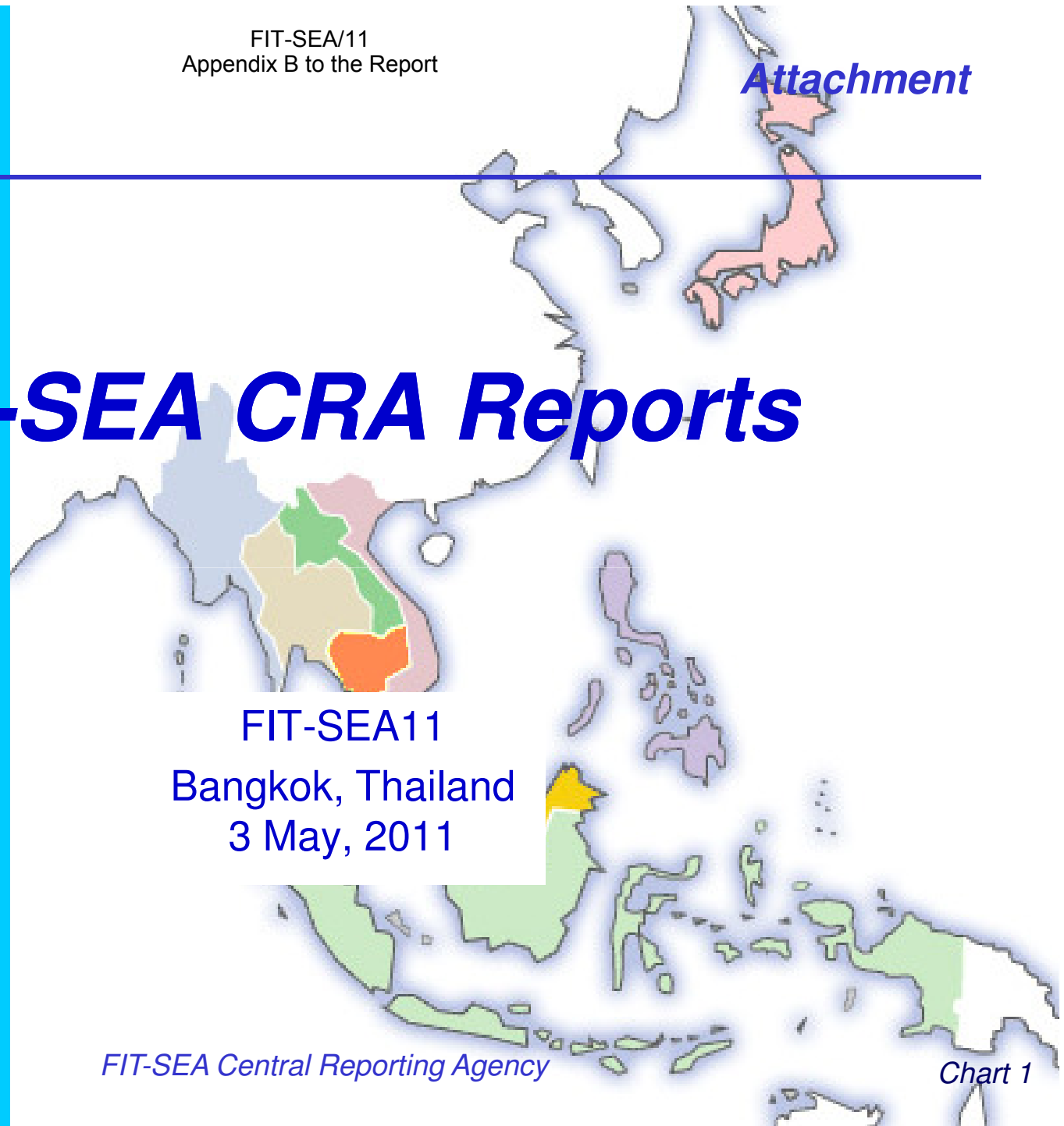


FIT-SEA CRA Reports



FIT-SEA CRA Reports

A map of Southeast Asia is visible in the top right corner of the slide, showing the outlines of the region's countries.

This presentation contains;

