



# **FPDAM**

## Flight Procedure Design and Airspace Management

FPDAM is IDS AirNav's market leading solution for flight procedure design. FPDAM provides an interactive environment which enables users to create, visualize, check and maintain instrument flight procedures compliant with international (ICAO, FAA, and Canadian), standards.

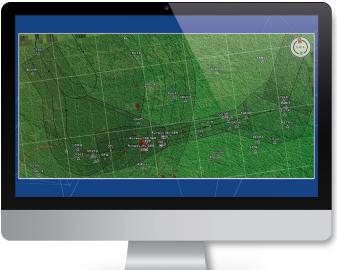
FPDAM implementation allows civil and military agencies to design, document an instrument flight procedure in few hours.

FPDAM fully supports all types of procedures including: SID/ departures, STARs/arrivals and approaches for conventional, RNAV/PBN, RNP AR, APV/LPV, GLS, 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;

Ensures tight control on the criteria application providing online checks about compliancy to reference criteria and ARINC 424 coding.





### **FPDAM Features**

ATS data is stored and managed in the IDS AirNav AeroDB database; with dedicated data translators providing data interchange capabilities (AIXM and custom formats);

Terrain and raster database (3D terrain elevation data and images) management;

All different types of conventional and RNAV protection areas builder (VOR/TACAN, NDB, LOC, ILS, DME, PAR, SRE, RNAV/PBN, RNP APCH AR,

GBAS, SBAS, APV) for SID, STAR and approach procedures;

Obstruction assessment (against natural and human made) for minima, penetration, OCA/H, DA/DH, MDA/H and PDG/CG calculator;

OAS ILS, BASIC ILS and CRM capability analysis; Helicopter procedures CAT H and PinS are fully included;

Procedure textual report included for the submission forms generation;

MORE THAN 200 OPERATIONAL INSTALLATIONS WORLDWIDE



### **Benefits**

The only design system fully integrated in a complete AIS/ AIM suite. The IDS AirNav suite of products enables EUROCONTROL Aeronautical Data Quality (ADQ) mandate to be respected. The full design process, as stated in ICAO 9906, can be traced and all input and output data for each single step stored in the workflow and task management system named PLX.

Time saving and data quality: data loading (DEM, DTED, BT, SRTM) does not require any conversion. Full Quality Assurance documentation in accordance with the ICAO 9906 Vol. III requirements. Interoperability:

FPDAM is globally the most used system within design organizations (ANSPs/CAAs/Airlines/Airport Authorities) and this ensures full compliance with operational needs.

Regular updates: FPDAM is continually updated ensuring that all calculations are in accordance with current

criteria and applicable annexes and changes.

#### **FPDAM Modules**

AeroChart – automatically builds and maintains draft SID, STAR and Approach charts from the FPDAM project files. This can be done simply by selecting the relevant flight procedure, a preconfigured template and then running the symbolization process. New chart layouts can be created and background graphic information such as topography and terrain maps can be used.

**SSA Encoder** – allows SID, STAR and Approach procedures to be stored in the central AIS database for subsequent data transfer via ARINC files or other formats.

**AeroReport** - allows the creation of textual technical custom reports out of the FPDAM framework in a very simple and fast way using custom templates.





