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(54) Title: DATABASE OF DRONE FLIGHT PLANS FOR AIRCRAFT INSPECTION USING RELATIVE MAPPING

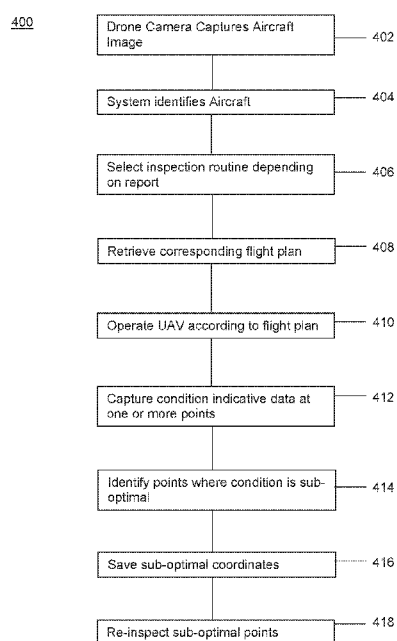


FIGURE 4

(57) Abstract: Methods for drone-assisted inspection of aircraft and other large, mobile structures are disclosed. The drone's camera identifies the mobile structure to be inspected and an inspection routine for a portion of the mobile structure is selected from a plurality of available inspection routines. A flight plan for the drone corresponding to the selected inspection routine is retrieved from a database, the flight plan corresponding to a portion of the identified mobile structure and comprising instructions to visit positions in three-dimensional space corresponding to the points of the structure identified for inspection in the inspection routine. The drone is operated according to the retrieved flight plan and at one or more of the positions visited, data indicative of the condition of corresponding point of the structure is captured. Points of the structure where the condition of the structure appears sub-optimal are identified and their coordinates saved. On completion of the inspection, one of more points identified as sub-optimal is revisited and a further, more detailed inspection is performed under the control of an operator.