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(71) Applicant: **CYBEROPTICS CORPORATION**
[US/US]; 5900 Golden Hills Drive, Golden Valley, Min-
nesota 55416 (US).

(72) Inventors: **RUDD, Eric P.**; 608 North Van Buren Trail,
Hokpkins, Minnesota 55343 (US). **HAUGAN, Carl E.**; 2031
Goodrich Avenue, St. Paul, Minnesota 55105 (US). **HAU-
GEN, Paul R.**; 9625 Edgewood Road, Bloomington, Min-
nesota 55348 (US).

(74) Agent: **CHRISTENSON, Christopher** et al.; 141 West 1st
Street, Suite 100, Waconia, Minnesota 55387 (US).

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(54) Title: STRUCTURED LIGHT PROJECTION FOR SPECULAR SURFACES

(57) Abstract: A system (1400) for generating a three-dimensional height image of a reflective target includes an illumination source (1402) configured to generate a patterned illumination on the reflective target, and an imaging system (1404) configured to acquire an image of the patterned illumination on the reflective target, the illumination source (1402) and camera (1432) being aligned relative to the target such that the camera (1432) acquires a specular image of the patterned illumination. The system further including a controller (1456) coupled to the illumination source (1402) and the camera (1432) configured to generate a first height image of the target based on the acquired image, the first height image being used by the controller (1456) to determine a position, a height, and a tilt of the target and calculate an error function based on the determination to compensate the first height image for the calculated error.