Multiple Projector Geometric and Color Calibration with Color Management Solutions

Tech ID: 20707 / UC Case 2009-606-0

BRIEF DESCRIPTION

Tiled multi-projector displays are becoming increasingly more popular for visualization, education, entertainment, training and simulation applications but registering multiple projectors on such a display presents many challenges. Existing solutions are complex, expensive and often require a highly skilled technician to operate.

FULL DESCRIPTION

Researchers at the UCI's CaliT2 Visualization Lab have developed a simple procedure to register multiple projectors on a curved display that can be operated by a layman. Geometric calibration is achieved from any arbitrary viewpoint using a single uncalibrated camera with a simple click of a button. The UCI methods also achieves complete color seemlessness by morphing the 3D color gamut from one pixel to another of the display to achieve a 3D color smoothing that is imperceptible to the human eye. Furthermore, these methods are the first to provide completely artifact free color management that is general enough to work across multiple heterogeneous devices such as displays, cameras and printers.

APPLICATION

Education, training, simulation, entertainment

ADVANTAGES

Inexpensive, easy to use, seamlessness

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,195,121	11/24/2015	2009-606

CONTACT

Ben Chu
ben.chu@uci.edu
tel: .

OTHER INFORMATION

KEYWORDS

Multi-projector, visualization, display

RELATED CASES

2009-606-0, 2009-607-1, 2009-608-1

UCI Beall
Applied Innovation

5270 California Avenue / Irvine,CA
92697-7700 / Tel: 949.824.2683