Twenty Sixth Meeting of the Communications/
Navigation and Surveillance Sub-group (CNS SG/26) of APANPIRG

WP/30 - Inconsistent ICAO Aircraft Address and Target Identification between Surveillance Data and Flight Plan

Presented by Hong Kong, China

Introduction

- At SURICG/6, Hong Kong, China presented working papers on recurring inconsistencies of ICAO Aircraft Address and Target Identification observed between received ADS-B data and filed flight plan for some aircraft flying within HKFIR

- Conclusion was endorsed by SURICG/6 and CNS SG/25 to **urge States/Administrations to proactively follow up with air operators to address discrepancies of ICAO Aircraft Address and Target Identification between ADS-B / MLAT / Mode S data and flight plan**

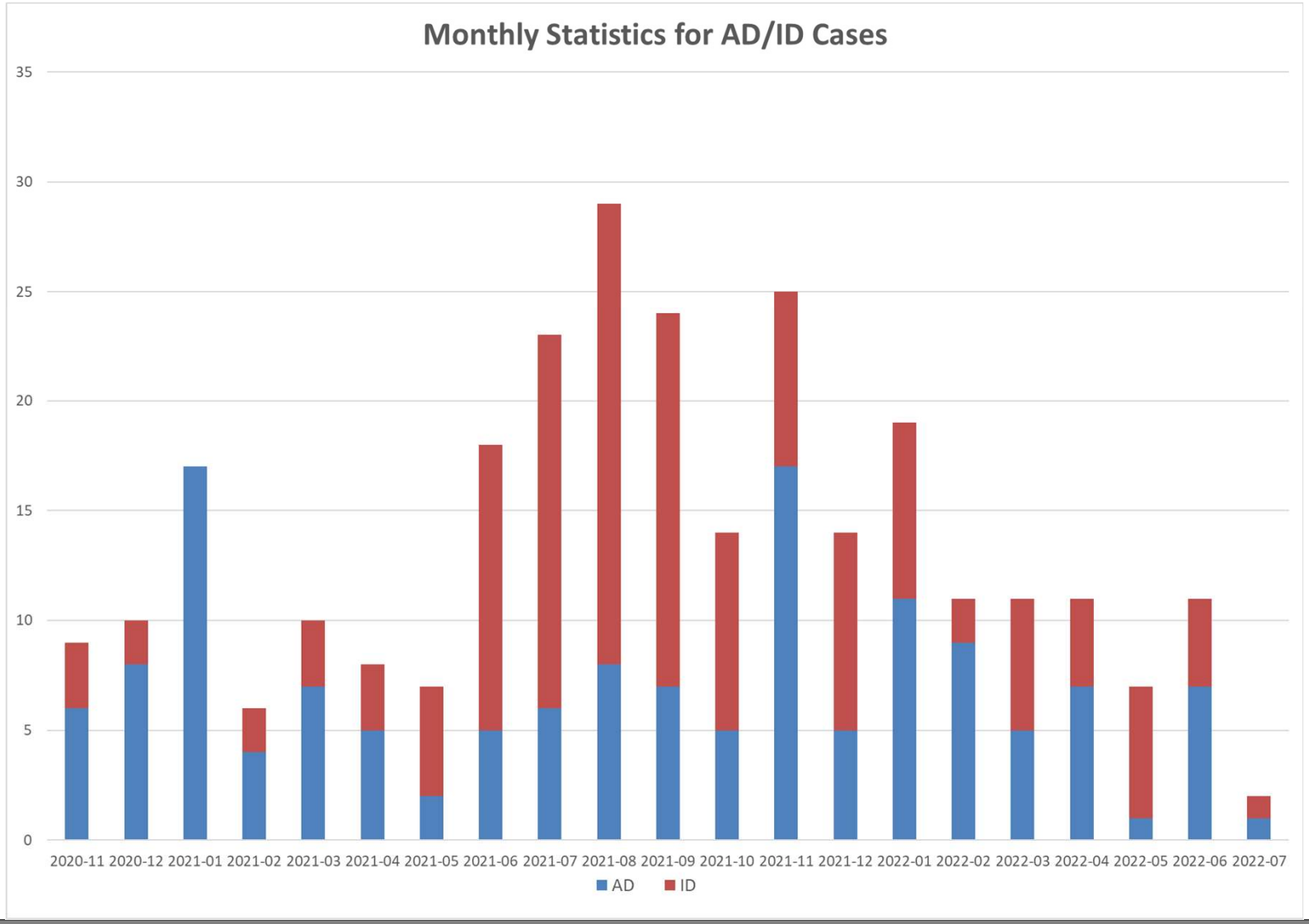
Introduction

- Despite the repeated efforts by Hong Kong, China in following up the problems with concerned airlines, improvement in the overall situation has **not** been seen

