in DTS

Display for Traffic Surveillance

in*DTS* is an innovative display module for traffic surveillance. It is designed for use within Vessel Traffic Service (VTS) centers and Coastal Surveillance Systems. in*DTS* combines a high performance traffic viewport with a modern graphical user interface. Key features of the system are the highly developed display of radar, AIS and chart data and the accurate monitoring and editing of alarm areas or lines.
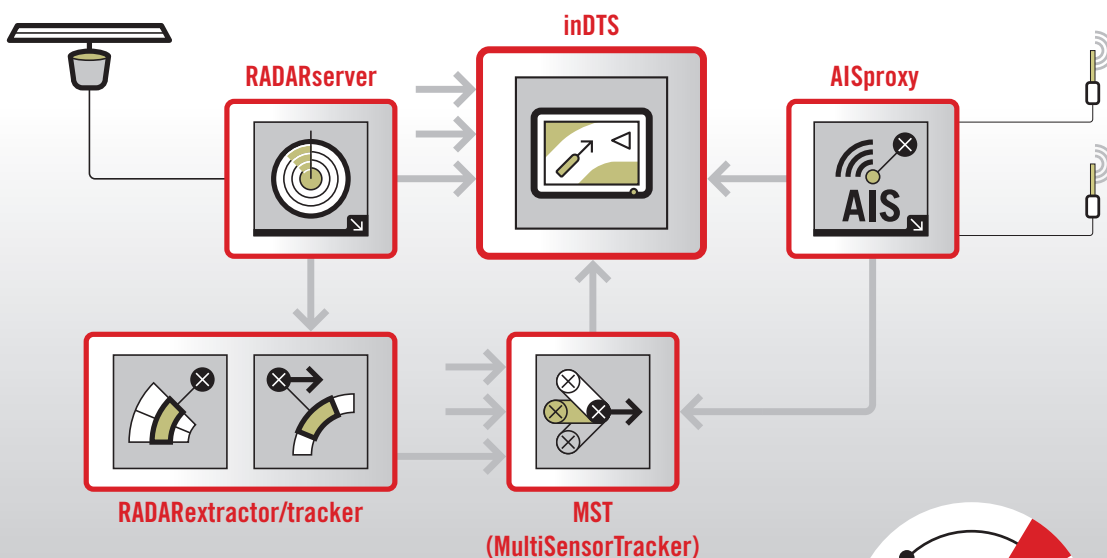in*DTS* is the user interface to present traffic image and to interact with other inVTS components. Based on these components, state-of-the-art traffic surveillance systems can be set up for use at inland waterways, as shore-based or offshore applications. It is possible to connect up to 8 sources of radar data, while data are provided by RADARserver respective RADARproxy. Radar images of overlapping areas are displayed with configurable transparency.
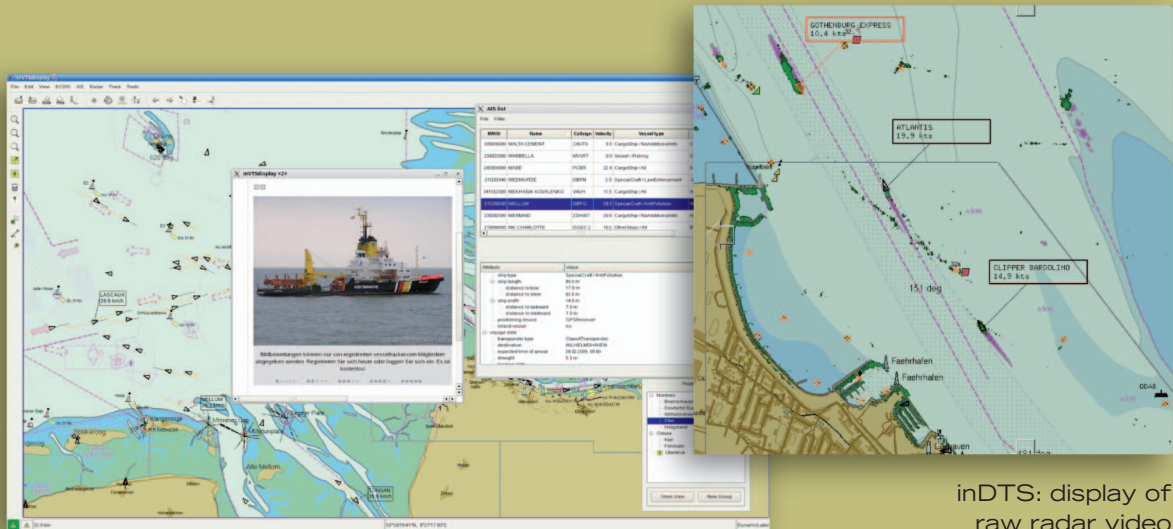Furthermore, in*DTS* is a powerful tool to process and indicate AIS data. Several thousand AIS tracks can be handled simultaneously. The system provides special windows to show static/dynamic AIS data including sophisticated filtering functions.

Display options like centering a target in the display or tracking a target on the screen complete the functionality. in*DTS* comprises a plug-in interface for web services that enables customers to embed server-based extensions without compilation. The in*DTS* web plug-in provides a bidirectional communication interface between server-based extensions and the in*DTS* core program. With its revolutionary web plug-in, in*DTS* is an ideal platform for networked traffic surveillance services.
In order to achieve best compatibility with other components of a surveillance system, the new in*DTS* relies on existing standards. It provides input interfaces for EUROCONTROL ASTERIX data format, AIS in ITU-R M.1371 standard format and radio direction finder data (RDF) in NMEA syntax.
The user is able to draw or adapt alarm zones or alarm lines in the chart. An alert module observes those selected areas and generates alarms, whenever an object enters or leaves that area, or crosses the alarm line.

Sample configuration of a traffic data visualization system

RADARserver

inDTS

AISproxy

RADARextractor/tracker

MST
(MultiSensorTracker)

in SIGHT

A product of **innovative navigation**

inDTS: display of
raw radar video

inDTS with embedded ship data-base window
and native track list window

Features of the new display system are:

- Display of standardized (Inland-)ECDIS charts,
  with customizable level of detail
- Overlay of radar, AIS and multi-sensor targets,
  including history trails
- Configurable Graphical User Interface
- OpenGL drawing engine
- Realtime zooming and panning operations without any delays
- Various measuring functions (e.g. EBLs)
- Parallel overlay of radar video from up to 8 radar sources
  (RADARserver or RADARproxy), including trails
- High performance radar scan-converter with a maximum
  resolution of 12000 range cells per beam and 8192 beams
  per revolution
- Geometrically configurable radar transparency
- Input of targets in the EUROCONTROL ASTERIX data format
  (CAT062, CAT048 and CAT010). This input is used to connect
  inDTS to RADARextractor/tracker or MultiSensorTracker.

- Retroactive radar and track history trails:
  immediate response on enlargement of display time.
- Individually configurable labels for targets
- Customizable display for confirmed and tentative targets
- Configurable target table windows
- Graphical and textual presentation of AIS data
- Input of AIS target information from serial line or network
  (ITU-R M.1371 standard format). AIS data may be provided
  by AISproxy. Position data are provided to inDTS via tracker
  and Asterix input.
- Input for Radio direction finder data (RDF) in NMEA syntax
- Graphical definition and adaption of alarm zones
- Automatic generation of alert signals for predefined events
- Interface to North Sea AIS as well as hellcom server
- MS Windows™ or Linux operating systems
- SNMP interface for system monitoring

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