

***European Flight Test Safety Workshop  
Nov the 19th, 2012***



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***THERE I WAS !!***

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***FALCON 7X LOC-I due to  
a trim runaway  
25th of May, 2011***

***DESILLES Christophe  
DA 7X Captain  
[dezfalcon@gmail.com](mailto:dezfalcon@gmail.com)***

# ***FLIGHT DATA***

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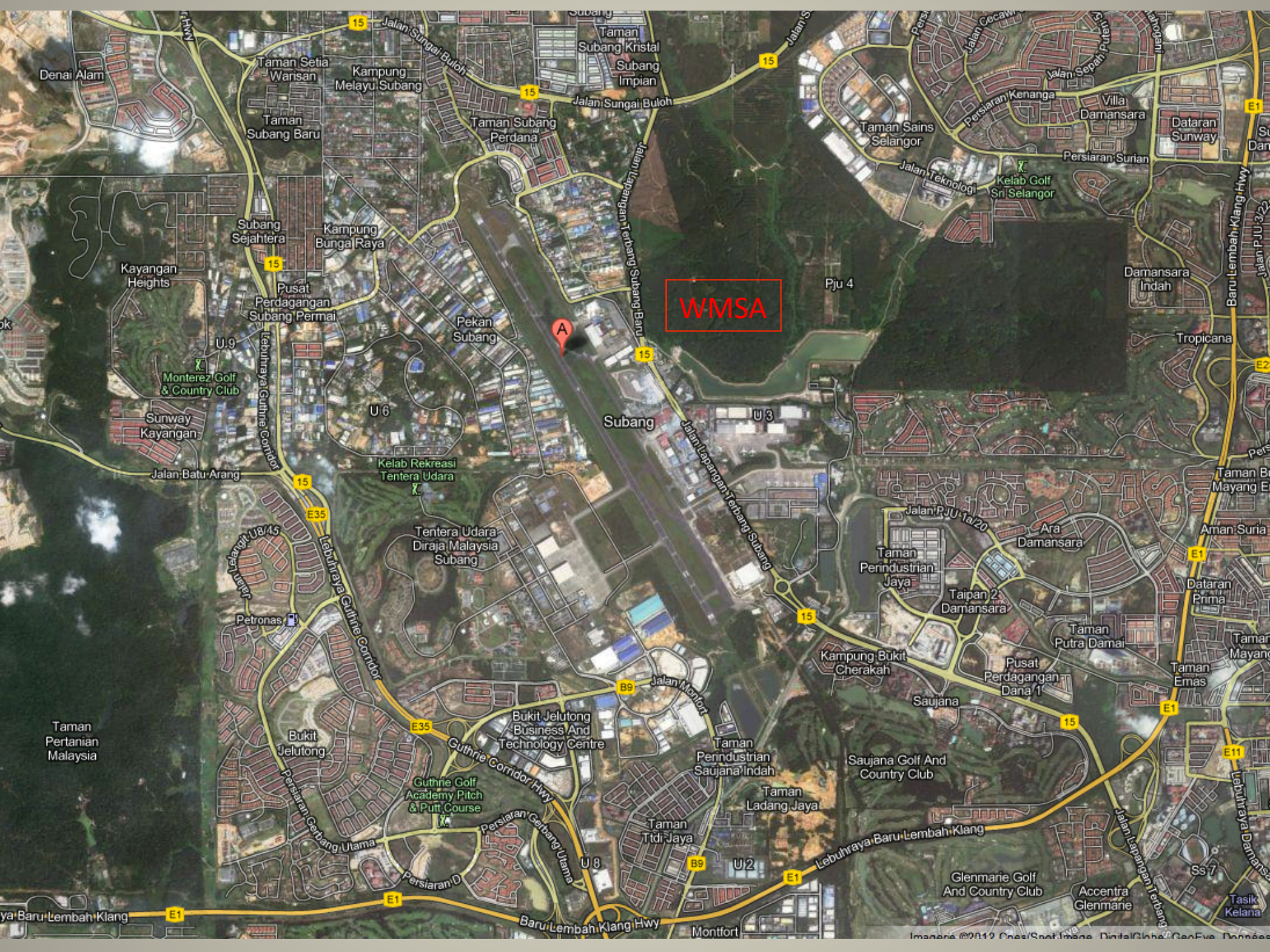
***FLIGHT DATA***