- Hong Kong, China presented an update during SURICG/7 in May 2022, In the meeting:
  - IATA expressed appreciation on the efforts by Hong Kong, China
  - IATA agreed to continue their efforts to communicate with airlines to address the problems
  - ICAO Secretariat invited Hong Kong, China to present an update in CNS SG/26 to draw attention from higher level of representatives from States/Administrations

Discussion

- The latest statistics of AD / ID discrepancies:



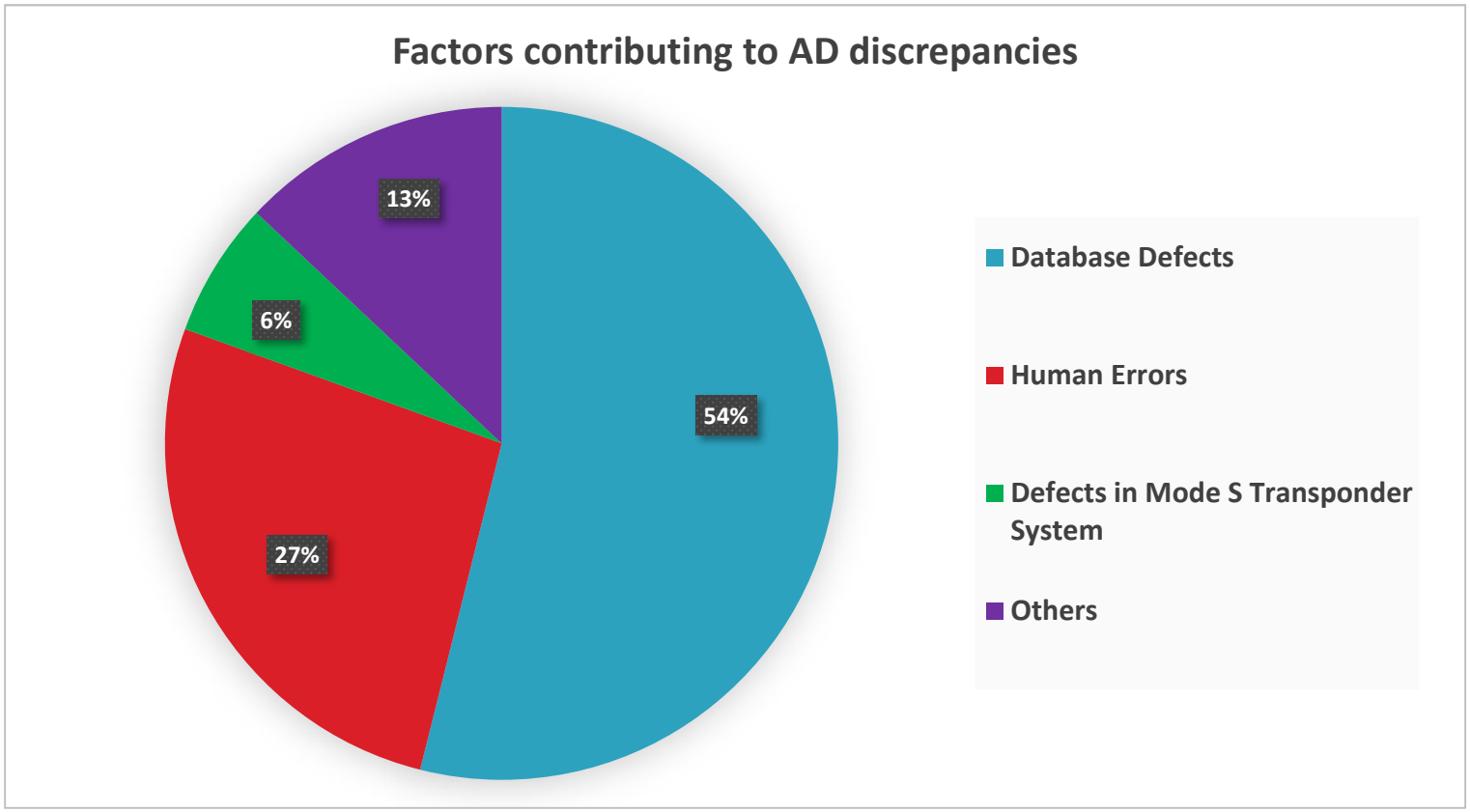
Discussion

- Since we presented the working paper of the discrepancies at SURICG/6 in Aug 2021, **178** reported cases of the discrepancies in the past 12 months. Comparing to the 12-month's statistics before SURICG/6 with about **108** cases of the discrepancies

- Improvement in the overall situation has not been seen

Discussion

- Analysis of the factors contributing to **AD** discrepancies



Discussion

- Factors contributing to **AD** discrepancies – Avionics Database Defects (about 54% of the AD discrepancies)

