

Mandatory Occurrence Reporting

Electronic Data Interchange Specification 1.0

Introduction

The requirements for Mandatory Occurrence Reporting (MOR) are laid out in Rule Part 12 of the Civil Aviation Rules with additional information in an Advisory Circular AC12-1. Both the Rule and AC state that the detail for an Accident or incident shall be sent to the CAA on form CA005; or by a means acceptable to the Authority. In AC12-1 11.3 states *“Organisations may wish to use and incident detail form designed to meet their own requirements or communication system. In such cases the format should, as far as possible, follow the general format of the CA005 detail form in order to facilitate data capture. Organisations must consult with the Authority when proposing an alternative system to ensure that it is acceptable to the Authority.”* Any organisation wishing to use this EDI specification as a means of compliance will still need to:

- (a) Notify the CAA of their intentions either directly or through an agent acting on their behalf;
- (b) Have it accepted in principle;
- (c) Have the interface tested and accepted;

Note:

1. The CAA has the right to accept, or reject, alternatives to the CA005.
2. The CAA reserves the right to change this specification.

This is an interface specification and must not be interpreted as CAA Policy or as an interpretation of legislation. Any alternative reporting mechanism other than that prescribed in legislation **MUST** be approved and accepted by the CAA.

This specification does not address what data is stored in which fields nor does it attempt to define the data from an aviation perspective. The specification only defines the physical attributes of the field, field name, data type, field length etc.

Overview

This interface relies on the sending of e-mail via the Internet to the CAA. The detailed information is contained in Microsoft Access 8 MDBs and Microsoft Word 95 Documents sent as attachments to the e-mail messages. The CAA sends its e-mail using MIME encoding as its default but can receive mail that has been either UUEncoded or MIME encoded. Typically information is sent three times for a given occurrence:

1. Initial Notification – little detail is known.
2. Occurrence Details – Sent latter when the facts have been established.
3. Safety Investigation with Findings Causes and Actions – Sent when investigation into the occurrence has completed.

Whether all three e-mails are sent is transparent to the interface other than 3 must have been preceded by either 1 or 2.

The e-mail message and the attachments are identical in format for 1 & 2 and are referred to as the Occurrences e-mail. The interface doesn't mind how many times an occurrence is resent to the CAA but *the Safety Investigation E-mail (No 3) can only be sent ONCE per investigation*. If a Safety Investigation is sent a second time it will be moved to an error queue and resolved manually at the CAA.

The information requirements for this interface are aligned with the fields and tables in the CAA's corporate database (ASMS Aviation Safety Management System).

Occurrences e-mail can contain any number of occurrences in the Microsoft Access 8 MDB, but Safety Investigation e-mail contains the details for a single Investigation.

