



## INTERNATIONAL CIVIL AVIATION ORGANIZATION

### AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP EIGHTEENTH MEETING (APIRG/18) Kampala, Uganda (27 – 30 March 2012)

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#### Agenda Item 3: AFI REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION ISSUES

#### MISSING FLIGHT PLANS

*(Presented by South Africa)*

SUMMARY
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<p>This Information paper presents the insight in the on-going occurrences of missing flight plans as experienced by South Africa with special reference to the influx of air traffic due to various Major International Events, which adversely affects safety. Cognisance is taken of Conclusion 17/42 and the current initiatives being undertaken by the APIRG ATM/AIM/SAR Sub-Group in this respect.</p>
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<b>REFERENCES(S):</b>
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APIRG ATM/AIM/SAR Sub-Group 12 Report ICAO Doc 4444
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<b>Related ICAO Strategic Objectives: A and C</b>
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#### 1. INTRODUCTION

1.1 The non-receipt of flight plans in the AFI Region is an ongoing problem which to-date has not been resolved.

1.2 Aviation safety is adversely affected by the presence of unannounced aircraft within the Air Traffic Management (ATM) System requiring a Created Flight Plan (CFP) to be generated and transmitted whilst the aircraft is in flight.

1.3 South Africa, as with many other States, has been affected by this occurrence and is urgently seeking an improvement in order to enhance safety, efficiency and effectiveness of ATM.

1.4 Cognisance is taken that the APIRG ATM/AIM/SAR Sub-Group is working on identifying the causal factors of the missing flight plans. This information paper will contribute additional information, statistics and trends to support the effort and outline the magnitude of the problem.

## 2. DISCUSSION

2.1 South Africa has been a host to a number of International events that have been accompanied by an influx of air traffic, where missing flight plans have produced an unsatisfactory safety risk, coupled with delays in the arrival sequence as well as an increased work load on the ATM System.

2.2 An aircraft entering an ATM system without a flight plan, results in the requirement for a Created Flight Plan (CFP), to be hastily entered into the system in order for the ATM system to recognize the flight. This results in an increased safety risk due to the workload it places on the system, as well as, the disruption of traffic that has complied with the flight planning requirements.

2.3 Appendices **A and B** provide insight into the magnitude of the problem presenting statistics and tendencies for the full year of 2011 and January 2012, respectively.

2.4 South Africa issued an AIP supplement to remind the aviation community of the contents of the already existing requirement for addressing flight plans into South African airspace. Refer to **Appendix C**.

## 3 ACTION BY THE MEETING

3.1 The meeting is invited to note:

- a) the contents of the Information Paper and where appropriate take remedial action and;
- b) the content of this Information Paper will form the basis of a Working Paper to be tabled by South Africa at the next APIRG ATM/AIM/SAR Sub-Group meeting.

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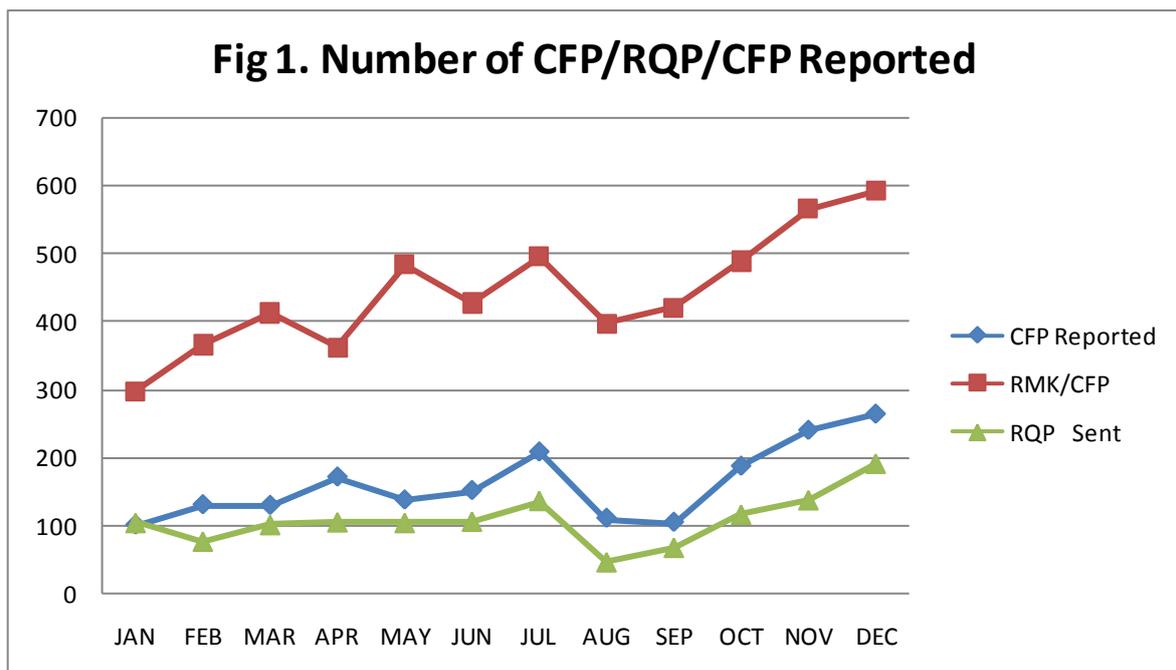
## APPENDIX A

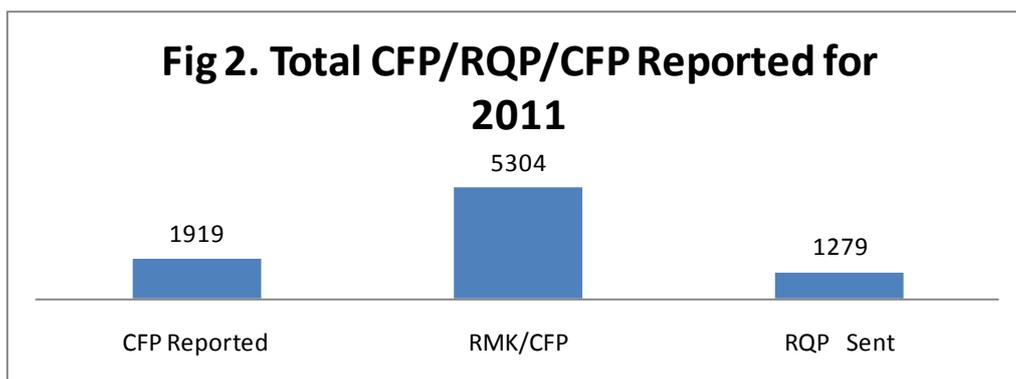
### CREATED FLIGHT PLAN REPORT SUMMARY 2011

After analysis of all CFP's generated and their relevant data for the time period 1 January 2011 to 31 December 2011, the following information has been concluded:

