EASA
European Aviation Safety Agency

RMT.0188 – FCL.002
What happened after the Opinion

FCL focused consultation
31 October 2018

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Practical arrangements

- **Presentation: point per point (summary of after opinion amendments)**
- **How to comment?**
  - **„high-level comments“: after every point**
  - **„low-level comments“: written consultation after the workshop**
    - **Comments to gerda.pardatscher@easa.europa.eu , cc to daan.dousi@easa.europa.eu**
    - **Subject: „RMT.0188 comment“**
    - **Deadline: 1 February 2019**

General overview

- **Part I: AMC/GM to Part-FCL**
- **Part II: AMC/GM to Part-ARA**
- **Part III: AMC/GM to Part ORA**

What has happened to the consolidated text ?

- Opinion 05 and 06 of 2017
- One consolidated text
- UPRT text
- With some amendments of RMT.0188
  - Definitions
  - Appendix 9
  - FSTD

What has happened to the consolidated text ?

- Consolidated text after first discussions at the Committe
  - Technical meeting with Member States
  - 70 proposed amendments
  - Agreement reached
  - Only two open issues:
    - Annex II aircraft used for training
    - FCL.900(c) and FCL.1000(c), oversight

Annex II – NBR Annex I

- Technical meeting
- EASA proposed working group
- Very much welcomed
- The results of this task – later today

FCL.900(c) and FCL.1000(c), oversight

- EASA has proposed amendments
- Allow EU MS approved ATOs to make use of the provisions as well
- Organisation authorisations for instructors and examiners in EASA approved ATOs in third countries

EU MS approved ATOs

- (1) Notwithstanding point (a), in the case of approved flight instruction provided in an ATO located outside the territory of the Member States, the competent authority that approved the training organisation may issue an instructor certificate to applicants holding a pilot licence, which shall be in any case at least a CPL, and a rating or a certificate issued by a third country in accordance with Annex 1 to the Chicago Convention, for which they are authorised to instruct, provided that applicants:
  - (i) comply with the requirements established in this Subpart for the issue of the relevant instructor certificate; and
  - (ii) demonstrate to the competent authority an adequate level of knowledge of European aviation safety rules to be able to exercise instructional privileges in accordance with this Annex (Part-FCL).
- (2) The certificate shall be limited to providing approved flight instruction:
  - (i) in ATOs located outside the territory of the Member States; and
  - (ii) to student pilots who have sufficient knowledge of the language in which flight instruction is given.

EASA approved ATOs

- (3) Notwithstanding point (a), applicants intending to provide flight instruction in ATOs located outside the territory of the EU are authorised by their ATO when they comply with the conditions of point (1). The authorisation is granted instead of the issue of a certificate and is limited to providing approved flight instruction solely in the authorising ATO and to the conditions of point (2).

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RMT.0581 / FCL.0188 – UPRT – Appendix 9

Part I: AMC/GM to Part-FCL

FCL focused consultation
30 October 2018

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Definitions in FCL.010

- Available
- ‘available FSTD’ means any flight simulation training device (FSTD) that is vacant for use of the FSTD operator or of the customers irrespective of any time consideration

Definitions in FCL.010

- Accessible
- ‘accessible’ means that a device can be used by:
  - the approved training organisation (ATO) under whose approval a training course for a class or type rating is being conducted; or
  - the examiner conducting the assessment of competence, skill test or proficiency check for the purpose of assessing, testing and checking.

Use of FSTDs in Appendix 9

- The training for MPA and PL type ratings shall be conducted in an FFS or in a combination of FSTD(s) and FFS. The skill test or proficiency check for MPA and PL type ratings and the issue of an ATPL and an MPL, shall be conducted in an FFS, if available.
- The training, skill test or proficiency check for type ratings for SPA and helicopters shall be conducted in:
  - (a) an available and accessible FFS, or
  - (b) a combination of FSTD(s) and the aircraft if an FFS is not available or accessible; or
  - (c) the aircraft if no FSTD is available or accessible.
- The training, skill test or proficiency check for class ratings for SPA are allowed to be conducted in the aeroplane or in a combination of FSTD(s) and the aeroplane.
- If FSTDs are used during training, testing or checking, the suitability of the FSTDs used shall be verified against the applicable 'Table of functions and subjective tests' and the applicable 'Table of FSTD validation tests' contained in the primary reference document applicable for the device used. All restrictions and limitations indicated on the device's qualification certificate shall be considered.

