

**Waypoints**

In the table below, the waypoints used in the procedure design, both existing and new, are listed with their role, identification and coordinates.

ROLE	IDENT	Coordinates
TP	ALAXI	N 41 44 05.12 E 013 20 51.60
OTHER	ATRUP	N 42 20 55.92 E 013 35 43.80
TP	ELITO	N 41 58 15.39 E 012 18 45.03
OTHER	MAKAG	N 41 53 25.87 E 012 58 29.07
TP	MAKAG	N 41 53 25.87 E 012 58 29.07
OTHER	SUBAR	N 41 55 31.45 E 012 30 52.68
OTHER	TINIX	N 42 09 57.24 E 013 07 21.76

**AeroChart**

AeroChart is a very effective tool to generate draft SID, STAR and Approach Charts, which the user can configure templates and customize/edit the output.

**Benefits**

- Automated processes and design procedures reduce the time spent designing flight procedures, and creating and maintaining aeronautical data;
- Improved safety as compliance with the relevant regulations for flight procedures is ensured;
- Integrated approach ensures a high level of data quality and integrity;
- GIS interface improves spatial awareness;
- Continually updated to ensure that all calculations are in accordance with current criteria and applicable annexes and changes;
- Modular construction allows the solution to grow as an organization's requirements increase. Modules are available for chart creation, SSA encoding, airspace sectorization, airspace coordination and simulator scenario management.

# Aeronautical Design and Management

Design and Management of Flight Procedures, Routes/Airways and Airspace



Procedure report

Instrument approach chart

Standard Instrument Departure / SID Report																							
1. ICAO	2. Design Process	3. New or revised	4. Registered																				
ICAO 5155 Amend 4 / PFDAM	Automated Design	New	2/17/2014																				
5. Procedure Identification	6. Aerodrome Name	7. ICAO Identifier																					
U000	BALNEIDAR ALPEI	U000																					
8. Classification	9. AD Elevation																						
RNAV	13 00 5 MSL																						
10. AIRCRAFT REFERENCE POINT COORDINATES																							
LOMRES 5000	E 508235.00	N 4128 11.00																					
COSRME	E 508330	N 4128 18																					
11. Communications Block																							
<table border="1"> <thead> <tr> <th>Name</th> <th>Freq</th> <th>Name</th> <th>Freq</th> <th>Name</th> <th>Freq</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Name	Freq	Name	Freq	Name	Freq												
Name	Freq	Name	Freq	Name	Freq																		
12. Departure Procedure or SID Text																							

## Aeronautical Design and Management

FPDAM has been specifically developed to meet the ever-changing evolution of technology, compliance and regulation for the air navigation industry. The tool is designed with performance-based navigation (PBN) concepts for current and future communications, navigation, and surveillance/air traffic management (CNS/ATM) environments. Dynamic airspace reconfiguration requires reassessment of new and old flight procedures and innovative management of an increasingly crowded airspace.

IDS Air Nav's Aeronautical Design and Management family of products provides Air Navigation Service Providers (ANSPs) and other AIS/AIM providers with a suite of professional tools to design and manage airspace, airways, routes and instrument flight procedures. The Versatile, expandable modules allow operators to work in an interactive 3D environment to generate flight procedures which are compliant with international standards to create and maintain airspace structures. The family of products allows users to consider factors such as airport, terrain and obstacle data, aircraft type, procedure types and rules as well as navigational aid and Global Navigation Satellite System (GNSS) availability. Navigation Satellite System (GNSS) availability.

## Products

The Aeronautical Design and Management family includes the following products:

### FPDAM

FPDAM is IDS Air Nav's market leading solution for flight procedure design. Its versatile, expandable modules enable users to create, visualize, check and maintain instrument flight procedures compliant with international standards. FPDAM includes construction rules based on and compliant with PANS-OPS (ICAO doc. 8168, 9905, Annex 14), FAA TERPS (8260.3B, 8260.58 and related orders), Canadian TP 308 and:

- Fully supports all types of procedures including: SID/departures, STARs/arrivals and approaches for conventional, RNAV/PBN, RNP APCH AR, APV/LPV, GLS/GBAS and Baro-VNAV guidance systems;
- Allows users to perform terrain and obstacle assessments by importing and utilizing digital terrain data relevant to procedure design in any known projection, datum and resolution/accuracy; Automates complex procedure design functions within its design environment;
- Ensures tight control of the system configuration, design elements and design criteria related to flight safety issues through connection to a controlled aeronautical database.

