International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

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Third NAM/CAR Air Traffic Services Inter-facility Data Communication (AIDC) and North American Interface Control Document (NAM/IDC) Implementation Follow-up Meeting (AIDC/NAM/ICD/3)

Mexico City, Mexico, from 25 to 28 February 2020

Agenda Item 2: Joint Meeting with the ANI/WG AIM Task Force

ABSTRACT ON THE EFFECTIVENESS OF FLIGHT PLANS IN THE MUFH FIR

(Presented by Cuba)

EXECUTIVE SUMMARY	
Statistical analysis of errors in FPL and associated messages, rejected in the Havana FIR in 2019.	
Action:	Suggested actions are presented in Section 4.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Environmental Protection
References:	• Doc 4444 • Daily analysis of errors in FPL received in the Havana CCTA.

1. Introduction

1.1 Errors in flight plans and in their associated messages have been object of study in regional meetings, what has propitiated carrying out recommendations to the different member States. However, messages with errors continue to be sent by the different parties requiring the assistant or executive controllers to find a solution for flights to be done without issues.

2. Discussion

2.1 Chart No. 1 shows a summary of the management of flight plans received in the Havana FIR in February-December 2019, observing that of a total of 377 602 received FPL, 275 987 were accepted without errors for an effectiveness of 73%, and 94 453were rejected, which represents 27%.

Chart No. 1

Month	RECVD	ACK	%	REJ	%
Februay	35577	26196	74%	9016	26%
March	36933	27372	74%	9301	26%
April	38311	27049	71%	10196	29%
May	32695	23166	71%	9409	29%
June	31624	23117	73%	8289	27%
Juily	35815	26857	74%	7783	26%
August	33971	25141	74%	8682	26%
Septembre	29435	21153	72%	7497	28%
October	31825	22259	70%	8107	30%
November	33427	24725	74%	7702	26%
December	37989	28952	76%	8471	24%
TOTAL	377602	275987	73%	94453	27%

2.2 Chart No. 2 shows the relationship between the associated messages of the filed flight plan and its correspondent update. In all rejected messages the fundamental cause was the lack of compliance with the format established in the year 2012.

2.3 The cause of this lack of compliance is due the lack of updating of the systems in charge of generating these messages that, in the majority of the cases, are still files in a format before 2012.

Chart No. 2

MSG TYPE	RECVD	ACK	%	REJ	%
DPG	73576	49982	67%	23594	33%
CHG	7445	3981	53%	2778	47%
DLA	11188	7332	65%	2610	35%
CNL	17871	13515	75%	3954	25%

3. Errors analysis

3.1 Chart No. 3 details the flight plan errors that have been received in the Havana FIR. For a better understanding, columns show the fields of the FPL, type of error, code that corresponds to the NAM-ICD rejection table, months of the year, correspondent totals and subtotals, results that are found in the **Appendix** to this working paper.

3.2 During the last years, and with an annual periodicity, a meeting with the AIDC and FPL monitoring Taskforce members is carried out with the participation of IATA representatives. In this meetings a series of actions have been agreed, in which can be found the establishment of a homogeneous procedure that must be used regionally with the aim of achieving the reduction of errors in filed flight plans. The persistency of these errors is due to low training of personnel in charge of this activity, which includes operators, service providers, industry and the States.

3.3 Considering the aforementioned we suggest:

I. **Operators:** Must warranty that their personnel complies with the established in the Flight plan format (FPL 2012), use the associated messages correspondent for each affectation/modification that suffers the filed FPL to reduce the great number of currently received FPL (Similar and Duplicated). Special attention should be paid to the correct filling of Field 18 due that it is sent with errors or data omissions such as RNAV, RNP and other specifications that are essential and that provide information for air traffic control, airport facilities and search and rescue (SAR).

II. **Service providers:** Since they are the ones that are rectifying the errors mentioned above, they should create an organizational structure with personnel dedicated to this task. By introducing to the system an abbreviated flight plan, orally received, the elimination of essential data must be avoided. For example, currently most of the time data in Fields 10a and 10b is not transmitted, and are essential for the development of the flight plan until its final step, which can result in errors when in assignation in the approximation.