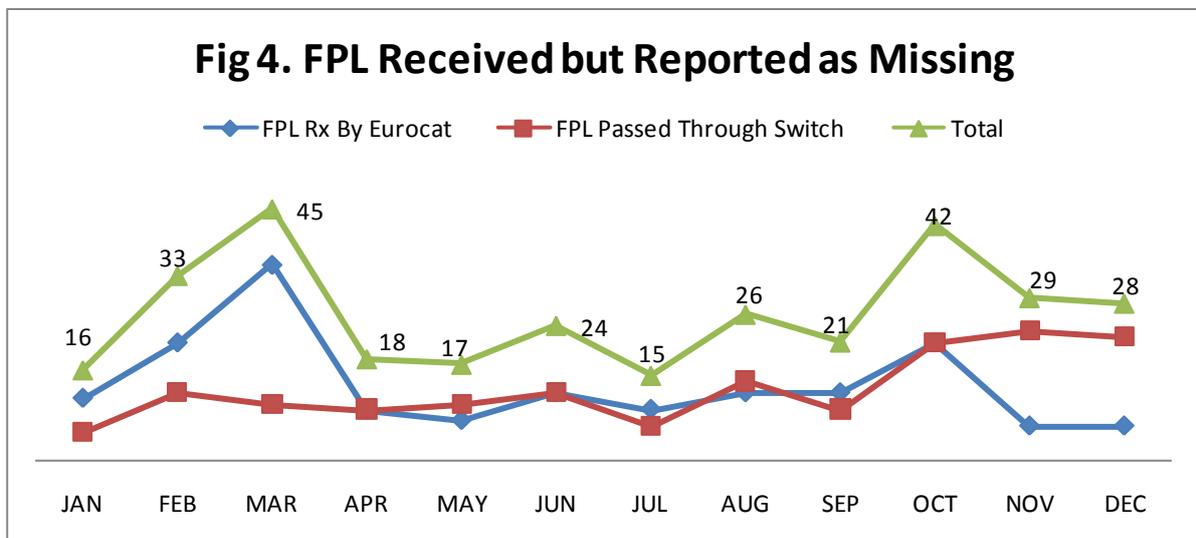
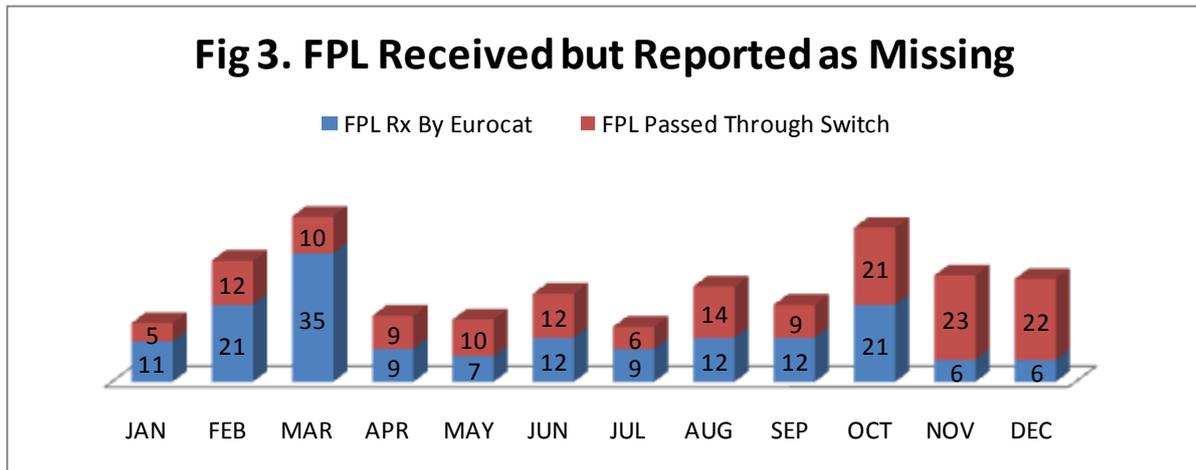
The information below shows in general an increase in the number of Created Flight Plans (CFP's) per month, which could be as a result of better information collection, or a deterioration of the reception of FPL's. However, the number of FPL's being reported as missing but found as a percentage of CFP's has decreased, showing an improvement of FPL processing. More specifically, an improvement of the number of FPL's being reported as missing which had already been sent to Filter.

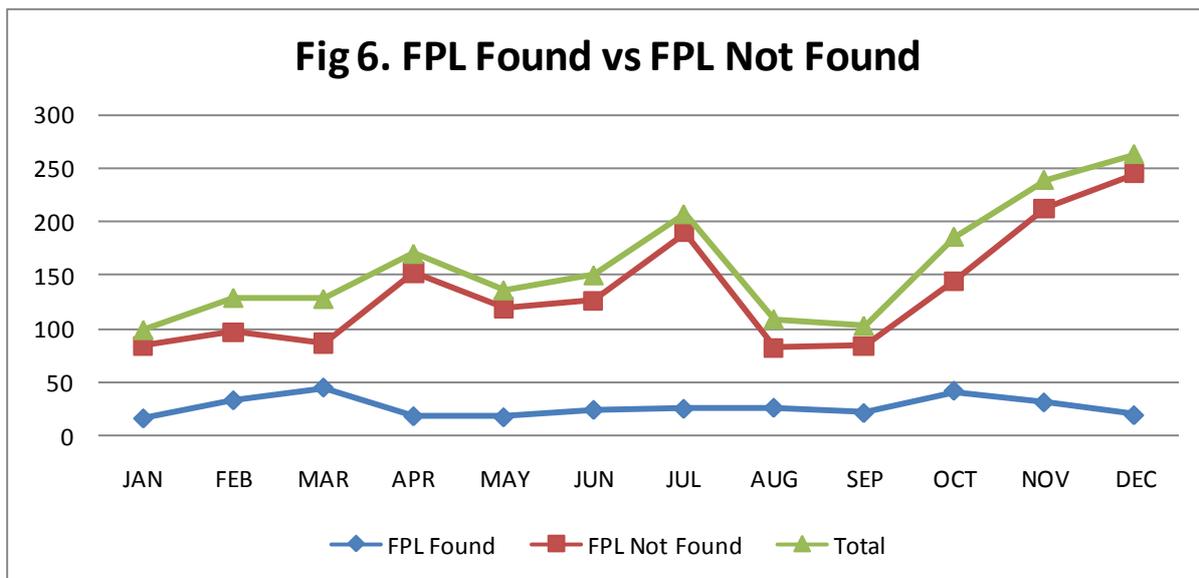
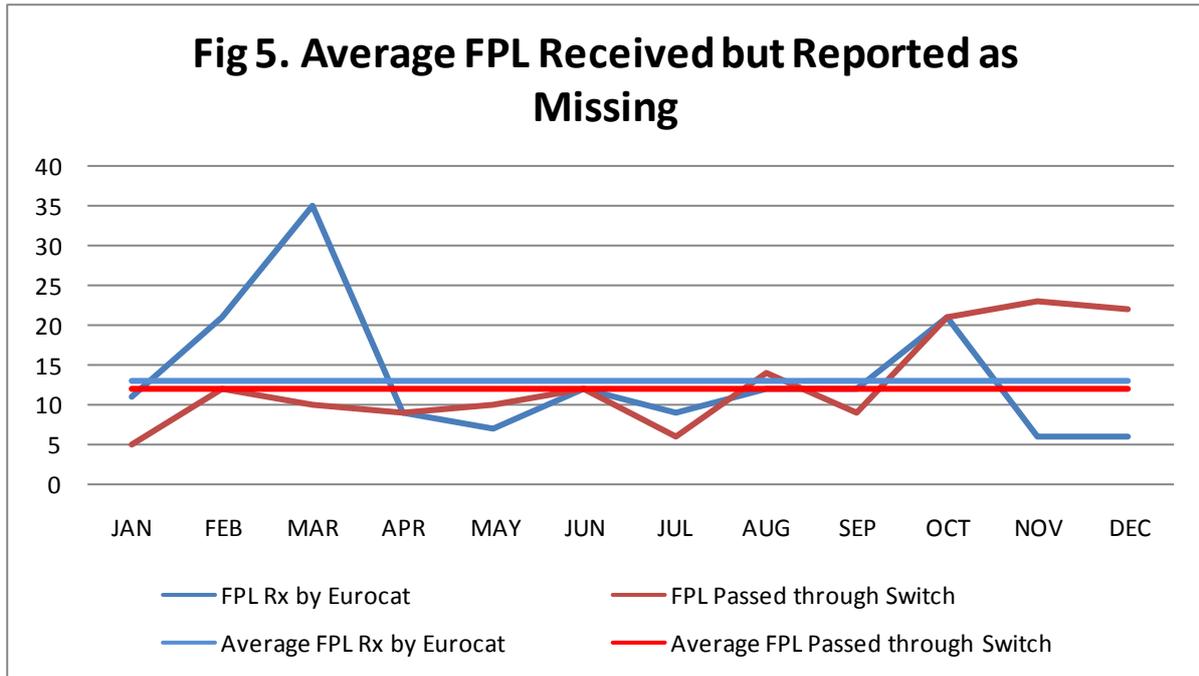
During 2011 a total of 1919 CFP's were created by either planner or filter of which 1279 (66.6%) had an RQP message. On average, 5 CFP's are created per day (5.26) leading to an average of 160 CFP's created per month (159.9). Please see the graphs below for the monthly contributions.

