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(54) **IMAGE PROJECTOR WITH REFLECTED LIGHT TRACKING**

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(57) **ABSTRACT**

An image projection device for displaying an image onto a remote surface. The image projection device employs a scanner to project image beams of visible light and tracer beams of light onto a remote surface to form a display of the image. The device also employs a light detector to sense at least the reflections of light from the tracer beam pulses incident on the remote surface. The device employs the sensed tracer beam light pulses to predict the trajectory of subsequent image beam light pulses and tracer beam light pulses that form a display of the image on the remote surface in a pseudo random pattern. The trajectory of the projected image beam light pulses can be predicted so that the image is displayed from a point of view that can be selected by, or automatically adjusted for, a viewer of the displayed image.

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