1. **Statistic Analyses on System Performance**

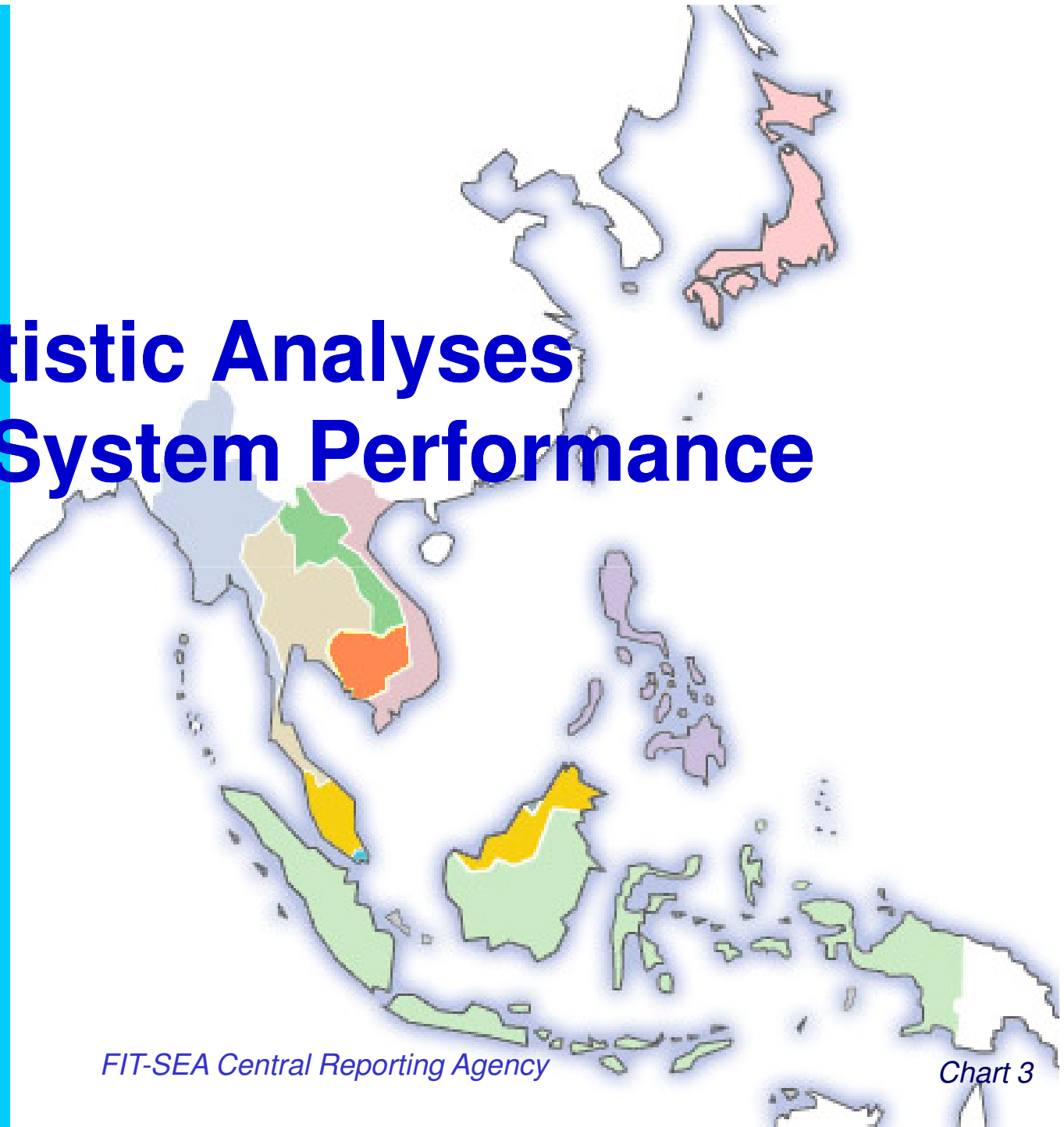
System Performance Analysis Data

2. **Problem Reports**

Since FIT-SEA/10

Specific reports

1. Statistic Analyses on System Performance



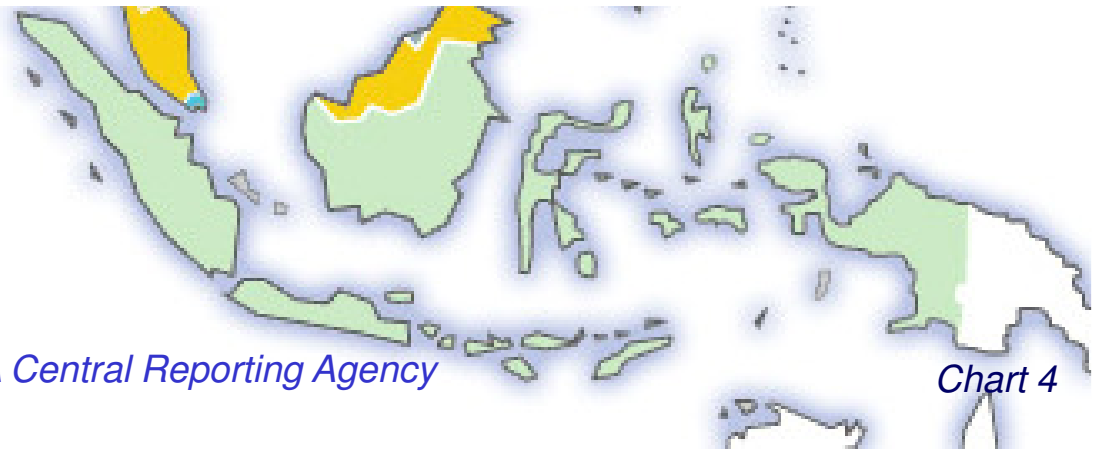
FIT-SEA Central Reporting Agency

Chart 3

CPDLC System Performance



- In this section, we provide CPDLC system performance on:
 - + CPDLC Down-link Performance
 - + CPDLC Up-link Performance
 - + CPDLC Up-link Message Success Rate
 - + Auto Transfer Success Rate

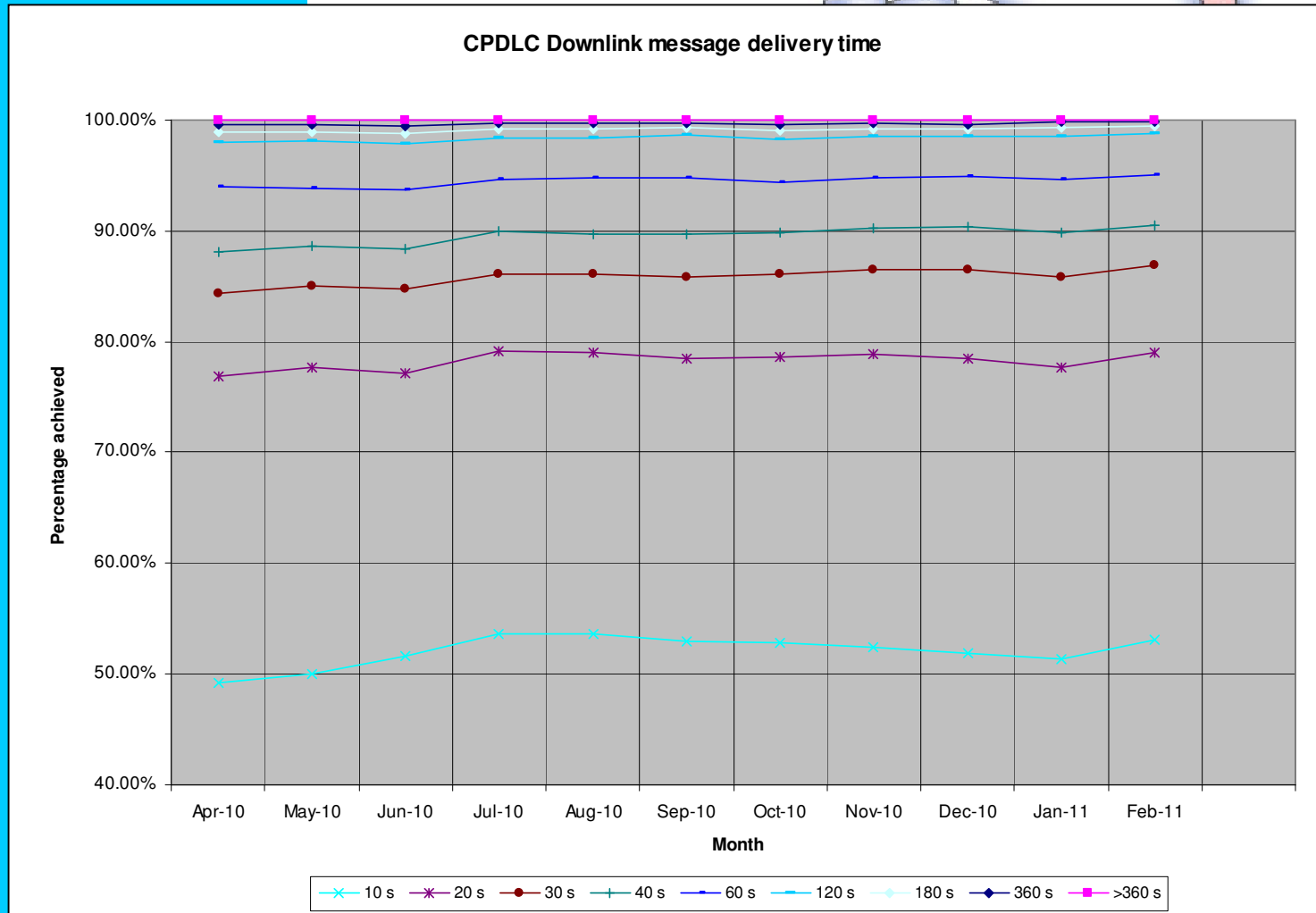


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Chart 4

CPDLC Down-link Performance

<SINGAPORE>



One-way Trip Time: Difference of time-stamps between the avionics and ground systems

