



International Civil Aviation Organization

**The 2<sup>nd</sup> Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/2)**

Bangkok, Thailand, 28 – 29 March 2013

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**Agenda Item 6: Any Other Business**

**DATA LINK PERFORMANCE REPORTING TEMPLATE**

(Presented by the Secretariat)

**SUMMARY**

This paper presents a draft Data Link performance reporting template FIT-Asia.

**Strategic Objectives:**

- A: *Safety – Enhance global civil aviation safety*
- C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

**Global Plan Initiatives:**

- GPI-2 Reduced vertical separation minima
- GPI-8 Collaborative airspace design and management
- GPI-9 Situational awareness
- GPI-16 Decision support systems and alerting systems
- GPI-17 Data link applications
- GPI-21 Navigation systems
- GPI-22 Communication infrastructure

**1. INTRODUCTION**

1.1 The 1<sup>st</sup> Meeting 1<sup>ST</sup> Meeting of the FANS Interoperability Team-Asia (FIT-Asia/1, Bangkok, Thailand, 27 August 2012) identified the need for a template for the provision of data-link performance data, such as Actual Communications Technical Performance (ACTP), Actual Communications Performance (ACP), Pilot Operational Response Time (PORT) and surveillance latency information.

**2. DISCUSSION**

2.1 In response to the identified need for standardized provision of data-link performance data, FIT-ASIA/1 raised Task 1/3, requiring the Secretariat to develop a template.

2.2 A draft template is appended to this paper at **Attachment 1**. The template is in the form of a Working Paper, to be submitted to each FIT-Asia meeting by participating States or their Central Reporting Agencies (CRAs).

2.3 The following draft Decision is proposed for the meeting's consideration:

**Decision 2/X – Data-Link Performance Reporting Template**

That, the Date-Link Performance Report Template appended at Appendix X to the report should be used by States or their Central Reporting Agency for the reporting of data-link performance to FIT-Asia.

**3. ACTION BY THE MEETING**

- a) The meeting is invited to:
- b) note the draft Data-Link Performance Data Reporting Template;
- c) suggest any improvements or changes, including the benefits of additional tables summarizing causes of data-link performance problems and geographical representation of problem areas; and
- d) discuss any relevant matters as appropriate.

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*International Civil Aviation Organization*

**The XX<sup>nd</sup>/rd<sup>th</sup> Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/XX)**

[e.g. Bangkok, Thailand, 28 – 29 March 2013]

**Agenda Item 3: Review of ADS/CPDLC Operations**

**DATA LINK PERFORMANCE REPORT FOR (STATE/ORGANIZATION)**

(Presented by **NAME OF STATE/ORGANIZATION**)

**SUMMARY**

This paper presents data link performance data for **YYYY** for the following **FIR/s**:

- **FIR 1**
- **FIR 2**
- **etc.....**

This paper relates to –

**Strategic Objectives:**

A: **Safety** – *Enhance global civil aviation safety*

~~B: **Security** – *Enhance global civil aviation security*~~ **MAY NOT BE RELEVANT**

C: **Environmental Protection and Sustainable Development of Air Transport** –  
*Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

**Global Plan Initiatives:** **DELETE ALL THAT ARE NOT APPLICABLE**

- GPI-2 Reduced vertical separation minima
- GPI-8 Collaborative airspace design and management
- GPI-9 Situational awareness
- GPI-16 Decision support systems and alerting systems
- GPI-17 Data link applications
- GPI-21 Navigation systems
- GPI-22 Communication infrastructure
- GPI-22 Communication infrastructure

**1. INTRODUCTION**

**1.1 TEXT**

**2. DISCUSSION**

**XXXX FIR CPDLC Actual Communications Performance (ACP)**

2.1 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

2.2 **Table 1** summarizes overall CPDLC Actual Communications Performance (ACP) for messages sent within the **XXXX** FIR. **Figure 1** presents the ACP measurement by media type (Satellite, VHF and the combined total of both) for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX FIR CPDLC ACP</b>				
<b>Messages</b>		<b>% &gt; 180 sec (Target 95%)</b>	<b>% &gt; 210 sec (Target 99.9%)</b>	<b>Remarks</b>
Satellite	<b>XX</b>	<b>XX</b>	<b>XX</b>	
VHF	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
Total	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table 1: XX FIR CPDLC ACP per Media Type**

