

FAA Perspective

“The other day I was thinking,
‘I just overthink things.’
And then I thought, ‘Do I, though?’”

-- Comedian Demetri Martin

Outline

- Perspectives on this workshop
 - Interactions during the academics
 - Views on SAA simulator visit
 - Thoughts on a way forward
- The key differences in published approaches
- Strengths of current approaches
- Possible weaknesses of current approaches
- Summary

Perspectives on this workshop

Interactions during the academics

- Interactions with most everyone (either during lecture and on-the-side)
- Several hard questions, so I learned myself
- Enthusiasm on the part of many was self-evident

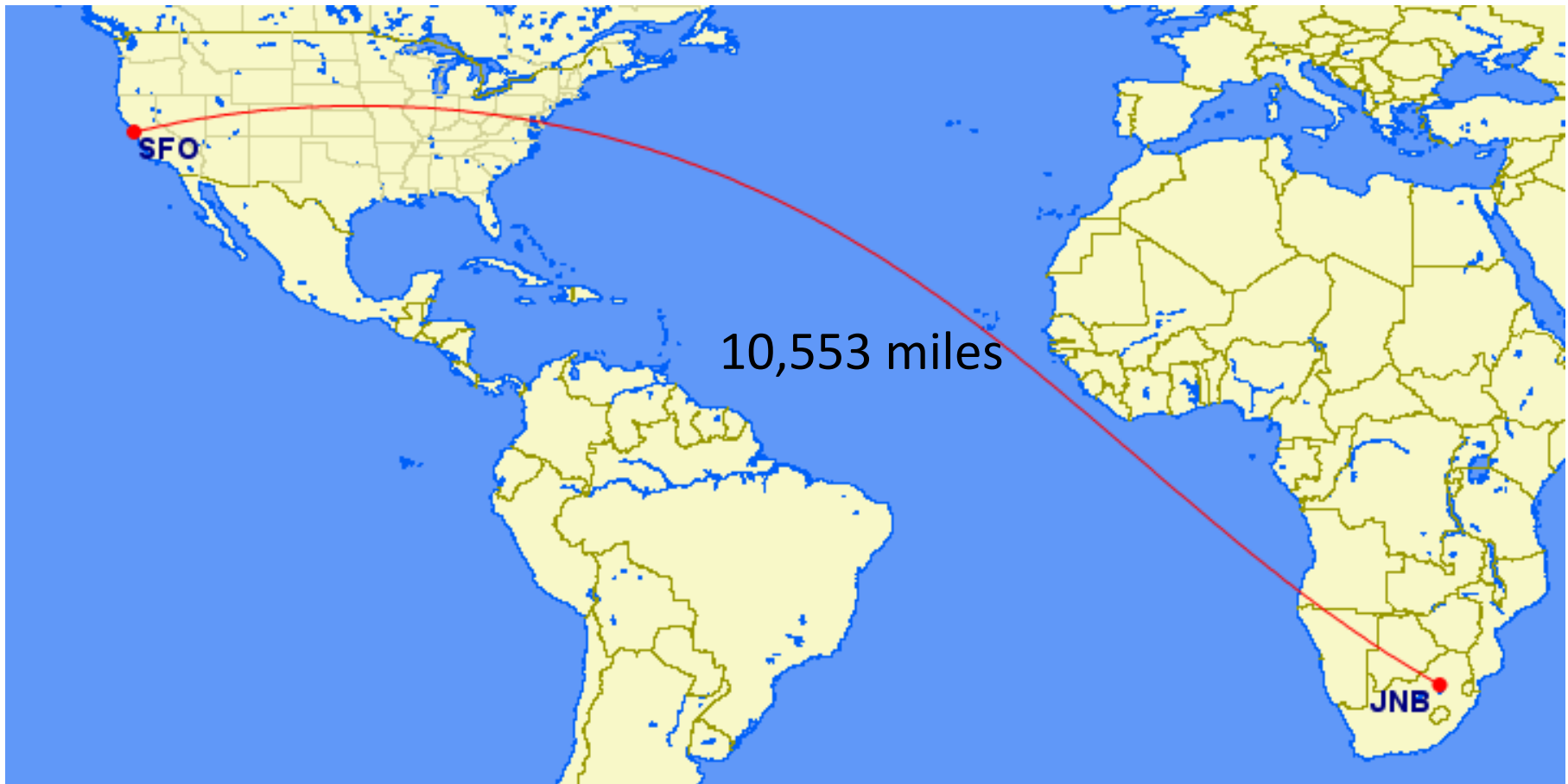
Perspectives on this workshop

Views on SAA simulator visit

- Watched A320 session, and had a side A340 visit
- What I saw was first class (admittedly a small sample)
- I think the approach SAA has taken to teach their instructors serves as an industry model
- Perhaps the simulator models will be upgraded later, so that a 100% coverage is possible

Perspectives on this workshop

Was being the farthest I have ever been away from home worth it?



