

malaysiaairlines.com



Hazards and Mitigation Strategies

November 18th, 2013

Captain Adrian Abraham



CONFIDENTIAL

Copyright© Malaysian Airline System Berhad 2010. All rights reserved.



When we get it wrong

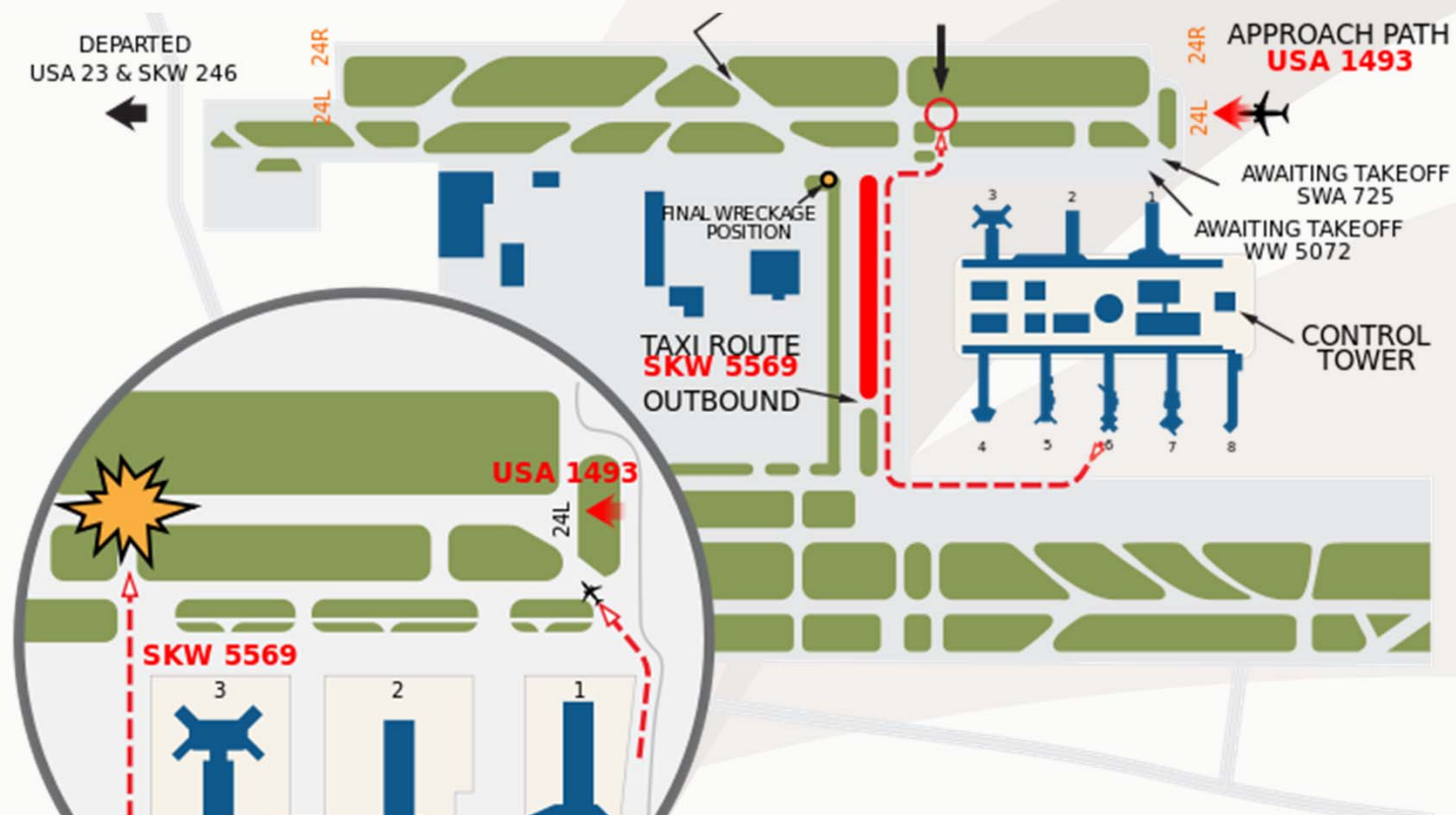


Identifying Hazards – The Lessons

- Runway Incursion – Collision at Los Angeles on the 1st of February, 1991.
- Runway Incursion – Collision at Milan Linate on the 8th of October, 2001
- Runway Excursion – Accident at Little Rock on 1st of June, 1999.