PROCEDURE DESIGN REPORT - PERFORMANCE BASED NAVIGATION																				
1. AIRPORT						Ł RUNW	/AY	3. T	3. TYPE OF PROCEDURE					4. SEGMENT			5	5. DESIGN DATE		
PHETCHABUN / PHETCHABUN AIRPORT						RWY 3f	6		RN	P APC	APCH			ST36W to	IFI36			1-Feb-2019		
6. MINIMUM SEGMENT LENGTH																				
			FIRE	ST FIX							SECOND FIX FOR PRETECION AREA									
ST36W		IAS (MA	IAS (MAX): 25		кт	ALTITUDE	ALTITUDE:		6000 FT		FIX NAME: IFI36			IAS (MAX):	250	кт	ALTITUDE:		3900	FT
25	DEG	TEMP:		ISA+15	-	K FACTOF	æ	1.123	-	BANK A	ANGLE:	25	DEG	TEMP:	ISA+15	5 -	K FACTOR:	:	1.088	-
0	DEG	RATE O	OF TURN:	1.81	*/SEC	RADIUS O	JF TURN:	2.46	NM	TURN A	ANGLE:	90	DEG	RATE OF TURN:	1.87	*/SEC	RADIUS OF	TURN:	2.31	NM
T TYPE STARTING FIX		ENDI	ENDING FIX		PE	ALTIT	UDE	T/	AS	TURN	TURN ANGLE M		SD	MINIMUM SEC	SMENT LET	NGTH	SEGM	SEGMENT LENGTH (MEASUR		E)
-		ST	36W	FLY	-BY	6000	FT	280.77 KT		0	DEG	,	-	27	****			_		
ST36W		IF	136	FLY	-BY	3900	FT	271.88	8 КТ	90	DEG	2	2.7	2.1	NM		,		NM	
7. DESCENT GRADIENT(DG)																				
TAS	s	BANK	ANGLE	TURN /	ANGLE	RADIU	/S OF TUF	RN [r]	r'TA'	N (TURN	(TURN ANGLE/2)		π/180	* TURN ANGLE/2	fr /	Δh	TRD		DG	
280.77	кт	25	DEG	0	DEG	2.4	46	NM		0		NM		0 NM		_				
271.88	кт	25	DEG	90	DEG	2.3	31	NM		2.31		NM		1.81 NM		) FT		NM	4.9	%
	1. AI ABUN / PH ST300 25 0 STARTIN - ST300 TAS 280.77	1. AIRPOR ABUN / PHETCH  ST36W  25 DEG 0 DEG STARTING FIX - ST36W  TAS 280.77 KT	1. AIRPORT  ABUN / PHETCHABUN A  ST36W IAS (MAI- 25 DEG TEMP: 0 DEG RATE OI  STARTING FIX ENDIN - ST3  ST36W IFI  TAS BANK, 280.77 KT 25	1. AIRPORT  ABUN / PHETCHABUN AIRPORT  FIRS  ST36W IAS (MAX):  25 DEG TEMP:  0 DEG RATE OF TURN:  STARTING FIX ENDING FIX  - ST36W IF136  TAS BANK ANGLE  280.77 KT 25 DEG	1. AIRPORT  ABUN / PHETCHABUN AIRPORT  FIRST FIX  ST38W	1. AIRPORT 2.  ABUN / PHETCHABUN AIRPORT  FIRST FIX  ST36W IAS (MAX): 250 KT  25 DEG TEMP: ISA+15 - 0 DEG RATE OF TURN: 1.81 'NSEC  STARTING FIX ENDING FIX TYPE - ST36W FLY-BY  ST36W IF136 FLY-BY  TAS BANK ANGLE TURN ANGLE 280.77 KT 25 DEG 0 DEG	1. AIRPORT 2. RUNW/ ABUN / PHETCHABUN AIRPORT RWY 36  FIRST FIX  ST36W IAS (MAX): 250 KT ALTITUDE: 25 DEG TEMP: ISA+15 - K FACTOR 0 DEG RATE OF TURN: 1.81 '/SEC RADIUS OF STARTING FIX ENDING FIX TYPE ALTITU - ST36W FLY-BY 6000  ST39W IF136 FLY-BY 3600  TAS BANK ANGLE TURN ANGLE RADIUS 280.77 