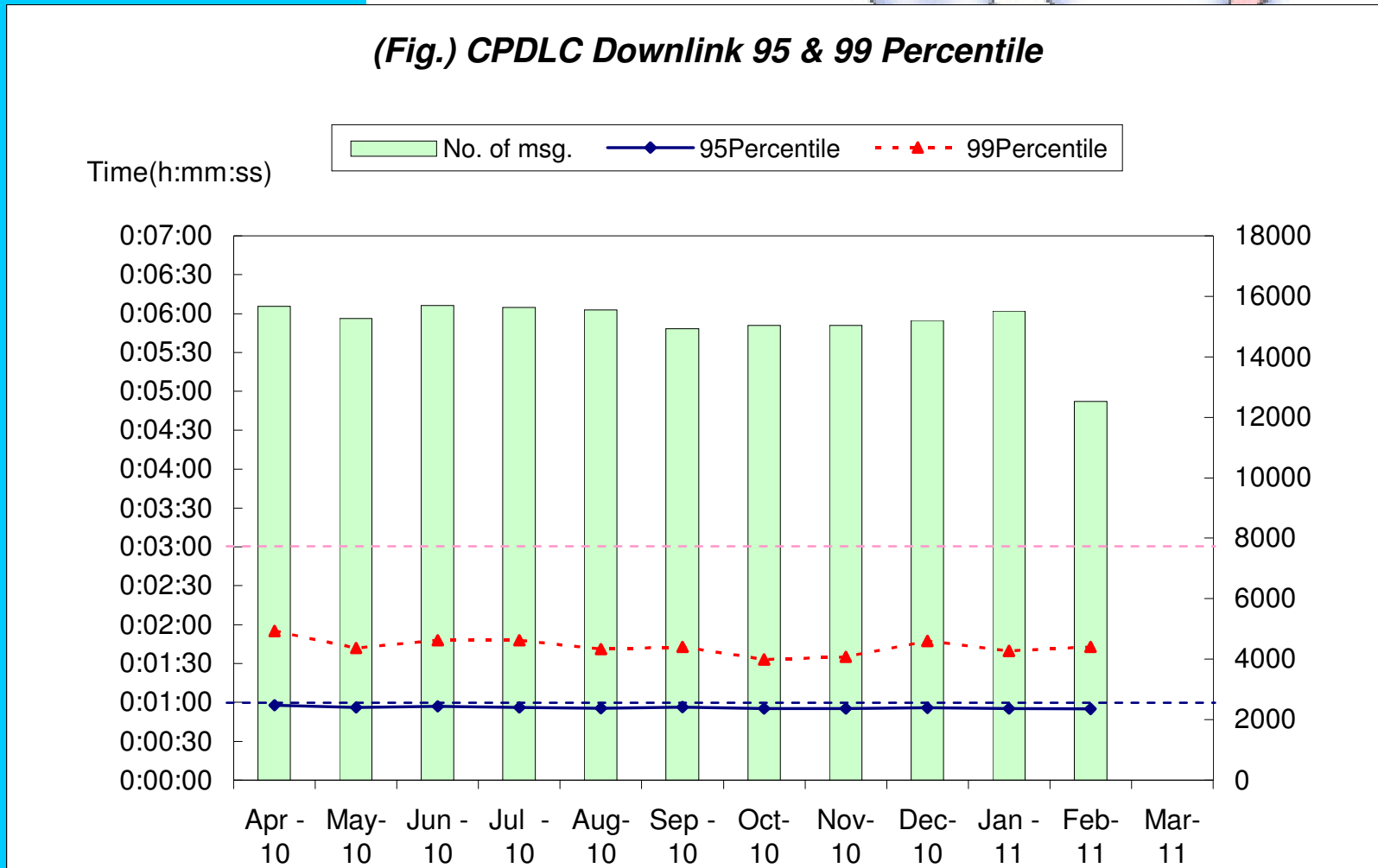
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Chart 5

CPDLC Down-link Performance

<VIETNAM>

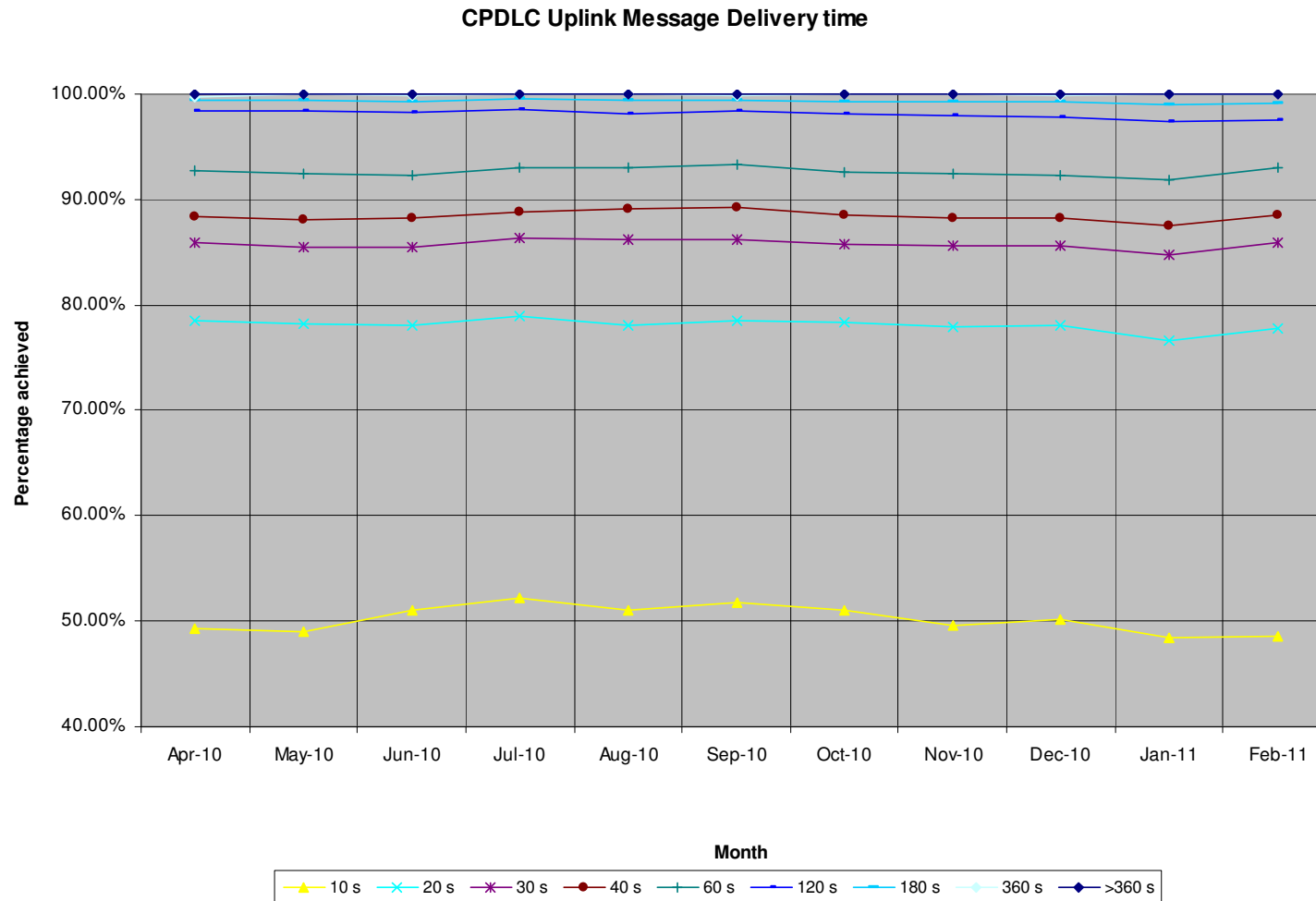
(Fig.) CPDLC Downlink 95 & 99 Percentile