AMC – Appendix 9

- Proposed draft AMC transmitted
- Acronyms not yet proposed
- Use of FSTDs

General overview

- Part I: AMC/GM to Part-FCL
- **Part II: AMC/GM to Part-ARA**
- Part III: AMC/GM to Part ORA

AMC and GM to Part-ARA

- FSTD qualification certificate
- Record keeping for approval process for Annex I aircraft used in training
- Qualification of FSTDs alternatively part of CS FSTD (to be decided)

General overview

- Part I: AMC/GM to Part-FCL
- Part II: AMC/GM to Part-ARA
- **Part III: AMC/GM to Part ORA**

AMC and GM to Part-ORA

- Use of Annex I aircraft for training
  - ORA.ATO.135 use of an adequate fleet of training aircraft
  - DTO.GEN.240

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Thank you !

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The use of FSTDs in pilot training

Arnaud Lozahic, FSTD expert
Gerda Pardatscher, Senior FCL expert

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Objectives:

A fundamental change of the training and FSTD qualification requirements is necessary to:

- Establish the simulation fidelity levels
- Establish a link between the training needs and the fidelity levels
- Provide for advanced simulation technology and training research for today and tomorrow

2 Tasks to be implemented:

- Task 1

Use ICAO 9625 doc structure to link FCL/OPS to FSTD:

- Update the CS-FSTD
- Update the Aircrew Regulation

Current situation

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FLIGHT SIMULATION TRAINING DEVICE QUALIFICATION CERTIFICATE

Pursuant to Commission Regulation (EU) No 1178/2011 and subject to the conditions specified below, the European Aviation Safety Agency hereby certifies that

FSTD No EU-IT052/CU

S/N: FlightSafety / 8497

Cessna CJ1 (525)

Located at

FlightSafety International, Inc.
9027 Airport Blvd.
78216 San Antonio, TX
USA

has satisfied the qualification requirements prescribed in Part-ORA, subject to the conditions of the attached FSTD specifications.

This qualification certificate shall remain valid subject to the FSTD and the holder of the qualification certificate remaining in compliance with the applicable requirements of Part-ORA, unless it has been surrendered, superseded, suspended or revoked.

For the European Aviation Safety Agency,

Date of issue: 24.03.2017

Hans BIRKHOLM
ATO & AeMC Section Manager

Note:
The following numbers are listed on the certificate:
EASA current Project Number: 0010016500- 001

FSTD QUALIFICATION CERTIFICATE – 10039368, REV. 3 – FlightSafety International, Inc.
EASA Form 145, Issue 1 – 08/04/2012

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European Aviation Safety Agency

FSTD QUALIFICATION CERTIFICATE: EU-IT052/CU
FSTD SPECIFICATIONS

A.	Type or variant of aircraft:	Cessna CJ1 (525)
B.	FSTD qualification level:	AEROPLANE FFS LEVEL C
C.	Primary reference document:	FAA AC 120-40B and Catch-Up Special Conditions (JAA AGM Sect. Six, Part Two, Chapter 13)
D.	Visual system:	FSI FVS, Vital VIII, CRT projectors, FOV 180degx40deg
E.	Motion system:	FSI SSD, 36 inch, hydraulic, 6 DOF
F.	Engine fit:	Williams RR FJ-44-1A
G.	Instrument fit:	According to aircraft type equipped with Rockwell Collins Proline 21
H.	ACAS fit:	TCAS I
I.	Windshear:	Profiles available
J.	Additional capabilities:	None
K.	Restrictions or limitations:	None