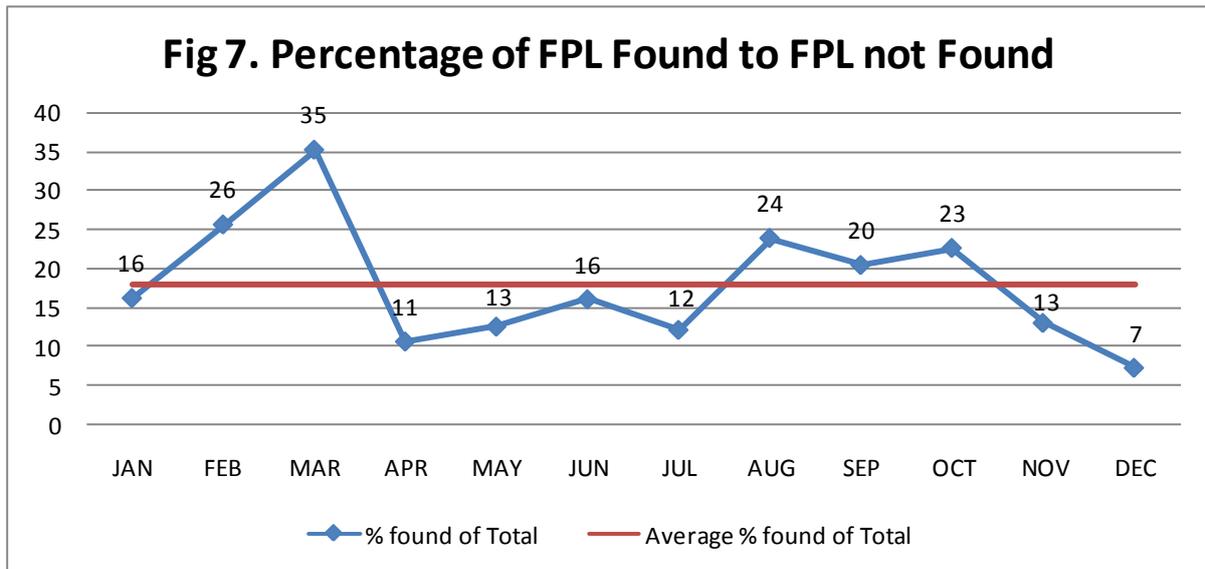




The average number of FPL's sent to EUROCAT but reported as missing was 13 per month, where as the average FPL 's reported as missing but which passed through the switch was 12 per month. This represents an average of 18% of CFP's created could have been retrieved from the AIMU (communication centre) should Filter/Planner have requested the AIMU to search for the relevant FPL. Please see the graph below for more information.

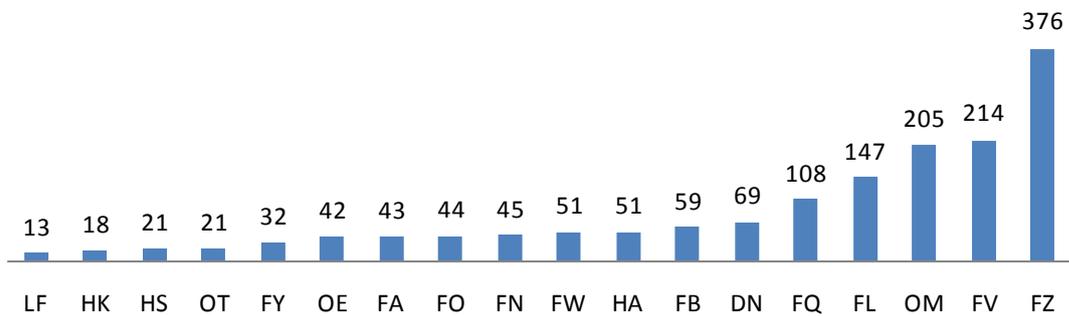




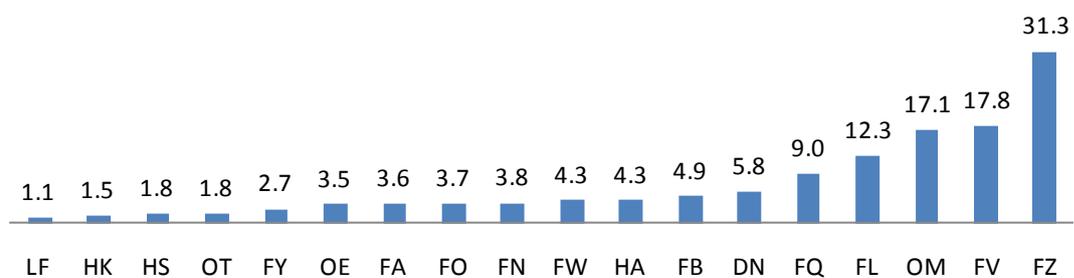


Forty-Four (44) countries were origin countries for CFP's flights. Fourteen (14) of them were one time offenders. A significant 40.9% (18 of 44) of countries produce on average more than one CFP per month, and these countries are responsible for 95.6% of all CFP's. The 18 biggest contributors are shown in the graph below.

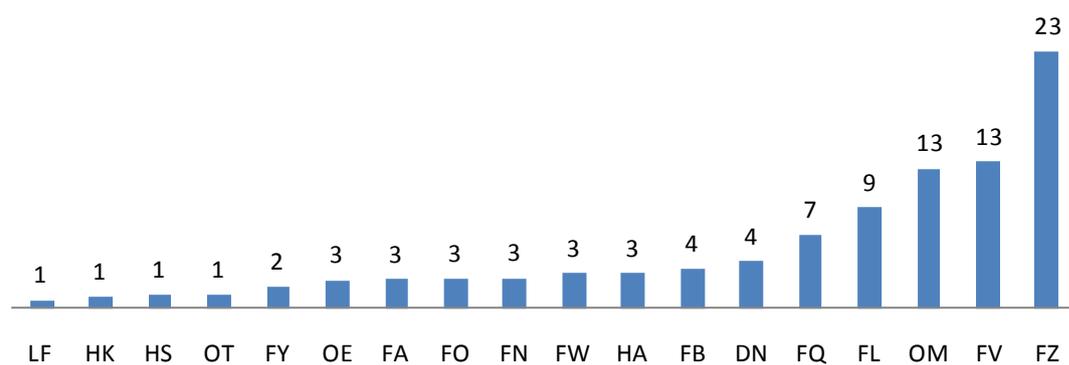
**Fig 8. Top 18 Contributors to CFP by Originating FIR**



