



## Systems, Methods, And Media For Encoding Structured Light Imaging Patterns And Estimating Depths In A Scene

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### The Invention

In accordance with some embodiments, systems, methods and media for encoding structured light imaging patterns and estimating depths in a scene are provided. In some embodiments, a system for estimating depths in a scene is provided, the system comprising: a light source; an image sensor; a hardware processor programmed to: cause the light source to emit K light patterns toward the scene, each of the K light patterns is different and includes a trapezoid-shaped wave, and at least one of the K light patterns includes at least two trapezoid-shaped waves; cause the image sensor to generate an intensity value during emission of each of the K light patterns such that the pixel is associated with at least K intensity values; determine a depth estimate for a portion of the scene imaged by the pixel based on the K intensity values associated with the pixel.

### Additional Information

#### For More Information About the Inventors

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#### Tech Fields

- [Information Technology : Computing methods, software & machine learning](#)
- [Information Technology : Image processing](#)

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