L.	Guidance information for training, testing and checking considerations							
CAT I	RVR	550	m	DH	200	ft	yes
CAT II	RVR	300	m	DH	100	ft	n/a
CAT III (lowest minimum)	RVR		m	DH		ft	n/a
LVTO	RVR	125	m				yes
Recency							yes
IFR-training / check							yes / yes
Type rating							yes
Proficiency checks							yes
Autocoupled approach							yes
Autoland / roll out guidance							n/a / n/a
ACAS I /II							yes / n/a
Windshear warning system / predictive windshear							n/a / n/a
WX-radar							yes
HUD / HUGS							n/a / n/a
FANS							n/a
GPWS / EGPWS							n/a / yes
GPS							yes
ETOPS capability							n/a
Other:	TV recording system, steep approach capability, RNP APCH limited to: [LNAV]						

For the European Aviation Safety Agency,
Date of issue: 24.03.2017

Hans BIRKHOLM
ATO & AeMC Section Manager

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Current situation

Appendix 9

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES	PRACTICAL TRAINING					ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
Manoeuvres/Procedures	OTD	FTD	FFS	A	Instructor initials when training completed	Chkd in FFS A	Examiner initials when test completed
3.4.10 Ground proximity warning system, weather radar, radio altimeter, transponder		p——>	——>	——>			
3.4.11 Radios, navigation equipment, instruments, flight management system	p——>	——>	——>	——>			

Proposal

AMC to Appendix 9

	SINGLE-PILOT AEROPLANES, EXCEPT FOR HIGH PERFORMANCE COMPLEX AEROPLANES	Testing & Checking (T&C) Training (T)	Flight deck/cockpit layout and structure	Flight model (aerodynamics and engine)	Ground handling	Aircraft systems	Flight controls and forces	Sound cues	Visual cues	Motion cues	Environment - ATC	Environment – navigation	Environment – Atmosphere and weather	Environment – aerodromes and terrain
	Manoeuvres/Procedures	Fidelity level of device features*												
1	Section 1 Departure													
1,1	Pre-flight including: Documentation Mass and Balance Weather briefing NOTAM		N	N	N	N	N	N	N	N	N	N	N	N
1,2	Pre-start checks	T&C	S	S	S	S	S	R	S	R		S	R	R
		T	R	R	G	R	R	R	R	R		S	R	R
1.2.1	External	T&C	N	N	N	N	N	N	N	N		N	N	R
		T	N	N	N	N	N	N	N	N		N	N	R
1.2.2	Internal	T&C	S	S	S	S	S	R	S	R		S	R	R
		T	R	R	G	R	R	R	R	R		S	R	R

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Proposal

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For the European Aviation Safety Agency,

Date of issue: 24.03.2017

Hans BIRKHOLM
ATO & AeMC Section Manager

Note:
The following numbers are listed on the certificate:
EASA current Project Number: 0010016500- 001

FSTD QUALIFICATION CERTIFICATE – 10039368, REV. 3 – FlightSafety International, Inc.
EASA Form 145, Issue 1 – 08/04/2012

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FSTD QUALIFICATION CERTIFICATE: EU-A0106
FSTD SPECIFICATIONS

A.	Type or variant of aircraft:	Gulfstream G280
B.	FSTD qualification level:	AEROPLANE FFS LEVEL D
C.	Primary reference document:	CS-FSTD(A) initial issue
D.	Visual system:	FSI FVS, Vital 1100, Laser projectors, FOV 180degx40deg
E.	Motion system:	FSI FSS, 36 inch, electric, 6 DOF
F.	Engine fit:	Honeywell HTF7250G
G.	Instrument fit:	According to aircraft type
H.	ACAS fit:	TCAS II (ver. 7.1)
I.	Windshear:	Profiles available
J.	Additional capabilities:	None
K.	Restrictions or limitations:	1. No training, testing, and checking of LPV approaches in Europe 2. No UPRT training

