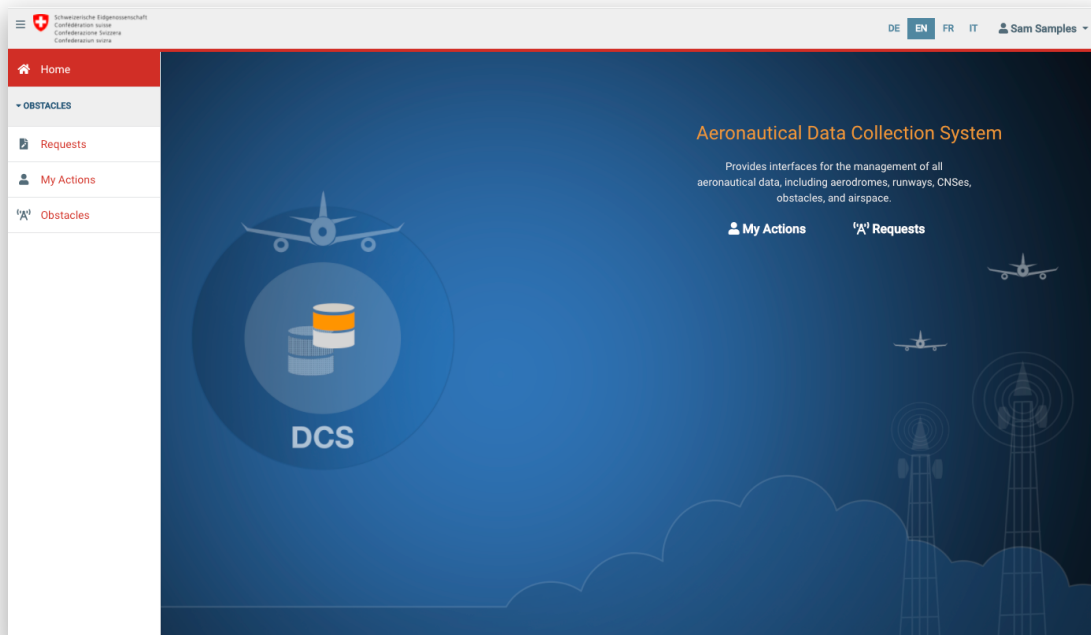


Aeronautical Data Collection Service Specification



15 Obstacle export csv

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Approval	Name	Date
Author	Ruedi Schneeberger	2022-02-25
Reviewer		
Developer	Zachary Light	2022-03-02
Approver	Markus Luginbühl	2022-03-11

Summary

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1 Technical Specification (Appendix to Contract)

ID	Mandatory Requirements	Interpretation / Clarification	SP
TPTS24	The web platform must be able to export specific data (at least in XML, PDF, XLS, CSV, KML, TXT, GeoJSON, SHP, geoTIFF and GeoPackage formats).		2



2 Introduction

Obstacle data is available as a CSV text file (DSV to be more precise). The CSV is one format of the delivery of active obstacles to the data users and as a base for creating and updating aeronautical information products (AIP and charts). It has identical content as the corresponding KMZ file.



3 Definitions and Abbreviations

<i>Active_Obstacles</i>	The file Active_Obstacles_<yyyy-mm-dd_hhmmss+...>.csv
CSV	Comma Separated Values A CSV-File is a text file with a tabular structure where the values in a row are separated by commas. The term CSV-File is also commonly used for DSV files where the delimiter character separating the values in each row does not have to be a comma. --> DSV
DCS	Data Collection System
DSV	A format that uses Delimiter Separated Values to store a tabular data structure by separating the values in each row with specific delimiter characters. The character chosen as a delimiter is the vertical bar (also called pipe character) which has no occurrence in the data fields.
effectiveDate	The date of the last change of the obstacle. This change can be: <ul style="list-style-type: none"> • The obstacle has been activated or inactivated • Some properties of the obstacle have changed (e.g geometry, marking or lighting)
OMS	Obstacle Management System (The system in use at FOCA before its replacement by DCS)
<i>T_{export}</i>	The instance in time of the export
UUID	Universally Unique Identifier, a 128 bit number that is used to identify information across a computer system.



