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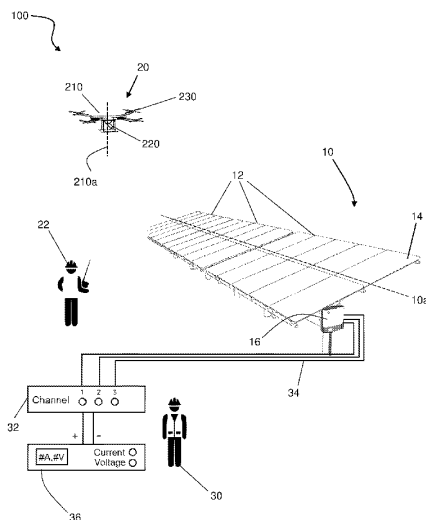
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(54) Title: METHOD, SYSTEM, AND IMAGE PROCESSING DEVICE FOR CAPTURING AND/OR PROCESSING ELECTROLUMINESCENCE IMAGES, AND AN AERIAL VEHICLE



(57) Abstract: A method (400) of capturing and processing electroluminescence (EL) images (1910) of a PV array (40) is disclosed herein. In a described embodiment, the method 400 includes controlling the aerial vehicle (20) to fly along a flight path to capture EL images (1910) of corresponding PV array subsections (512b) of the PV array (40), deriving respective image quality parameters from at least some of the captured EL images, dynamically adjusting a flight speed of the aerial vehicle along the flight path, based on the respective image quality parameters for capturing the EL images (1910) of the PV array subsections (512b), extracting a plurality of frames (1500) of the PV array subsection (512b) from the EL images (1910); determining a reference frame having a highest image quality of the PV array subsection (512b) from among the extracted frames (2100); performing image alignment of the extracted frames (2100) to the reference frame to generate image aligned frames (2130), and processing the image aligned frames (2130) to produce an enhanced image (2140) of the PV array subsection (512b) having a higher resolution than the reference frame. A system, image processing device, and aerial vehicle for the method thereof are also disclosed.

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