- NUREMBERG (EDDN) – Subang Kuala Lumpur (WMSA) / Ferry flight









WMSA

Subang

Pju 4

Jalan Lapangan Terbang Subang

Tentera Udara Diraja Malaysia Subang

Jalan Batu Arang

Lebuhraya Guthrie Corridor

Bukit Jelutong Business And Technology Centre

Guthrie Golf Academy Pitch & Puff Course

Taman Perindustrian Saujana Indah

Taman Ladang Jaya

Saujana Golf And Country Club

Glenmarie Golf And Country Club

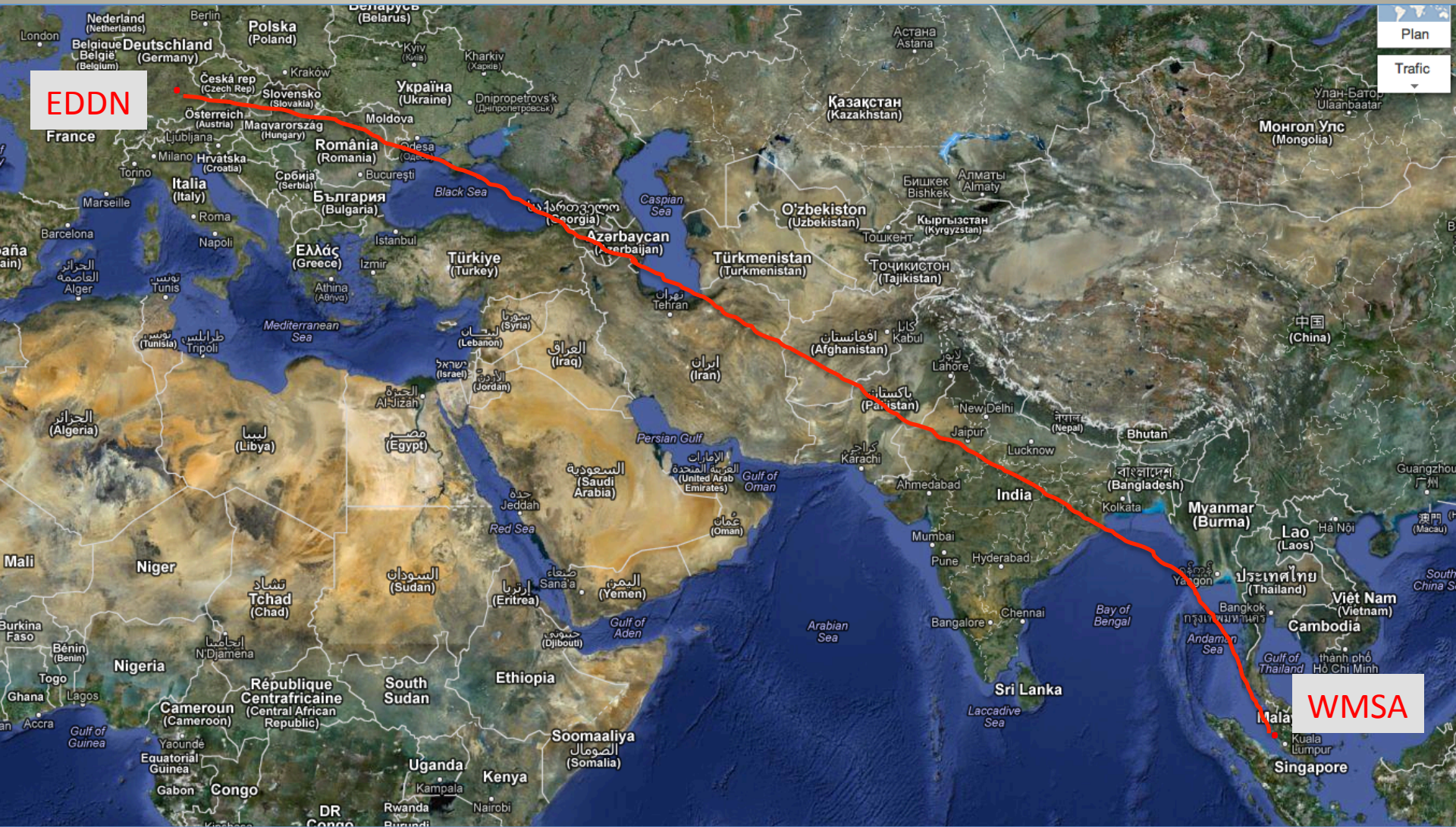
Accentra Glenmarie

Baru Lembah Klang Hwy

Montfort

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EDDN

WMSA



# ***FLIGHT DATA***

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FLIGHT DATA

- NUREMBERG (EDDN) – Subang Kuala Lumpur (WMSA) / Ferry flight
- Estimated flight time : **12 hours**
- ATD : 0809 Z (1009am LT) at the MTOW : 31200 lbs on board
- ETA : 2010 Z (0410am LT) : 2600 lbs on board
- Arrival in Subang by **night** in VMC without neither turbulence nor icing conditions
  