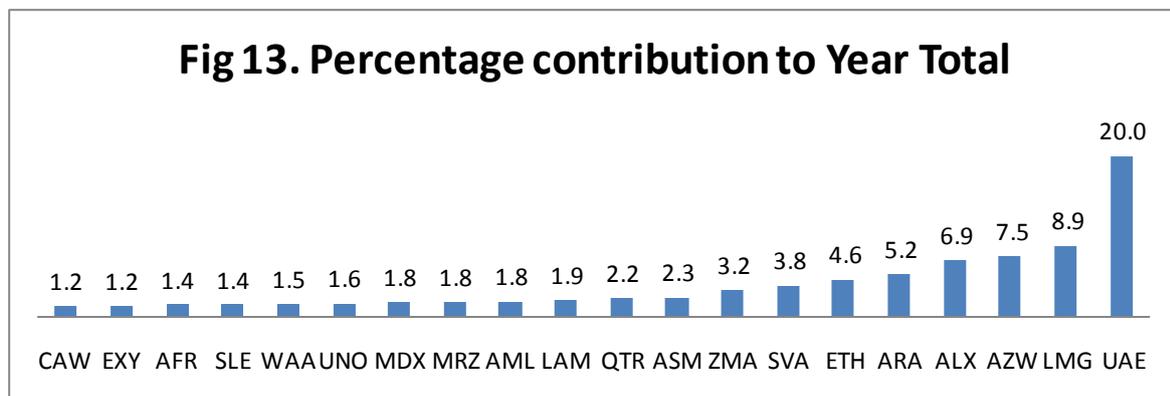
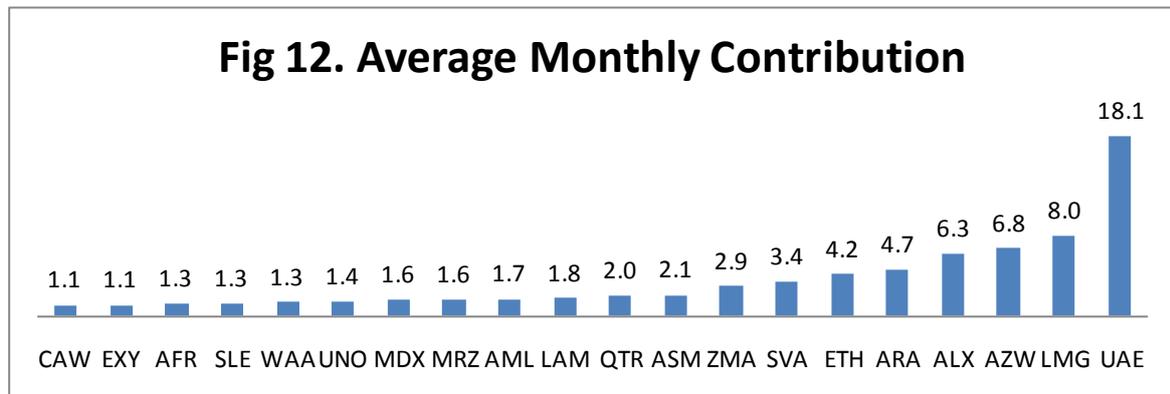
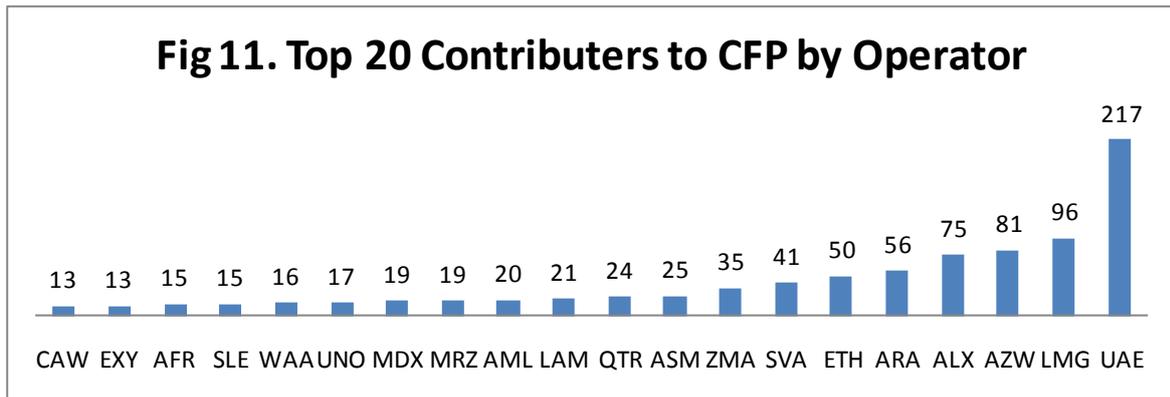
**Fig 9. Monthly Average Contribution of Top 18 Offenders**



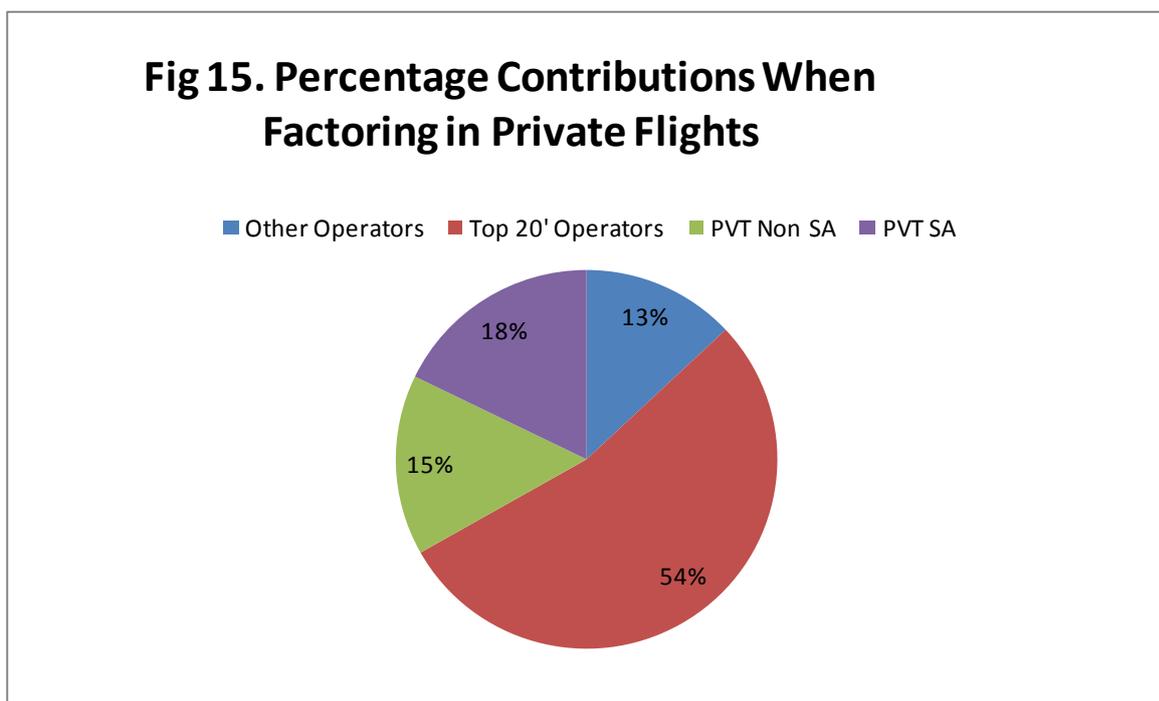
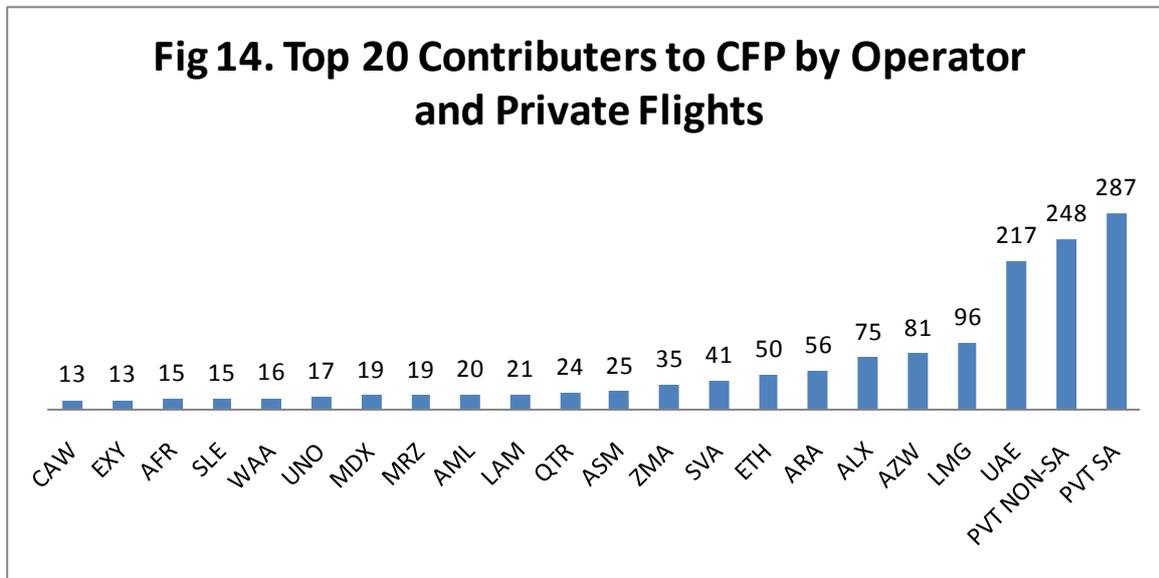
**Fig 10. Percentage Contribution to Year Total**



There were 101 different Operators (Airlines) whose flights resulted in a CFP, 47 of which were one time offenders, contributing roughly 3.9% of all CFP's for the 2011 period. Twenty operators (19.8% of the operators) averaged more than one CFP a month, and these twenty operators are responsible for 83% (868 CFP's) of all CFP's created where the flights flew under airline designators. These operators and their individual contributions are shown below.



