Abstract

Marine security is an absolute requirement of any country let alone archipelago countries like Indonesia. Problem of the territorial sea encroachment, illegal fishing, illegal logging to the infiltration of other countries warships to the area of Indonesia’s sovereignty, it is often the case. This occurs because of still very lack of patrol boats in the number of sectors have in the appeal which must be in amankan. Untuk minimize the problem, needs to do the optimization of the fleet that patrols the ad so that the system can be done efficiently and effectively. To optimize the limited patrols with a fleet that patrols the route is a fairly dominant factor, this algorithm in the optimization process in selected using PSO (particle swarm optimizations) and also brute force algorithm to determine the shortest route from the route patrol, PSO was used because this algorithm suitable in handling problems - problems that have a high complexity From the simulation results it appears that the system developed can make the appropriate selection of the fleet and the determination of an efficient patrol route.