



International Civil Aviation Organization

Eleventh Meeting of the FANS Interoperability Team – Asia
(FIT-Asia/11)

Video Teleconference, 23 – 27 August 2021

Agenda Item 4: Review of ADS-C/CPDLC Operations and Performance

DATA LINK PERFORMANCE REPORT OF CHENNAI FIR

(Presented by Airports Authority of India)

SUMMARY

This paper presents the Data Link performance observed in the Chennai FIR during the period 1st January to 31st December 2020, measured against the CPDLC RCP240 and ADS-C RSP180 specifications.

1. INTRODUCTION

1.1 BOBASMA conducted the annual End-to-End Safety and system performance monitoring of the Chennai ATS Data link ground system in India. Data extracted from the Chennai data link ground system for the period 1st January to 31st December 2020 were used to measure FANS1/A system performance against the CPDLC RCP240 and ADS-C RSP180 specifications as per guidelines contained in DOC9869.

2. DISCUSSION

ADS-C RSP180

2.1 **Table 1** summarizes overall ADS-C performance per media type, Remote Ground Station (RGS) and Ground Earth Station (GES) for downlinks sent within the VOMF FIR during 2020.

FIR	VOMF					
Criteria	RSP180					
Period	Jan-June 2020			July-December 2020		
Colour Key ■ Meets Criteria ■ 99.0%-99.84% ■ Under Criteria	Message Counts	95% % <= 90sec	99.90% % <= 180sec	Message Counts	95% % <= 90sec	99.90% % <= 180sec
By Media Type						
SATCOM	165439	97.45%	99.05%	99643	98.07%	99.35%
VHF	76202	98.84%	99.43%	45679	99.42%	99.73%
HF	272	40.81%	57.35%	277	18.95%	34.61%
ALL	241913	97.82%	99.12%	145599	98.34%	99.34%
By Remote Ground Station (RGS) Ground Earth Station (GES)						

Designator	Type	(only RGS/GES with message counts >100 recorded)					
		Count	RGS	GES	Count	RGS	GES
APK1	SAT	95329	98.27%	99.35%	57678	98.86%	99.55%
APK2	SAT	14169	95.77%	98.06%	5309	97.10%	98.82%
EUA1	SAT	1103	94.25%	98.14%	487	97.02%	98.99%
EUA2	SAT	854	92.74%	98.53%	272	94.39%	96.73%
IG1	SAT	595	80.34%	93.82%	436	81.08%	94.53%
IGW1	SAT	6556	94.57%	98.58%	1034	93.47%	98.82%
XXA	SAT	33457	98.12%	99.70%	8315	98.35%	99.80%
XXF	SAT	847	89.49%	96.75%	586	89.25%	96.61%
XXI	SAT	734	97.21%	98.05%	548	97.81%	99.30%
XXP	SAT	10548	94.17%	96.52%	8397	94.94%	97.38%
XXQ	SAT	1247	98.45%	99.88%	16581	98.25%	99.90%
BLR	VHF	5239	99.75%	99.91%	4635	99.82%	99.96%
BLR1	VHF	3898	99.84%	99.88%	3905	99.98%	100.00%
BLR2	VHF	2918	99.64%	99.73%	1152	99.92%	99.99%
BOM	VHF	816	98.38%	99.59%	993	99.77%	100.00%
BOM1	VHF	444	98.48%	99.35%	640	100.00%	100.00%
BOM2	VHF	1445	99.23%	99.68%	2031	100.00%	100.00%
BTJ1	VHF	5925	97.60%	98.67%	2201	99.05%	99.20%
CJB1	VHF	695	100.00%	100.00%	270	100.00%	100.00%
CMB1	VHF	2123	99.82%	99.87%	775	99.62%	99.64%
COK1	VHF	3022	99.72%	99.84%	935	99.60%	99.89%
GOI1	VHF	6760	99.30%	99.80%	2499	99.65%	99.87%
HKT	VHF	8504	99.25%	99.82%	6402	99.05%	99.71%
HYD	VHF	1072	99.80%	99.92%	253	99.61%	99.63%
HYD1	VHF	432	99.79%	99.87%	248	99.65%	99.95%
IXZ1	VHF	10866	96.95%	98.20%	5783	98.84%	99.48%
KDT	VHF	333	99.73%	100.00%	352	98.93%	99.32%
MAA	VHF	5274	98.94%	99.68%	3300	98.67%	99.43%
MAA1	VHF	9010	98.73%	99.37%	5262	99.42%	99.63%
MLE1	VHF	124	100.00%	100.00%			
NAG1	VHF	172	98.94%	99.52%	173	100.00%	100.00%
PNQ1	VHF	945	99.66%	99.82%	912	100.00%	100.00%
TRV	VHF	2186	99.51%	99.93%	800	100.00%	100.00%
TRV1	VHF	1151	99.92%	100.00%	590	100.00%	100.00%
USM	VHF	282	99.68%	99.93%	170	100.00%	100.00%
VTZ1	VHF	1833	98.66%	99.58%	402	99.84%	100.00%

