

Lebanese Directorate General of Civil
Aviation



ICAOMID PBN SG/3 Meeting
CAIRO, 11-13 February 2018

Lebanon

Presented by Tarek Mrad
Head Division Beirut ACC



National PBN Implementation Plan

The LEBANESE PBN implementation plan still in preparation process to meet our needs and will be developed to comply with the Regional PBN implementation plan.

it is planned to be achieved before the end of 2018 and it consists of three stages:



Near term stage (by the End of 2018)

- - update our regulations and PANS-OPPs Approval procedures (a committee will be establish from the following units:
 - * the legislation entity
 - * ATM department
 - * flight Safety Dep.
 - * CNS Dep.
- - Electronic Terrain and Obstacles Data (by the end of second quarter of 2018)



Mid term Stage (by the end of 2020)

- - procedures for LNAV/VNAV for the 3 ends Runways: 16-21-03 (the LNAV/VNAV procedures have prepared been by ENAV through MEDUSA project and will be endorsed and published after updating in the near future our regulations and PANS-OPPs approval)





Mid term stage (by the end of 2020)

- Redesign our airspace to increase Air flow capacity, since our government endorsed the project to expand Beirut Int. Airport in order to raise the number of passengers (planning for new RNAV₁ GNSS STARs and SIDs) with the following specifications:
 - - provide vertical and lateral separation between outbound and inbound traffic in order to enhance safety and reduce controller workload and C-P radio communication .
 - - Implementing CCO and CDO for noise abatement, environmental benefits and fuel consumption



Long term stage 2021 and behind

- Procedures for LPV for the 3 ends Runways: 16-21-03 (the procedures have been achieved by ENAV through MEDUSA project and will be endorsed and published after updating our regulations and PANS-OPPs approval and after having the augmentation system coverage in our region.
- Redesign our ATS RNAV routes within our FIR to increase our airspace capacity for the overflight traffic



Status of Implementation

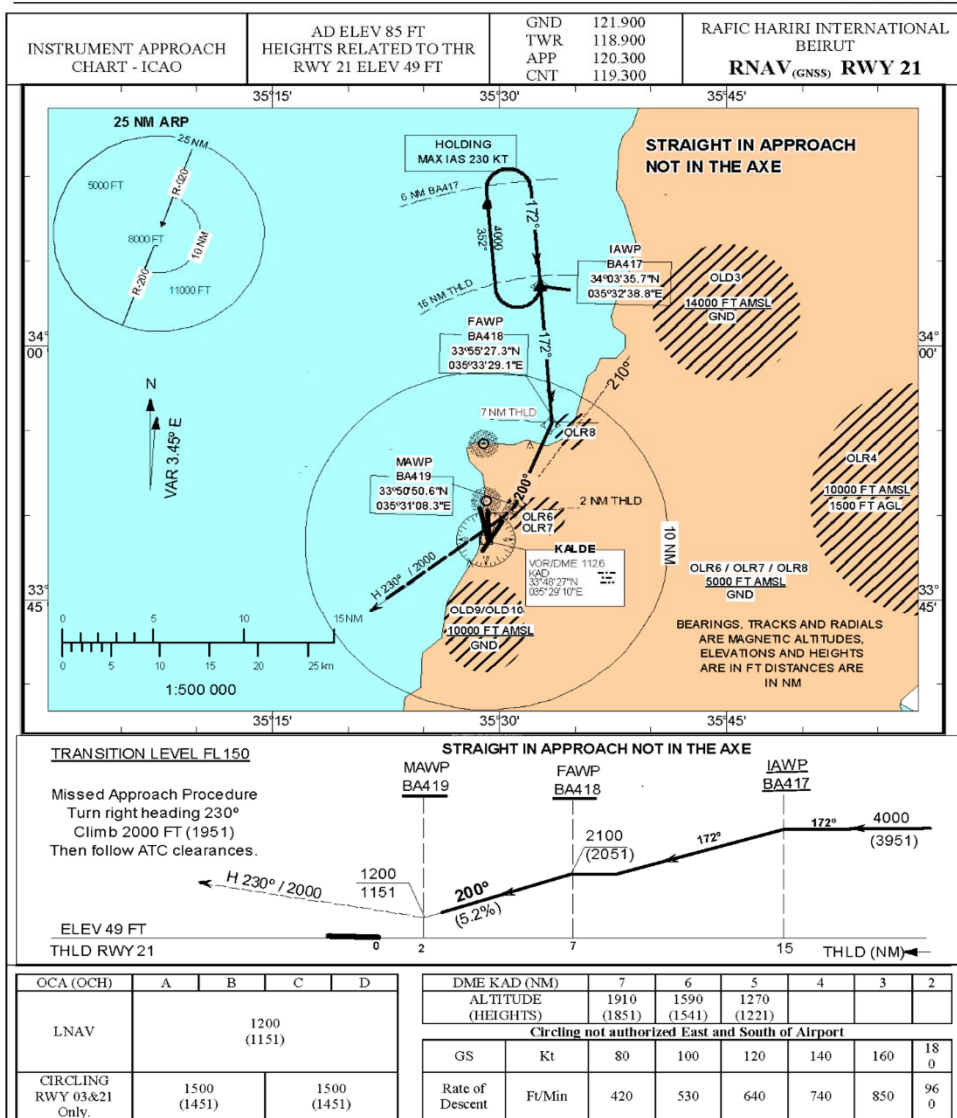
overview of the State's PBN capabilities:

