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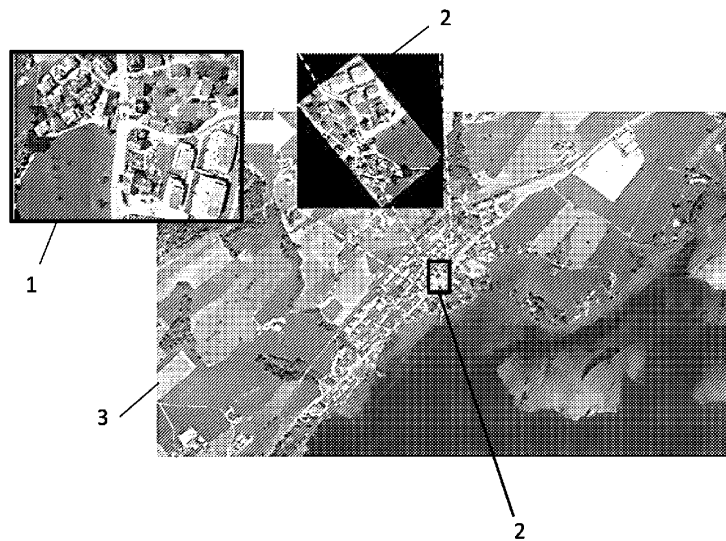


Fig. 1

(57) Abstract: A computer-implemented method for processing a geo-location of an aerial platform, comprises: (a) providing a set of classification stages, which is trained end-to-end to provide a set of cascade decisions, wherein each cascade decision is optimized for a different classification modality and for different spatial resolution; (b) receiving a geo-location query comprising an aerial sensor image, a reference bird's eye view image-map with coordinate system and sensor pose angles measures with respect to the coordinate system; (c) projecting the aerial sensor image onto the coordinate system of the reference image-map using the pose angles measures; (d) matching between the projected sensor image and corresponding image patches in the reference satellite image-map, by applying said set of classification stages in accordance with features extraction from said images and similarity criteria; (e) generating a cascade sequencing, wherein a classification score is aggregated along a cascade path among said set of cascade stages; (f) generating a cascade

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decision at each stage along the cascade path based on the aggregated classification score and on defined decision logic between successive stages; (g) retrieving a geo-location associated with said aggregated classification decision; and (h) sending the retrieved geo-location to a geo-location requester.