ABSTRACT

The present disclosure provides a hybrid quantum/classical computer implemented method useful in tracking one or more targets in a field of view. The method comprises: receiving positioning data and or not doppler data from a sensing system scanning a field of view containing one or more targets over successive sensing times (t_0, …t_k) thereby collecting over time a batch (B_k) of scans (S_1,…,S_k) of sensed plots. The method further comprises, for a current batch (B_k) of scans (S_1,…,S_k) of sensed plots: processing a graph (G) containing said sensed plots as vertices (V) and possible connections between pairs of plots associated with consecutive scans as edges (E); associating a binary variable to each edge of the graph (G); processing a cost function of the binary variables so as to favor geometrically relevant edge patterns for the targets being tracked; optimizing said cost function using a quantum processing system by determining the ground state of a Hamiltonian encoding the solutions of said cost function in its eigenvalues; and processing one or more tracks between plots of successive scans when said plots belong to an edge associated with a binary variable solving said optimization.

No suitable figure