

Benefits of using a very high contrast projector in simulation applications

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ABSTRACT

Based on the optical principle of double modulation a projector can be designed with a full on/off contrast of 2.5 Million : 1. This contrast allows to modulate the output intensity to represent the correct intensity values for gamma = 2.2 down to the lowest levels. Furthermore it allows to overlay different channels without using additional mechanical or optical blend masks. Hence the alignment of channels can be done purely electronically. A simulator equipped with such a high contrast projector allows very realistic night vision training. The projector additionally offers the opportunity to integrate an infrared channel which extends the training capabilities for using night vision goggles in realistic light conditions.

BIO

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1985-1990	Studies of Physics at the Friedrich-Schiller-University Jena
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1992-1997	Research Associate at the Fraunhofer Institute for Applied Optics & Precision Mechanics, Jena
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