International Civil Aviation Organization
Second Meeting of the Asia Pacific Regional Aviation Safety Team (APRAST/2)
(Bangkok, Thailand, 21 – 24 August 2012)

Agenda Item 2: Review APRAST/1 Conclusions, the work of its subsidiary bodies and related safety initiatives.

2.4 i) Report and Review the status of SEIs and DIPs on runway safety, LOC and CFIT to identify priorities and establish implementation dates

LOSS OF CONTROL (LOC)

(Presented by LOC Facilitator)

SUMMARY

While ICAO Annex 6 requires training on all types of emergency and abnormal situations, it does not specifically mention loss of control or upset recovery training. PANS Training (Doc 9868) mandates upset recovery training as an MPL training requirement. Aircraft jet manufacturers recommend upset training and an Airplane Upset Recovery Training Aid has been developed to provide guidance in this regard.

1. INTRODUCTION

1.1 Loss of control in-flight category is responsible for the highest percentage of fatalities – approximately 30% of the total even though less than 5% of all accidents were classified as being related to loss of control.

2. DISCUSSION

2.1 APRAST/1 created a working group to examine safety enhancement initiatives (SEIs) to reduce the risk of a loss of control accident.

2.2 The LOC working group considered the six LOC SEIs related to specific safety enhancements identified by the Commercial Aviation Safety Team (CAST), as well as implementation actions undertaken by the Asian COSCAPs and other ICAO aviation safety groups.

2.3 In seeking to identify a priority list of SEs, the LOC working group identified seven additional SEIs (including variations of existing SEIs) and established a preliminary priority list based on an IMPACT / CHANGEABILITY index.

2.4 See Attachment I for the analysis of IMPACT / CHANGEABILITY and the resulting priority.

2.5 The 1st priority for work was an SEI identified by the LOC working group:

LOC 7: Implementation of safety management practices into operational processes & decision making

Purpose: To implement safety management practices into operational processes and decision making to reduce the risk of loss of control. The project will implement methods of risk assessment and mitigation for operational issues related to incipient LOC or loss of control occurrences

Statement of Work: Airlines incorporate hazard analysis, risk assessment and risk management practises into operational processes and decision making. The project will develop materials to support safety management practices, including the use of FDA, reporting systems, etc. as elements of hazard analysis to identify the precursors to loss of control events.

Champion: Association of Asia Pacific Airlines

Supporters: Airbus, Boeing, CAAs & operators, COSCAP, universities, etc.

2.6 See Attachment II for outputs, performance indicators and actions.

2.7 A key action to advance the examination of each proposed SEI was for the LOC working group to identify a champion for each of the priority SEIs. The champion would act as a focal point to lead and coordinate development work for the SEI and present this to the APRAST for further consideration. The Association of Asia Pacific Airlines kindly volunteered to be the champion for the LOC 7.

2.8 The LOC working group did not identify Champions for the remaining LOC SEIs and as a result no further development work has been completed.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Note the work of the LOC working group;

b) Confirm or revise the general priorities for LOC SEIs; and

c) Through further LOC working group break-out sessions, identify Champions for additional LOC SEIs and develop detailed implementation plans.

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Attachment I

Loss of Control
Safety Enhancement Initiative Analysis
APRAST February 2012

Number	Action	Impact	Changeability	IC #	Selected Priority
LOC 7	Implementation of safety management practices into operational processes & decision making	High	Moderate	P2	1
LOC 8	Loss of control training (AMT: recognition & prevention)	High	Moderate	P2	
LOC 11	Mode Awareness / Energy management (Human factors: Communications of mode & energy state)	high	moderate	P2	
LOC 2	Risk assessment & management (Development, guidance, promotion – original)	High	moderate	P2	
LOC 6	Loss of Control training (AMT: Original)	High	Moderate	P2	
LOC 13	Loss of Control: Data Sharing (BASIS / ASAIS-like collection, analysis & sharing)	High	Difficult	P3	
LOC 12	Mode Awareness / Energy management (Design)	High	Difficult	P3	
LOC 3	Safety Information	High	Medium	P4	
LOC 4	Flight Crew Proficiency	Medium	moderate	P5	
LOC 10	Mode Awareness / Energy management (Knowledge, Recognition & Awareness)	medium	moderate	P5	
LOC 9	Loss of control training (AMT: Recognition & recovery)	Medium	Difficult	P6	
LOC 1	Hazard Identification, and risk assessment and management	Medium	Easy / (potentially more complex across a system)	P7	
LOC 5	Human Factors and Automation	Low	Easy	P7	

Attachment II

Loss of Control
Outputs, Resources, Actions, Timelines, Performance Measurement

Outputs
Output 1:
Assess existing actions and compile guidance materials related to risk assessment and risk management tools to prioritize safety for operational processes and decision making to reduce the risk of loss of control.
Addressing as a minimum training, flight operations, dispatch, use of MEL, fatigue, communications protocols, weather and human factors.

Resources:
Human: not identified
Financial: not identified

Actions:
1. XXX should survey existing actions to identify actions that could be adopted to reduce the risk of loss of control
2. XXX should survey various industry and YYYY entities to determine risk assessment and risk management material available.
3. XXX should gather the available risk resource material
4. XXX should lead an industry-government team to assess the actions and material for applicability and utility.

Timeline: DIP approval + 18 months

Output 2:
Based on the assessment from Output 1, compile the most applicable information (actions, materials, etc.) for operators, regulators, and manufacturers on risk assessment and risk management tools to prioritize safety for operational processes and decision making to reduce the risk of loss of control

Resources:
Human: not identified
Financial: not identified

Actions:

1. XXX (with assistance from YYYY) should compile material from Output 1.
2. Distribution ….. TBD
3. ZZZ should develop and publish in parallel a model bulletin for CAA inspectors' guidance on risk assessment tools usage

Timeline: Output 1 + 6months

Output 3:
Operator, regulator, manufacturer and other identified parties should implement and use applicable risk assessment tools to prioritize safety for operational processes and decision making to reduce the risk of loss of control.

Resources:
Human: not identified
Financial: not identified

Actions:

1. Operator, regulator, manufacturer and other identified parties should Implement etc
2. Operator, regulator, manufacturer and other identified parties should report to the respective industry association periodically and RASG / APRAST on the status of risk assessment and management program implementation related to reducing the risk of loss of control events.

Timeline: Output 2 + 24 months

Performance Goals & Indicators for Safety Enhancement/Outputs:

Safety Enhancement Goal: Develop and implement risk assessment and management methods to prioritize

Indicators and target: [s p e c i f i c Reduction (measure to be determined)] in precursor events, incidents and accidents related to loss of control [based on specified time-frame] in Asia-Pacific [includes aspect of world-wide comparison]

Output 1 Goal:

Assess existing actions and compile guidance materials related to risk assessment and risk management tools to prioritize safety for operational processes and decision making to reduce the risk of loss of control

Indicator: Applicable risk assessment and management information is compiled and assessed .

Output 2 Goal:

Based on the assessment from Output 1, compile the most applicable information (actions, materials, etc.) for operators, regulators, and manufacturers on risk assessment and risk management tools to prioritize safety for operational processes and decision making to reduce the risk of loss of control

Indicator: Distribution of most applicable information (actions, materials, etc.)

Output 3 Goal:

Operator, regulator, manufacturer and other identified parties should implement and use applicable risk assessment tools to prioritize safety for operational processes and decision making to reduce the risk of loss of control

Indicator: Implementation of most applicable information (actions, materials, etc.)

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