Types of Avionics Database Defects revealed	Percentage
Failure to update 24-bit aircraft address upon change of aircraft registration or after aircraft maintenance	47%
Software defects in flight planning system of airline operators / ground handling agents	37%
Incorrect initial entry of aircraft data	11%
Others	5%

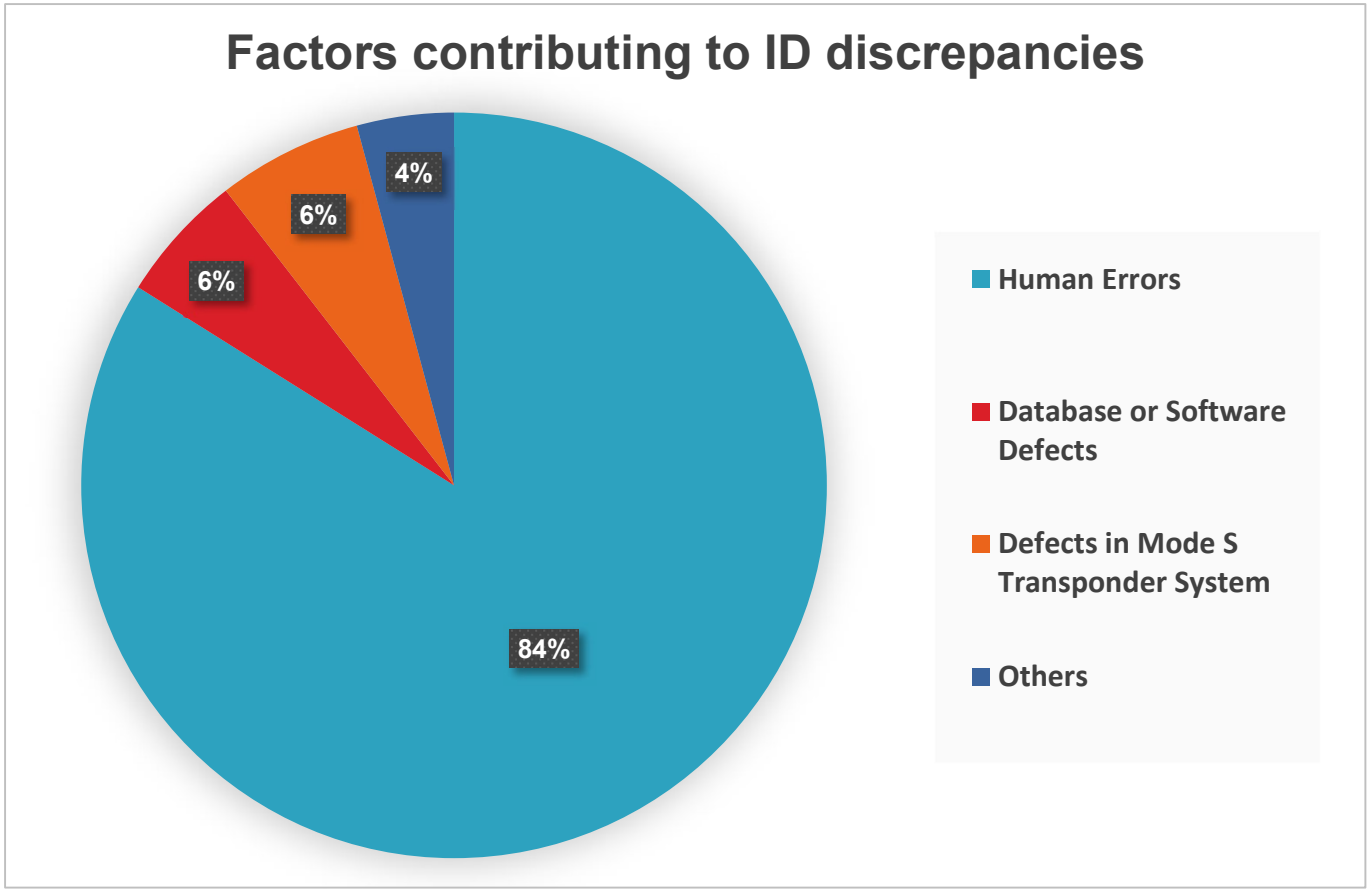
Discussion

- Factors contributing to **AD** discrepancies – Human Errors (about 27% of AD discrepancies)

Types of Human Errors committed	Percentage
Typological error of cockpit crews, flight dispatchers and/or ground handling agents	51%
Failure to update 24-bit aircraft address after flights delay or cancellation, or before commencing the next sector of a flight	25%
Others	24%

