



# ATC12.1 — Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring

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The implementation of free route airspace (FRA) needs to be supported by conflict detection tools (CDT), resolution support information and conformance monitoring.

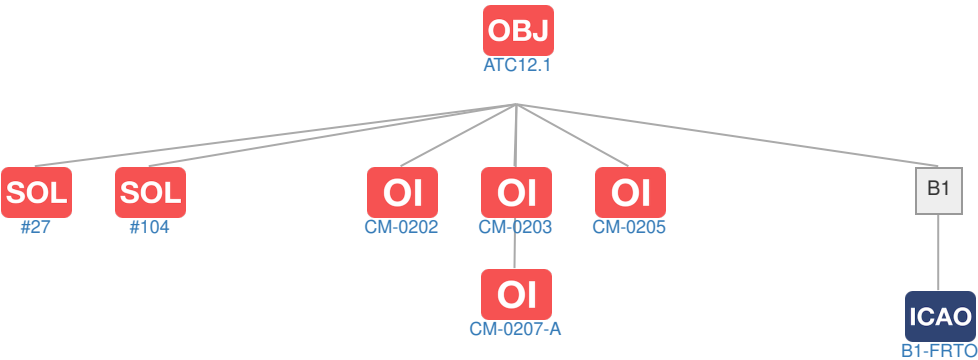
The conflict detection tools (CDT) include the trajectory based medium conflict detection tool (MTCD) or/and tactical controller tool (TCT). The decision on whether to implement either one or both tools (MTCD and TCT) is left to the individual ANSP organisation as it depends on local conditions and systems in use.

*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.*

Edition	2022
Stakeholders	Air Navigation Service Provider
Type	SESAR
Scope	ECAC+
Status	Active

## Context

### Related Elements



## Applicability Area(s) and Timescales

**Applicability Area:** All ECAC States except: Luxembourg. Plus: Israel, Morocco












Timescales	From	By	Applicable to
Initial operational capability	01-01-2015	-	Applicability Area
Full operational capability	-	31-12-2021	Applicability Area

## Links to ATM Master Plan Level 2

### Operational Improvement Steps

Code	Title	IOC	FOC	Related Elements
CM-0202	Automated Assistance to ATC Planning for Preventing Conflicts in En-Route Airspace	-	-	    
CM-0203	Automated Flight Conformance Monitoring	31-12-2010	31-12-2014	    
CM-0205	Advanced support for Conflict Detection and Resolution by Tactical Controller in En Route	-	-	      
CM-0207-A	Advanced Automated Ground Based Flight Conformance Monitoring in En-Route	31-12-2020	31-12-2024	      





### Links to SESAR Solutions

Code	Title	Program	Related Elements
#27	MTCD and conformance monitoring tools	SESAR1	     
#104	Sector Team Operations - En-route Air Traffic Organiser	SESAR1	    

### Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
No record found		

### ICAO Block Modules

Designator	Title	Related Elements
B1		
B1-FRTO	Improved Operations through Optimized ATS Routing	   

## References

#### Applicable legislation

None

#### Applicable ICAO Annexes and other references

None

#### Deployment Programme 2022

Family 3.2.1 - Initial FRA

#### Operating Environments

En-Route

## Expected Performance Benefits

<b>Safety</b>	Early and systematic conflict detection and conformance monitoring enabled by ground based automated tools will reduce the need for tactical interventions, conformance monitoring reduces the risk of the impact of controllers and pilots errors. Possibility to maintain high level of safety with an increase in capacity due to a reduction of controller workload per aircraft.
<b>Capacity</b>	Reduction of tactical controller workload, and better sector team productivity, compared to the conventional systems without automated support will open potential for capacity up to 15% in comparison to a baseline case without a detection tool (MTCD and/or TCT).
<b>Operational efficiency</b>	-
<b>Cost efficiency</b>	-
<b>Environment</b>	-
<b>Security</b>	-

## Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Implement MTCD and associated procedures	01-01-2015	31-12-2021	EN
ASP02	Implement resolution support function and associated procedures	01-01-2015	31-12-2021	EN
ASP03	Implement TCT and associated procedures	01-01-2015	31-12-2021	EN
ASP04	Implement MONA functions	01-01-2015	31-12-2021	EN
ASP05	Perform ATCO training for the use of CDT ( MTCD and or TCT), resolution support and MONA related functions	01-01-2015	31-12-2021	
ASP06	Develop safety assessment for the changes	01-01-2015	31-12-2021	

## Supporting Material

Title	Related SLoAs
EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006 <a href="https://www.eurocontrol.int/tool/safety-assessment-methodology">https://www.eurocontrol.int/tool/safety-assessment-methodology</a>	ASP06
EUROCONTROL - EAM 4 - ESARR 4 - Risk Assessment and Mitigation in ATM - Edition 1.0 / 04/2001 <a href="https://www.eurocontrol.int/publication/esarr-4-risk-assessment-and-mitigation-atm">https://www.eurocontrol.int/publication/esarr-4-risk-assessment-and-mitigation-atm</a>	ASP06
EUROCONTROL - FASTI - Completing the FASTI Safety Case: Guidance for Service Providers - 1.0 / 01/2009 -	ASP05, ASP06
EUROCONTROL - FASTI - FASTI Specific Human Factors Guidelines for MTCD, MONA and SYSCO 06/2007 -	ASP05
EUROCONTROL - FASTI - Operational Performance Requirements Analysis for the Conflict Detection Tool - Final Draft - 2 / 12/2012 -	ASP01
EUROCONTROL - Good Practice Guidelines for First ATC Support Tools Implementation (FASTI) with a Focus on Human Factors and Managing the Transition - Edition 1.0 / 06/2007 -	ASP05
EUROCONTROL - SPEC 143 - EUROCONTROL Specification for Trajectory Prediction - Edition 2.0 / 03/2017 <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-trajectory-prediction">https://www.eurocontrol.int/publication/eurocontrol-specification-trajectory-prediction</a>	ASP01, ASP04
EUROCONTROL - SPEC-139 - EUROCONTROL Specification for Medium-Term Conflict Detection - Edition 2.0 / 03/2017 <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-medium-term-conflict-detection-mtcd">https://www.eurocontrol.int/publication/eurocontrol-specification-medium-term-conflict-detection-mtcd</a>	ASP01, ASP02, ASP05
EUROCONTROL - SPEC-142 - EUROCONTROL Specification for Monitoring Aids - Edition 2.0 / 03/2017 <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-monitoring-aids-mona">https://www.eurocontrol.int/publication/eurocontrol-specification-monitoring-aids-mona</a>	ASP04
EUROCONTROL - TCT RTS Final report - 0.3 / 04/2009 -	ASP03

## Consultation & Approval

<b>Working Arrangement in charge</b>	NETOPS
<b>Outline description approved in</b>	-
<b>Latest objective review at expert level</b>	04/2012
<b>Commitment Decision Body</b>	Provisional Council (PC)
<b>Objective approved/endorsed in</b>	07/2003
<b>Latest change to objective approved/endorsed in</b>	07/2014