

## NBlend – Patent Pending

Most of today's projection technology cannot display pure and smooth black. This leads to visible grey areas in the overlapping regions of multi-channel projections. While the effect is hardly visible when day scenarios are projected it becomes a major disturbance when dark content and night visuals have to be displayed.

The common approach is to mitigate the effect by increasing the black level in the non-overlapping areas. The disadvantage of such remedy is that the contrast of the system – which is crucial for a good perception of the projected visual – will be severely affected and thereby lowered.

The best way to get the overlapping areas under control is the use of so-called optical blending masks. When using this technology foil or glass based filters with a blending pattern are put in front of the lens. The blending pattern is "filtering" the additional light in the overlapping areas and leaves the non-overlapping areas unaffected. The technology is sophisticated and expensive but widely known.

## Obstacles of existing optical blend mask technology

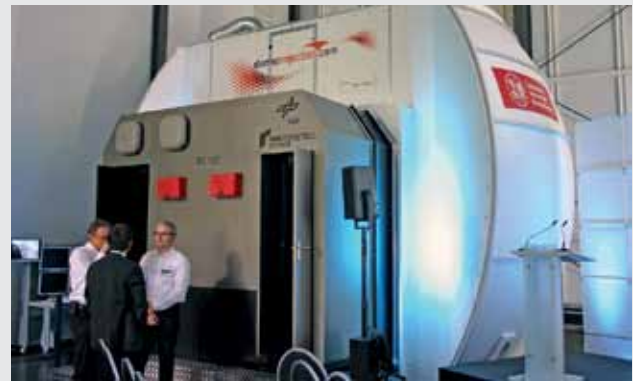
Though optical blending mask technology has been used for a long time it still poses a lot of challenges. Usually the manufacturing is done based on a "theoretical" design where a lot of parameters are either not exactly determinable or the final projection system installation deviates from the original design.

Many degrees of freedom for positioning and orientating the projectors and the optical blending masks need to be provided. Thus manual adjustment is time consuming and cumbersome. Furthermore, the same time and effort as during initial set-up is required when maintaining the system.

## domeprojection.com<sup>®</sup> revolutionized the way to produce optical blend masks

With domeprojection.com's patent pending NBlend optical blending mask technology the process and complexity of designing and installing the optical blend mask will be significantly reduced. Moreover, our technology allows to produce blend masks in unprecedented quality. domeprojection.com's industry-leading camera-based autocalibration technology is now featuring calibration of optical blend masks. NBlend can calculate the optical blend mask based on accurate calibration data gathered from the visual system and the mask kit.

The newly developed combination of mask holder mechanics and optical blend mask features in domeprojection.com<sup>®</sup> ProjectionTools and camera-based AutoCal Suite will push optical blending to an entirely new level.



## Features

- NBlend mask design using real calibration data
- Camera-based mask calibration
- Ruggedized mask holder mechanics
- Motorized mask removal (option)

## Benefits

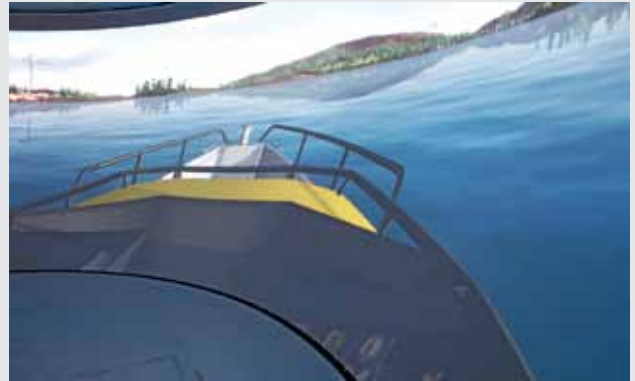
- dramatically reduced installation and maintenance cost
- minimized adjustment effort
- unprecedented blending accuracy
- independent from screen shape
- perfectly integrated into domeprojection.com® ProjectionTools and AutoCal Suites

## Target Markets & Application

- Civil- and Military Simulation and Training
- Dusk & Night Training Applications
- NVG based Simulation and Training
- Planetariums & Dome Cinemas
- VR Centers
- Theme Parks and Dark Rides
- Culture and Entertainment Attractions

## Basic Requirements

- Windows or Linux based display system
- Windows 7/10 based control computer
- Certified projectors



## ProjectionTools for Simulation, Training & Entertainment

- Patent Pending -



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