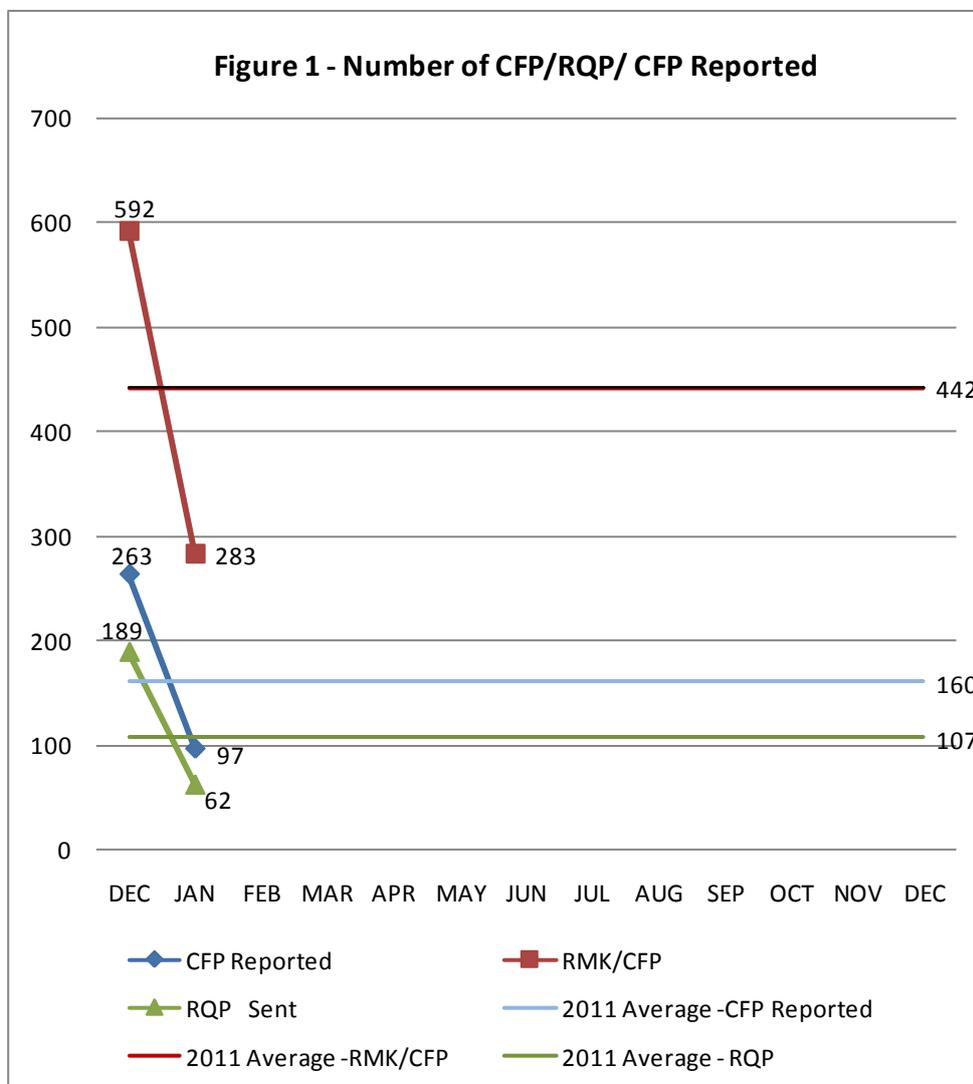
However, when including private flight's whose flights resulted in a CFP; the above-mentioned airlines were only responsible for 54% of CFP's, whilst private flights then generated 33% of CFP's (18% for South African registered aircraft, and 15% for non South African registered aircraft). This is best illustrated in the pie chart below.



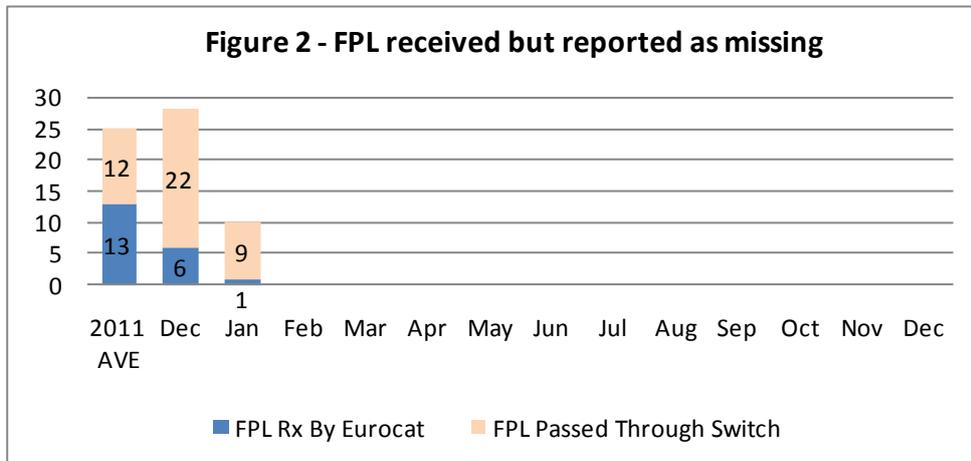
## APPENDIX B CREATED FLIGHT PLAN REPORT JANUARY 2012

After data compilation and analysis, the following information was obtained regarding created flight plans for the period 01 January 2012 to 31 January 2012.

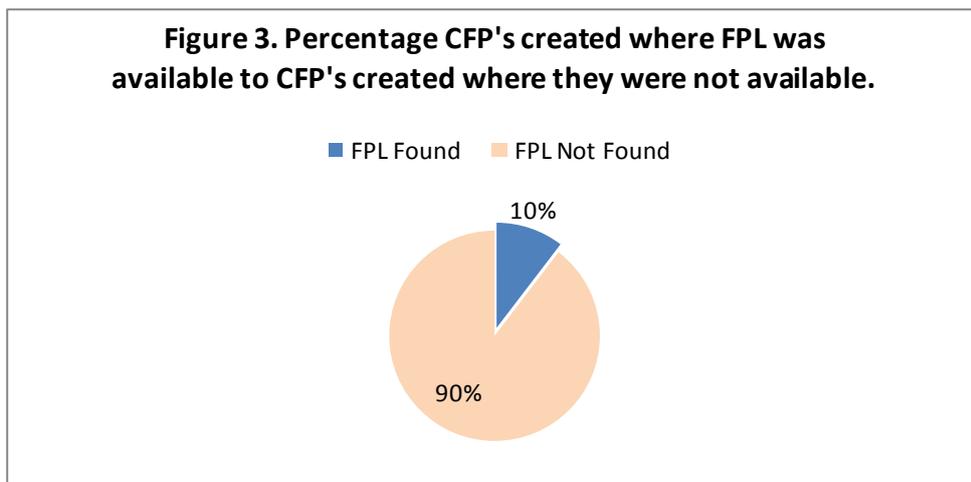
With regards to the number of created flight plans in January, messages containing RMK/CFP decreased by 52.1% to 283 AFTN messages, 159 AFTN messages below the 2011 year average of 442. CFP reported decreased by 63% to 97 Flight plans. Flight plans requested from the Communication Centre decreased from 109 times to 41 times. The percentage of RQP's sent declined and now represents 64% of CFP reported. Filter calls Comms 1 out of 2.36 times they create a CFP. (See Annexure A)