- Regulations still basic
- We don't have yet PANS-OPS Inspectorate
- We have only 2 procedure designers need for refreshment and practicing
- We have one Automated tool need to be update



Status of Implementation

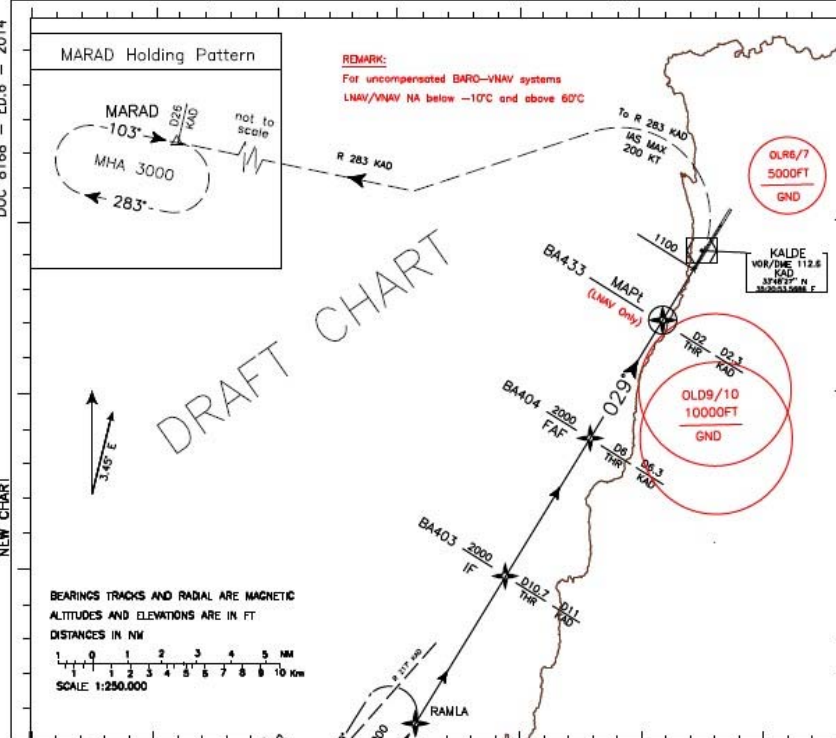
RWY Ends	ILS / CAT	LNAV	LNAV/ VNAV	LPV	RNP AR	RNAV SID	RNAV STAR
21	1	yes	designed but not published	Designed but not published		no	Yes
17	1	yes	no	no		no	yes
16	1	yes	Designed but not published	Designed but not published		No departure	yes
03	1	yes	Designed but not published	Designed but not published		no	yes
34		No arrival				no	
35		No arrival				no	



ICAO - INSTRUMENT APPROACH CHART

AD 2 OLBA XX

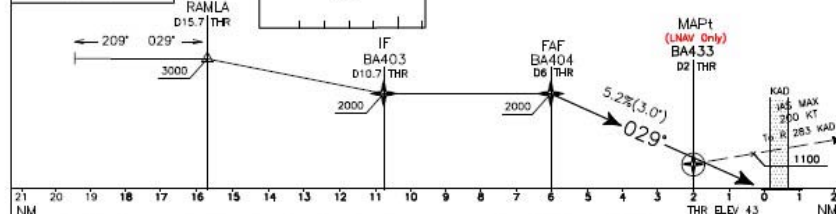
GND	121.900	AD ELEV	85	OLBA	RAFTC HARIRI INTERNATIONAL BEIRUT
TWR	118.900				RNAV (GNSS) - Z RWY 03
APP	120.300				
CNT	119.300				