Table 1: VOMF FIR ADS-C Downlink Latency per Media Type, RGS and GES

VOMF FIR ADS-C RSP180 Performance – Aircraft Operator/Type

2.2 **Table 2** summarizes overall ADS-C performance per Aircraft Operator/Type for downlinks sent within the VOMF FIR during 2020.

FIR	VOMF					
Criteria	RSP180					
Period	Jan-June 2020			July-December 2020		
Colour Key	Message Counts	95% % <= 90sec	99.90% % <= 180sec	Message Counts	95% % <= 90sec	99.90% % <= 180sec
<p>Meets Criteria</p> <p>99.0%-99.84%</p> <p>Under Criteria</p>						
By Aircraft Operator / Type (only message counts >100 recorded)						
ABD/B744	507	94.61%	99.37%	474	94.23%	99.32%
AFL/A333	177	97.12%	100.00%			
AFL/B77W	137	85.77%	95.63%			
AFR/A359	136	100.00%	100.00%	136	100.00%	100.00%
AFR/B77W	941	96.71%	99.14%	252	99.29%	100.00%
AFR/B789	172	99.43%	99.58%	172	99.43%	99.58%
AIC/A20N	566	69.26%	77.34%			
AIC/B744	102	92.97%	98.64%			
AIC/B788	3324	99.48%	99.77%	1495	99.44%	99.84%
ALK/A20N	1024	98.36%	99.11%			
ALK/A21N	1789	99.18%	99.65%			
ALK/A332	1917	99.65%	99.87%	893	99.40%	99.72%
ALK/A333	5525	99.57%	99.64%	2719	99.34%	99.46%
ANA/B788	143	99.52%	99.94%			
AZG/B744	686	90.52%	97.74%	196	90.92%	99.26%
AZG/B748	657	99.55%	99.59%	425	99.30%	99.37%
BAW/A35K	286	100.00%	100.00%			
BAW/A388	681	99.56%	99.56%			
BAW/B77W	2510	98.49%	99.81%	1211	99.18%	100.00%
BAW/B788	377	99.30%	99.56%	229	100.00%	100.00%
BAW/B789	985	99.62%	99.89%	413	100.00%	100.00%
BOX/B77L	3734	99.73%	99.95%	2048	99.95%	99.98%
CCA/A332	149	99.98%	100.00%			
CCA/B77W	1772	99.36%	99.91%	979	99.65%	99.90%
CES/A332	908	97.14%	98.47%	163	94.75%	96.58%
CES/A333	1327	96.99%	99.92%	461	97.51%	99.87%
CLX/B744	1268	92.55%	95.50%	424	93.36%	97.04%
CLX/B748	4373	99.53%	99.76%	3466	99.63%	99.82%