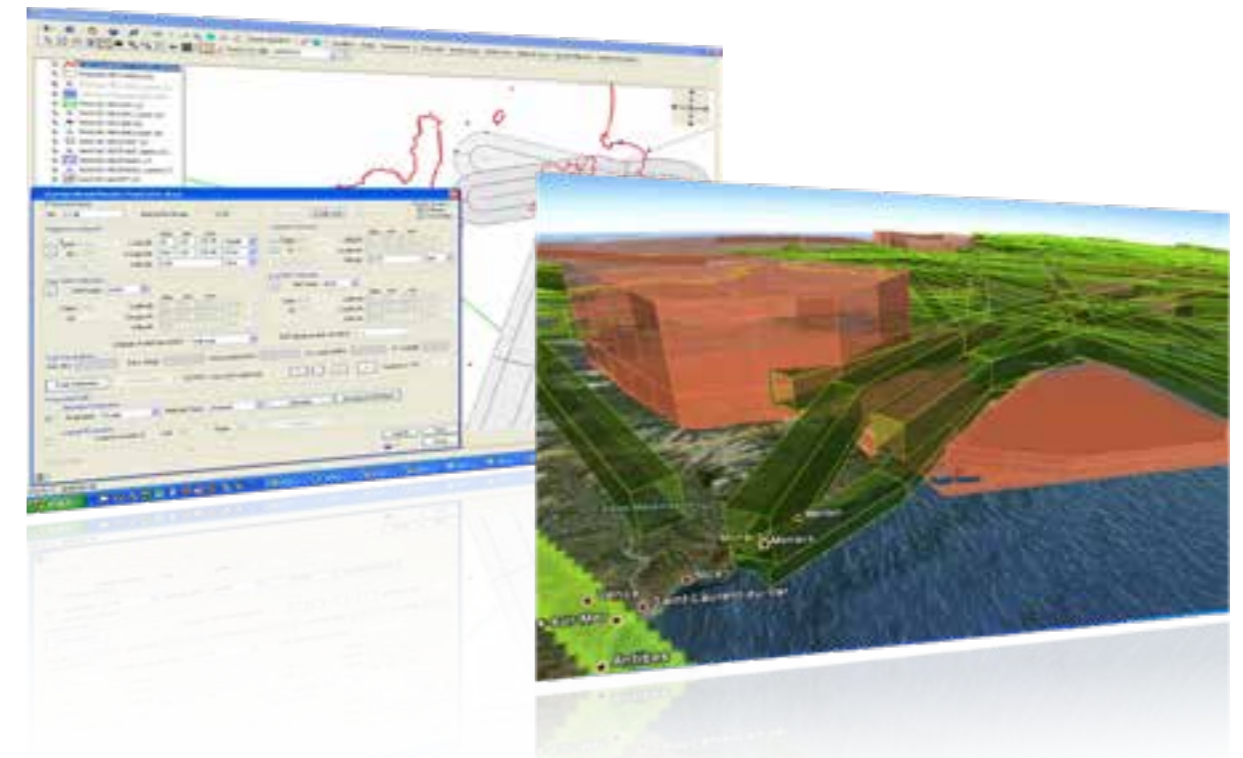


FPDAM views

### Airspace Designer

Airspace Designer is a fast and accurate tool for the advanced design and management of bounded airspace structures, airways, routes and related entities (such as waypoints). It provides a Geographic Information System (GIS) based solution for attribute and spatial queries as well as adjacency and intrusion analyses. Airspace Designer includes construction rules based on and compliant with PANS-OPS (ICAO doc. 8168), ICAO annex 11 and:

- Creates obstacle protection areas for all types of airways and routes (simplified / refined methods);
- Allows users to perform terrain and obstacles assessment by importing and utilizing digital terrain data relevant to procedure design in any known projection, datum and resolution/accuracy;
- Allows user to perform an analysis for the lateral and vertical separation between airspace and airways /routes or any other 3D element;
- Provide functions to users for the full automatic magnetic update of navaids and routes;
- Provide geometrical check to detect database inconsistencies;
- Help for the designer in the implementation of continuous (climb or descend) operations;
- Help for the designer in the impact analysis check of temporary segregated airspaces structures;
- Ensures tight control of aeronautical data in a flexible workflow, storing it all in the central AIS database including usage and services.



3D view of airspace data in Airspace Designer

### AeroReport

A tool which allows for the technical textual reporting based on a configurable template to be compliant with any Quality Management System templates. AeroReport is completely integrated with the IDS Air Nav solution for output tracking.

### Aeronautical Data

The Aeronautical data shown in the below table is considered as significant input to the procedure design activity, as recorded by Authorities.

AIRPORT INFORMATION	
Airport Name	ROMA/FIUMICINO
ICAO Identifier	LIRF
A/D Elevation	
ARP Latitude	414801.0000N
ARP Longitude	0121420.0000E
Magnetic Variation (year)	
Aircraft Categories	AB

DER INFORMATION		
DER	Coordinates	Elevation (FT)
34L		