TRANSITION LEVEL
FL 150

RDH 15M

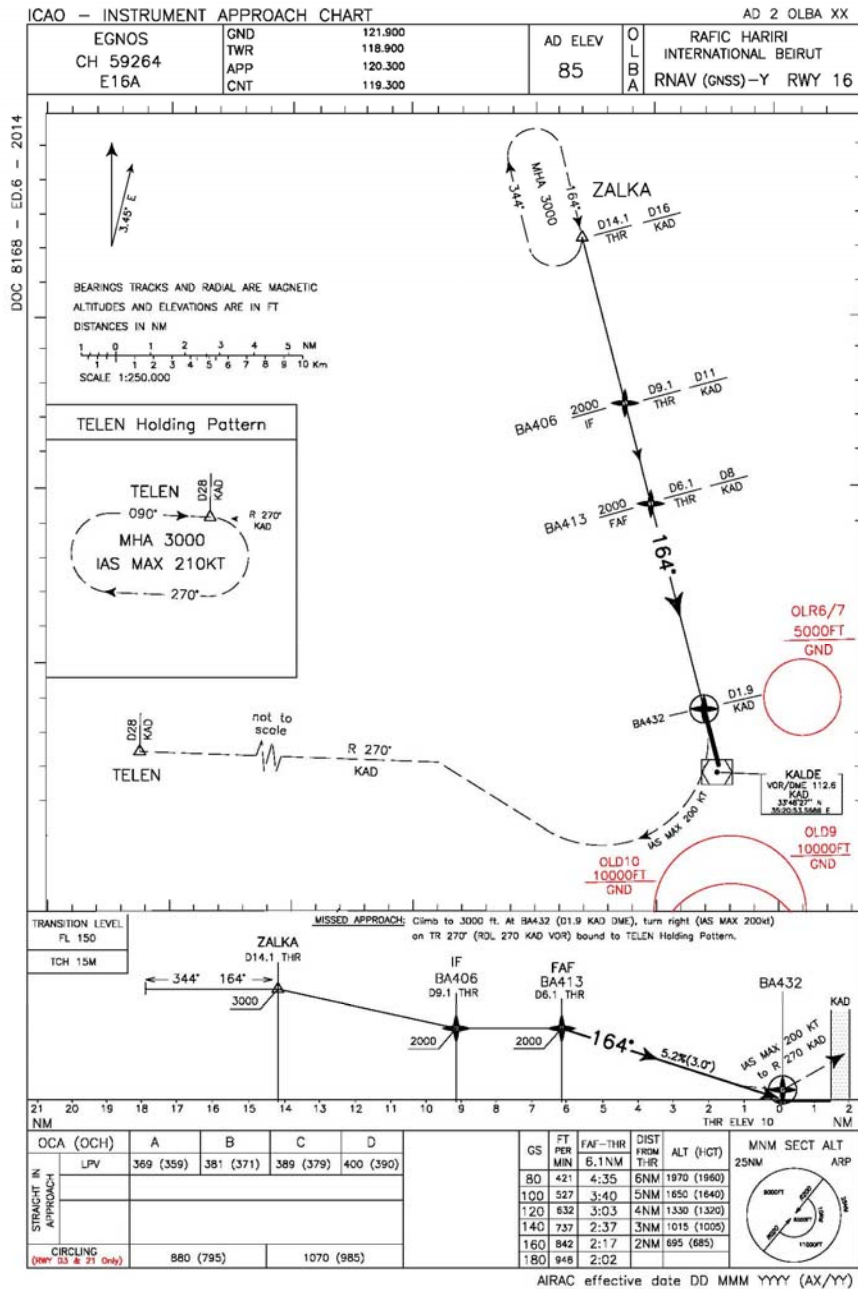
MISSED APPROACH: Proceed on track 029° (ROL 209° KAD VOR) climbing to 3000 ft. At 1100ft turn left (IAS MAX 200kt) on TR 283° (ROL 283 KAD VOR) bound to MARAD Holding Pattern.



STRAIGHT IN APPROACH	OCA (OCH)				CS	FT PER MIN	FAF-THR	DIST FROM THR	ALT (HGT)	MNM SECT ALT
	A	B	C	D						
LNAV/VNAV	949 (906)	961 (918)	969 (926)	980 (937)	80	4:30	6NM	2000 (1957)	25NM	ARR
LNAV/VNAV NA 3.05	869 (826)	881 (838)	889 (846)	900 (857)	100	3:36	5NM	1685 (1642)		
LNAV	1000 (957)				120	3:00	4NM	1365 (1322)		
					140	2:34	3NM	1050 (1007)		
					160	2:15	2NM	730 (687)		
					180	2:00				
CIRCLING (Wrt 03 & 31 Only)	1410 (1325)		1510 (1425)							

AIRAC effective date DD MMM YYYY (AX/YY)

NEW CHART
DOC 8168 - ED.6 - 2014





Challenges

Awareness to raise the interest of decision-makers and stakeholders

Training for understanding of PBN use, operations and benefits for aviation

Survey, examination and gap analysis in relation to the existing legislations and regulations, procedures and current practices

From findings of the survey/examination/gap analysis:

Assessment of the readiness of Lebanon to introduce PBN operations After assuring a regulatory convergence with international regulations



Challenges

- the Act, Law(481/2002) was endorsed by the Lebanese Parliament, which aimed to establish the General Authority of Civil Aviation to make the Civil Aviation an independent entity still the main priority
- Regulatory Authority
- Professional and certified personnel
- Software
- The process to publish and endorse new PBN procedures



Lessons learned



Thoughts/Recommendations

Developing regulations

Training of PANS-Ops inspectors

Maintaining procedure designers competency

Data validation

Flight validation

Working together through MID FPP for assistance is highly needed and will improve PBN implementation in LEBANON





On behalf of our Directorate and the Chief of ATM Dep. we will take the opportunity to thank the core of ICAO MID office and the enthusiasm carried out to set up this meeting.

Thank



You...