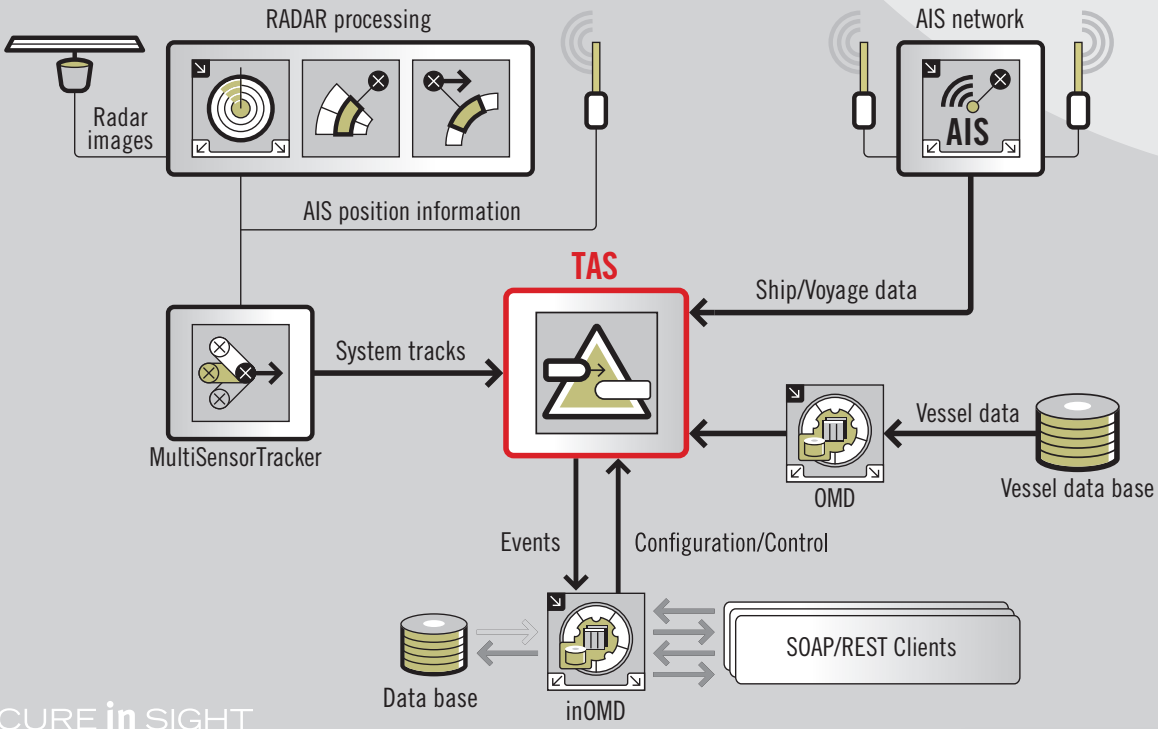
TAS

Traffic Analysis System



SECURE in SIGHT

Sample configuration

TAS - Detects traffic conflicts and rule violations

TAS is a powerful rule-based software tool used in VTS/CSS areas to detect potentially dangerous situations and monitor ships to adhere to traffic regulations for safe and secure traffic. It is successfully in operation for harbour traffic monitoring, offshore wind farm surveillance, as well as for border security or sovereign tasks. The software applies user defined traffic rules on real-time vessel traffic situations integrating the prediction of the movement of tracks and, thereby, provides so called traffic events which may evoke traffic alerts.

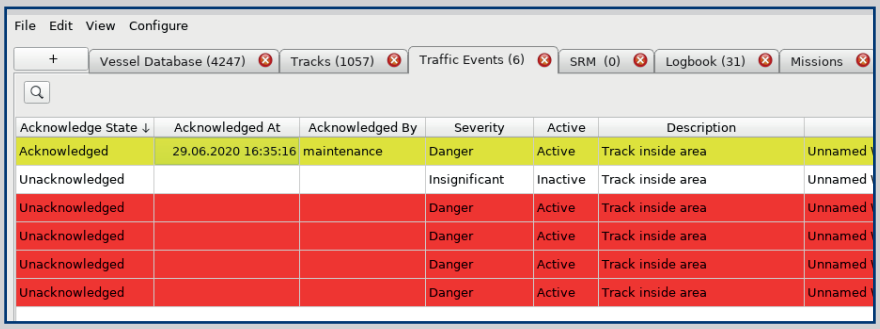
TAS detects reliably any conflict situation and all traffic rule infringements, such as specific vessels entering a prohibited or restricted area or violating speed limitations. Crossing lines, leaving routes or berth, as well as heading to the wrong direction provide unequivocal alerts. Furthermore, thresholds defined for CPA /TCPA events evoke reports of encounters in special areas. Vessel features such as dangerous load or ship dimensions can be part of the rules.
The geographical areas, which rules shall be applied on, can have any shape (circle, polygon or line). In addition, a wide range of static (size, type, ...) or dynamic (speed, load, ...) attributes can be used for the ships involved. Rules may be modified by supervisor any time to adapt to daily local operating procedures.