Perspectives on this workshop

Thoughts on a way forward

- Stylized regional guidance, per Papa Issa's draft, makes sense
 - Needs regional NAA feedback
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- “If I had more time, I would have written you a shorter letter”
 - We may have too much worldwide guidance
 - Here is an opportunity to “right size it” by
 - Distilling it all to only its essence
 - Making sure the priorities are identified and satisfied
 - Make no mistake, the above is painful and takes thoughtful effort

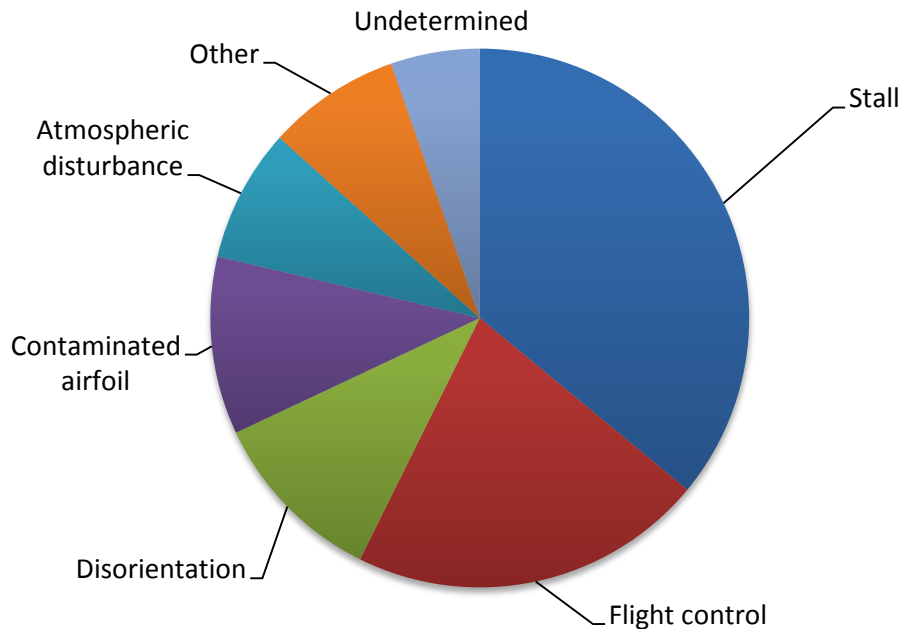
The key differences in published approaches

	<u>Simulator full stall training</u>	<u>On-airplane UPRT</u>
FAA	✓	X
EASA	X	✓

What will you decide?

