FSTD Training Capability Matrix

{ Way's to Identify Devices to Achieve Training Objectives}

Use of Training Devices Including FSTDs Workshop

Cologne, 6 March 2018

Itash Samani

OUTLINE

- Background
  - EASA RMT.0196 / NPA 2017-013 – FSTD CAPABILITY MATRIX
    - Part 1: Training Credits Matrix (As-Is)
    - Part 2: Training Credits Matrix (As-Should-Be)
- Proposed Methodology (Way Forward)
    - Options
    - Regulatory Framework Considerations

- **Know the problem**
- **Do the work**
- **Enjoy the solution**

•BACKGROUND – RMT.0196 WP1

RMT.0196 – TRAINING MATRIX

NPA 2013-17

Step-1

- Review Current Training Regulations
- Document FSTD Credits By License/Certifi

Step-2

- Review Current FSTD Standards / Fidelity
- Recommend Changes to Standard

Step-3

- Revise FSTD Standards as Required

=

Some Basic Task Considerations

- Developing New Requirements:
  - **Meet Industry Need**
  - **Addresses existing and future requirements**
  - Provides improvements
  - Includes guidance on Implementation
  - Provides for effective compliance
  - Ensures standardization
  - Ensure level playing fields
  - Provides for oversight
  - Addresses omissions/inconsistencies in current regulation
  - Minimizes administration burden for all stakeholders
  - Promotes Safety & Agency goals
  - Provides flexibility where appropriate

PROCESS TO DEVELOP TCM

- Consolidated Training Tasks
- FSTD Fidelity Assessment
- FSTD Capability Matrix

Table/Flowchart for each type of training (licensure or rating)

- To allow determination of device suitable for tasks
- To provide final result as a suite of devices
  - FNPT I
  - FNPT II
  - FNPT II MCC
  - Level 1
  - Level 2
  - Level A
  - Level B
  - Level C
  - Level D

A basic approach to TCM

1. Identify the device credits afforded to each licensure and rating for fixed wing
   I. For each licensure and rating, define the suitability of the device for each task to be trained:
      - Partial
      - Complete
      - None
   II. For tasks that can be partially completed, specify proportion or elements of the task which can be credited

2. Identify the device credits afforded to each licensure and rating for rotary wing
   I. For each licensure and rating, define the suitability of the device for each task to be trained:
      - Partial
      - Complete
      - None
   II. For tasks that can be partially completed, specify proportion or elements of the task which can be credited

NPA 2017-013

- **Draft AMC/GM (draft EASA D**
- **AMC/GM to Part-FCL**
  - New GM1 Appendix 9 to P

Adobe Acrobat Document

- **Draft resulting text**
- **GM1 Appendix 9 to Part-FCL**

•PROPOSED METHODOLOGY

WHY?

- **Why do we need to do it**
  - Training Credits Not Proportionate To FSTD Fidelity
  - FSTD Fidelity may not always support training requirement
  - New Technologies & Training Methodologies
  - Current Situation Is Untenable

WHAT?

- **What we need**
  - Device Qualification Levels
  - Device Qualification Standards
  - Device Fidelity & Training Credits Matched
  - ICAO Doc 9625?

Licence or type of training	ICAO FSTD	T/TP	Cockpit Layout & Structure	Flight model (Aero & engine)	Ground Handling	A/C Systems	Flight controls and loads	Sound Cue	Visual Cue	Motion Cue	Environment - ATC	Environment - Navigation	Environment - Weather	Environment - Airspace & Terrain
MPL4 - Advanced		T+TP	S	S	S	S	S	R	S	R	S	S	R	R
TR+ATPL		TP	S	S	S	S	S	R	S	R	S	S	R	R
Re	VII	T	S	S	S	S	S	R	S	R	N	S	R	R
RO+IO+CQ		TP	S	S	S	S	S	R	S	R	S	S	R	R
RL		TP	S	S	S	S	S	R	S	R	S	S	R	R
MPL3 - Intermediate	VI	T+TP	R	R	R	R	R	R	S	R1	S	S	R	R
ATPL/TRI/O/RO/RL	V	T	S	S	S	S	S	R	R	N	G	S	R	R
MPL2- Basic	IV	T+TP	R	G	G	R	G	R	G	N	G	S	G	R
CR	III	T	R	R	R	R	R	G	R	N	N	S	G	G
IR	II	T	G	G	G	R	G	G	G	N	G	S	G	G
CPL		T	R	R	R	R	R	G	R	N	N	S	G	G(S)
MPL1 - Core flying skills	I	T	R	R	R	R	R1	G	G	N	N	S	G	G
PPL		T	R	R	R	R	R	G	R	N	N	S	G	R(S)

HOW?

- **How Do We Get There**
  - Establish True Fidelity of Simulators
  - Standardize Characteristics
  - Improve Standard & Performance
  - Define Appropriate Use of Device for Purpose

ICAO Dc 9625 As International Basis
3 Streams of Standard

OTD & FSTD SPECTRUM – As Used Today

•Commonly Used Pilot Training Devices

- Self-Paced Training
- Instructor Led Ground School
- Practical Training

KNOWLEDGE TRAINING

PRACTICAL TRAINING

Knowledge Training → **Part Task Simulators** → **High Fidelity Simulators** →

•Examples of Devices In Use Today

GOALS & NEXT STEPS

- **GOAL**
  - Align device levels and standards with today's training needs,
  - Provide an equitable system of training credits based on device fidelity

- **NEXT STEPS**
  - Form International Working Team of Key Trainers & Technical Specialists, & EASA, FAA & Other to work on the benchmarking

- Operators
- Industry
- CAAs

Summary & Conclusions

- FSTD Credits ⇔ FSTD Standards, cannot be delineated!
- Must have well defined FSTD standards
- Must have an Equitable system of device credits
  - For optimum use of all device types/levels
  - Generous
- Must cater for qualified & non-qualified devices

Thank You!

- Take the risk or lose the chance.