- a) Note the progress achieved by the Aircrew Flight Simulator Training Ad-hoc Group and the ongoing international regulatory developments regarding FSTD modernization;
- b) support the release of an updated Flight Simulation Training Devices (FSTDs) Certification Guidance Document, based on the newly released EASA FSTD regulations;
- c) support the development of regional workshops with all stakeholders about the use of the Flight Simulation Training Devices (FSTDs) Certification Guidance Document and the adoption of the Flight Simulator Capability Signature (FCS) concept;
- d) support the prioritization of those workshops in Mexico, Central America and Panama, in coordination with the ICAO SAM Regional Office, where airline operators are already using or intending to use high technology FSTDs for pilot training;
- e) support the continued regional harmonization efforts related to FSTD qualification, approval, and use in pilot initial and recurrent training; and
- f) encourage States to adopt the Flight Simulation Training Devices (FSTDs) Certification Guidance Document, as an alternate means of compliance and/or review and modernize their national regulations and procedures in alignment with it.