



ATS INTERFACILITY DATA COMMUNICATION AIDC



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ATS INTERFACILITY DATA COMMUNICATION (AIDC)

AIDC is a communications protocol that is used between control centers, where the data of an aircraft that is going to enter another control center is automatically sent to the receiving control center and this responds by the same way.

The protocol uses different messages that are sent in each of the AIDC phases.

It is necessary that before initiating dialogues for AIDC coordination, both ACCs understand the concept of the AIDC, its advantages and disadvantages.



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COORDINATION PHASES

REPORTING PHASE (1)

It is the phase in which the system automatically sends a dialog notifying the adjacent unit that a flight is near to enter its area. And any change may be broadcast to an ATSU from the current ATSU prior coordination.

COORDINATION PHASE (2)

A coordination message is sent to coordinate an aircraft between two ATSU's. The AIDC contains the time to a coordination point, the flight level, transponder code, and the rest part of the flight plan. During this phase, control centers may request a different level change than the one initially authorized.

TRANSFER PHASE (3)

During the transfer phase a control center sends control transfer and the receiving control center accepts the transfer.



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AIDC

AMHS

PLANNING

TRAINING

PRACTICE

T E A M W O R K



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ASIA /PAC AIDC CORE AND OPTIONAL MESSAGES

CORE	OPT	MESSAGE	MESSAGE ACRONYM	ICAO FIELDS											NON-ICAO FIELD	
				3	7	8	9	10	13	14	15	16	18	22		
X		Advance Boundary Information	ABI	X	X				X	X		X		X		
																X 8, 9, 10, 15, 18, Text
X		Current Flight Plan	CPL	X	X	X	X	X	X	X	X	X	X	X		
X		Coordination Estimate	EST	X	X				X	X		X				
X		Coordination Cancellation	MAC	X	X				X			X			X	14,18
	X	PreActivation	PAC	X	X				X	X		X			X	8,9,10,15,18
X		Coordination	CDN	X	X				X			X			X	10,14,15,18, Text
X		Acceptance	ACP	X	X				X			X				
X		Rejection	REJ	X	X				X			X				
	X	Track Update	TRU	X	X				X			X				X
X		Transfer of Control	TOC	X	X				X			X				
X		Assumption of Control	AOC	X	X				X			X				



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X		Emergency	EMG	X	X									X		
X		Miscellaneous	MIS	X	X									X		
	X	Track Definition Message	TDM	X												X
X		Logical Acknowledgment Message	LAM	X												
X		Logical Rejection Message	LRM	X									X			
	X	Application Status Monitor	ASM	X												
	X	FANS Application Message	FAN	X	X				X				X			X
	X	FANS Completion Notification	FCN	X	X				X				X			X
	X	Surveillance ADS-C	ADS	X	X				X				X			X



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MISCELLANEOUS

Used to transmit operational information which cannot be formatted to comply with any other message type and for plain language statements.

Normally the information would be presented directly to the controller responsible for the flight or to the controller expecting to receive responsibility for the flight.

When the message does not refer to a specific flight, a functional address shall be used and the information presented to the appropriate ATS position.

Where such an address is used it is preceded by an oblique stroke (/) to differentiate it from an aircraft identification.



AIDC ERROR CODES

Error Code	Field Number	Error Text
1	HEADER	INVALID SENDING UNIT (e.g., AFTN Address)
2	HEADER	INVALID RECEIVING UNIT (e.g., AFTN Address)
3	HEADER	INVALID TIME STAMP
4	HEADER	INVALID MESSAGE ID
5	HEADER	INVALID REFERENCE ID
6	7	INVALID ACID
7	7	DUPLICATE ACID
8	7	UNKNOWN FUNCTIONAL ADDRESS
9	7	INVALID SSR MODE
10	7	INVALID SSR CODE
11	8	INVALID FLIGHT RULES
12	8	INVALID FLIGHT TYPE
13	9	INVALID AIRCRAFT MODEL
14	9	INVALID WAKE TURBULENCE CATEGORY
15	10	INVALID CNS EQUIPMENT DESIGNATOR
16	10	INVALID SSR EQUIPMENT DESIGNATOR
17	13, 16, 17	INVALID AERODROME DESIGNATOR
18	13	INVALID DEPARTURE AERODROME
19	16	INVALID DESTINATION AERODROME
20	17	INVALID ARRIVAL AERODROME
21	13, 16, 17	EXPECTED TIME DESIGNATOR NOT FOUND
22	13, 16, 17	TIME DESIGNATOR PRESENT WHEN NOT EXPECTED
23	13, 14, 16, 17	INVALID TIME DESIGNATOR
24	13, 14, 16, 17	MISSING TIME DESIGNATOR
25	14	INVALID BOUNDARY POINT DESIGNATOR
26	14, 15	INVALID ENROUTE POINT
27	14, 15	INVALID LAT/LON DESIGNATOR