4 Requirement Specifications

ID	Requirement	
15.01	The file Active_Obstacle.zip contains: <ul style="list-style-type: none"> • Active_Obstacle_<yyyy-mm-dd_hhmmss+....>.csv containing all <u>active obstacles</u> in a tabular structure. • Active_Obstacle_<yyyy-mm-dd_hhmmss+....>.csv.sha512 containing a SHA-512 checksum of the Active_Obstacle_<yyyy-mm-dd_hhmmss>.csv file 	
15.02	The file is exported (at T_{export}) every day at approx. 00:05 UTC	
15.04	<yyyy-mm-dd_hhmmss> in the Filename is the datetime of T_{export}	
15.05	The file contains: <ul style="list-style-type: none"> • All obstacles with status Active (“state”=A) and “effectiveDate” $\leq T_{export}$ 	
The content the file is specified below		
15.06	Each obstacle is provided as one or more lines, each of them representing one obstacle point.	
15.07	For polygon obstacles the first and last points are identical	
15.08	The field UUID contains a type 4 universally unique identifier	UUID
15.09	The field REC_NR contains a sequential number of the obstacle point (1..n)	REC_NR
15.10	The field NAME contains the Registration Number. The Registration Number is a 10 character text string. There are two types for registration numbers supported: <ul style="list-style-type: none"> • <mmm><CC><nnnnn> : for obstacles transferred from OMS • <CC><zzzzzzzz> : for obstacles collected in DCS Where: <ul style="list-style-type: none"> • <mmm> is a 3 digit number • <nnnnn> is a 5 digit number • <zzzzzzzz> is a 8 digit number • <CC> is the two letter abbreviation for the Canton (of the first point of the obstacle) or “HL” for power lines. 	NAME
15.11	The field AIRPORT contains the location indicator of the referenced airport if the obstacle is within the obstacle limitation surface perimeter	AIRPORT
15.12	The field TYPE indicates the obstacle type according to AIXM 5.1.1. The following types are currently used: <ul style="list-style-type: none"> • BRIDGE • BUILDING • CABLE_CAR • CATENARY • CRANE • POLE • STACK • TRANSMISSION_LINE • VEGETATION • WINDMILL 	TYPE
15.13	The field STATUS is A for: <ul style="list-style-type: none"> • A = active (the obstacle is present) 	STATUS
15.14	The field GEO_LON contains the longitude of the obstacle point in decimal degrees referenced to WGS-84 (epsg:4326).	GEO_LON
15.15	The field GEO_LAT contains the latitude of the obstacle point in decimal degrees referenced to WGS-84 (epsg:4326).	GEO_LAT
15.16	The field TOP_AMSL contains the mean sea level elevation of the top of the obstacle point in meters referring to Swiss LN02 (epsg:5728)	TOP_AMSL
15.17	The field HEIGHT_AGL contains the height of the vertical structure or pylon/mast above the ground in meters	HEIGHT_AGL



ID	Requirement	
15.18	The field RADIUS contains the radius in meters of an obstacle of circular shape (e.g. boom length of a crane)	RADIUS
15.19	The field WEF contains the effective date of the obstacle (the date of the last update of the obstacle)	WEF
15.20	The field MARKING contains the marking information: <ul style="list-style-type: none"> • NONE : no marking • RED_WHITE_RED • ORANGE_CANVAS • ORANGE_SPHERES • CABLE_WARNER • MARKED (type of marking unknown) 	MARKING
15.21	The field LIGHTING contains the lighting information: <ul style="list-style-type: none"> • NONE : no lighting • LOW : Low intensity light • MEDIUM : Medium intensity light • HIGH : High intensity light (can have low intensity light during the night) • LIGHTED (intensity of lighting unknown) 	LIGHTING
15.22	The field GROUP contains the following information: <ul style="list-style-type: none"> • YES : the obstacle represents multiple obstacles in the immediate vicinity • NO : the obstacle is representing a single obstacle 	GROUP
15.23	The field STYLE indicates the style to apply as graphical representation of the obstacle. See 10.14 Obstacle data presentation rules for a style map	STYLE
15.28	The field SMALL indicates small obstacles near airports: <ul style="list-style-type: none"> • YES : If the obstacle is located within the obstacle limitation surface perimeter AND the max. height above ground level is less than 60 m inside built-up area or less than 25 m outside built-up area. • NO : otherwise 	SMALL
Encoding and format		
15.24	The encoding is UTF-8	
15.25	The format is a DSV text file with the vertical bar (hex 7c also called pipe) as the delimiter character.	
15.26	The line separator is the new line character (hex a)	
15.27	The first line contains the field names.	



5 Sample Data Set

[Active Obstacle.zip](#)