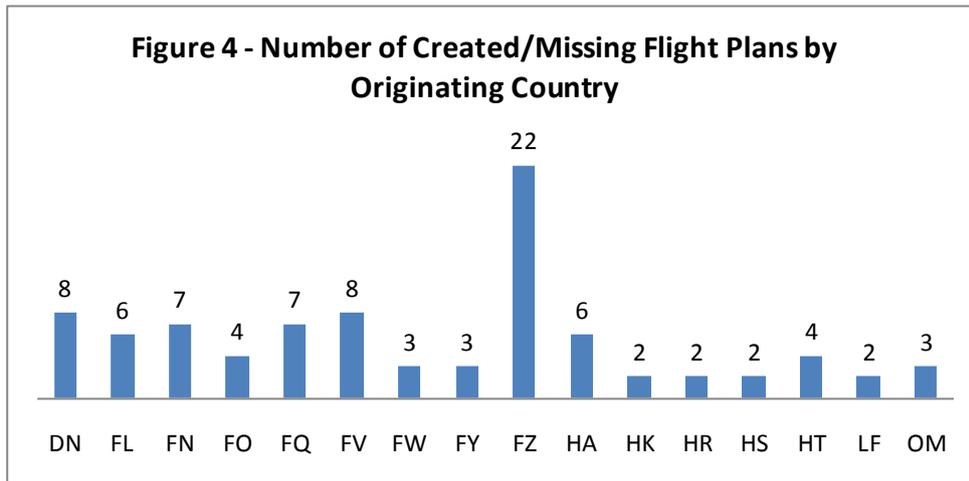
A total of 10 flight plans that were reported as missing were available to Filter/Planner only 1 of which was originally addressed to Filter. (See Annexure B)



'Flight plans received but reported as missing' increased in nominal terms but decreased in real terms. (See Annexure C)

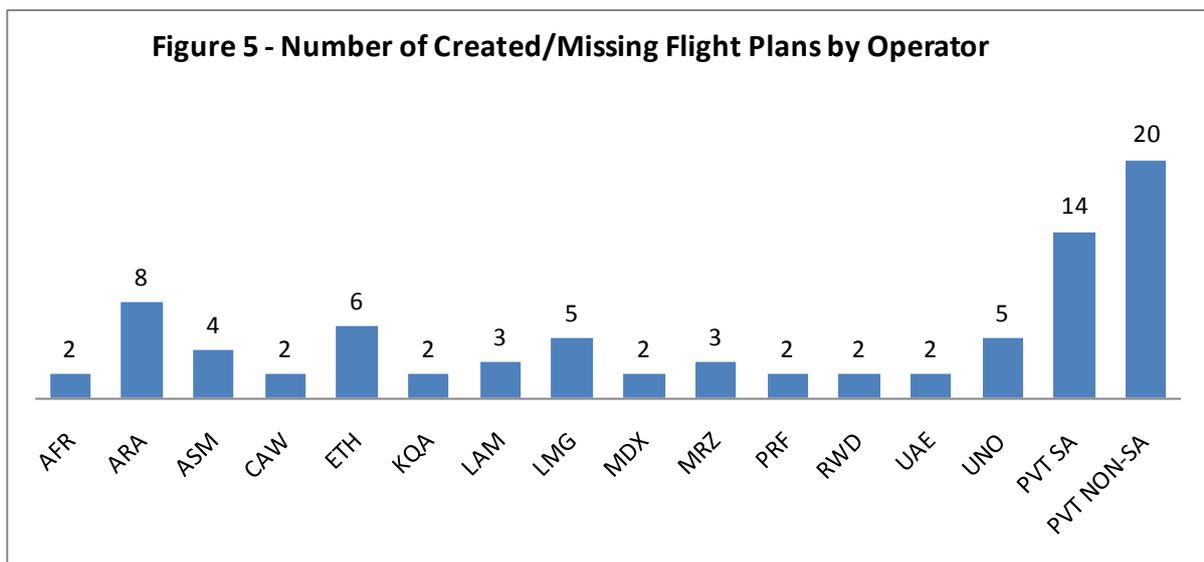


It appears that after our communication with Emirates Airlines, our CFP's for the O region, last month being responsible for 119 CFP's has been reduced to 3 CFP's. Our current biggest contributor is the Democratic Republic of the Congo contributing 22% of all CFP's, followed by Nigeria and Zimbabwe. The following countries had flights which resulted in one CFP: FA, FB, FC, FG, HT, HU, OE, OM, OT, and WS. The following countries had communication errors during the month FCCC, HKNA, FIMP, FDMS, HTDA, FSIA, FBSK, FYWH, FMMM (See Annexure D).



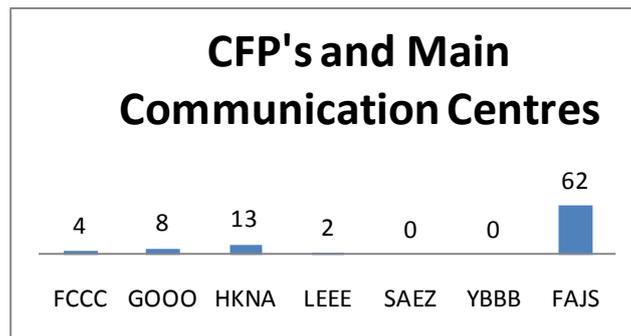
Private flights represent more than a third of all CFP's, after which, the next biggest airline contributor was Arique Air and Air Ethiopia. The following operators had one (1) CFP each: FDR, GIB, JEK, LFL, MAI, MEM, MME, NMD, PVJ, QTR, SIA, SVA, SYD, SYY, TAP, TCX.

Trends have developed and have been identified. For details regarding repeat offenders, please see Annexure E.



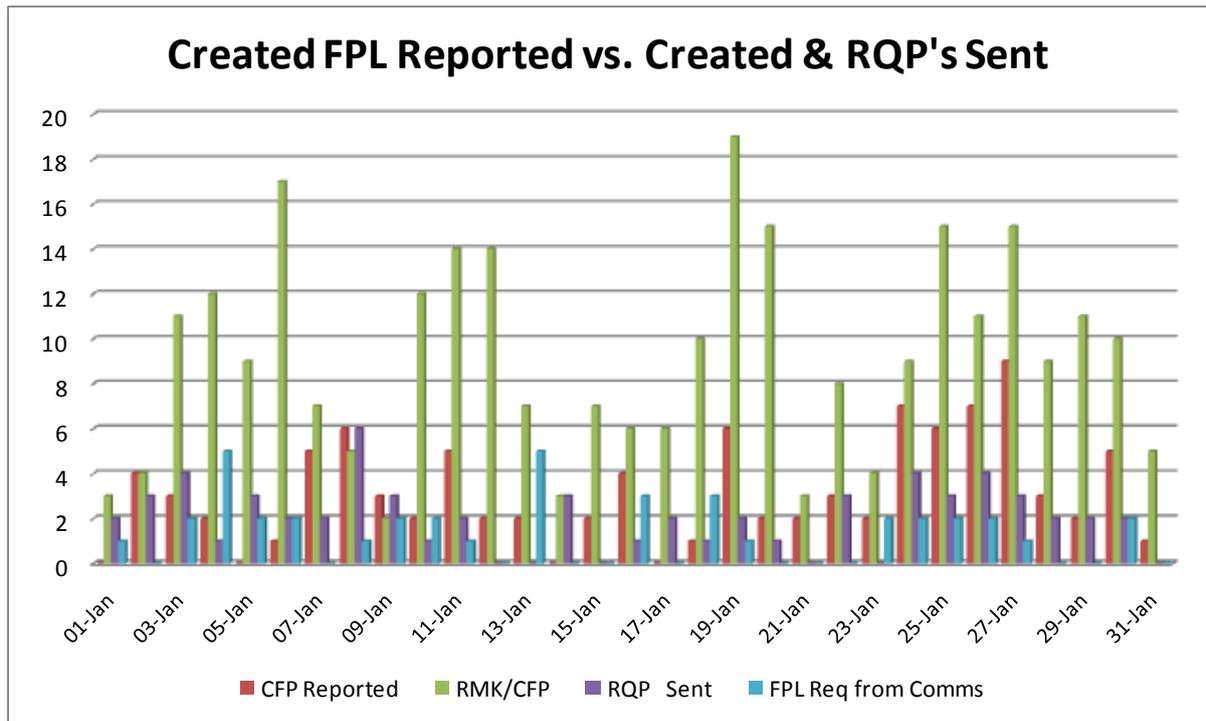
Pvt SA represents all Created FPL made for ZS and ZU registered aircraft flying under their registrations. Pvt Non-SA represents all Created FPL made for aircraft flying under their registrations where such registrations are not ZS or ZU.