CPA/A333	2468	89.59%	92.83%	673	95.54%	97.81%
CPA/B744	5762	88.27%	93.13%	3418	88.33%	93.36%
CPA/B77W	2299	87.91%	95.08%	727	85.08%	94.09%
CRK/A333	298	99.84%	100.00%			
CSC/A332	199	98.66%	100.00%	154	99.08%	100.00%
CSN/A332	308	99.04%	100.00%			
CSN/A333	1004	96.18%	97.65%			
DLH/A333	111	99.81%	100.00%			
DLH/A343	548	99.53%	100.00%	148	98.24%	100.00%
DLH/A359	212	99.57%	100.00%			
DLH/A388	188	98.11%	99.69%			
DUB/B744	133	100.00%	100.00%			
EDW/A343	241	99.17%	100.00%			
ELY/B772	320	99.73%	100.00%			
ELY/B789	534	100.00%	100.00%			
ETD/A320	895	98.39%	99.43%			
ETD/A321	1853	99.06%	99.67%			
ETD/A388	398	100.00%	100.00%			
ETD/B77L	947	97.18%	98.93%	342	98.40%	99.67%
ETD/B77W	5222	98.81%	99.62%	546	99.65%	99.91%
ETD/B787	272	99.64%	99.89%			
ETD/B788	672	99.90%	100.00%			
ETD/B789	15870	99.75%	99.91%	10138	99.81%	99.93%
ETD/B78X	878	100.00%	100.00%	878	100.00%	100.00%
ETH/A359	1314	99.53%	100.00%	1194	99.66%	100.00%
ETH/B77L	7914	99.36%	99.97%	3671	99.41%	99.97%
ETH/B77W	1594	99.05%	99.78%	777	99.09%	100.00%
ETH/B788	8839	96.42%	97.81%	4689	95.50%	97.12%
ETH/B789	2552	99.49%	99.71%	1660	99.47%	99.61%
FDX/B77L	2787	95.44%	98.40%	1357	96.65%	98.80%
FDX/MD11	495	97.47%	99.48%	239	98.46%	100.00%
FIN/A359	363	99.46%	99.51%	141	98.61%	98.74%
GEC/B77L	318	95.81%	99.75%	263	95.56%	99.70%
GFA/A321	139	96.81%	98.59%			
GIA/A333	112	94.82%	95.37%			
GIA/B773	106	100.00%	100.00%			
GIA/B77W	1526	98.34%	99.18%	156	97.92%	98.76%
HDA/A333	519	93.64%	97.14%	225	92.44%	97.34%
HKC/A332	509	98.30%	99.05%	509	98.30%	99.05%
ICV/B748	472	100.00%	100.00%	467	100.00%	100.00%

KAC/A332	397	99.08%	100.00%			
KAC/B77W	181	99.50%	99.99%	164	99.45%	99.99%
KAL/A333	385	98.61%	99.69%			
KLM/B772	400	96.32%	98.77%			
KLM/B77W	2176	98.48%	99.66%	1075	98.70%	99.70%
KLM/B789	751	99.87%	100.00%	423	99.78%	100.00%
KQA/B788	881	99.67%	99.89%			
LNI/A333	637	98.96%	100.00%			
LOT/B788	270	98.44%	100.00%			
LOT/B789	466	99.81%	100.00%			
MAS/A332	4910	99.78%	99.91%	2990	99.74%	99.93%
MAS/A333	5339	97.72%	98.54%	3068	98.71%	99.28%
MAS/A359	1724	98.92%	99.68%	227	100.00%	100.00%
MAS/A388	3925	99.16%	99.42%			
MAS/B738	10978	96.78%	99.04%			
MMZ/B763	187	93.05%	99.56%			
MSR/B789	288	99.70%	100.00%			
N/CL35	123	95.75%	99.71%	123	95.75%	99.71%
N/GLEX	109	96.25%	99.97%			
N/GLF5	321	95.02%	98.20%	133	97.74%	99.75%
N/GLF6	354	92.20%	95.10%			
OMA/A332	1868	99.72%	99.94%			
OMA/A333	2481	99.59%	99.79%	215	96.54%	98.08%
OMA/B788	121	100.00%	100.00%			
OMA/B789	1378	99.64%	99.84%			
PLM/A332	159	99.93%	100.00%			
QFA/A388	369	97.57%	97.58%			
QFA/B789	331	99.63%	100.00%			
QQE/GLF6	295	97.65%	98.59%	155	100.00%	100.00%
QTR/A332	915	99.86%	100.00%	324	100.00%	100.00%
QTR/A333	948	99.80%	100.00%			
QTR/A359	23141	99.49%	99.68%	12229	99.41%	99.58%
QTR/A35K	13276	99.50%	99.69%	1636	99.78%	99.87%
QTR/A388	1024	100.00%	100.00%			
QTR/B77L	5379	96.06%	98.48%	1858	98.04%	99.29%
QTR/B77W	28177	95.88%	98.36%	14140	97.24%	98.76%
QTR/B788	10094	99.12%	99.62%	3471	99.54%	99.78%
RBA/A333	265	100.00%	100.00%			
SDM/B77W	258	97.34%	100.00%			
SIA/A333	3039	99.51%	99.79%			

