

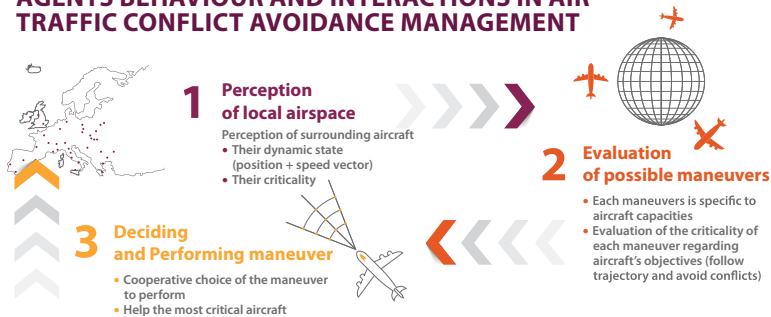


CAAMAS

An autonomous Conflict Avoidance
Multi-Agent System

Automated and dynamic traffic
conflict avoidance based on
a decentralized distributed
approach to ease traffic
scenario preparation

AGENTS BEHAVIOUR AND INTERACTIONS IN AIR TRAFFIC CONFLICT AVOIDANCE MANAGEMENT



RESULTS AND BENEFITS

Random experiment with 12 airplanes: 12 reached their destination and 0 collision

Random experiment with 80 airplanes: 76 reached their destination and 0 collision

Random scenarios

Number of Aircraft	Test failed due to conflict (for 100 tests)	
	CAAMAS	CSORCA ¹⁾
30	0	0
40	1	1
50	4	2
60	4	12
70	30	8
80	41	15
90	60	25

- Generation of air traffic simulations
- Auto-Adaptive to ensure free conflict zone without human interaction
- For simulation & training purpose
- Interoperable with ML engine to enhance traffic realism

WHAT'S NEXT ?

CAAMAS is the basis for automated simulation scenario. Next steps are:

- Reverse self-separation to generate conflict situation
- Build a prototype allowing user to request conflict situations the system would automatically generate
- Enhance this first base of scenario generation to include more situations
- Combine with our trajectory generator based on ML (EVAA) to benefit from its realistic traffic
- Test self-separation on other domains

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founding members