Error Code	Field Number	Error Text
28	14, 15	INVALID NAVAID FIX
29	14, 15	INVALID LEVEL DESIGNATOR
30	14, 15	MISSING LEVEL DESIGNATOR
31	14	INVALID SUPPLEMENTARY CROSSING DATA
32	14	INVALID SUPPLEMENTARY CROSSING LEVEL
33	14	MISSING SUPPLEMENTARY CROSSING LEVEL
34	14	INVALID CROSSING CONDITION
35	14	MISSING CROSSING CONDITION
36	15	INVALID SPEED/LEVEL DESIGNATOR
37	15	MISSING SPEED/LEVEL DESIGNATOR
38	15	INVALID SPEED DESIGNATOR
39	15	MISSING SPEED DESIGNATOR
40	15	INVALID ROUTE ELEMENT DESIGNATOR
41	15	INVALID ATS ROUTE/SIGNIFICANT POINT DESIGNATOR
42	15	INVALID ATS ROUTE DESIGNATOR
43	15	INVALID SIGNIFICANT POINT DESIGNATOR
44	15	FLIGHT RULES INDICATOR DOES NOT FOLLOW SIGNIFICANT POINT
45	15	ADDITIONAL DATA FOLLOWS TRUNCATION INDICATOR
46	15	INCORRECT CRUISE CLIMB FORMAT
47	15	CONFLICTING DIRECTION
48	18	INVALID OTHER INFORMATION ELEMENT
49	19	INVALID SUPPLEMENTARY INFORMATION ELEMENT
50	22	INVALID AMENDMENT FIELD DATA
51		MISSING FIELD <i>nn</i> (See Note 2)
52		MORE THAN ONE FIELD MISSING
53		MESSAGE LOGICALLY TOO LONG
54		SYNTAX ERROR IN FIELD <i>nn</i> (See Note 2)
55		INVALID MESSAGE LENGTH
56		TDM ERROR
57		INVALID MESSAGE
58		MISSING PARENTHESIS
59		MESSAGE NOT APPLICABLE TO <i>aaaa</i> OAC
60	3	INVALID MESSAGE MNEMONIC (i.e., 3 LETTER IDENTIFIER)

Error Code	Field Number	Error Text
61	HEADER	INVALID CRC
62		UNDEFINED ERROR
63		MSG SEQUENCE ERROR: ABI IGNORED
64		MSG SEQUENCE ERROR: INITIAL COORDINATION NOT PERFORMED
65		MSG SEQUENCE ERROR: EXPECTING MSG <i>xxx</i> ; RECEIVED MSG <i>yyy</i> (See Note 2)
66	14	INVALID BLOCK LEVEL
67	14	INVALID OFF-TRACK CLEARANCE TYPE
68	14	INVALID OFF-TRACK DIRECTION
69	14	INVALID OFF-TRACK DISTANCE
70	14	INVALID MACH NUMBER QUALIFIER
71	14	INVALID MACH NUMBER
72	ADF (See Note 3)	INVALID IDENTIFIER
73	ADF (See Note 3)	INVALID SMI
74	ADF (See Note 3)	INVALID ACID IN FMH/ IDENTIFIER
75	ADF (See Note 3)	INVALID REGISTRATION IN REG/ IDENTIFIER
76	ADF (See Note 3)	INVALID AIRCRAFT ADDRESS IN CODE/ IDENTIFIER
77	ADF (See Note 3)	INVALID LOCATION IN FPO/ IDENTIFIER
78	ADF (See Note 3)	INVALID DATA LINK APPLICATION IN FCO/ IDENTIFIER
79	ADF (See Note 3)	INVALID OR UNSUPPORTED CPDLC VERSION NUMBER
80	ADF (See Note 3)	INVALID OR UNSUPPORTED ADS-C VERSION NUMBER
81	ADF (See Note 3)	INVALID IDENTIFIER IN FAN MESSAGE
82	CSF (See Note 4)	INVALID CPDLC CONNECTION STATUS
83	CSF (See Note 4)	INVALID FREQUENCY IN FREQ/ IDENTIFIER
84	ADF (See Note 5)	INVALID IDENTIFIER IN ADS MESSAGE
85	ADF (See Note 5)	INVALID DATA IN ADS MESSAGE Note: This error message refers to the encoded ADS-C data (e.g. if it contains non-hexadecimal characters), rather than whether the contents of the decoded ADS-C report itself are valid.
86	TDF (See Note 6)	INVALID IDENTIFIER IN TRU MESSAGE
87	TDF (See Note 6)	INVALID HEADING IN HDG/ IDENTIFIER
88	TDF (See Note 6)	INVALID POSITION IN DCT/ IDENTIFIER
89	TDF (See Note 6)	INVALID OFF TRACK DEVIATION IN OTD/ IDENTIFIER
90	TDF (See Note 6)	INVALID FLIGHT LEVEL IN CFL/ IDENTIFIER
91	TDF (See Note 6)	INVALID SPEED IN SPD/ IDENTIFIER
92-256		RESERVED FOR FUTURE USE