SIA/A359	24126	99.36%	99.96%	11942	99.44%	99.95%
SIA/A388	5105	99.33%	99.62%			
SIA/B744	4222	97.09%	98.68%	2181	97.19%	98.68%
SIA/B772	662	98.41%	99.89%			
SIA/B77W	3913	96.75%	99.25%	306	98.11%	99.54%
SIA/B787	124	99.03%	100.00%			
SIA/B788	498	98.90%	99.54%	121	100.00%	100.00%
SIA/B789	196	99.81%	100.00%			
SIA/B78X	2538	99.58%	99.89%	2538	99.58%	99.89%
SLK/A320	998	95.06%	97.94%			
SLK/B738	5119	99.41%	99.71%			
SVA/B744	1399	92.07%	97.24%			
SVA/B77W	2314	98.08%	99.28%	479	98.66%	99.31%
SVA/B787	194	99.60%	100.00%			
SVA/B788	488	100.00%	100.00%	135	100.00%	100.00%
SVA/B789	3627	99.37%	99.72%	287	99.88%	100.00%
SVA/B78X	581	99.94%	100.00%	581	99.94%	100.00%
SWR/B77W	808	98.51%	100.00%	314	98.01%	100.00%
T/GL5T	109	93.52%	96.56%			
T/GLEX	230	97.39%	99.62%	158	96.20%	99.45%
TGW/B788	2645	99.51%	99.73%			
TGW/B789	1426	99.91%	99.99%			
THA/A333	1233	99.85%	99.97%			
THA/B772	2046	96.09%	98.87%			
THA/B773	332	91.93%	96.51%			
THY/A332	1240	99.97%	100.00%	764	99.94%	100.00%
THY/A333	2317	96.94%	98.24%	468	97.93%	98.66%
THY/B77L	751	97.34%	98.93%	425	96.94%	99.04%
THY/B77W	4567	97.76%	99.37%	2143	98.26%	99.60%
THY/B789	4674	99.65%	99.94%	3168	99.87%	100.00%
TREK/C17	174	100.00%	100.00%			
UAE/A388	12833	99.22%	99.62%			
UAE/B77L	3582	96.48%	99.72%	1877	96.54%	99.79%
UAE/B77W	45151	98.28%	99.82%	21986	98.50%	99.88%
VJT/GLEX	858	98.54%	99.93%	513	98.57%	100.00%
XAX/A333	2973	94.43%	97.31%	133	94.49%	97.12%

Table 2: VOMF FIR ADS-C Downlink Latency per Aircraft Operator/Type

VOMF FIR CPDLC RCP240 Performance – Media Type, RGS and GES

2.3 **Tables 3A and 3B** summarize overall CPDLC performance per Media Type, RGS and GES for messages sent within the VOMF FIR during 2020.




FIR		VOMF				
Criteria		RCP240				
Period		Jan - Jun 2020				
Colour Key  Meets Criteria  99.0%-99.84%  Under Criteria	Message Counts	95% benchmark		99.9% Benchmark		
		ACP	ACTP	ACP	ACTP	
		% <= 180sec	% <= 120sec	% <= 210sec	% <= 150sec	
By Media Type						
SATCOM	16846	99.71%	99.73%	99.83%	99.76%	
VHF	14420	99.85%	99.97%	99.89%	99.98%	
HF						
ALL	31266	99.77%	99.84%	99.86%	99.86%	
By Remote Ground Station (RGS) Ground Earth Station (GES)						
Designator	Type	(RGS/GES with message counts >100)				
APK1	SAT	9612	99.69%	99.69%	99.84%	99.73%
APK2	SAT	774	99.52%	99.64%	99.91%	99.72%
XXA	SAT	2158	99.94%	99.96%	99.96%	100.00%
XXP	SAT	1218	99.84%	99.79%	99.95%	99.95%
XXQ	SAT	2864	99.83%	99.86%	99.84%	99.87%
BLR	VHF	1943	99.95%	100.00%	99.96%	100.00%
BLR1	VHF	2329	99.75%	100.00%	99.80%	100.00%
BLR2	VHF	810	99.76%	99.88%	99.80%	99.91%
HKT	VHF	1041	99.94%	100.00%	100.00%	100.00%
IXZ1	VHF	1320	99.86%	100.00%	99.88%	100.00%
MAA	VHF	1566	99.95%	99.96%	99.97%	99.97%
MAA1	VHF	3829	99.90%	99.98%	99.95%	99.99%