Runway Incursion – Collision at Los Angeles





Runway Incursion – Collision at Los Angeles



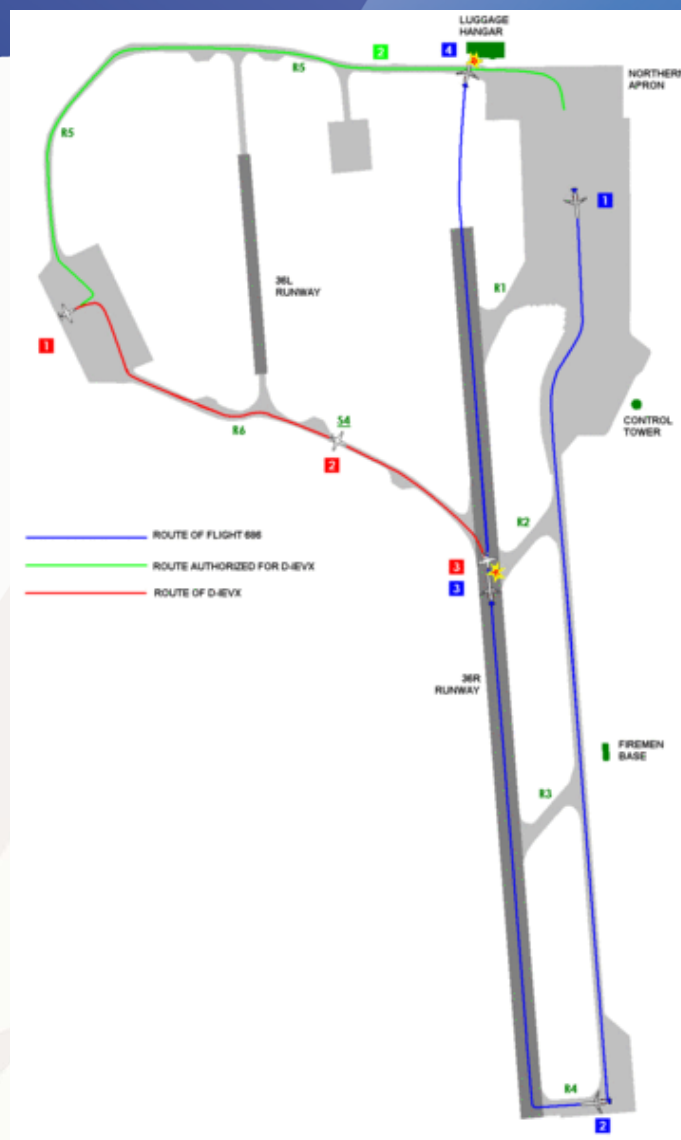


Runway Incursion – Collision at Los Angeles

- 34 Killed in both aircraft.
- NTSB – Probable Cause: ATC Management of Risks
- Recommendations:
 - ATC procedures around Risk Management
 - Surface detection equipment and Procedures.
 - Human Factor Training



Runway Incursion – Collision at Milan Linate





Runway Incursion – Collision at Milan Linate





Runway Incursion – Collision at Milan Linate

- 118 Fatalities
- Causes:
 - Human Factors
 - Markings and Signs – not in compliance with Annex 14
 - Traffic Management
 - Non Standard RT Phraseology



Runway Excursion – Accident at Little Rock





Runway Excursion – Accident at Little Rock





Runway Excursion – Accident at Little Rock

- 11 Fatalities, 45 Serious Injuries.
- NTSB Probable Causes:
 - Unstabilised Approach
 - Impaired Performance resulting from Fatigue



When we get it wrong



Lessons

- ATC Procedures
- Surface Detection Equipment
- Markings and Signs
- Non Standard RT Phraseology
- Unstabilised Approaches
- Human Factors
- Fatigue



Mitigation - ATC

- ATC Dialog
- Malaysian Flight Safety Forum
- SMS's that talk to one another.



Mitigation – Surface Detection Equipment

- Stop Bar Lights.
- Interlocking System
- Alternatives – Enhanced Markings



Non Standard RT Phraseology

- National Runway Safety Committee Program.
- Education and Promotion



Un-stabilized Approaches

- Runway Safety Holy Grail
- Long established industry standards
- Flight Safety Foundation Toolkit.
- The next step.



Human Factors

- Human Factors Training
- Human Factors Training for ATC – NOSS and TEM
- Human Factors for Airport Operators



Fatigue

- FRMS
- ATC Fatigue ?
- Fatigue Management for Airport Operators.



Summary - So what is our Mitigation Strategy ?

- Learn from Industry Events
- Learn from Industry Lessons
- Every identified cause is a hazard
- Understand
- A Common Understanding
- Engagement and Involvement



Thank You