One-way Trip Time: Difference of time-stamps between the avionics and ground systems

CPDLC Up-link Performance

<SINGAPORE>



Round Trip Time: Transit-delay-time from time-stamp of up-link to receipt time of MAS

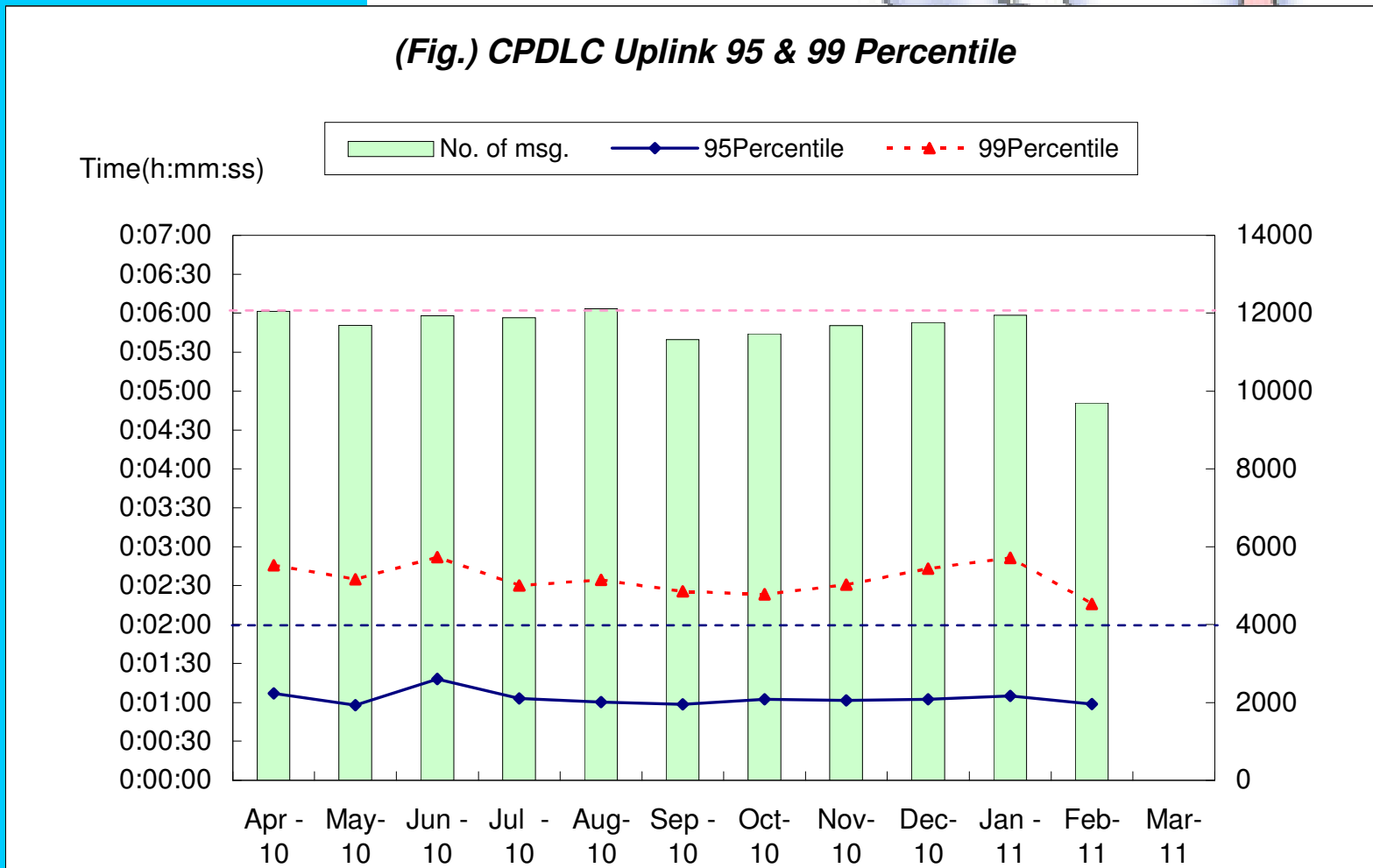
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Chart 7

CPDLC Up-link Performance

<VIET NAM>

(Fig.) CPDLC Uplink 95 & 99 Percentile



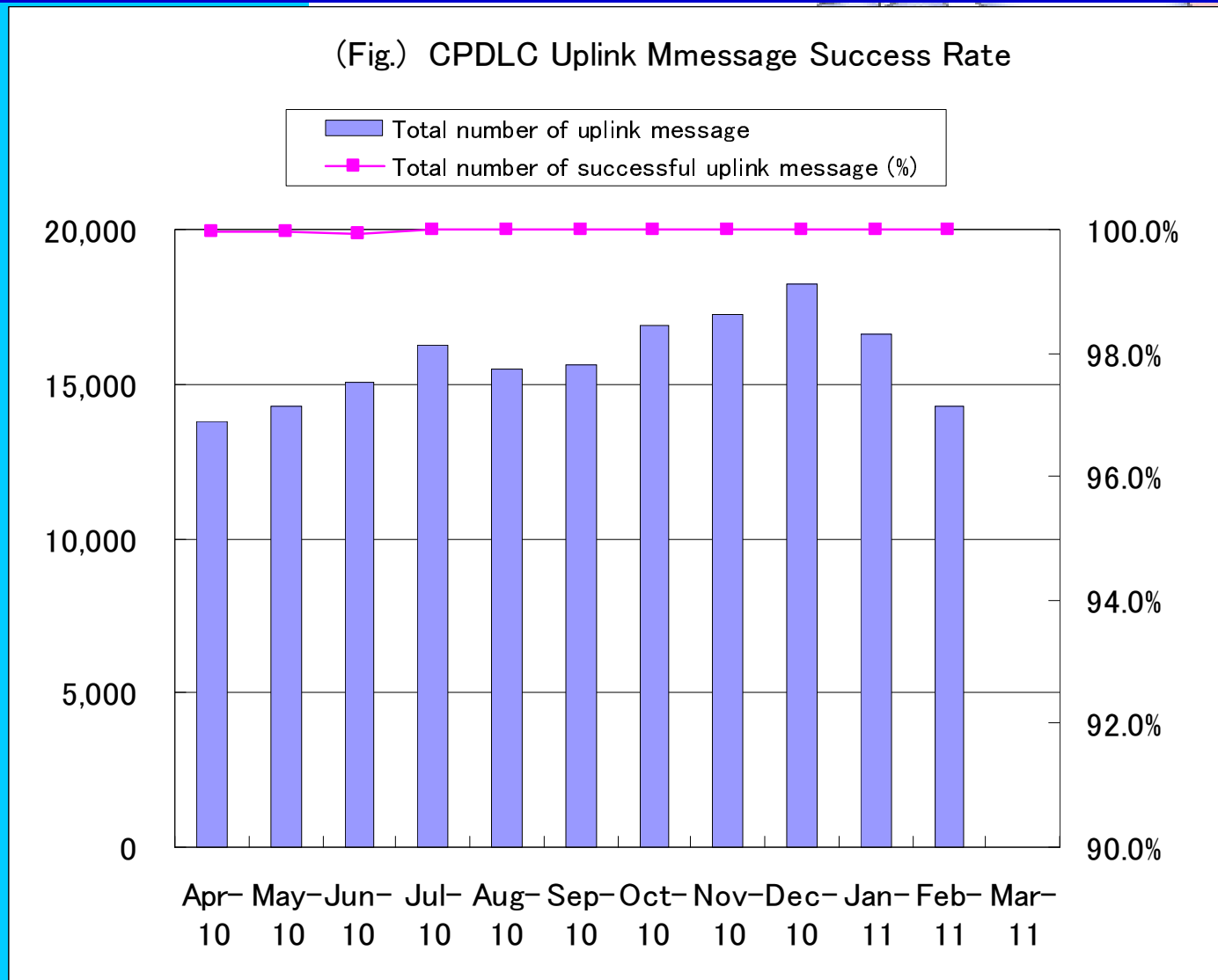
Round Trip Time: Transit-delay-time from time-stamp of up-link to receipt time of MAS