Strengths of current approaches

Loss-of-control accidents
1993-2007

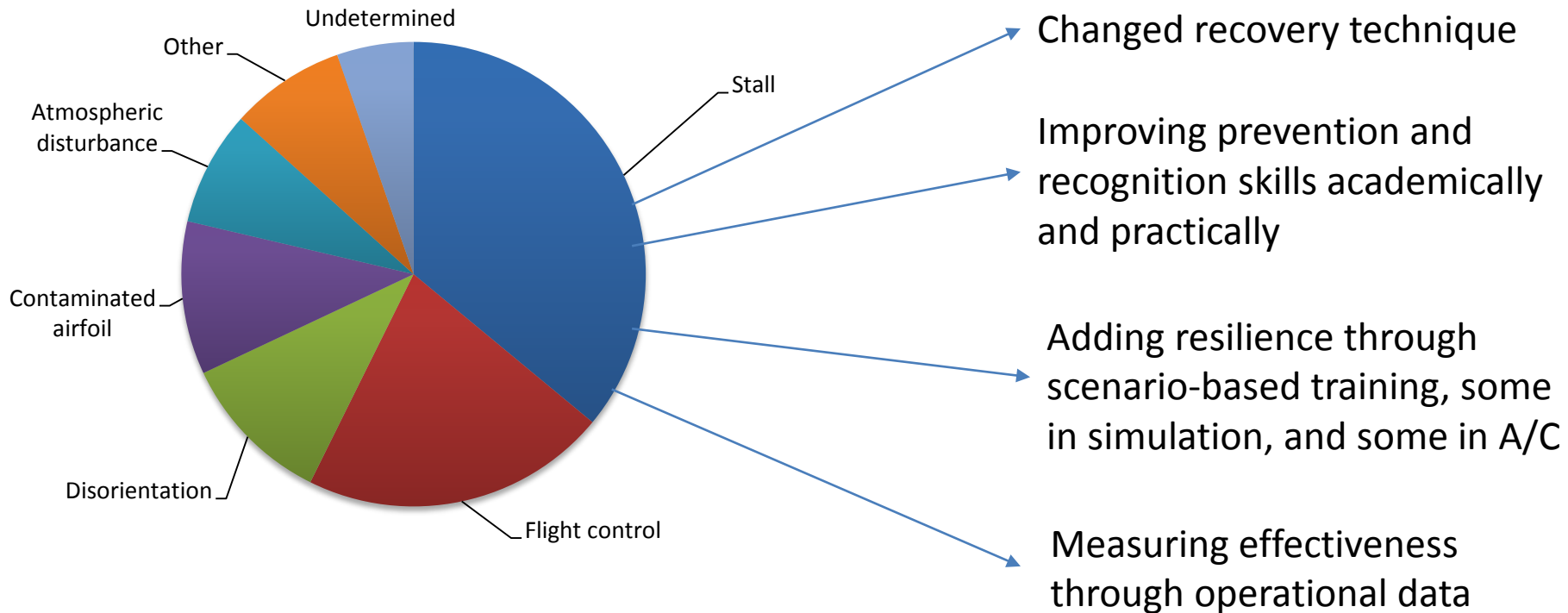


+ XL Airways GXL888T
+ Empire Airlines 8284
+ Turkish 1951
+ Colgan 3407

+ Air France 447
+ Air Algerie 5017
+ Air Asia 8501

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Possible weaknesses of current approaches

- Although much of the rules and guidance are harmonized...
 - I think there is too much and priorities can get lost
 - ICAO Doc 10011, FAA part 121 rule, two FAA advisory circulars, EASA rule split into two parts, EASA guidance, IATA guidance, AUPRTA, RAeS guidance, IPTA guidance (to be out soon)
- If satisfactory resilience to psychological and physiological cues can only be accomplished in an aeroplane...
 - Then, the FAA approach is flawed...but evidence exists to the contrary
 - I think on-aeroplane training (1) improves UPRT instructor quality, and (2) quickly teaches introspection to a line pilot

Possible weaknesses of current approaches

- If all future full stalls can be prevented with the new recovery technique, then...
 - teaching the different ways a commercial transport can stall in a simulator is unnecessary
 - no need to upgrade simulator aerodynamics
 - yet, I know of at least 5 full stalls in U.S. operations since the introduction of the new recovery technique

Possible weaknesses of current approaches

- If all future full stalls can be prevented with the new recovery technique, then...
 - teaching the different ways a commercial transport can stall in a simulator is unnecessary
 - no need to upgrade simulator aerodynamics
 - yet, I know of at least 5 full stalls in U.S. operations since the introduction of the new recovery technique
- U.S. Public Law states
 - “..to provide flight crewmembers with...training...to recognize and avoid a stall of an aircraft or, if not avoided, to recovery from the stall”

Possible weaknesses of current approaches

- If you believe full stall training in simulator is negative training, as you are “ignoring” a stall warning, then...
 - why do the vast majority of the instructors and pilots that I have talked to shake their head when the that claim is made?
 - strong opinions, but show me the evidence
 - why isn’t doing full stalls in an aeroplane then negative training?

Possible weaknesses of current approaches

- If you believe full stall training in simulator is negative training, as you are “ignoring” a stall warning, then...
 - why do the vast majority of the instructors and pilots that I have talked to shake their head when the that claim is made?
 - strong opinions, but show me the evidence
 - why isn’t doing full stalls in an aeroplane then negative training?
- Is any of this going to work in a big airplane in the real world for the very infrequent times that load factor deviations from 1g arise?
 - We know simulators cannot provide the g...are we kidding ourselves that an instructor can bridge the gap?
 - Do we really believe one-time, 3-hr flight course in a light airplane is the solution?

Possible weaknesses of current approaches

	Lack of External Visual References	Flight Crew Impairment	Training	Airplane Maintenance	Safety Culture	Invalid Source Data	Distraction	Systems Knowledge	Crew Resource Management	Automation Awareness	Ineffective Alerting	Inappropriate Control Actions	Total
Formosa Airlines Saab 340	x	x			x		x	x	x		x		7
Korean Air 747-200F	x			x		x	x		x		x		6
Flash Airlines 737-300	x		x		x		x		x	x	x	x	8
Adam Air 737-400	x		x	x			x	x	x	x	x	x	9
Kenya Airways 737-800	x		x				x		x	x	x	x	7
Aeroflot-Nord 737-500	x	x	x	x	x		x	x	x	x	x	x	11
Gulf Air A320	x		x				x		x		x	x	6
Icelandair 757-200 (Oslo)	x						x		x	x	x	x	6
Armavia A320	x	x			x		x		x	x	x	x	8
Icelandair 757-200 (Baltimore)	x				x	x	x	x	x	x	x	x	9
Midwest Express 717	x				x	x	x		x		x	x	7
Colgan Air DHC-8-Q400	x	x	x		x		x	x	x	x	x	x	10
Provincial Airlines DHC-8	x		x				x			x	x	x	6
Thomsonfly 737-800	x		x	x	x		x			x	x		7
West Caribbean MD-82	x	x			x		x	x	x	x	x	x	9
XL Airways A320		x	x	x	x	x	x	x	x	x	x		10
Turkish Airlines 737-800	x			x	x	x	x		x	x	x		8
Empire Air ATR-42	x	x			x		x		x	x	x		7
Overall	17	7	9	6	12	5	18	7	16	14	18	12	

Summary

- On balance, I think all present UPRT plans will make a difference
- I'm seldom satisfied, and I think we can and will make incremental improvements
 - Maybe that's how it always works