III. **Industry and the States:** They must work jointly to update the systems that are in operation, considering:

1) That they are capable to alert the service providers on errors in flight plans and associated messages.
2) Create templates (automatized formats with the capacity to validate filed information) for the stations to generate or transmit flight plans where an error cannot be filed.
3) Adjust the messages that are generated automatically or manually to the requirements of the work protocols in the FIR.
4) The States must warranty that there is information feedback between each party points of contact, with the objective to maintain information on how the process is working and their level of acceptance.
5) That security information is exchanged between the ANSPs of the States and their adjacent FIRs.

6) That the entities in charge of inspection in the aeronautical authorities include in their surveillance protocols of the operations safety of the operators aspects relates with the level of training of the specialists in charge, that the systems correspond to what is asked by the national regulations and with ICAO, and others that contribute in the surveillance of the procedures' compliance.

4. Suggested actions

4.1 The Meeting is invited to:

a) analyse and discuss these considerations to:

1. Reduce errors in flight plans
2. Strenghten the validation mechanisms of the flight plan information.

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CHART NO. 3

FIELD	TYPE OF ERROR	CODE	F E B	M A R	A P R	MAY	JUN	JUL	AUOG	SEP	OCT	NOV	D E C	TOTAL
0	DUPLICADOS	#	3808	3953	3709	4383	3754	2861	4204	3519	3785	3394	3225	40595
0	SIMILARES	#	3 5 6 9	3458	3744	3381	2973	3132	3048	2859	3035	3043	3205	35447
7	IDENTIFICACION (INVALIDA)	6				1		1	1	1		1	2	7
8	REGLAS VUELO (INVALIDA)	11						3						3
8	TIPOS VUELO (INVALIDA)	12		2	1		39	3	2	3	2	3	25	80
9	MODELO AERONAVE(INV)	13	15			16	23	28	36	19	23	23	27	210
13	AERÓDROMO DESP	18							1		2	1	27	31
16	AERÓDROMO DEST	19			2	4	1	1		3				11
15	DESIGNADOR NIVEL(INV)	29	1	1	4	4	1	3	2	1	3		1	21
15	AUSENCIA DE DESIGNADOR NIVEL	30					1					1		2
15	DESIGNADOR VELOCIDAD	38		5		5		7			2	1	5	25
15	AUSENCIA DEL DESIGNADOR DE VELOCIDAD	39		1					1			2		4
18	INFORMACION O ELEMENTOS INVALIDOS	48	66	95	95	92	64	282	57	75	69	101	111	1107
0	MAS DE 1 CAMPO AUSENTE O EXCEDIDO	52	80	104	134	109	94	91	119	85	125	92	146	1179
0	ERROR DE SINTAXIS EN UN CAMPO	54	42	54	50	72	30	37	49	24	27	45	44	474
0	AUSENCIA DE PARENTESIS	58	5	3	10	8	21	10	6	9	10	58	11	151
18	DIA OPERAC INVALIDO(DOF)	63	128	173	882	170	130	176	156	109	104	154	188	2370
18	ELEMENTOS INCONSISTENTES E/CAMPO 10 Y18	64	69	120	64	55	90	66	98	54	73	55	69	813
0	MENSAJE EN FORMATO ICAO MIXTO	67	15	11	29	23	35	76	22	19	18	15	13	276
10a	VALORES INVALIDOS EN LOS DESIGNADORES DE EQUIPOS	73	8	3	2	4	4	1	1	2	4	3	1	33
10b	VALORES INVALIDOS EN LOS DESIGNADORES DE EQUIPOS VIGILANCIA.	74	16	17	21	21	28	22	7	15	7	20	34	208
18	DATOS INVALIDOS PBN	77			6	2	3	1	8		14	2	3	39
15/10a	NO RVSM STATUS	81	8	31	28	10	15	16	31	13	7	11	13	183
18	ELEMENTOS INVALIDOS EN STS	83				4	1	1	1	2		7	1	17
18	VALOR PBN EXCEDIDO O INVALIDO	84	12	9	7	12	10	14	7	17	16	30	20	154
18	INVALIDO FPL DATOS EET.	85	994	1045	1227	969	929	875	751	598	682	612	1252	9934
18	INCONSISTENCIA VALOR PBN	86	178	186	149	63	40	75	72	68	84	63	75	1053
TOTAL			**9014**	**9271**	**10164**	**9408**	**8286**	**7782**	**8680**	**7495**	**8092**	**7737**	**8498**	**94427**

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