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Chart 8

CPDLC Up-link Message Success Rate

<SINGAPORE>

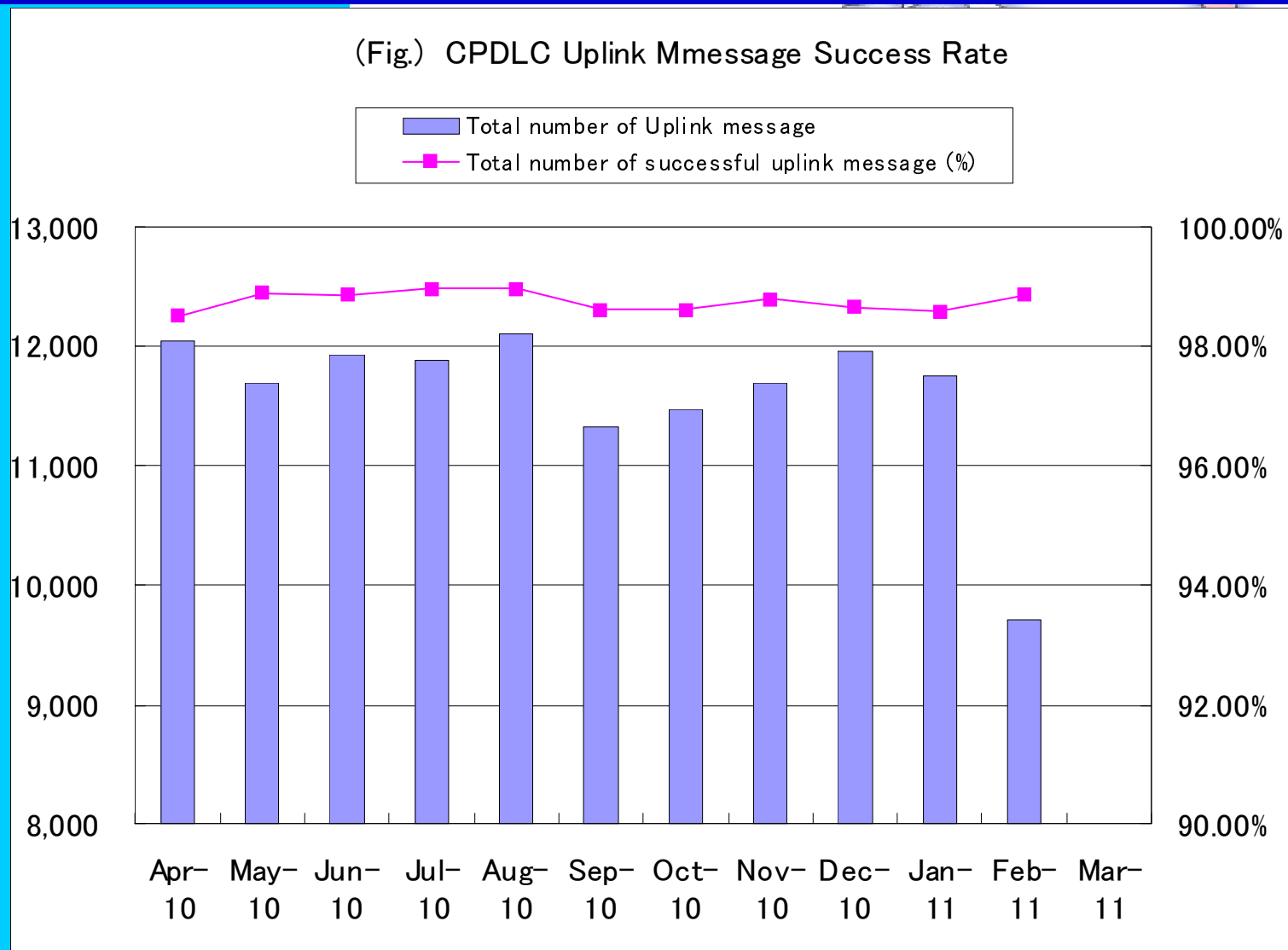


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Chart 9

CPDLC Up-link Message Success Rate

<VIET NAM>



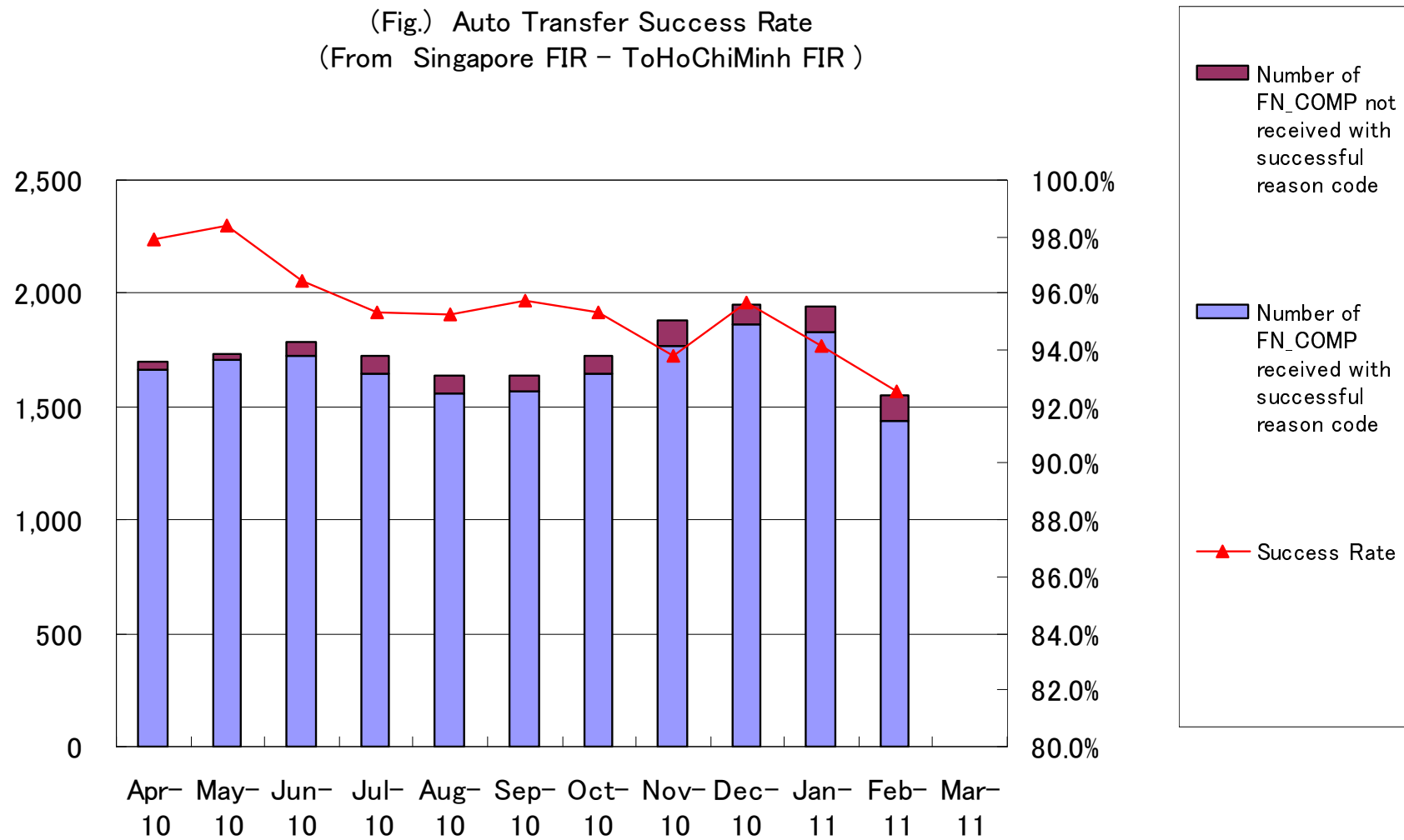
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Chart 10

