Title: HELIOSTAT WITH INTEGRATED IMAGE-BASED TRACKING CONTROLLER

Abstract: A system (100) for directing incident sun light to a receiver (150) based on an integral imager (116) is disclosed. The system includes an imager (116) mounted to a reflector (112); a tracking controller (226) coupled to the imager; and one or more actuators (114) connected to the reflector and tracking controller. The tracking controller (226) is configured to receive and process image data from the imager (116); determine angular positions of a radiation source and target relative to the mirror normal vector (N) based on the image data; and orient the reflector with the axis bisecting the angular positions of the sun and receiver (150). When the optical axis of the imager is precisely aligned with the vector normal to the reflector, the source and target will be detected as antipodal spots (320, 330) with respect to the center of the imager's field of view, which may be used to effectively track the sun or like object.
— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Ui))
— of inventorship (Rule 4.17(iv))

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