

# Next-generation COP processing

The ongoing net-centric transformation of the defence operational concept means that common operational pictures (COPs) now play a central role in state-of-the-art C4ISR architectures that govern modern combat and battlefield management systems, as well as network-enabled capabilities deployment and system-of-systems for homeland security.

Be it for international peacekeeping and peace enforcement missions, cross-border global security initiatives or integrated maritime surveillance projects, sharing tactical information from heterogeneous and independent COPs is now of paramount importance to enable operational cooperation among users and establish coordinated decision-making mechanisms in safety-critical real-time environments.

The Multi-COP Processing (MCP) Toolbox from Aster provides developers

of information and data fusion engines, and legacy C4I architecture designers with a modular library of functions for processing information pertaining to multiple COPs through a combination of geometric, kinematics and statistical-knowledge-based algorithms.

The MCP Toolbox allows a shared virtual COP to be automatically compiled in a completely asynchronous way, so that events, tracks and other information of interest that are not recognised in the stand-alone COPs can be detected, notwithstanding the inherent spatial and temporal misalignment of the processed information.

Specific versions are licensed for different vertical domains such as integrated maritime surveillance and critical infrastructures protection, and expert consultancy for MCP integration is provided through analysis and modelling of operational requirements, and in the characterisation of operational scenarios.

As an example, beta testing results have demonstrated the capability to correlate ship tracks in maritime COPs with up to six hours temporal misalignment, and correlation distance in excess of 30m after space-time realignment.

The MCP Toolbox is available as C++ function or Java class and can be easily embedded in all software development environments. ■



The MCP Toolbox allows personnel to share tactical information from different COPs.

Further information: Aster [www.aster-te.com](http://www.aster-te.com)



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### DOMAINS

- C4I Systems
- Integrated Surveillance Systems
- Situation Awareness
- Decision Support Systems



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