Table 3A: VOMF FIR CPDLC Performance Latency per Media Type, RGS and GES– Jan-Jun 2020

FIR		VOMF				
Criteria		RCP240				
Period		Jul - Dec 2020				
<div style="border: 1px solid black; padding: 2px;"> Colour Key Meets Criteria 99.0%-99.84% Under Criteria </div>	Message Counts	95% benchmark		99.9% Benchmark		
		ACP % <= 180sec	ACTP % <= 120sec	ACP % <= 210sec	ACTP % <= 150sec	
By Media Type						
SATCOM	16979	99.70%	99.72%	99.82%	99.76%	
VHF	14464	99.85%	99.97%	99.89%	99.98%	
HF						
ALL	31445	99.77%	99.84%	99.85%	99.86%	
By Remote Ground Station (RGS) Ground Earth Station (GES)						
Designator	Type					
APK1	SAT	9612	99.69%	99.69%	99.84%	99.73%
APK2	SAT	774	99.52%	99.64%	99.91%	99.72%
XXA	SAT	2158	99.94%	99.96%	99.96%	100.00%
XXI	SAT	137	100.00%	100.00%	100.00%	100.00%
XXP	SAT	1218	99.84%	99.79%	99.95%	99.95%
XXQ	SAT	2864	99.83%	99.86%	99.84%	99.87%
BLR	VHF	1943	99.95%	100.00%	99.96%	100.00%
BLR1	VHF	2329	99.75%	100.00%	99.80%	100.00%
BLR2	VHF	810	99.76%	99.88%	99.80%	99.91%
BTJ1	VHF	133	100.00%	100.00%	100.00%	100.00%
CMB1	VHF	127	99.90%	100.00%	100.00%	100.00%
GOI1	VHF	322	99.93%	100.00%	100.00%	100.00%
HKT	VHF	1041	99.94%	100.00%	100.00%	100.00%
IXZ1	VHF	1320	99.86%	100.00%	99.88%	100.00%
MAA	VHF	1566	99.95%	99.96%	99.97%	99.97%
MAA1	VHF	3829	99.90%	99.98%	99.95%	99.99%
PNQ1	VHF	133	100.00%	100.00%	100.00%	100.00%

Table 3B: VOMF FIR CPDLC Performance Latency per Media Type, RGS and GES– Jul-Dec 2020.

VOMF FIR CPDLC RCP240 Performance – Aircraft Operator/Type

2.4 **Tables 4A and 4B** summarize overall CPDLC performance per Aircraft Operator/Type for messages sent within the VOMF FIR during 2020.

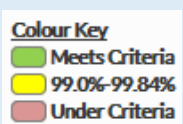
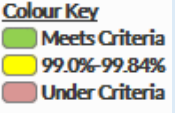
FIR	VOMF					
Criteria	RCP240					
Period	Jan - Jun 2020					
	Message Counts	95% benchmark		99.9% Benchmark		95%
		ACP % < = 180sec	ACTP % < = 120sec	ACP % < = 210sec	ACTP % < = 150sec	PORT %<60secs
By Aircraft Operator / Type (only message counts >100 recorded)						
ALK/A333	614	99.43%	100.00%	99.55%	100.00%	97.83%
BAW/B77W	401	99.10%	99.38%	99.25%	99.48%	99.09%
BOX/B77L	718	99.72%	100.00%	99.92%	100.00%	98.75%
ETD/B77W	325	99.78%	100.00%	99.91%	100.00%	97.91%
ETD/B789	2269	99.81%	99.82%	99.96%	99.86%	98.93%
ETH/B77L	1542	100.00%	100.00%	100.00%	100.00%	99.47%
ETH/B788	1304	100.00%	99.97%	100.00%	100.00%	99.19%
ETH/B789	549	100.00%	100.00%	100.00%	100.00%	99.22%
FDX/B77L	381	99.05%	99.24%	99.28%	99.35%	97.64%
MAS/A332	949	99.86%	99.80%	99.93%	99.84%	99.09%
QTR/A359	2619	99.87%	100.00%	99.90%	100.00%	98.47%
QTR/A35K	763	99.59%	99.52%	99.89%	99.59%	98.69%
QTR/B77L	721	100.00%	99.88%	100.00%	99.96%	99.17%
QTR/B77W	3051	99.32%	99.39%	99.64%	99.55%	98.23%
SIA/A359	2615	99.97%	99.83%	100.00%	99.89%	99.01%
SIA/B77W	301	100.00%	100.00%	100.00%	100.00%	99.34%
THY/B77W	474	99.85%	100.00%	99.91%	100.00%	97.83%
UAE/B77L	654	100.00%	99.96%	100.00%	100.00%	99.26%
UAE/B77W	5498	99.88%	99.95%	99.91%	99.98%	99.27%

