ASTAIR

Auto-Steer Taxi at AIRport

September 2023 – February 2026

OVERVIEW

ASTAIR aims at designing a support tool for fully automated ground operations supervision. The project has the potential to increase airport ground traffic capacity while mitigating the impact on human workload and environment.

OBJECTIVES

1. Characterize levels of automation and identify pathways to full automation from the decision support solutions and technologies developed in AEON
2. Design of interactive tools in collaboration with the operators that allow to supervise, predict, and gradually takeover the control in ASTAIR automated concepts
3. Design human-centered AI algorithms able to perform optimized path planning and fleet management
4. Create a simulation and demonstration platform to demonstrate the potential of sustainable autonomous taxi operations with a unified ground operation position

METHODOLOGY

ASTAIR proposes to explore how we can assign adequate parts of the ground operation tasks to the machine and the human, according to each other's abilities.
Based on the lessons learned from the AEON project, we envision algorithms able to collaborate with ground operators in their tasks: supervision of all ground surface movements and ground operations such as allocation of towing vehicles to optimize ground traffic performance even more.
Unifying ground operation and control positions, humans and algorithms will share responsibilities to perform the tasks as efficiently as possible at different levels of automation.

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Co-funded by the European Union

ASTAIR project

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Consortium:

ENAC deepblue EUROCONTROL TUDelft GROUPE ADP SHARING NEW HORIZONS

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