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Multi-Agent Target Tracking using Particle Filters enhanced with Context Data (Demonstration)

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Abstract:

The proposed framework for Multi-Agent Target Tracking supports i) tracking of objects and ii) search and rescue based on the fusion of very heterogeneous data. The system is based on a novel approach to fusing sensory observations, intelligence and context data (i.e. the data about the environmental conditions relevant for the tracked target). In contrast to the traditional approaches to target tracking (e.g. maritime or aviation domains), the emphasis is on tracking with low quality data sampled at low frequencies from different sensors dispersed throughout a larger area that may be only partially covered. In this demo we illustrate a live, real-time target tracking application that uses a Multi-Agent System approach to find and connect relevant information sources.