Data Model

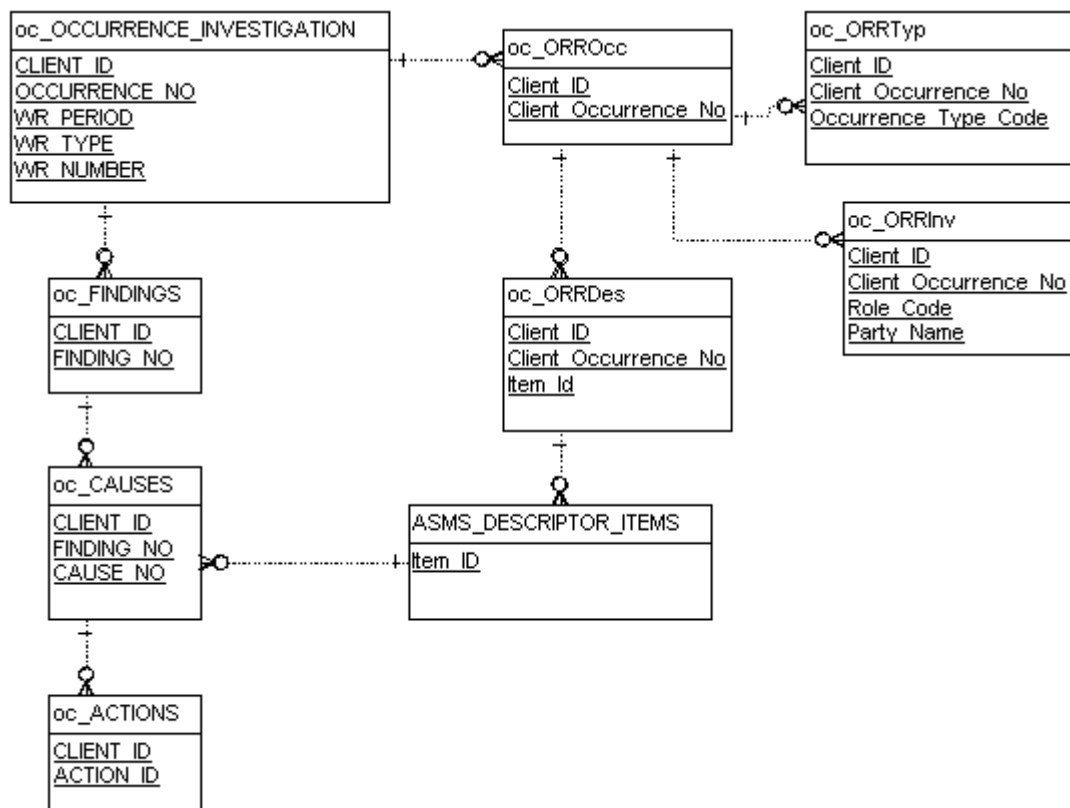


Table Descriptions

oc_OCCURRENCE_INVESTIGATION

Used to associate one or more client Occurrence Numbers to a clients safety investigation. Findings causes and actions belong to the investigation rather than specific occurrences.

oc_ORROcc

Client's Occurrence identified by the client's CAA Client ID and the Client's Occurrence No (A9).

oc_ORRTyp

Occurrence type classification (Accident, Defect, Aircraft Incident etc.). An occurrence may be considered to be of more than one type, e.g. An In-flight Defect that is miss handled by the flight crew will be both a defect and an aircraft incident.

oc_ORRInv

Used to identify the involved parties in an occurrence: Pilot, Maintenance Organisation etc.

oc_ORRDes

Occurrence Event Descriptors. An intersection entity between an occurrences and asms_descriptor_Items. Descriptors are used to further describe the event in a codified fashion.

ASMS_DESCRIPTOR_ITEMS

A fifth normal form table extracting to: Descriptor Headers, Descriptor Categories and Descriptor Sub categories.

oc_FINDINGS

Table describing each of the problems discovered during the safety investigation.

oc_CAUSES

For each finding, the safety investigation establishes one or more causes, coding these causes against the human factors descriptors contained in ASMS_DESCRIPTOR_ITEMS. The human factor descriptors identify person/org, category and item codes.

oc_ACTIONS

Table containing each action planned to address the causes identified.

Occurrences E-mail

Message Format

Address

Initially a test address will be provided. Once the new interface has been verified a new e-mail address will be provided. The addresses will be of the form: xxx@caa.govt.nz.

Subject

Company Name Occurrences. E.G. Flyaway Airlines Ltd Occurrences.

Message Text

The attached file contains the Occurrences for Flyaway Airlines Limited, CAA
Client Id: 99999

Note: it is vital that the CAA Client ID is at the end of the Message Text in the format shown above.

Attachments

One Attachment being a Microsoft Access 8 MDB Named occexp.mdb

OCCEXP.MDB

A Microsoft Access 8 template MDB is provided with this specification. The MDB contains the following tables:

- Oc_ORROcc
- Oc_ORRTyp
- Oc_ORRDes
- Oc_ORRinv

Safety Investigation E-mail

Message Format

Address

Initially a test address will be provided. Once the new interface has been verified a new e-mail address will be provided. The addresses will be of the form: xxx@caa.govt.nz.