No progress was made with the investigations into the possibility of the reason for CFP's being the routing through a Main Communication Centre; below are this month's figures. Please note that the stations below are only the Main Communication Centers, the problem could still lie with the tributary stations. For example, South Africa is the main communication centre (FAJS below) for Mozambique (which is tributary to FAJS, listed as FQ above). South Africa is not responsible for generating FPL's out of Mozambique, however, all outbound and inbound messages will pass through the South African switch.



**Annexure A - Created Flight Plans Reported vs Created and RQP's sent**

<b>Date</b>	<b>CFP Reported</b>	<b>RMK/CFP</b>	<b>RQP Sent</b>	<b>FPL Req from Comms</b>
01-Jan	0	3	2	1
02-Jan	4	4	3	0
03-Jan	3	11	4	2
04-Jan	2	12	1	5
05-Jan	0	9	3	2
06-Jan	1	17	2	2
07-Jan	5	7	2	0
08-Jan	6	5	6	1
09-Jan	3	2	3	2
10-Jan	2	12	1	2
11-Jan	5	14	2	1
12-Jan	2	14	0	0
13-Jan	2	7	0	5
14-Jan	0	3	3	0
15-Jan	2	7	0	0
16-Jan	4	6	1	3
17-Jan	0	6	2	0
18-Jan	1	10	1	3
19-Jan	6	19	2	1
20-Jan	2	15	1	0
21-Jan	2	3	0	0
22-Jan	3	8	3	0
23-Jan	2	4	0	2
24-Jan	7	9	4	2
25-Jan	6	15	3	2
26-Jan	7	11	4	2
27-Jan	9	15	3	1
28-Jan	3	9	2	0
29-Jan	2	11	2	0
30-Jan	5	10	2	2
31-Jan	1	5	0	0
<b>TOTALS</b>				
<b>JAN</b>	<b>97</b>	<b>283</b>	<b>62</b>	<b>41</b>
DEC	263	592	189	109
NOV	239	566	136	122
OCT	186	488	115	98



**Notes:**

1. CFP Reported refers to the number of entries which appear on the Created/Missing International Flight Plans Form (ATNS/HO/ATM Instr 1/2010 - Appendix A) which is given to Comm's personnel nightly by Filter.
2. RMK/CFP figures are derived from the number of results received when RMK/CFP is searched filtering for FAJSFDPO.
3. RQP Sent figures are derived from the number of results received when RQP is searched filtering for FAJSFDPO.
4. High RQP values vs RMK/CFP values may be as a result of multiple requests sent for a single FPL.
5. High RMK/CFP vs CFP Reported values may be as a result of FPL being created more than once, or FPL being created and CFP report not being completed by filter personnel.
6. FPL Requested by Comms are values obtained by a report filled out by Comms personnel every time they receive a call for a FPL.

**Annexure B - Flight Plans received but reported as Missing**

Date	Callsign	Dep	Dest	Originator	Relevant A	TI - JAS	Status
2012/01/04	AFR990	LFPG	FAJS	LFPGYEYX	FNANZQZX		Passed through the switch
2012/01/07	ARA103	DNMM	FAJS	DNMMZPZX	FNANZQZX		Passed through the switch
2012/01/08	VQBFQ	FNLU	FALA	FNLUZPZX	FAJSZTZX		Passed through the switch
2012/01/09	ARA103	DNMM	FAJS	DNMMZPZX	FNANZQZX		Passed through the switch
2012/01/15	ETH3809	HAAB	FAJS	HAABYBYX	FBSKZPZX		Passed through the switch
2012/01/19	ARA103	DNMM	FAJS	DNMMZPZX	FNANZQZX		Passed through the switch
2012/01/20	ARA103	DNMM	FAJS	DNMMZPZX	FNANZQZX		Passed through the switch
2012/01/26	TAP282	FQMA	LPPT	LPPTTAPO	FAJSYFYX		Passed through the switch
2012/01/27	SIA478	WSSS	FAJS	WSSSYOYX	FAJSFDPO	5099	Eurocat received this message
2012/01/27	ARA103	DNMM	FAJS	DNMMZPZX	FNANZQZX		Passed through the switch

The following AFTN addresses will be routed to EUROCAT - FAJSFDPO FAJSZQZX as well as any indicator starting with FAJA or FAJSFD or any collective address inclusive of FAJSFDPO.

The following AFTN addresses will be routed to EUROCAT - FAJSFDPO FAJSZQZX as well as any indicator starting with FAJA or FAJSFD or any collective address inclusive of FAJSFDPO

**Annexure C - Created FPL filed where original FPL did not pass through the switch**

<b>Date</b>	<b>Callsign</b>	<b>Dep</b>	<b>Dest</b>
2012/01/01	nil		
2012/01/02	MRZ01	FVBU	FALA
2012/01/02	MRZ01	FVHA	FALA
2012/01/02	FDR372	ZZZZ	FAJS
2012/01/02	LAM233	FQVL	FAJS
2012/01/03	ZJSB	FVHA	FALA
2012/01/03	ZAHL	FVCP	FALA
2011/01/03	GIB2604	FQNP	FAJS
2012/01/04	9QCJL	FZQA	FAPN
2012/01/05	nil		
2012/01/06	N314BG	FZQA	FALA
2012/01/07	MEM001	FCBB	FABL
2012/01/07	5HCCM	HTDA	FAJS
2012/01/07	MAI001	FOOL	FABL
2012/01/07	TRKSP	FOOL	FABL
2012/01/08	PVJ108	FOOL	FABL
2012/01/08	ARA103	DNMM	FAJS
2012/01/08	QTR584	OTBD	FAJS
2012/01/08	UAE772	OMDB	FACT
2012/01/08	UNO830	FZQA	FALA
2012/01/09	LAM313	FQRB	FAJS
2012/01/09	ETH809	HAAB	FAJS
2012/01/10	ETH809	HAAB	FAJS
2012/01/10	SY448	FLLI	FAJS
2012/01/11	UNO828	FZQA	FALA
2012/01/11	ZSLFM	FVHA	FAJS
2012/01/11	ETH809	HAAB	FAJS
2012/01/11	LFL01	FVCP	FALA
2012/01/11	ZSNKE	FQVL	FALA
2012/01/12	KQA760	HKJK	FAJS
2012/01/12	LMG286	FZNA	FAWK
2012/01/12	ETH809	HAAB	FAJS
2012/01/13	9QCAP	FZQA	FALA
2012/01/13	ECKMK	FZQA	FALA
2012/01/14	nil		
2012/01/15	UNO830	FZQA	FALA
2012/01/16	ZANT	FVBU	FAPN
2012/01/16	LMG8	FNLU	FAWK
2012/01/16	ZSMON	FVBU	FAPN

