Cooperative Aircraft Trajectories Planning
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To cite this version:
Romaric Breil, Laurent Lapasset. Cooperative Aircraft Trajectories Planning. 4th SESAR Innovation Days, Nov 2014, Madrid, Spain. hal-01131014

HAL Id: hal-01131014
https://hal-enac.archives-ouvertes.fr/hal-01131014
Submitted on 16 Mar 2015

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Cooperative Aircraft Trajectory Planning

Multi-agent system
- Resilient, fast and scalable method for problem solving
- Composed of agents (aircraft) cooperating to elaborate their trajectories
- Decisions are taken by each aircraft, based on knowledge of its local environment

Conflict avoidance by speed regulation
- Aircraft sends messages containing their estimated trajectories
- Each aircraft selects optimal speed changes based on this shared knowledge
- Speeds are selected within [-6%, +3%] of its optimal speed

Without regulation, conflicts occur
With speed regulation, conflicts are solved

Macro-structuration of air traffic
- The system reduces traffic complexity by structuring trajectories into flows
- A local network of routes is generated on demand

Unstructured traffic
Structured traffic

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