

**ABSTRACT****A METHOD OF REDUCING DISTORTION OF AN IMAGE**

5 The present invention proposes a closed-loop method including a projector and a camera for projecting images onto a non-planar surface. The camera can capture simultaneously both optical and range information of a scene. The camera is placed at a selected view point and used to observe a displayed image and display surface shape at the same time. In order to ameliorate geometric distortion perceived at a viewpoint,

10 pre-warp values are determined using the information captured by the camera and applied to application images before they are sent as an input to the projector for projection on the display surface. The pre-warp at least partially compensates for the geometric distortion, thereby creating an image which has reduced or no geometric distortion perceived at the viewpoint.

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(Figure 3)



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