**INSERT ACP GRAPH**

**Figure 1: xx FIR ACP by Data Link Media Type**

**XXXX FIR ADS-C Downlink Latency**

2.3 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

2.4 **Table 2** summarizes ADS-C Downlink Latency for messages sent within the **XXXX** FIR. **Figure 2** presents the ADS-C Downlink Latency per media type (Satellite, VHF, and the combined total of both) for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX FIR ADS-C Downlink Latency</b>				
<b>Messages</b>		<b>% &gt; XXX sec (Target XX%)</b>	<b>% &gt; XXX sec (Target XX%)</b>	<b>Remarks</b>
Satellite	<b>XX</b>	<b>XX</b>	<b>XX</b>	
VHF	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
Total	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table 2: XX FIR CPDLC ACTP (VHF) per Month**

**INSERT ADS-C Downlink Latency GRAPH**

**Figure 2: xx FIR ADS-C Downlink Latency**

**XXXX** FIR CPDLC Actual Communications Performance (ACP) per Operator (de-identified)

2.5 **Table 3** summarizes CPDLC Actual Communications Performance per Operator for messages sent within the **XXXX** FIR. **Figure 3** presents the CPDLC Actual Communications Performance per Operator for the period **XXX** 20**XX** to **XXX** 20**XX**.

<b>XXXX</b> FIR CPDLC ACP per Operator				
<b>Operator</b> (de-identified)	<b>Messages</b>	<b>% &gt; XXX sec</b> (Target <b>XX%</b> )	<b>%&gt; XXX sec</b> (Target <b>XX%</b> )	<b>Remarks</b>
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table 3:** **XX** FIR CPDLC ACP per Operator

**INSERT CPDLC ACP per Operator GRAPH**

**Figure 3:** **xx** FIR CPLC ACP per Operator

2.6 **TEXT**

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to: **AMEND AS APPROPRIATE**

- a) **note the information contained in this paper; and**
- b) **discuss any relevant matters as appropriate.**

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**POSSIBLE APPENDIX MATERIAL**

**XXXX FIR CPDLC Actual Communications Performance (ACP) per Month - Satellite**

1.1 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.2 **Table X** summarizes CPDLC ACP (Satellite) per month for messages sent within the **XXXX** FIR. **Figure X** presents the ACP (Satellite) **XXX** measurement per month for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX FIR CPDLC ACP per Month - Satellite</b>				
Month	Messages	% > XXX sec (Target XX%)	%> XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X: XX FIR CPDLC ACP per Month - Satellite**

**INSERT XXXX GRAPH**

**Figure X: xx FIR ACP per Month - Satellite**

**XXXX FIR CPDLC Actual Communications Performance (ACP) per Month - VHF**

1.3 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.4 **Table X** summarizes CPDLC ACP (VHF) per month for messages sent within the **XXXX** FIR. **Figure X** presents the ACP (VHF) measurement per month for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX FIR CPDLC ACP per Month - VHF</b>				
Month	Messages	% > XXX sec (Target XX%)	%> XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X: XX FIR CPDLC ACP per Month - VHF**

**INSERT XXXX GRAPH**

**Figure X: xx FIR ACP per Month - VHF**

**XXXX** FIR CPDLC Actual Communications Technical Performance (ACTP)

1.5 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.6 **Table X** summarizes overall CPDLC Actual Communications Technical Performance (ACTP) for messages sent within the **XXXX** FIR. **Figure X** presents the ACTP measurement by media type (Satellite, VHF and the combined total of both) for the period **XXX** 20**XX** to **XXX** 20**XX**.

