

ABSTRACT

5 **SYSTEM AND METHOD FOR CONSTRUCTING PICTURES OF TRACKS OF MOVING TARGETS FROM ELECTRO-OPTICAL DETECTIONS**

 A tracking system and method for constructing pictures of tracks of moving targets on a scene from electro-optical (EO) detections are described. The system includes EO sensors, and an EO tracker constructing pictures of the tracks of the targets. The EO
10 tracker includes a pre-processing system for receiving EO detections of the targets and locating the targets on a world map, a candidate track selection system for finding candidate tracks, a track initializing module for receiving the EO detections and initializing a new track, an assigning system for assigning the EO detections to the candidate tracks, a
data updating system for updating the candidate tracks after the assigning, and for
15 generating an ambiguity set of tracks and an exclusion set of tracks, a picture providing system for receiving the ambiguity set and the exclusion set to generate a picture, and a tracker database for storing the updated tracks.

Fig. 1