Auto Transfer Success Rate

<SINGAPORE>

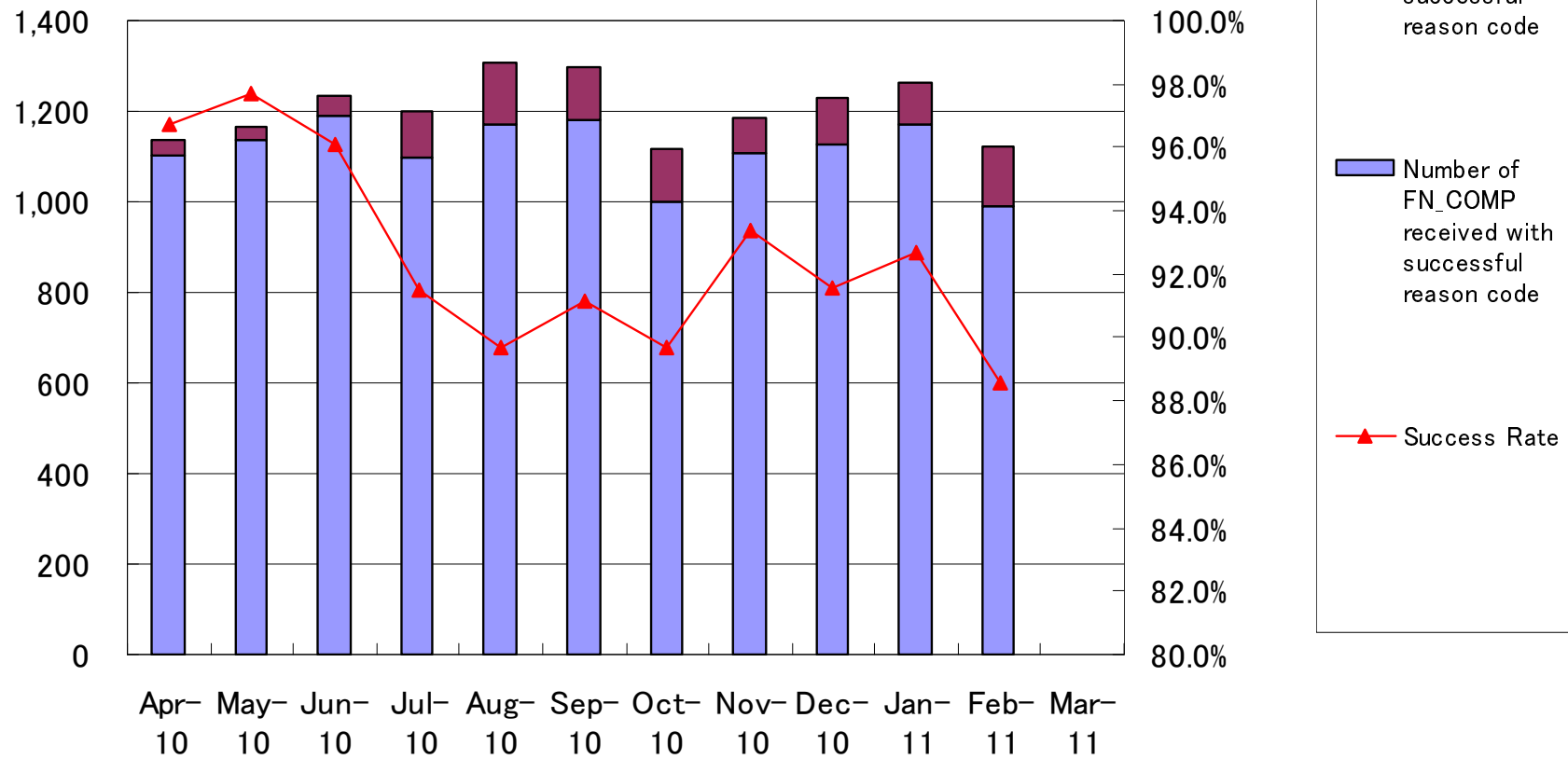
(Fig.) Auto Transfer Success Rate
(From Singapore FIR - ToHoChiMinh FIR)



Auto Transfer Success Rate

<VIET NAM>

(Fig.) Auto Transfer Success Rate
(From HoChiMinh FIR - To Singapore FIR)



2. Problem Reports



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Chart 13

FIT-SEA CRA Activities Since FIT-SEA/10

- **New Problem Reports**
- **Specific reports to be discussed**



New Reports since FIT-SEA/10

PR #	Problem Report Title	Originator	Air/ Ground	Comments/Notes/Description	Status
50036	Unable to up link CPDLC/ADS messages	CAAS	Air/ Ground	Still under investigation	In progress
50037	Unable to up link CPDLC/ADS messages	CAAS	Air/ Ground	Still under investigation	In progress
50038	Unable to up link CPDLC/ADS messages	CAAS	Air/ Ground	Still under investigation	In progress
50039	Incorrect ADS track speed	CAAS		Still under investigation	In progress
50040	Data link disrupted	CAAS	Air/ Ground	Still under investigation	In progress
50041	Data link disrupted	CAAS	Air/ Ground	Still under investigation	In progress
50042	Unable to up link CPDLC/ADS messages	CAAS	Air/ Ground	Still under investigation	In progress
50043	Unable to up link CPDLC/ADS messages	CAAS	Air/ Ground	Still under investigation	In progress

Specific PRs (New)

A map of Southeast Asia with several countries highlighted in red and orange, including Thailand, Laos, Cambodia, Vietnam, and parts of Malaysia and Indonesia.