Table 4A: VOMF FIR CPDLC Performance Latency per Aircraft Operator/Type– Jan-Jun 2020

FIR						
Criteria						
Period	Jul - Dec 2020					
	Message Counts	95% benchmark		99.9% Benchmark		95%
		ACP % < =180sec	ACTP % <= 120sec	ACP % <= 210sec	ACTP % <= 150sec	PORT %<60secs
By Aircraft Operator / Type (only message counts >100 recorded)						
AIC/B788	344	100.00%	99.82%	100.00%	99.96%	99.06%
ALK/A332	189	100.00%	100.00%	100.00%	100.00%	99.02%
ALK/A333	614	99.43%	100.00%	99.55%	100.00%	97.83%
BAW/B77W	401	99.10%	99.38%	99.25%	99.48%	99.09%
BOX/B77L	718	99.72%	100.00%	99.92%	100.00%	98.75%
ETD/B77W	189	99.54%	98.85%	99.83%	99.23%	99.55%
CPA/A333	120	100.00%	100.00%	100.00%	100.00%	99.24%
CPA/B77W	163	97.55%	96.27%	97.76%	97.14%	99.23%
ETD/B789	2269	99.81%	99.82%	99.96%	99.86%	98.93%
ETD/B78X	243	99.65%	100.00%	99.68%	100.00%	99.60%
ETH/A359	366	99.84%	99.80%	99.90%	99.85%	99.15%
ETH/B77L	1542	100.00%	100.00%	100.00%	100.00%	99.47%
ETH/B77W	260	99.78%	100.00%	99.84%	100.00%	99.12%
ETH/B788	1304	100.00%	99.97%	100.00%	100.00%	99.19%
ETH/B789	549	100.00%	100.00%	100.00%	100.00%	99.22%
FDX/B77L	381	99.05%	99.24%	99.28%	99.35%	97.64%
GEC/B77L	112	100.00%	100.00%	100.00%	100.00%	96.43%
HKC/A332	178	99.58%	99.55%	99.68%	99.63%	97.10%
KLM/B77W	303	99.39%	99.70%	99.43%	99.73%	98.59%
MAS/A332	949	99.86%	99.80%	99.93%	99.84%	99.09%
MAS/A333	748	100.00%	100.00%	100.00%	100.00%	99.11%
QTR/A332	169	99.54%	100.00%	99.62%	100.00%	97.56%
QTR/A359	2620	99.87%	100.00%	99.90%	100.00%	98.47%
QTR/A35K	763	99.59%	99.52%	99.89%	99.59%	98.69%
QTR/B77L	721	100.00%	99.88%	100.00%	99.96%	99.17%
QTR/B77W	3051	99.32%	99.39%	99.64%	99.55%	98.23%
QTR/B788	697	99.61%	99.87%	99.70%	99.91%	99.14%
SIA/A359	2618	99.97%	99.83%	100.00%	99.89%	99.01%
SIA/B78X	508	99.81%	99.71%	99.83%	99.81%	99.02%
SIA/B77W	141	100.00%	100.00%	100.00%	100.00%	97.91%
THY/A332	297	100.00%	100.00%	100.00%	100.00%	97.70%
THY/B77W	474	99.85%	100.00%	99.91%	100.00%	97.83%
THY/B789	593	99.64%	100.00%	99.68%	100.00%	97.72%

UAE/B77L		654	100.00%	99.96%	100.00%	100.00%	99.26%
UAE/B77W		5498	99.88%	99.95%	99.91%	99.98%	99.27%

Table 4B: VOMF FIR CPDLC Performance Latency per Aircraft Operator/Type– Jul-Dec 2020

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the information contained in this paper; and
 - b) discuss any relevant matters as appropriate.

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