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IMPORTANT NOTE

IT IS IMPORTANT TO HAVE A PERMANENT TEAM FOR ALL THE AIDC IMPLEMENTATION PROCESS.

CHANGES IN STAFF DELAYS THE PROCESS CONSIDERABLY.

FEW PEOPLE MUST COORDINATE FULL TIME.

CONTROLLERS MUST BE TRAINED BY THOSE WHO KNOWS THE AIDC PROTOCOL.

IF IT IS POSSIBLE WITHIN THE TEAM ONE OR MORE PERSONS WITH DATA BASE EXPERIENCE SHOULD BE INCLUDED.

TO AVOID CONFUSIONS, CHANGES IN THE DATABASE MUST BE MADE DIRECTLY WITH THE RESPONSIBLE OF THE DATABASE.



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COCESNA'S AIDC IMPLEMENTATION

MEXICO NAM

HONDURAS AIDC 2020

GUATEMALA AIDC

EL SALVADOR AIDC

COSTA RICA AIDC 2020



HAVANA NAM

JAMAICA NAM 2020

NICARAGUA AIDC

PANAMA AIDC

BOGOTA AIDC 2020

GUAYAQUIL AIDC



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Study of the flows of incoming and outgoing aircraft.

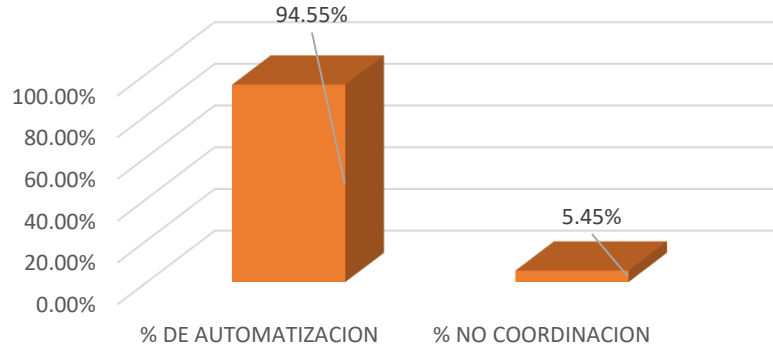




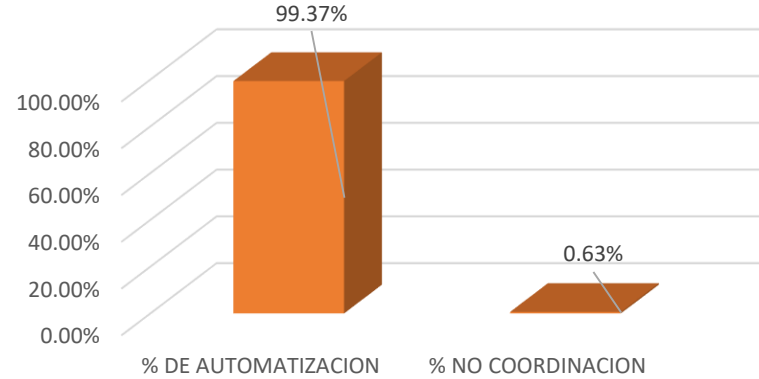
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AIDC STATISTICS

