

LANDING AN UNMANNED AERIAL VEHICLE IN A CONTINGENCY SCENARIO

ABSTRACT

An apparatus is provided for causing an unmanned aerial vehicle (UAV) to perform a contingency landing procedure. The apparatus includes memory and processing circuitry configured to cause the apparatus to at least determine candidate safe landing zones (SLZs) within an estimated current range of the UAV. Trajectories are generated for landing the UAV in respective ones of the candidate SLZs. Risk values are calculated that quantify third-party risk associated with operation of the UAV along respective ones of the trajectories to the respective ones of the candidate SLZs. A flight termination risk value is calculated that quantifies third-party risk associated with immediately landing the UAV at the current position. The lowest of the risk values is compared with the flight termination risk value, and a sequence is executed to operate the UAV along the trajectory to the selected one of the candidate SLZs, or immediately land the UAV.

FIG. 5