- Pic on the LHS as PM / Copilot on the RHS as PF / CC in the cabin
- No passenger on board (« fortunately !! »)
- Pic 7X experience : **80 hours** / Copilot 7X experience : **80 hours**
  
- Position 40Nm north of Subang airport
- DA 7X established in descent crossing 12 500' QNH at 300 kts with AP and AT engaged (cleared to descend to 11 000' QNH)

# **TRIM RUNAWAY**

- Without any faulty message, crossing 12 500', the aircraft pulled up
- **40°** attitude with a **4,6 G** load factor in a slight right turn (10°)
- **FIRST REFLEX** : Side Stick FULL FORWARD and THROTTLES MAX POWER

.....**but NOTHING happened** !!!





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- Speed decreased dangerously down to 138kts (Data recorder)
- **SECOND REFLEX** : put the aircraft nose on the horizon by the shortest way

I had to **bank** the 7X up to **100°** by the right

....at least, i stabilized the aircraft and the speed increased again until .....

.....*the second pitch up* !!!!



# **TRIM RUNAWAY**

- In fact we experienced the PHUGOID phenomenon on the pitch axis (Airbus A300 DHL flight in Baghdad in 2003, DC10 UA flight 232 in 1989)
- Finally a safety device set off and we manage to recover the aircraft CTL
  - **12 000-foot altitude bust !!!!**
  - **No pitch authority for 2'13" !!!!**

**So?? Lucky or unlucky ??**

# **CONCLUSION**

- Never say « NEVER » !!....or **always expect the unexpected** !!
- **Basic flying skills** are PARAMOUNT and will remain PARAMOUNT : it's more than obvious with the predominance of automation in modern aircraft (Gene Cernan)

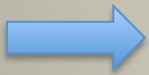


# **CONCLUSION**

.....Apollo 17 commander Gene CERNAN said he worries about the flying skills of pilots today. « I worry about the complacency that technology is imposing on pilots ». He said his Cessna 421 has a glass PFD and MFD and terrain avoidance technology that's supposed to keep me from killing myself; but if that technology fails, i still need to fly the airplane and miss that mountaintop..... (AIN Safety article November 5, 2012).

# CONCLUSION

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- **Basic flying skills** are PARAMOUNT and will remain PARAMOUNT : it's more than obvious with the predominance of automation in modern aircraft (Gene Cernan)
- Pilots, companies' management, international organisations have to wonder what could be done or improved to safely recover from a LOC-I :



Training .....but what kind of training? (Bill Voss)

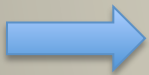


# **CONCLUSION**

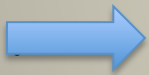
.....Five years ago we passed the point where automation was there to back up pilots. This is simply a realistic assessment of the world today, except we are not training pilots to be backups to automation.....we need to develop new kinds of pilot training.....human pilots too often lose the mental picture of the aircraft's automation.... (AIN Safety news April 16, 2012 : Bill VOSS, Flight Safety Foundation CEO).

# CONCLUSION

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- **Basic flying skills** are PARAMOUNT and will remain PARAMOUNT : it's more than obvious with the predominance of automation in modern aircraft (Gene Cernan....)
- Pilots but especially companies' management must wonder what could be done or improved to safely recover from a LOC-I :

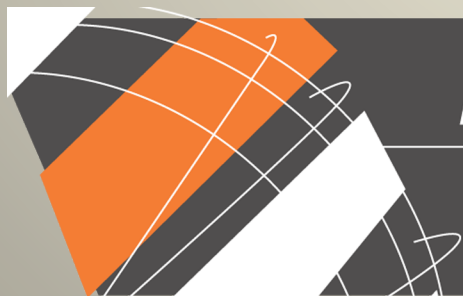


Training .....but what kind of training? (Bill Voss)



Experience sharing should be emphasised, shouldn't it?

- Think about Murphy's law or more seriously JAMES REASON'S THEORY !!



**ECAIR** Aviation

*European Center for Advanced Inflight Recovery*



QUESTIONS ?