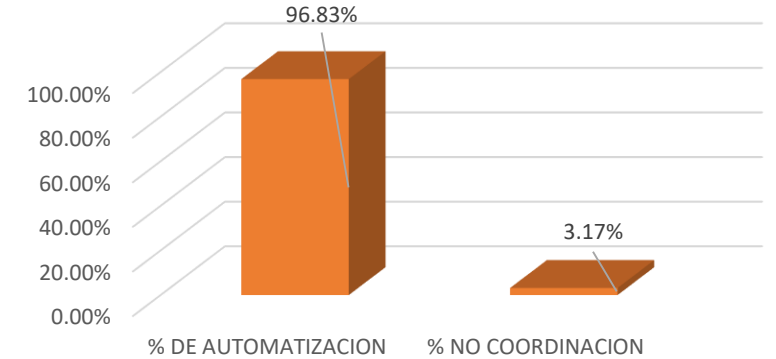
LA HABANA - CENAMER JUL -SEPT 2019



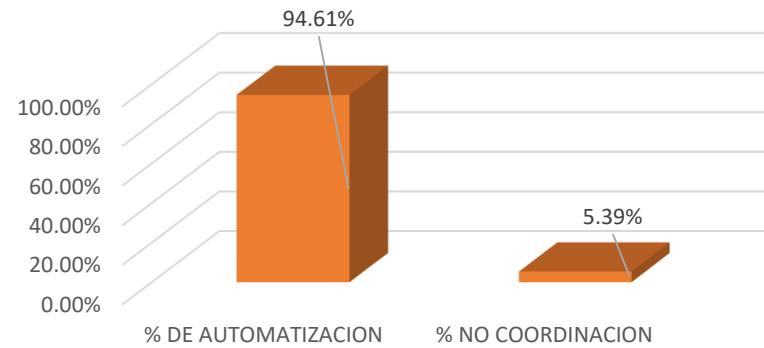
GUAYAQUIL - CENAMER JUL-SEPT 2019



PANAMA - CENAMER JUL-SEPT 2019

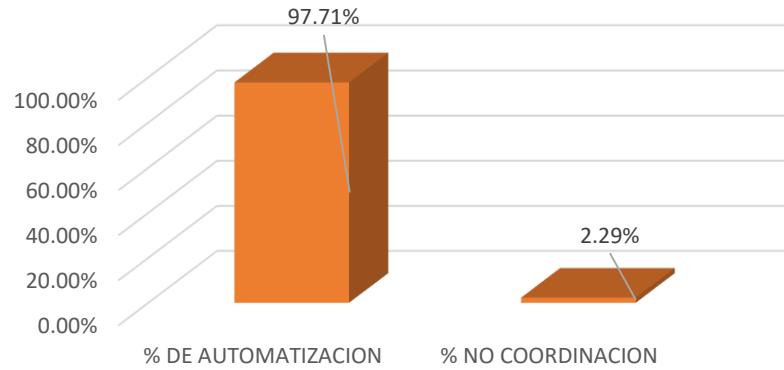


MERIDA- CENAMER JUL-SEPT 2019

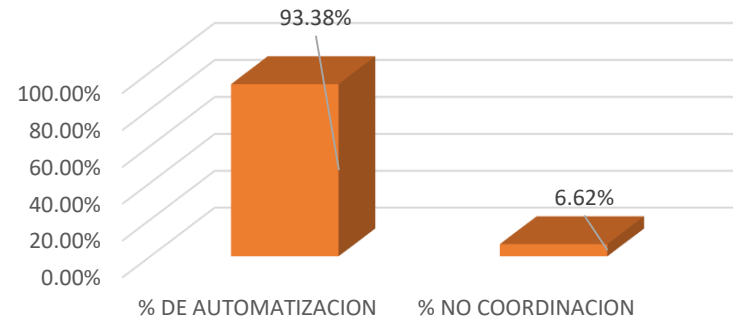


AIDC STATISTICS

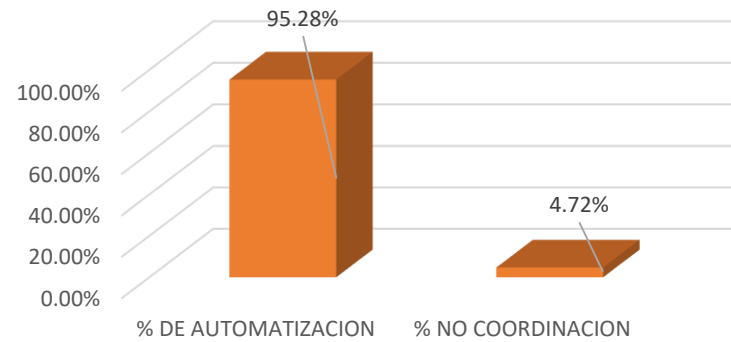
EL SALVADOR - CENAMER JUL-SEPT 2019



SANDINO-CENAMER JUL-SEPT 2019



LA AURORA -CENAMER JUL-SEPT 2019





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A I D C ATS INTERFACILITY DATA COMMUNICATION

- *Experience of operational staff in the development of flows.*
- *Continuous ascents and descents air traffic operations.*
- *Coordination points to be implemented in procedures.*
- *Levels of coordination (when applicable).*
- *Transfer messages.*
- *Procedures in case of lack of automation.*
- *Modification of the letter agreement between two flight regions.*
- *Message set differences:*
 - *Coordination messages.*
 - *Negotiation Messages.*
 - *Transfer messages*
- *ADE and flight data dependency*

T H A N K Y O U !!!
