60th CONFERENCE OF DIRECTORS GENERAL OF CIVIL AVIATION ASIA AND PACIFIC REGIONS

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AGENDA ITEM 5: AVIATION SECURITY AND FACILITATION

THE CHALLENGE OF DETECTING DANGEROUS ITEMS CONCEALED IN PASSENGERS' PRIVATE PARTS

(Presented by the People's Republic of China)

SUMMARY

Civil aviation security screening faces a critical challenge in detecting prohibited items concealed in passengers' private parts. While current body screening equipment still has limitations in detection capabilities, manual body searches may infringe upon privacy rights when addressing security concerns. To address this dilemma, a dual approach on both technology and procedure is recommended, namely optimizing millimeter-wave algorithms to improve detection capabilities for private parts, and developing analysis methods to identify abnormal passenger behavior. Additionally, it is advocated that ICAO develop global guidance, and that States share their experience and practices, and enhance professional training for screeners, with a view to ensuring aviation security while minding passengers' privacy and screening efficiency.

THE CHALLENGE OF DETECTING DANGEROUS ITEMS CONCEALED IN PASSENGERS' PRIVATE PARTS

1. INTRODUCTION

1.1 The civil aviation industry operates in an increasingly complex and dynamic global security landscape. Maintaining heightened and forward-looking vigilance, and adopting strengthened security measures remain imperative to safeguarding both industry operations and public safety.

1.2 In recent years, criminals have persistently attempted to identify and exploit vulnerabilities in aviation security systems, consistently targeting perceived weak points. The "underwear bomb" plot on Christmas Day 2009 revealed the challenge faced by the industry in security screening on passengers' private parts.

2. DISCUSSION

2.1 The primary equipment used for passenger screening in civil aviation includes the walk-through metal detector and millimeter-wave body imaging device. However, the walk-through metal detectors cannot detect prohibited items other than metal objects, such as explosives, flammable liquids, and ceramic knives. Millimeter-wave body imaging devices automatically scan for foreign objects outside the human skin by generating 3D millimeter-wave image of the body, which perform well in detecting body parts with simpler structures such as the back and thighs, but are challenged with limited capabilities in detecting private parts due to their complex structures, and need further improvements to the detection algorithms.

2.2 Such challenge of security screening in private parts also exist in manual searches of passengers. Doc 8973 emphasizes in 11.5.7 "Manual Searches of Passengers" that "a systematic approach should be used for manual searches to ensure that no part of the body, items of clothing or areas of baggage are overlooked", "special attention to armpits, breasts, waistband, crotch", and "limitations of a manual search…may make passengers feel as though their personal privacy is being violated…may be an unpleasant process for the searcher". In actual screening practices, screeners often face a dilemma - balancing prohibited items detection with respect for passenger privacy, which necessitates a guidance manual with various scenarios, clear operation steps and strong feasibility.

2.3 It is recommended to address the screening challenges related to passengers' private parts via technological advancements and procedure optimization. From the technical perspective, manufacturers of millimeter-wave body imaging device or third-party algorithm providers should be encouraged and guided to enhance the detection capability of prohibited items in passengers' private parts, security screening laboratories to collaborate in performance compliance evaluations, and airports to update and upgrade their millimeter-wave body imaging device. From the procedure perspective, screeners should be assigned with additional responsibilities in identifying abnormal behavior, for screeners to observe passengers during screening for signs of tension or unusual posture, and conduct targeted manual searches on suspicious passengers.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

a) pay attention to the limitations of current passenger security screening methods, and encourage States to share their experience and practices in screening passengers' private parts;

b) call on States and the industry to conduct research on passenger security screening technologies and process; and

c) support the referral to the ICAO AVSEC Panel and Working Group on Guidance Material of the need to develop specific guidance materials to facilitate States in strengthening training for airport managers and screeners on identifying abnormal behavior and protecting passengers' privacy, with a view to ensuring operational feasibility and global consistency of training.

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