2012/01/16	D2EPI	FNUB	FALA
2012/01/17	nil		
<b>Date</b>	<b>Callsign</b>	<b>Dep</b>	<b>Dest</b>
2012/01/18	9QCFJ	FZQA	FALA
2012/01/19	9QCJG	FZQA	FAJS
2012/01/19	CAW274	FYWH	FAJS
2012/01/19	LMG286	FZNA	FAWK
2012/01/19	ZSCNA	FZQA	FALA
2012/01/19	TCX1465	OMAA	FAJS
2012/01/20	N800UK	FLND	FALA
2012/01/21	ASM474	FNLU	FALA
2012/01/21	UAE763	OMDB	FAJS
2012/01/22	LMG734	HSFS	FAWK
2012/01/22	ZSPLC	FLLS	FALA
2012/01/22	ZSMNU	HUEN	FAJS
2012/01/23	SVA447	OEJN	FAJS
2012/01/23	TRLGY	FOOL	FALA
2012/01/24	N410DM	FWKI	FALA
2012/01/24	DZEYN	FNGI	FAKN
2012/01/24	7QWPB	FWKI	FALA
2012/01/24	CAW287B	FLLI	FAJS
2012/01/24	MME120	FZQA	FALA
2012/01/24	UNO829	FZQA	FALA
2012/01/24	ASM475	FLLS	FALA
2012/01/25	RWD113	HRYR	FAJS
2012/01/25	ZSETA	FZQA	FALA
2012/01/25	ZSSDS	FBJW	FALA
2012/01/25	ZSCLT	FLND	FALA
2012/01/25	MDX551	FQTT	FALA
2012/01/25	PRF700	HTDA	FAJS
2012/01/26	ARA103	DNMM	FAJS
2012/01/26	9QCJG	FZQA	FAJS
2012/01/26	LMG286	FZNA	FAWK
2012/01/26	ZSLAC	FZQA	FALA
2012/01/26	ZSCHI	FZQA	FALA
2012/01/26	PRF700	HTDA	FAJS
2012/01/27	MDX801	HTDA	FALA
2012/01/27	LAM313	FQTT	FAJS
2012/01/27	KQA762	HKJK	FAJS
2012/01/27	ZSOPY	HTDA	FALA
2012/01/27	ZSMMG	HSSJ	FALA
2012/01/27	NMD018	FYWH	FAJS
2012/01/27	SYD911	FYWE	FALA
2012/01/28	ASM349	FNLU	FALA
2012/01/28	ZSEXG	FGSL	FALA

2012/01/28	ARA103	DNMM	FAJS
2012/01/29	AFR990	LFPG	FAJS
<b>Date</b>	<b>Callsign</b>	<b>Dep</b>	<b>Dest</b>
2012/01/29	ETH809	HAAB	FAJS
2012/01/30	ASM475	FNCA	FALA
2012/01/30	UN850	FZAA	FALA
2012/01/30	RWD113	HRYR	FAJS
2012/01/30	9QCFJ	FZQA	FALA
2012/01/30	JEK744	FZAA	FALA
2012/01/31	MRZ01	FWCL	FALA

**Annexure D - International Line Faults**

<b>International Line faults</b>	
<b>1</b>	<p><b>FCCC</b></p> <p>1) MMS:1201030024. FCCC line downgraded from the 3-13 Jan 2012 due missing check messages Line diverted via Dakar, nil telephonic answer on their end. Fault reported to FRC. DgTF: 250 hrs.</p> <p>2) MMS:1201190034. Line downgraded from the 19-23 Jan 2012 due nil messages received from FCCC. Line diverted via HKNA. DgTF: 99 hours.</p>
<b>2</b>	<p><b>HKNA</b></p> <p>1) MMS:1201090048. Line downgraded on the 9/1/2012 due messages reported as being truncated on HKNA side. Fault reported to VSAT techs/FRC. SA Matthews advised that our system was not responsible for the truncated messages as it was set to multipart. DgTF: 6.5 hours.</p> <p>2) MMS:1201130015. Line downgraded from the 13-17 Jan 2012 due messages not received by HKNA. Fault reported to SA's. No fault found on our end. DgTF: 96.5 hours.</p> <p>3) MMS:1201270043. Line u/s on the 27/1/12 due HKNA not receiving messages from FAJS. Line was diverted on their end via FIMP. VSAT Checklist attached and Mohale called out to attend to fault. Testing completed and Mohale advised that fault was not on the MOTSETA side. Memotek was reset and line became operational. DT: approx 4 hours.</p>
<b>3</b>	<p><b>FIMP</b></p> <p>1) MMS:1201190035. Line downgraded on the 19/1/12 due FIMP not receiving messages from FAJS. Fault reported to Bright (VSAT Techs). DgTF: 1 hour.</p>
<b>4</b>	<p><b>FDMS</b></p> <p>1) MMS:1201190036. Line downgraded from the 19-23 Jan 2012 due not receiving and transmitting messages. Line was diverted to e-mail. FDMS advised that the system was u/s due hard drive crash. DgTF: 98.5 hours.</p> <p>2) MMS:1201280004. Line downgraded on the 27/1/12 due messages going into the reject queue. Fault was reported to the VSAT tech Patrick. Channel parameters were changed by VSAT techs and test completed. Channel is now back in service with no errors. DT: Approx</p>

	74hrs
5	<p><b>HTDA</b></p> <p>1) MMS:1201190038. Line downgraded from the 19-20 Jan 2012 due FAJS not receiving message from HTDA. Fault was not closed. Line again downgraded on the 23th due FAJS not receiving messages even though Dar es Salaam are receiving our traffic fine. Direct comms restored 31 January 2012. Estimated DT:209hrs</p>
6	<p><b>FSIA</b></p> <p>1) MMS:1201270044. Line u/s on the 27/1/2012 due line intermittent. Lines did not stay in service operational long enough for the messages to go through. Messages diverted via FIMP. VSAT checklist completed and Mohale called out to attend to fault. Mohale conducted testing and advised that fault not on the MOTSETA system. Memotek reset and line became operational. DT: approx 4 hours.</p>
7	<p><b>FBSK</b></p> <p>1) MMS:1201270045. Line u/s on the 27/1/12. Line on overflow due nil diversion options available Mohale called out to attend to fault. VSAT checklist completed. Testing conducted and Mohale advised that fault was not on the MOTSETA system. Memotek was reset and lines became operational. DT: approx 4 hours.</p>
8	<p><b>FYWH</b></p> <p>1) MMS:1201270046. Line u/s on the 27/1/12. Line was diverted via YBBB. Line intermittent. Mohale was called out to attend to fault. VSAT checklist completed. Testing conducted by Mohale and he advised that the fault was not on the MOTSETA system. Memotek reset and line became operational. DT: approx 4 hours.</p>
9	<p><b>FMMM</b></p> <p>1) MMS:1201300019. Line downgraded from the 30/1/2012 due FAJS not receiving messages from FMMM. Tried calling, nil answer. Line was diverted via FMMI VSAT line. Communication restored at 0800B. DT:4hrs</p>

**Annexure E - Created FPL as per Operating Agency & Trends Identified**

<b>Callsign</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>
7QWPB	1	3	1
9QCFJ			2
9QCJG	3	3	2
AFR990	7	5	2
ARA103	14	7	
ASM349	1	1	1
ASM475		1	2
ASM731	2		
AZW367	5		
COI369	2		
ETH3809	4	5	1
ETH809	13	15	5
LAM311	2	2	
LAM313	2	2	3
LMG286	3	2	3
MRZ01	2	1	3
N324BG	3	1	
PRF700	2		2
QTR582	4	6	
QTR584	2	3	1
RWD113			2
SVA447	5	5	1
SVA947	5	7	
UAE761	10	16	
UAE763	11	20	1
UAE765	10	19	
UAE770	11	16	
UAE772	11	20	1
UAE775		4	
UNO830			2
ZSNVB	3		
ZSPVU	2		
ZSTCC	2		
ZSTGS	3		
ZWFP		2	

## APPENDIX C

 <p><b>SOUTH AFRICAN CIVIL AVIATION AUTHORITY</b></p>	<p><b>REPUBLIC OF SOUTH AFRICA</b></p> <p><b>CIVIL AVIATION AUTHORITY</b></p> <p><i>Private Bag x 73 Halfway House 1685</i></p>	<p><b>AIRAC AIP SUPPLEMENT S002/12 12 JANUARY 2012</b></p>

**CAPE TOWN (FACA), OCEANIC (FAJO) AND JOHANNESBURG (FAJA) FLIGHT INFORMATION  
REGIONS**

**DISTRIBUTION OF ATS MESSAGES OUTSIDE SOUTH AFRICA**

Validity period: *PERM*

*All Flight plans and related ATS messages originating outside of South Africa shall be addressed to FAJSZPZX, who shall be responsible for the further distribution of such messages within South Africa.*

**REF:** *AIP ENR 1.11. paragraph 1.11.2*