In case of rule infringements, TAS will generate and update the appropriate traffic alert and makes the information available to other modules of the system. If the software is combined with inOMD and CameraControlServer of in-innovative navigation GmbH, a vessel violating a predifined rule will be focused and tracked automatically by the video camera.

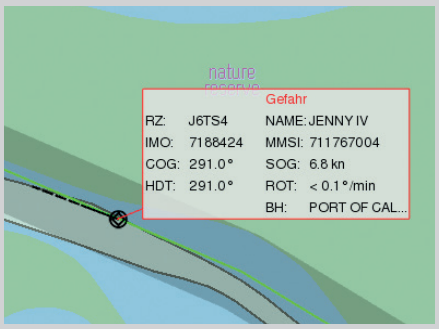
Different severity levels can be defined for specific incidents. Acknowledgement by the operating officer is indicated by colour.

TAS is the crucial tool for reliable warning function and collision avoidance in traffic surveillance and security.

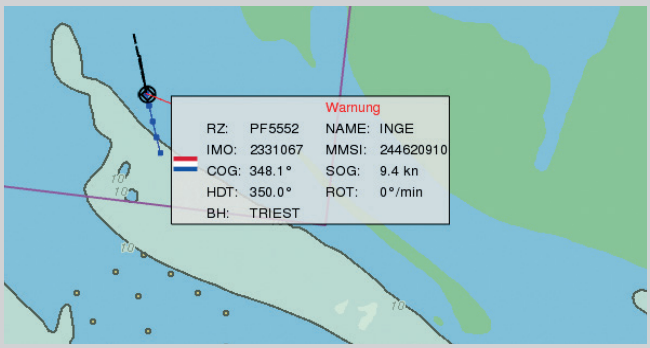
Visualization of TAS output



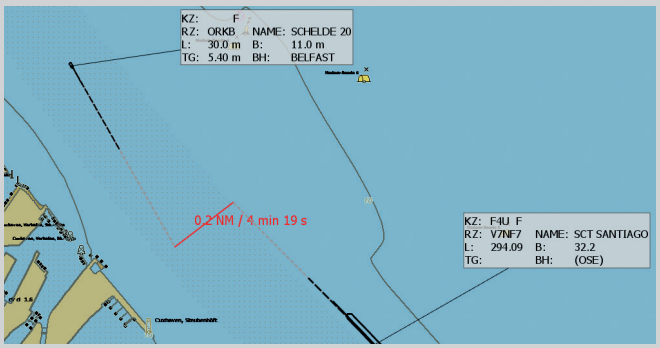
▲ Traffic event list



Defining required vessel behaviour along routes ▲



▲ Visual warning by TAS when vessel entered a predefined topology



CPA/TCPA output of TAS ▲

Highlights TAS

- Graphical editing (via in*DTS* or in*DTS*web) to define geographic areas, swing circles, lines and routes combined with the according rules
- Modelling of common traffic management topologies as warning areas, warning circles, guard lines or separation schemes
- Area conflicts for entering or leaving warning zones
- Traffic rules combining geographical areas and ship attributes
- Flexible rule editor allowing the operator to change rules during runtime
- Processing of enhanced traffic attributes from radar and AIS sources
- Definition of prewarning times and alarm life time
- List of all current traffic events immediately available on a GUI
- Providing history of traffic event changes and acknowledgement of alarms
- Processing ASTERIX track data and integration of AIS via TCP/IP or RS232
- SNMP monitoring
- Platform independent (LINUX, Windows™)

Further information about recent developments on:
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