KT 25 DEG 0 DEG 2.46	1. AIRPORT 2. RUNWAY ABUN / PHETCHABUN AIRPORT RWY 36  FIRST FIX  ST36W IAS (MAX): 250 KT ALTITUDE: 25 DEG TEMP: ISA+15 - KFACTOR: 0 DEG RATE OF TURN: 1.81 */SEC RADIUS OF TURN: STARTING FIX ENDING FIX TYPE ALTITUDE - ST36W FLY-BY 6000 FT  ST36W IF136 FLY-BY 3000 FT  TAS BANK ANGLE TURN ANGLE RADIUS OF TUR 280.77 KT 25 DEG 0 DEG 2.46	1. AIRPORT 2. RUNWAY 3. TO ABUN / PHETCHABUN AIRPORT RWY 36  FIRST FIX  ST36W IAS (MAX): 250 KT ALTITUDE: 6000 25 DEG TEMP: ISA+15 - KFACTOR: 1.123 0 DEG RATE OFTURN: 1.81 "SEC RADIUS OF TURN: 2.46  STARTING FIX ENDING FIX TYPE ALTITUDE TA ALTITUDE: TA ALTITUDE TA ALTITUDE TA TA TYPE ALTITUDE TA	1. AIRPORT   2. RUNWAY   3. TYPE OF	1. AIRPORT 2. RUNWAY 3. TYPE OF PROGRADIN / PHETCHABUN AIRPORT RWY 36 RNP APCI  6. MINIMUM SEGMEN  FIRST FIX  ST36W IAS (MAX): 250 KT ALTITUDE: 0000 FT FIX NAM 25 DEG TEMP: ISA+15 - KFACTOR: 1.123 - BANKA 0 DEG RATE OF TURN: 1.81 */SEC RADIUS OF TURN: 2.46 NM TURN A STARTING FIX ENDING FIX TYPE ALTITUDE TAS TURN - ST36W FLY-BY 6000 FT 280.77 KT 0 ST36W IF136 FLY-BY 3000 FT 271.88 KT 60  7. DESCENT GRADII  TAS BANK ANGLE TURN ANGLE RADIUS OF TURN [6] **ITAN (TURN. 280.77 KT 25 DEG 0 DEG 2.46 NM 0	1. AIRPORT   2. RUNWAY   3. TYPE OF PROCEDUR	1. AIRPORT   2. RUNWAY   3. TYPE OF PROCEDURE	1. AIRPORT   2. RUNWAY   3. TYPE OF PROCEDURE	1. AIRPORT   2. RUNWAY   3. TYPE OF PROCEDURE   4. SEGMI	1. AIRPORT 2. RUNWAY 3. TYPE OF PROCEDURE 4. SEGMENT  ABUN / PHETCHABUN AIRPORT RWY 36 RNP APCH ST36W to IFI36  6. MINIMUM SEGMENT LENGTH  FIRST FIX  SECOND FIX FOR PRI  ST36W IAS (MAX): 250 KT ALTITUDE: 6000 FT FIX NAME: IFI36 IAS (MAX): 250  25 DEG TEMP: ISA+15 - K FACTOR: 1.123 - BANK ANGLE: 25 DEG TEMP: ISA+15  0 DEG RATE OF TURN: 1.81 'SEC RADIUS OF TURN: 246 NM TURN ANGLE: 60 DEG RATE OF TURN: 1.87  STARTING FIX ENDING FIX TYPE ALTITUDE: TAS TURN ANGLE MSD MINIMUM SEGMENT LEN  - ST36W FLY-BY 6000 FT 291.77 KT 0 DEG - 2.7  ST376W FI36 FLY-BY 3900 FT 271.88 KT 60 DEG 2.7  T. DESCENT GRADIENT (DG)  TAS BANK ANGLE TURN ANGLE RADIUS OF TURN [9] "TAN (TURN ANGLE2) #T180 'TURN ANGLE2'   248 NM 0 NM 0 NM 0 NM 2100	1. AIRPORT 2. RUNWAY 3. TYPE OF PROCEDURE 4. SEGMENT  ABUN / PHETCHABUN AIRPORT RWY 36 RNP APCH ST36W to IFI36  6. MINIMUM SEGMENT LENGTH  FIRST FIX  SECOND FIX FOR PRETECTOR  ST36W IAS (MAX): 250 