Subject

Company Name Investigation Report. E.G. Flyaway Airlines Ltd Investigation Report.

Message Text

The attached files contains an investigation report with Findings, Causes and Actions for Flyaway Airlines Limited, CAA
Client Id: 99999

Note: it is vital that the CAA Client ID is at the end of the Message Text in the format shown above.

Attachments

Two Attachments are a Microsoft Access 8 MDB Named findings.mdb and a safety investigation report as a Microsoft Word 95-document file.

FINDINGS.MDB

A Microsoft Access 8 template MDB is provided with this specification. The MDB contains the following tables:

- Oc_OCCURRENCE_INVESTIGATION
- Oc_FINDINGS
- Oc_CAUSES
- Oc_ACTIONS

TABLES.MDB

Contains ASMS_DESCRIPTOR_ITEMS Tables and other such tables that will be useful when building systems to implement this specification.

Data Dictionary

Table: oc_ORRDes

Name	Type	Size
Occurrence_No	Text	9
Header_Group_No	Number (Long)	4
Item_Repeat_Count	Number (Integer)	2
Item_Id	Number (Long)	4

Header_Group_No is the Event Descriptor Item ID. E.g. Effect On Flight being ID 26.

Item Repeat Count is normally 1 except where an event descriptor is used more than once for a given occurrence. Effect on Flight is a prime example of this where the CAA accept up to three Effects on flight per Occurrence. All others assume one descriptor per Occurrence.

Table: oc_ORRInv

Name	Type	Size	
Occurrence_No	Text	9	
Role_Code	Text	8	
Party_Name	Text	50	
Org_Item_Id	Number (Long)	4	Reserved
CAA_Client_ID	Number (Long)	4	
Attribute_Cause	Yes/No	1	

Client_Role_Code	Client_Role
ACOwnr	Aircraft Owner
Aerodme	Aerodrome Operator
ATSProv	ATS Provider
FacProv	Facility Provider
MaintOrg	Maintenance Organisation
Operator	Operator
Pilot	Pilot
ProfChk	Last Proficiency Check By

Table: oc_ORROcc

Name	Type	Size	Notes
Occurrence_No	Text	9	
Severity_Factor	Text	2	
Reoccurrence_Probability	Number (Integer)	2	Reserved
Occurrence_Date_Time	Date/Time	8	
Local_UTC	Text	3	
Latitude	Text	10	
Longitude	Text	11	
Injuries_Fatal_Crew	Number (Single)	4	
Injuries_Serious_Crew	Number (Single)	4	
Injuries_Minor_Crew	Number (Single)	4	
Injuries_Fatal_PAX	Number (Single)	4	
Injuries_Serious_PAX	Number (Single)	4	
Injuries_Minor_PAX	Number (Single)	4	
Registered_Date_Time	Date/Time	8	
Registered_By	Text	32	
Aircraft_ID	Number (Long)	4	Reserved
Registration_Mark	Text	10	
Location	Text	50	
COB	Number (Integer)	2	Crew On Board
POB	Number (Integer)	2	Pax On Board
Call_Sign	Text	10	
Altitude_ASL	Number (Single)	4	
Altitude_AGL	Number (Single)	4	
Altitude_FL	Number (Single)	4	
Runway_Used	Text	3	
Departure_Point	Text	20	
Destination_Point	Text	20	
NRP	Text	5	Nearest Reporting Point
Distance_From_NRP	Number (Single)	4	
Bearing_From_NRP	Number (Single)	4	
Flight_Rules	Text	3	
VMC_IMC	Text	3	
Scheduled	Number (Integer)	2	
Domestic	Number (Integer)	2	
ETOPS	Number (Integer)	2	Yes/No
DDP	Number (Integer)	2	Yes/No
Pilot_Total_Flying_Hrs	Number (Single)	4	
Pilot_Hours_On_Type	Number (Single)	4	
Pilot_Last_90_Days	Number (Single)	4	
Last_Proficiency_Check_type	Text	6	
Last_Proficiency_Result	Number (Integer)	2	
Last_Proficiency_Check_Date	Date/Time	8	
Rule_Reference	Text	20	
Airspace_ID	Text	8	
Originator_Category	Text	2	
TCAS_Alert	Text	2	
Intruder_Relative_Altitude	Number (Single)	4	
Intruder_Relative_Position	Text	10	
CAA_Classification	Text	10	
Facility_ID	Text	2	
Facility_Name	Text	20	
Bird_Species	Text	4	
Bird_Size	Number (Integer)	2	
Bird_Number_Seen	Number (Integer)	2	
Bird_Number_Hit	Number (Integer)	2	
Aircraft_IAS	Number (Single)	4	
Aircraft_Lights_On	Text	10	