L.	FSTD simulation features					
1.	Flight deck layout and structure	☐ S	☐ R		☐ G	☐ N
2.	Flight model (aerodynamics and engine)	☐ S	☐ R		☐ G	☐ N
3.	Ground handling	☐ S	☐ R		☐ G	☐ N
4.	Aeroplane systems	☐ S	☐ R			☐ N
5.	Flight controls and forces	☐ S	☐ R	☐ R1	☐ G	☐ N
6.	Sound cues		☐ R		☐ G	☐ N
7.	Visual cues	☐ S	☐ R		☐ G	☐ N
8.	Motion cues		☐ R	☐ R1		☐ N
9.	Environment — ATC	☐ S			☐ G	☐ N
10.	Environment — navigation	☐ S				☐ N
11.	Environment — atmosphere and weather		☐ R		☐ G	☐ N
12.	Environment — aerodromes and terrain	☐ S	☐ R		☐ G	☐ N

Other:	None

For the European Aviation Safety Agency,
Date of issue: 01.06.2018

Flavio DE NARDIS
Flight Crew Training Oversight Section Manager

Note:
The following numbers are listed on the certificate:
EASA current Project Number: 0010038481 – 001

FSTD QUALIFICATION CERTIFICATE – 10054824, REV. xx – FlightSafety International, Inc.
EASA Form 145, Issue 1 – 08/04/2012

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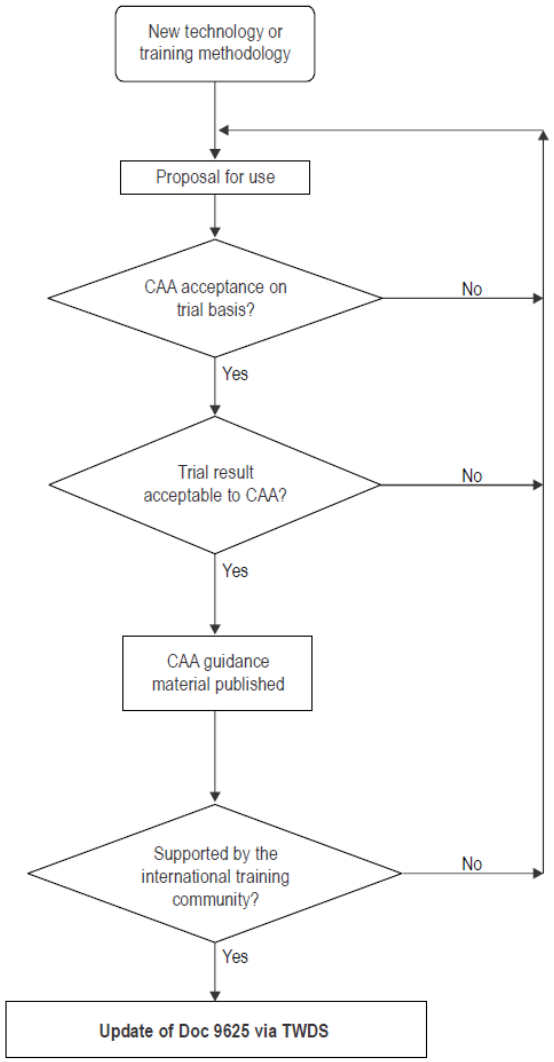
In parallel SM works on:

- EASA research project on “Virtual Reality Motion Safety Training Device” (VRMSTD) in EASA regulations.

Task 2

Use the Doc 9625 Part II-appendix D – Update Process

Introduction – flow chart



ICAO Doc 9625 Process

- description of the technical details of the proposal
- demonstration by the applicant that the proposed training solution achieves an equivalent level of safety
- revised or additional validation testing criteria to be used in FSTD evaluation and qualification;
- revised functional and subjective testing criteria to be used in FSTD evaluation and qualification;
- publication of supporting regulatory guidance documentation

Challenges

- Priorities of the RMTs;
- major change requiring proper change management;
- Schedule

Advantages

- EASA can be in advance of ECAO and other CAAS at the introduction of new technologies
- Establish a level playing field for EU industry

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