- 1) Unable to up link CPDLC/ADS messages
(PR50036, PR50037, PR50038 ,PR50042, PR50043)
- 2) Data link disrupted(PR50040,PR50041)
- 3) Incorrect ADS track speed(PR50039)



1) Unable to up link CPDLC/ADS messages



PR Number: 50036, 50037,50038, 50042 ,50043

PR Status: In Progress (Technical)

Problem Report from ATSU: CAAS

<EVENTS>

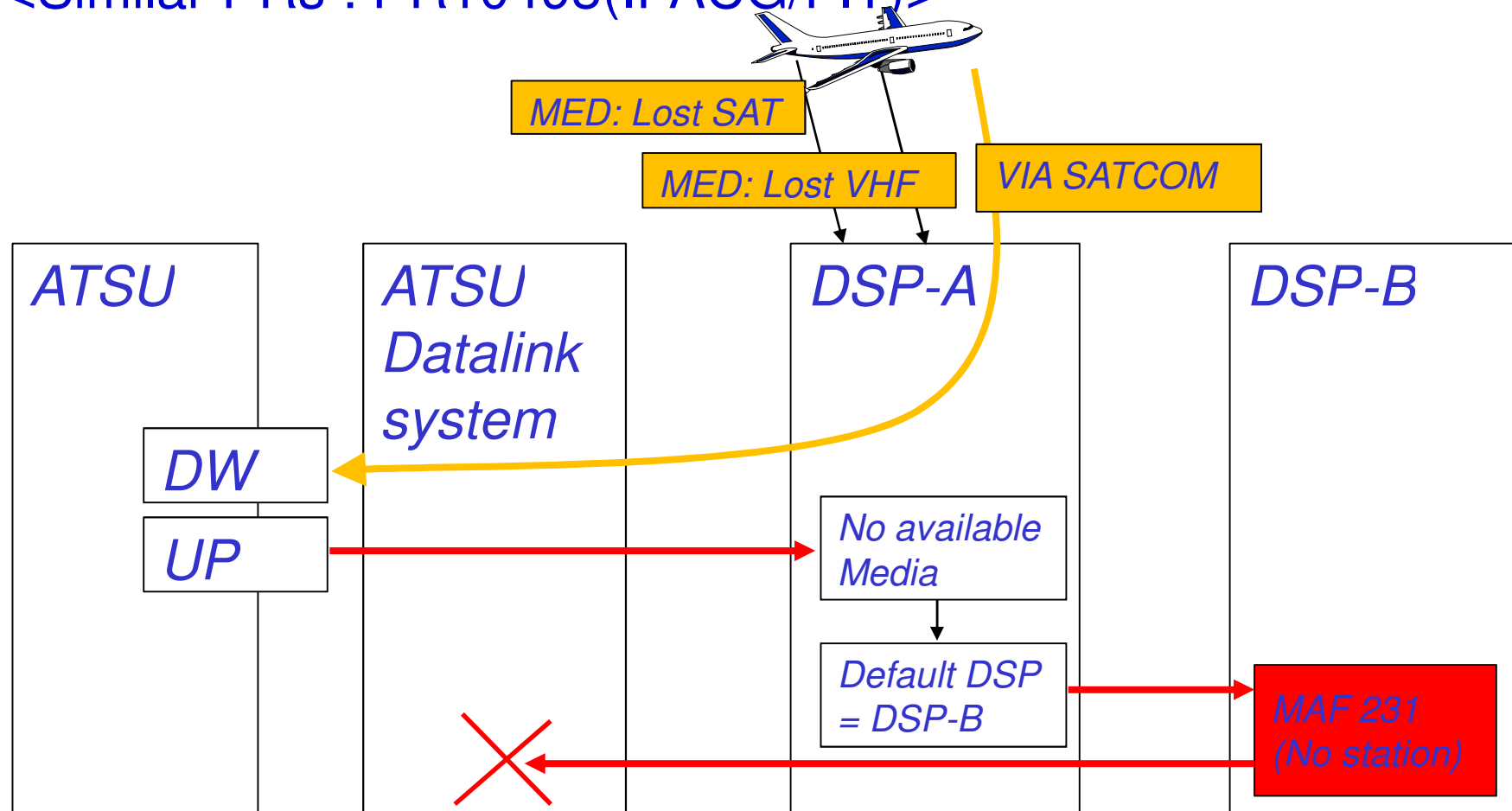
- No response received to ADS/CPDLC up links.
- Message down link conducted normally
- On the case of PR50037,PR50038, the ATSU received a MAF 234(UP INTERCEPT AIRCRAFT NOT LOGGED ON).

<ANALYSIS>

- The problem events occurred near the AKMON.
- AKMON is the vicinity of a VHF data link coverage boundary.
- Data transmission delay/data link disruption tends to occur in the vicinity of VHF coverage boundary area is frequently reported in FIT meeting.
- For detailed investigation, such information as communication media is necessary. Inquiry about detailed logs has been sent to the ATSU.

1) Unable to up link CPDLC/ADS messages

<Similar PRs : PR10493(IPACG/FIT)>



2) Data link disrupted



PR Number: 50040, 50041

PR Status: In Progress (Technical)

Problem Report from ATSU: CAAS

<EVENTS>

- No response received to ADS/CPDLC up links
- No down links observed

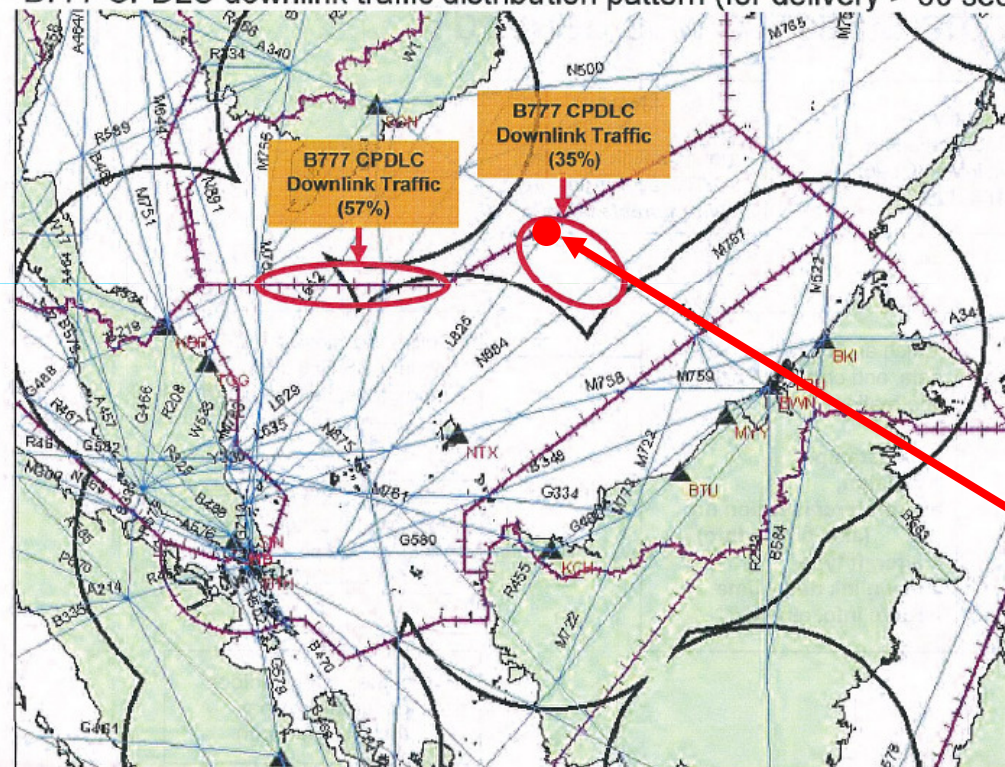
<ANALYSIS>

- The problem events occurred near the AKMON.
- AKMON is the vicinity of a VHF data link coverage boundary.
- Data transmission delay/data link disruption tends to occur in the vicinity of VHF coverage boundary area is frequently reported in FIT meeting.
- For detailed investigation, such information as communication media is necessary. Inquiry about detailed logs has been sent to the ATSU.