<b>XXXX FIR CPDLC ACTP</b>				
<b>Messages</b>		<b>% &gt; XXX sec (Target XX%)</b>	<b>%&gt; 150 sec (Target 99.9%)</b>	<b>Remarks</b>
Satellite	<b>XX</b>	<b>XX</b>	<b>XX</b>	
VHF	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
Total	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table X:** **XX** FIR CPDLC ACTP

**INSERT ACTP GRAPH**

**Figure X:** **xx** FIR ACTP by Data Link Media Type

**XXXX** FIR CPDLC Actual Communications Technical Performance (ACTP) per Month – Satellite

1.7 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.8 **Table X** summarizes CPDLC ACTP (Satellite) per month for messages sent within the **XXXX** FIR. **Figure X** presents the ACTP (Satellite) measurement per month for the period **XXX** 20**XX** to **XXX** 20**XX**.

<b>XXXX FIR CPDLC ACTP - Satellite</b>				
<b>Month</b>	<b>Messages</b>	<b>% &gt; XXX sec (Target XX%)</b>	<b>%&gt; XXX sec (Target XX%)</b>	<b>Remarks</b>
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table X:** **XX** FIR CPDLC ACTP per Month - Satellite

**INSERT ACTP per Month GRAPH**

**Figure X:** **xx** FIR ACTP per Month - Satellite

**XXXX** FIR CPDLC Actual Communications Technical Performance (ACTP) per Month - VHF

1.9 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.10 **Table X** summarizes CPDLC ACTP (VHF) per month for messages sent within the **XXXX** FIR. **Figure X** presents the ACTP (VHF) measurement per month for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX</b> FIR CPDLC ACTP (VHF)				
Month	Messages	% > XXX sec (Target XX%)	% > XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X:** **XX** FIR CPDLC ACTP (VHF) per Month

**INSERT ACTP (VHF) per Month GRAPH**

**Figure X:** **xx** FIR CPDLC ACTP (VHF) per Month

**XXXX** FIR ADS-C Downlink Latency per Month - Satellite

1.11 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.12 **Table X** summarizes ADS-C Downlink Latency (satellite) measurements per month for messages sent within the **XXXX** FIR. **Figure X** presents the ADS-C Downlink Latency (satellite) measurement per month for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX</b> FIR ADS-C Downlink Latency - Satellite				
Month	Messages	% > XXX sec (Target XX%)	% > XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X:** **XX** FIR ADS-C Downlink Latency per Month - Satellite

**INSERT ADS-C Downlink Latency per Month – Satellite GRAPH**

**Figure X:** **xx** FIR ADS-C Downlink Latency per Month - Satellite



**XXXX FIR ADS-C Downlink Latency per Month - VHF**

1.13 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.14 **Table X** summarizes ADS-C Downlink Latency (VHF) measurements per month for messages sent within the **XXXX** FIR. **Figure X** presents the ADS-C Downlink Latency (VHF) measurement per month for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX FIR ADS-C Downlink Latency - VHF</b>				
<b>Month</b>	<b>Messages</b>	<b>% &gt; XXX sec (Target XX%)</b>	<b>%&gt; XXX sec (Target XX%)</b>	<b>Remarks</b>
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table X: XX FIR ADS-C Downlink Latency per Month - VHF**

**INSERT ADS-C Downlink Latency (VHF) per Month GRAPH**

**Figure X: xx FIR ADS-C Downlink Latency per Month - VHF**

**XXXX FIR CPDLC Actual Communications Performance (ACP) per Month - HF**

1.15 **INCLUDE AN EXECUTIVE SUMMARY FOR EACH PERFORMANCE COMPONENT REPORTED**

1.16 **Table X** summarizes CPDLC ACP (HF) measurements per month for messages sent within the **XXXX** FIR. **Figure X** presents the CPDLC ACP (HF) measurement per month for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX FIR CPDLC ACP per Month - HF</b>				
<b>Month</b>	<b>Messages</b>	<b>% &gt; XXX sec (Target XX%)</b>	<b>%&gt; XXX sec (Target XX%)</b>	<b>Remarks</b>
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table X: XX FIR CPDLC ACP per Month - HF**

**INSERT CPDLC ACP per Month - HF GRAPH**

**Figure X: xx FIR CPDLC ACP per Month – HF**

**XXXX** FIR CPDLC Actual Communications Technical Performance (ACTP) per Month - HF

1.17 **Table X** summarizes CPDLC ACTP (HF) measurements per month for messages sent within the **XXXX** FIR. **Figure X** presents the CPDLC ACTP (HF) measurement per month for the period **XXX** 20**XX** to **XXX** 20**XX**.