KT ALTITUDE: 0000 FT FIX NAME: IFI36 IAS (MAX): 250 KT  25 DEG TEMP: ISA+15 - K FACTOR: 1.123 - BANK ANGLE: 25 DEG TEMP: ISA+15 -  0 DEG RATE OF TURN: 1.81 1/SEC RADIUS OF TURN: 2.46 NM TURN ANGLE: 00 DEG RATE OF TURN: 1.87 1/SEC  STARTING FIX ENDING FIX TYPE ALTITUDE TAS TURN ANGLE MSD MINIMUM SEGMENT LENGTH  - ST36W IFI36 FLY-BY 0000 FT 271.88 KT 00 DEG 2.7 NM  ST36W IFI36 FLY-BY 3900 FT 271.88 KT 00 DEG 2.7 NM  TAS BANK ANGLE TURN ANGLE RADIUS OF TURN [0] 1/TAN (TURN ANGLE2) 1/180 *TURN ANGLE2* 1/7 Ah  280.77 KT 25 DEG 0 DEG 2.46 NM 0 NM 0 NM 0 NM  2100 FT	1. AIRPORT	1. AIRPORT 2. RUNWAY 3. TYPE OF PROCEDURE 4. SEGMENT 5. DESIGNATION ABOUT PHETCHABUN AIRPORT RWY 36 RNP APCH ST36W to IFI36 1-Feb- 6. MINIMUM SEGMENT LENGTH  FIRST FIX  SECOND FIX FOR PRETECION AREA  ST36W IAS (MAX): 250 KT ALTITUDE: 9000 FT FIX NAME: IFI36 IAS (MAX): 250 KT ALTITUDE: 25 DEG TEMP: ISA+15 - KFACTOR: 1.123 - BANK ANGLE: 25 DEG TEMP: ISA+15 - KFACTOR: 0 DEG RATE OF TURN: 1.81 'SEC RADIUS OF TURN: 2.46 NM TURN ANGLE: 90 DEG RATE OF TURN: 1.87 'SEC RADIUS OF TURN: STARTING FIX ENDING FIX TYPE ALTITUDE TAS TURN ANGLE: MSD MINIMUM SEGMENT LENGTH SEGMENT LENG - ST36W FLY-BY 6000 FT 2980.77 KT 0 DEG -  ST376W IFI36 FLY-BY 3900 FT 271.88 KT 90 DEG 2.7 2.7 NM 7  T. DESCENT GRADIENT(DG)  TAS BANK ANGLE TURN ANGLE RADIUS OF TURN [1] ("TAN (TURN ANGLE2)" 17180 "TURN ANGLE2" Δh TRD  280.77 KT 25 DEG 0 DEG 2.46 NM 0 NM 0 NM 2100 FT 7 NM	1. AIRPORT 2. RUNWAY 3. TYPE OF PROCEDURE 4. SEGMENT 5. DESIGN DATE  ABUN / PHETCHABUN AIRPORT RWY 36 RNP APCH ST36W to IFI36 1-Feb-2019  6. MINIMUM SEGMENT LENGTH  FIRST FIX  SECOND FIX FOR PRETECION AREA  ST36W IAS (MAX): 250 KT ALTITUDE: 0000 FT FX NAME: IFI36 IAS (MAX): 250 KT ALTITUDE: 3600  25 DEG TEMP: ISA+15 - KFACTOR 1.123 - BANK ANGLE: 25 DEG TEMP: ISA+15 - KFACTOR 1.088  0 DEG RATE OF TURN: 1.81 1/SEC RADIUS OF TURN: 2.46 NM TURN ANGLE: 60 DEG RATE OF TURN: 1.87 1/SEC RADIUS OF TURN: 2.31  STARTING FIX ENDING FIX TYPE ALTITUDE TAS TURN ANGLE MSD MINIMUM SEGMENT LENGTH (MEASURE - ST36W) IFI36 FLY-BY 0000 FT 280.77 KT 0 DEG - 2.7 NM 7 NM  TO DESCENT GRADIENT (IDG)  TAS BANK ANGLE TURN ANGLE RADIUS OF TURN (MEASURE) H180 *TURN ANGLE2 *F ALT TUD DG 280.77 KT 25 DEG 0 DEG 2.46 NM 0 NM 0 NM 0 NM 10 NM 4.9

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