Discussion

- Analysis of the factors contributing to **ID** discrepancies



Discussion

- Factors contributing to **ID** discrepancies – Human Errors (about 84% of the ID discrepancies)

Types of Human Errors committed	Percentage
Typological error of cockpit crews, flight dispatchers and/or ground handling agents	48%
Misuse of IATA airline designators in ICAO flight plan	32%
Failure to update ACID after flights delay or cancellation, or before commencing the next sector of a flight	9%
Others	11%

Discussion

- Remedial and Preventive Measures to AD/ID Discrepancies by Hong Kong, China

  - **Operational level:** ATC informing pilots to rectify in-flight (incorrect ACID only; not applicable to aircraft of earlier generation)

  - **Post-event investigation** followed by remedial measures (joint effort of air operators)

  - Regular **NOTAM** reminders

```
(A1150/21 NOTAMN
Q) VHHK/QXXXX/IV/NBO/E /000/999/2003N11500E214
A) VHHK B) 2112230754 C) 2203222359
E) REF AIP GEN 1.5 PARA 3.7.7.2 AND ENR 1.10 PARA 2.2.5, OPR ARE
REMINDED TO ENSURE:
1. THE FLT IDENT ENTRY MATCHES EXACTLY THE ACFT IDENT IN ITEM 7 OF
ICAO FPL
2. CORRECTNESS ON 24-BIT ACFT ADDRESS IN ITEM 18 OF ICAO FPL)
```

Discussion

- Remedial and Preventive Measures to AD/ID Discrepancies by Hong Kong, China

  - Observed causes and findings published in **AIC 13/22** – Aircraft Identification and 24-bit Aircraft Address

  - **Air operators with persistent track records** (considering to adopt further measures so as to deter recurrence)

Discussion

- Remedial and Preventive Measures employed by operator

Factors contributing to AD Discrepancies	Mitigating Measures
Avionics Database-related Defects	• Checking and updating entire database of the operators' fleet • Adopting procedures to timely removal of obsolete aircraft data • Protocol to share aircraft information between the engineering team and flight operations • Software and system upgrade to provide for automatic update of aircraft database
Human Errors	Reminders and safety notices issued by operators to reduce the likelihood of human errors
Aircraft Defects	Timely maintenance of the defective part(s).

Discussion

- Remedial and Preventive Measures employed by operators

Factors contributing to ID Discrepancies	Mitigating Measures
Human Errors	• De-briefing and additional training with the crews directly involved • Issuance of internal safety bulletins, circulars or notice to all staff members • Revisit and review the standard operating procedures, emphasising on cross-check • Automating flight data handling process through software or system upgrade
Database Errors and Aircraft Defects	Timely maintenance of the defective part(s) and software upgrade

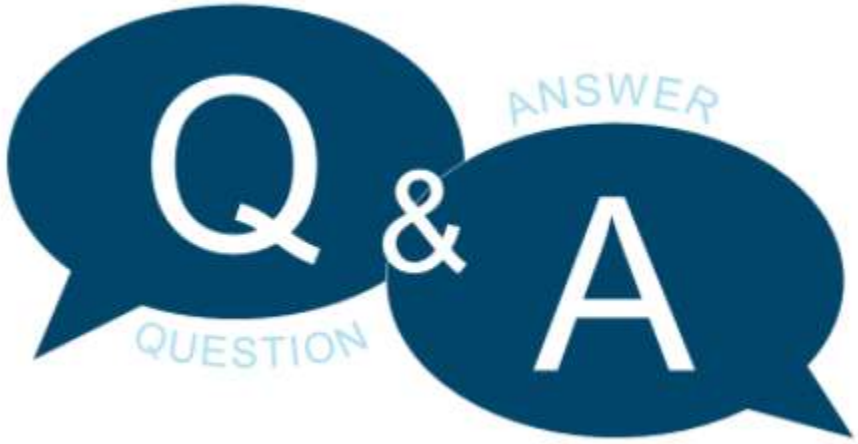
Actions by the Meeting

- The meeting is invited to:

  - note the recurring AD/ID discrepancies without improvement, despite the Conclusion endorsed by SURICG/6 and CNS SG/25, and update in SURICG/7, on urging States/Administrations to proactively follow up with air operators on the issue;

  - note the remedial and preventive measures taken by Hong Kong, China and share relevant experience for mitigating the impact to operation caused by the recurring discrepancies; and

  - seek further assistance from States/Administrations and IATA to stress the importance of having correct ICAO Aircraft Address and Target Identification in flight plans and surveillance data contributing to further enhancing flight safety, and urge them to comply with the requirements in the Hong Kong, China's AIP.


Q
ANSWER
&
A
QUESTION

Thank you


• Safe • Orderly • Efficient
• Airworthy • Teamwork
Committed to a Safe, Efficient and Sustainable Air Transport System