<b>XXXX</b> FIR CPDLC ACP per Month - HF				
Month	Messages	% > XXX sec (Target XX%)	%> XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X:** **XX** FIR CPDLC ACTP per Month - HF

INSERT CPDLC ACP per Month - HF GRAPH

**Figure X:** **xx** FIR CPDLC ACTP per Month - HF

**XXXX** FIR ADS-C Downlink Latency per Month - HF

1.18 **Table X** summarizes ADS-C Downlink Latency (HF) measurements per month for messages sent within the **XXXX** FIR. **Figure X** presents the ADS-C Downlink Latency (HF) measurement per month for the period **XXX** 20**XX** to **XXX** 20**XX**.

<b>XXXX</b> FIR ADS-C Downlink Latency per Month - HF				
Month	Messages	% > XXX sec (Target XX%)	%> XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X:** **XX** FIR ADS-C Downlink Latency per Month - HF

INSERT CPDLC ACP per Month - HF GRAPH

**Figure X:** **xx** FIR ADS-C Downlink Latency per Month - HF

**XXXX** FIR CPDLC Actual Communications Performance (ACP) per Operator (de-identified)

1.19 **Table X** summarizes CPDLC Actual Communications Performance per Operator for messages sent within the **XXXX** FIR. **Figure X** presents the CPDLC Actual Communications Performance per Operator for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX</b> FIR CPDLC ACP per Operator				
Operator (de-identified)	Messages	% > XXX sec (Target XX%)	% > XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X:** **XX** FIR CPDLC ACP per Operator

INSERT CPDLC ACP per Operator GRAPH

**Figure X:** **xx** FIR CPLC ACP per Operator

**XXXX** FIR CPDLC Actual Communications Technical Performance (ACP) per Operator (de-identified)

1.20 **Table X** summarizes CPDLC Actual Communications Technical Performance per Operator for messages sent within the **XXXX** FIR. **Figure X** presents the CPDLC Actual Communications Performance per Operator for the period **XXX 20XX** to **XXX 20XX**.

<b>XXXX</b> FIR CPDLC ACTP per Operator				
Operator (de-identified)	Messages	% > XXX sec (Target XX%)	% > XXX sec (Target XX%)	Remarks
XXX	XX	XX	XX	
XXX	XX	XX	XX	-
XXX	XX	XX	XX	

**Table X:** **XX** FIR CPDLC ACTP per Operator

INSERT CPDLC ACTP per Operator GRAPH

**Figure X:** **xx** FIR CPLC ACP per Operator

**XXXX** FIR CPDLC Pilot Operational Response Time (PORT) per Operator (de-identified)

1.21 **Table 15** summarizes CPDLC Pilot Operational Response Time per Operator for messages sent within the **XXXX** FIR. **Figure 15** presents the CPDLC Pilot Operational Response Time per Operator for the period **XXX** 20**XX** to **XXX** 20**XX**.

<b>XXXX</b> FIR CPDLC PORT per Operator				
<b>Operator</b> (de-identified)	<b>Messages</b>	<b>% &gt; XXX sec</b> (Target <b>XX%</b> )	<b>%&gt; XXX sec</b> (Target <b>XX%</b> )	<b>Remarks</b>
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	-
<b>XXX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	

**Table 15:** **XX** FIR CPDLC PORT per Operator

**INSERT CPDLC PORT per Operator GRAPH**

**Figure 15:** **xx** FIR CPLC PORT per Operator

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