

**Projection display and method for displaying an overall image for projection
free-form surfaces or tilted projection surfaces**

Abstract

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A projection display with an imaging system is described, which is implemented to generate individual images in a distribution, such as a two-dimensional distribution, of sub-areas of an imaging plane of the imaging system, and a multi-channel optics that is configured to map one allocated individual image or one allocated sub-area of the imaging system each per channel, such that the mapping of the individual images is at least partly superimposed to an overall image in a projection surface, wherein the projection surface is a non-planar free-form surface, such as a curved surface, and/or tilted with respect to the imaging plane, and the imaging system is implemented such that constellations of points in the sub-images, each superimposed in a respective common point in the overall image by the multi-channel optics, differ depending on what distance the respective common point in the overall image has to the multi-channel optics. Alternatively, imaging system and multi-channel optics are implemented such that a manifestation of a contribution of each channel to the overall image varies locally across the overall image depending on what distance the respective common point in the overall image has to the multi-channel optics.

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