

SESAR		Initial							APT		
AOP20		Wake Turbulence Separations for Departures based on Static Aircraft Characteristics (S-PWS-D)									
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP	

Subject matter and scope

This objective represents optimization of the ICAO wake turbulence separation classes by use of longitudinal wake turbulence static pair-wise separation minima for departures (S-PWS-D), applicable in all operating conditions.

The Static PairWise Separation for Departures concept optimizes wake separations between departures on the initial departure path by moving to a scheme defined between aircraft type pairs for the 96 aircraft types frequently at ECAC major airports, together with a scheme defined by a larger number of wake categories (20-CAT (6-CAT + 14-CAT)) for other aircraft type combinations.

The S-PWS-D is applied using a separation delivery tool, where the pairwise separations will be used as input into the separation delivery tool.

S-PWS-D requires the Optimised Separation for Departure (OSD) tool to be integrated at CWP and the wind measurement or forecast on the final approach path.

This objective targets capacity-constrained runways during high-intensity runway operations and applies to very large, large and possibly medium airports.

NOTE: This is an "Initial" objective to provide advance notice to stakeholders. Some aspects of the objective require further validation.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

Applicability Area(s) & Timescale(s)

Applicability Area (Not yet defined)		See list of airports in MP Level 3 Implementation Plan - Annexes			
Timescales:		From:	By:	Applicable to:	
IOC used for Analytics functioning only - not for implementation planning		01/01/2020			
FOC used for Analytics functioning only - not for implementation planning			31/12/2030		

References

European ATM Master Plan

OI step -		[AO-0323]-Static Pairwise Separations (S-PWS) for Departures									
Enablers -		AERODROME -ATC-42b	REG-0523								
Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective Objective covering the enabler				WXYZ-003	Not covered in the Implementation Plan		

Applicable legislation

-none-

Essential Operational Changes

Airport and TMA performance

SESAR Solution

PJ.02-01-06 - Wake Turbulence Separations (for Departures) based on Static Aircraft Characteristics

ICAO GANP - ASBUs

- none -

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Deployment Programme

- none -	
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European Plan for Aviation Safety

- none -	
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Operating Environments

Airport
Terminal Airspace

Stakeholder Lines of Action (SLoAs)

SLoA ref.	Title	From	By
AOP20-ASP01	Install ATC tool to support static pair-wise wake separation for departures		
AOP20-ASP02	Adapt ATC system (DMAN) to use static pair-wise wake separation for departures	21/06/2021	
AOP20-ASP03	Develop procedures for application of static pair-wise wake separation on final approach	21/06/2021	
AOP20-ASP04	Safety Assessment	21/06/2021	
AOP20-ASP05	Training	21/06/2021	
AOP20-ASP06	System in use	21/06/2021	
AOP20-INT01	Regulatory provisions (AMC) for static pair-wise wake separation minima	21/06/2021	
Description of finalised and deleted SLoAs is available on the eATM Portal @ https://www.eatmportal.eu/working/depl/essip_objectives			

Expected Performance Benefits

Safety:	Safety maintained while increasing capacity
Capacity:	Increased airport capacity
Operational Efficiency:	-
Cost Efficiency:	-
Environment:	-
Security:	-

Detailed SLoA Descriptions

AOP20-ASP01	Install ATC tool to support static pair-wise wake separation for departures	From:	By:
		-	-
Action by:	ANS Providers		
Description & purpose:	Install an automated ATC tool (Runway Usage Management sub-system) to enable application of static pair-wise wake separation for departures.		
ATM Master Plan relationship:	[AERODROME-ATC-42b]-Airport ATC tool to support static pair-wise wake separation (S-PWS) for departure operations		
Finalisation criteria:	1 - ATC tool installed.		
AOP20-ASP02	Adapt ATC system (DMAN) to use static pair-wise wake separation for departures	From:	By:
		21/06/2021	-
Action by:	ANS Providers		
Description & purpose:	Adapt DMAN to use reduced, pairwise separation for departing aircraft, based on configurable, static parameters.		
ATM Master Plan relationship:	[AERODROME-ATC-42b]-Airport ATC tool to support static pair-wise wake separation (S-PWS) for departure operations		
Finalisation criteria:	1 - The system adapted.		
AOP20-ASP03	Develop procedures for application of static pair-wise wake separation on final approach	From:	By:
		21/06/2021	-
Action by:	ANS Providers		
Description & purpose:	Develop ATC procedures as appropriate so as to support the application of static pair-wise wake separation for departures		
Finalisation criteria:	1 - The procedures implemented.		

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AOP20-ASP04	Safety Assessment	From: 21/06/2021	By: -
Action by:	ANS Providers		
Description & purpose:	A safety assessment of the changes shall be developed in coordination and synchronisation with all concerned stakeholders. This safety assessment shall be delivered to the competent authority.		
Finalisation criteria:	1 - Safety assessment has been developed and delivered to the competent authority.		
AOP20-ASP05	Training	From: 21/06/2021	By: -
Action by:	ANS Providers		
Description & purpose:	Train the air traffic controller on static pair-wise wake separation for departures.		
Finalisation criteria:	1 - Training has been performed		
AOP20-ASP06	System in use	From: 21/06/2021	By: -
Action by:	ANS Providers		
Description & purpose:	Once the systems have been updated, safety assessment delivered and accepted, training has been completed, the system is in operational use		
Finalisation criteria:	1 - The system has been put into service		
AOP20-INT01	Regulatory provisions (AMC) for static pair-wise wake separation minima	From: 21/06/2021	By: -
Action by:	EASA		
Description & purpose:	A regulatory change as per the RECAT-PWS-EU Safety Case Ed. 1.4 has been submitted to EASA and is under review. Pairwise separation is expected to become an EASA AMC to Req. ATS.TR.220 Application of wake turbulence separation from Reg. EC 2017/373 Annex IV Part-ATS.		
ATM Master Plan relationship:	[REG-0523]-Regulatory provisions (AMC) for static pair-wise wake separation minima (S-PWS)		
Finalisation criteria:	1 - Relevant AMC has been published		