2) Data link disrupted

System Performance

B777 CPDLC downlink traffic distribution pattern (for delivery > 60 sec)



B777 CPDLC downlink traffic based on weekly flight data (1 to 7 Feb 2010)

3) Incorrect ADS track speed



PR Number: 50039

PR Status: In Progress (Technical)

Problem Report from ATSU: CAAS

<EVENTS>

- ADS track indicates “000” speed readout

<ANALYSIS>

- Previously there was a PR about incorrect ADS data reported by the ATSU about the case of ADS ground speed readout was 999knots.
- Past PRs about incorrect ADS position and/or speed were caused by incorrect Intermediate Indent Group data.
- It has been reported that incorrect data are still included in the Intermediate Indent Group.
- ADS reports recorded in the log sent by the ATSU included only the Basic Group part data. For investigation, more detailed log as the one including such data as Intermediate Indent Group is indispensable, which has been asked to the ATSU.

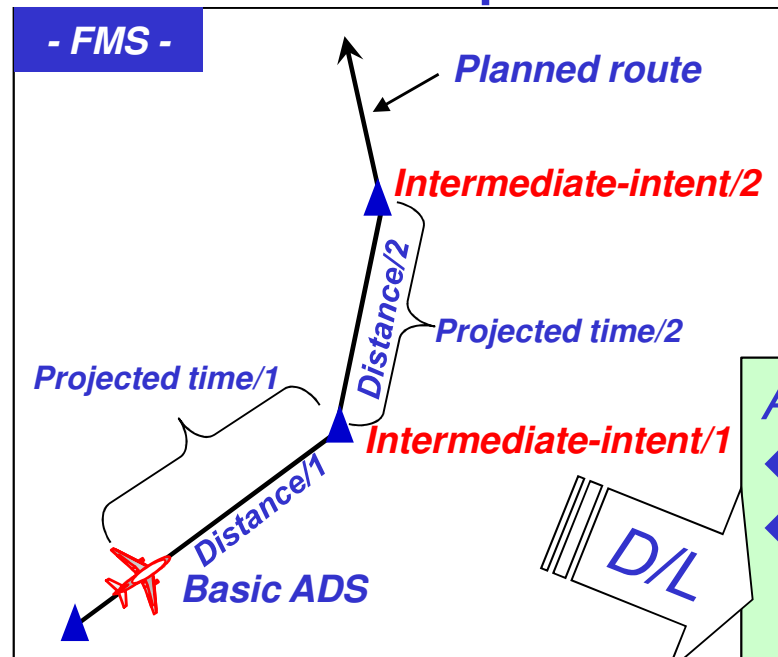
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Chart 21

3) Incorrect ADS track speed

<Similar PRs : PR50014(SEACG/FIT-SEA)>
Normal ADS report



ADS report

◆ Basic ADS

◆ Intermediate Intent

▪ Intermediate/1

→ Distance/1, True Track/1, Projected time/1)

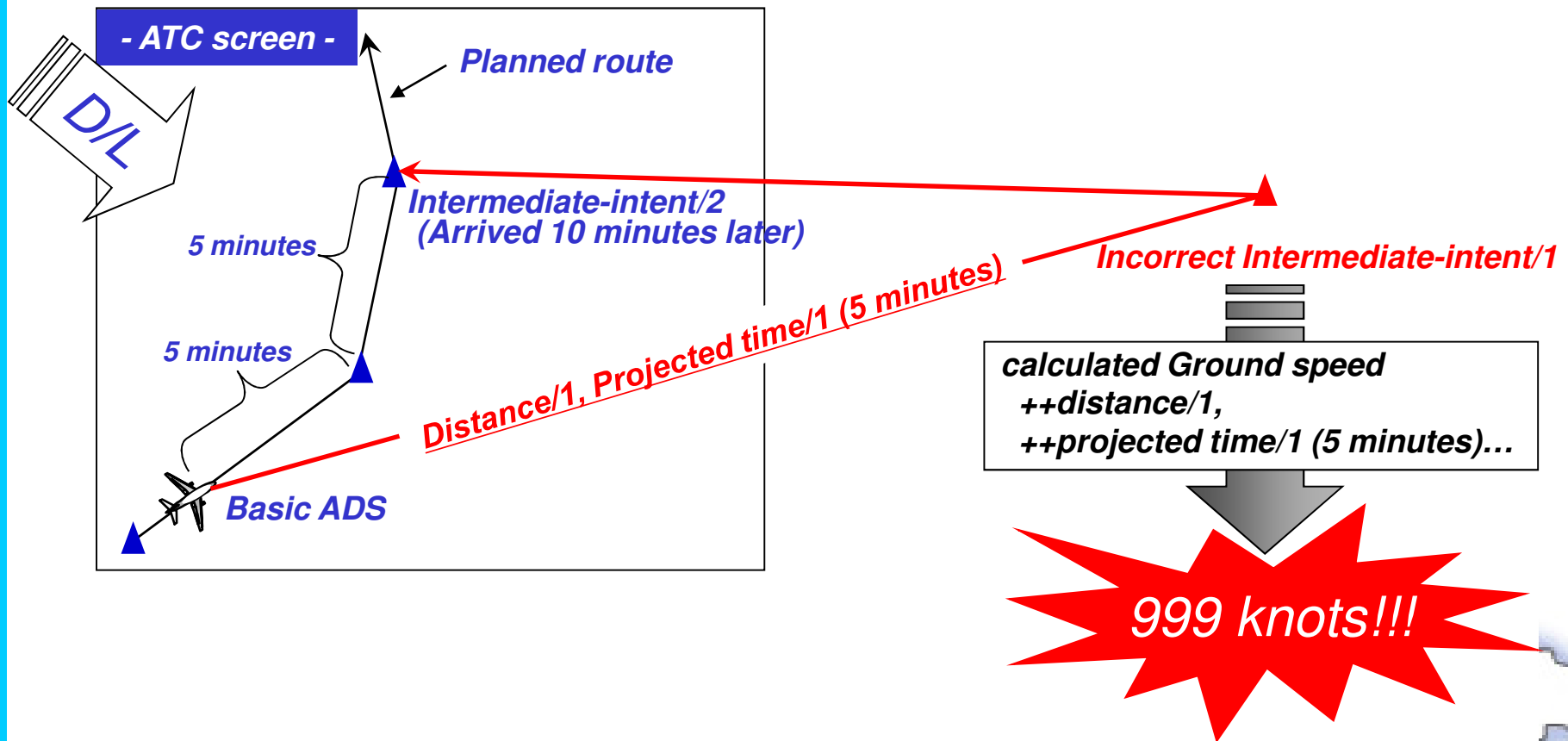
▪ Intermediate/2

→ Distance/2, True Track/2, Projected time/2(6 min))

3) Incorrect ADS track speed

<Similar PRs : PR50014(SEACG/FIT-SEA)>

If the Intermediate Intent is incorrect, the aircraft is displayed as,



Thank you for your attention!



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Chart 24