



# Multisensor Data Fusion and Automated Target Tracking

AYESAŞ Automated Target Tracking System provides a coherent air and surface picture (composed by air and surface tracks) by means of data fusion of the analog data received from search radars, navigation radar and the plots received from IFF Systems. The system detect and tracks all air and surface targets within the system volume of coverage by providing advanced track initiation and continuity algorithms and reduced false track rates.



## Specifications

- Process 3500+ plots per second
- Update and display 1000+ tracks per second

## Algorithms

- Interacting Multiple Models
- Probabilistic Data Association (PDA)
- Nearest Neighbour Approximate Joint Probabilistic Data Association (NN-JPDA)
- Track Splitting
- Global-Optimum Plot-Track Association (JVC) Algorithm
- Logic-based and pattern-based track initiation
- Automatic detection of echo interference areas
- Cell-averaging constant false alarm rate (CFAR) based plot post-processing
- Clutter suppression via statistical methods (hypothesis testing)

## Advantages

- Real-time multitarget tracking
- Automatic target tracking at the presence of high interference
- Clutter processing
- Self-adaptation of track initiation and maintenance with regard to environmental conditions
- Data fusion from multiple sensors (including IFF)
- More timely automatic detection of fast inbound moving surface and air threats to allow earlier weapon engagements, increasing ship survivability and mission success with reduced reaction times.