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(71) Applicant: Palo Alto Research Center, Incorporated Palo Alto, CA 94304 (US) (72) Inventors:

• STOWE, Timothy David Alameda, CA California 94501 (US)

BIEGELSEN, David K.
 Portola Valley, CA California 94028 (US)

MAEDA, Patrick Y.
 San Jose, CA California 95124 (US)

CHUA, Christopher L.
 San Jose, CA California 95123 (US)

(74) Representative: Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES (GB)

#### (54) VCSEL-BASED VARIABLE IMAGE OPTICAL LINE GENERATOR

(57) A single-pass imaging system utilizes a two-dimensional (2D) light field generator (e.g., one or more VCSEL devices) to generate a modulated two-dimensional modulated light field in accordance with image data for a single row of pixels, and an anamorphic optical system that concentrates the two-dimensional modulated light field in a process direction such that a one-dimensional scan line image extending in a cross-process direction is generated on an imaging surface. The VCSEL

array is configured using a scan line image data group made up of pixel image data portions, with associated groups of light emitting elements aligned in the process direction being configured by each pixel image data portion. Gray scaling is achieved either by turning on some of the light emitting elements of the associated group, or by turning the light emitting elements of the associated group partially on, e.g. using a common drive current.

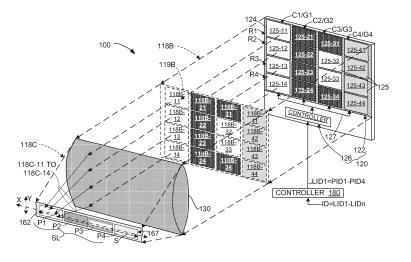


FIG. 1



## **EUROPEAN SEARCH REPORT**

Application Number EP 16 16 1793

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#### ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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