Name	Type	Size	Notes
Wind_Bearing	Number (Single)	4	
Wind_Velocity	Number (Single)	4	Knots
Total_Cloud	Text	5	Octaves
Cloud_Height	Number (Single)	4	Ft
Cloud_Base	Number (Single)	4	Ft
Precipitation	Text	15	
Controlled	Number (Integer)	2	Yes/no
Take_Off_Weight	Number (Long)	4	Kgs
Landing_Weight	Number (Long)	4	Kgs
Fuel_Jettisoned	Number (Single)	4	Kgs
QNH	Number (Integer)	2	
Temperature	Number (Integer)	2	Deg C
Visibility	Number (Single)	4	
Cloud_Type	Text	15	
Icing	Text	10	
Turbulence	Text	10	
Precipitation_Intensity	Text	10	
Light_Conditions	Text	15	
Runway_Condition	Text	15	
Pilot_Warning	Text	6	
Scaring_Devices	Text	12	
Parts_Struck	Text	4	
Parts_Damaged	Text	4	
System_Affected	Text	30	
Part_Defective	Text	30	
Part_Manufacturer	Text	30	
Part_Model	Text	30	
Part_Number	Text	20	
Part_Serial_Number	Text	20	
ATA_Code	Text	6	
TTIS_Hours	Number (Single)	4	
TTIS_Cycles	Number (Single)	4	
TSO_Hours	Number (Single)	4	
TSO_Cycles	Number (Single)	4	
TSI_Hours	Number (Single)	4	
TSI_Cycles	Number (Single)	4	
AD_SB_Compliance	Text	2	
AD_SB_Reference	Text	20	
Detection_Phase	Text	1	
Manufacturer_Advised	Number (Integer)	2	
Engineering_Description	Memo	-	
Maint_Release_Valid	Number (Integer)	2	
Aircraft_Damage_Level	Text	12	
Description_Of_Damage	Text	255	
Aircraft_Disposal	Text	8	
PAX_Baggage_or_Cargo	Text	1	
Shippers_Name_Address	Text	160	
Class_Or_Division_Used	Text	25	
Correct_Class_Or_Division	Text	25	
Maintenance_Base	Text	40	
Facility_Aircraft_Aerodrome	Text	25	
Document_Reference	Text	20	
Published_Info_Details	Text	60	
Occurrence_Description	Memo	-	
Detection_Location	Text	20	
CAA_Occ	Number (Integer)	2	
CAA_Occ_Reference	Text	9	
Internal_Defect_Ref	Text	20	
Internal_Flight_Ops_Ref	Text	20	
Custom_Type	Number (Integer)	2	
Date_Notified_To_CAA	Date/Time	8	

Name	Type	Size	Notes
Date_Details_To_CAA	Date/Time	8	
Date_Invest_Results_To_CAA	Date/Time	8	
Report_To_CAA	Number (Integer)	2	
ATC_Tape_Requested	Yes/No	1	
FDR_Tape_Requested	Yes/No	1	
CVR_Tape_Requested	Yes/No	1	
ATC_Advised	Yes/No	1	
Airway_Id	Text	5	
Engineering_Ref	Text	20	
Originator	Text	50	
Occurrence_Title	Text	60	
Acknowledgement_Date	Date/Time	8	
Intruder_Relative_Distance	Number (Single)	4	

Scheduled = 1 is Scheduled and 2 is non-Scheduled

Domestic = 1 is Domestic and 2 is International

Severity_Factor = CR as Critical, MA as Major and MI as Minor

Table: oc_ORRTyp

Name	Type	Size
Occurrence_No	Text	9
Occurrence_Type_Code	Text	3

Table: fa_ASMS_DESCRIPTOR_ITEMS

Name	Type	Size
Item_ID	Number (Long)	4
Item_Text	Text	40
Item_Level	Text	1
Alternate_Code	Text	10
Group_Sequence	Number (Long)	4
Parent_ID	Number (Long)	4
Old_Code	Number (Long)	4
Item_Status	Yes/No	1
VersionCol	Reserved	8

Group_Sequence is used for sorting.

Parent_ID is used to implementing the fifth normal form as a "pig's ear"

Item_Level:

D for Descriptor header

C for Category

S for Sub Category

Table: Actions

Name	Type	Size	Notes
ACTION_ID	Text	9	User Defined
ACTION_TYPE_CODE	Text	3	
FINDING_NO	Text	9	User Defined
CAUSE_NO	Number (Long)	4	User Defined
DUE_DATE	Date/Time	8	
RESPONSIBLE_DEPARTMENT	Number (Long)	4	Reserved
RESPONSIBLE_OFFICER	Number (Long)	4	Reserved
ACTION_STATUS	Number (Integer)	2	
ACTION	Memo	-	
REGISTERED_BY	Text	32	
REGISTERED_ON	Date/Time	8	
ACTION_RESPONSE	Number (Integer)	2	
ACTION_RESPONSE_TEXT	Memo	-	
EXT_ACTION_REFERENCE	Text	9	
TO_BE_TRACKED_BY	Number (Integer)	2	Reserved
CLOSED_ON	Date/Time	8	

Action_Status	Status
1	Open
2	Closed
3	Cancelled
4	Recheck

Table: Causes

Name	Type	Size	Notes
FINDING_NO	Text	9	User Defined
CAUSE_NO	Number (Long)	4	
PERSON_ORGANISATION	Number (Long)	4	
CAUSE_CATEGORY_ID	Number (Integer)	2	
CAUSE_ITEM_ID	Number (Long)	4	
CAUSE_TEXT	Text	255	

Table: Findings

Name	Type	Size	Notes
FINDING_NO	Text	9	User Defined
CAA_CLIENT_ID	Number (Long)	4	
ORG_ITEM_ID	Number (Long)	4	Reserved
AIRCRAFT_ID	Number (Long)	4	Reserved
FINDING_TYPE	Text	2	
FINDING_CATEGORY_CODE	Text	3	
DATE_DISCOVERED	Date/Time	8	
FINDING	Memo	-	
FINDING_SOURCE_ID	Number (Integer)	2	Reserved
RULE_REFERENCE	Text	20	
MANUAL_REFERENCE	Text	25	
CHECK_LIST_CODE	Text	15	
WR_PERIOD	Number (Integer)	2	
WR_TYPE	Text	3	
WR_NUMBER	Number (Integer)	2	
OCCURRENCE_NO	Text	9	
EXT_FINDING_REFERENCE	Text	9	
EXT_AUDIT_REFERENCE	Text	14	
STANDARD_CATEGORY_ID	Number (Integer)	2	Reserved

Table: Occurrence_Investigation

Name	Type	Size
OCCURRENCE_NO	Text	9
WR_PERIOD	Number (Integer)	2
WR_TYPE	Text	4
WR_NUMBER	Number (Long)	4