Fraunhofer
Institut
Nachrichtentechnik
Heinrich-Hertz-Institut

CineBox

MPEG-2 High-Level Multi-Projection Unit

Features

Digital MPEG-2 Video Recorder/Server/Player Unit for synchronized HD Multi-Projection in

- Electronic Cinemas
- 3D Cinemas
- Domes

The unit realizes an immersive projection technique (panorama projection) for digital cinemas, which should convey a realistic (immersive) impression. With this technique you are able to project electronic movie pictures in a high size and resolution never seen before.

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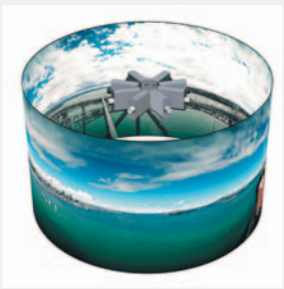
CineBox and Control Unit connected via LAN

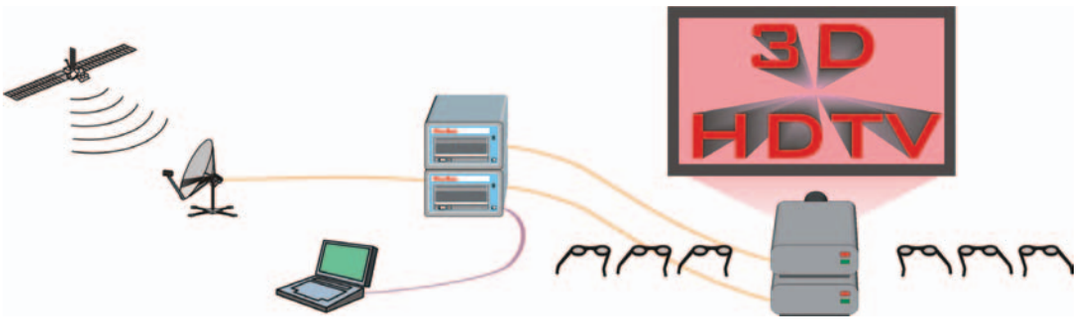
System configuration unlimited horizontally and vertically cascadable



Example for an ultra high resolution 360° Panorama realized by 8 beamers

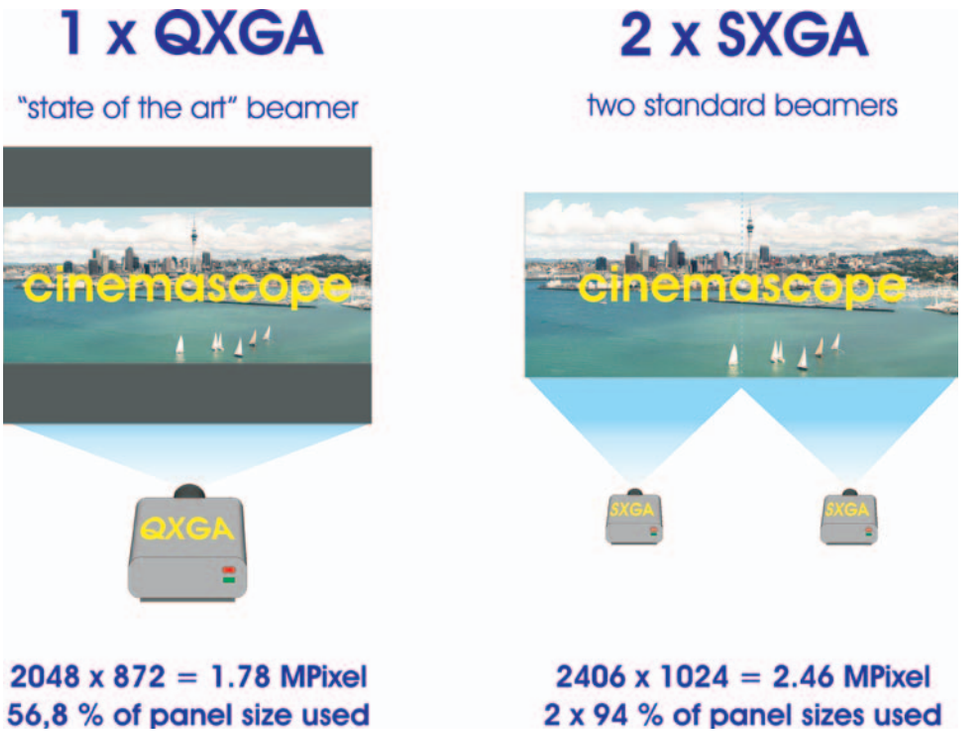
System Description

The typical large screen projection with overlapping of multiple single projections has been dramatically improved through absolutely field adjusted synchronization of any given number of sections as well as transition- and stripe free overblending of the horizontally and vertically arranged projectors. A modular concept and the MPEG-2 standardized compression algorithm, helps to realize user specific formats and at the same time to reduce amount and expenses.



Example for a 3D System Configuration including 2 Cineboxes (Broadcast Interface optionally)

Background of these activities is the still remaining insufficient resolution of digital projectors. Even a "State of the Art"-projector with its QXGA-resolution (2048x1536 pixels) is unsuitable for cinema usage. This is on the one hand due to its resolution which is still on a low limit in comparison to a conventional projection apart from its immense investment expenses. On the other hand it is due to the disadvantageous aspect ratio. Especially in the case of cinemascope films (2,35:1), where aspect ratio does not correspond to the aspect ratio of the digital projectors and only allow a usage of max 57 % of the extremely expensive projector panels. Therefore the Heinrich-Hertz-Institute proposes to combine two in comparison inexpensive standard SXGA projectors (1280x1024), so you can achieve 2406x1024 active pixel resolution. This resolution has not been accomplished with any commercial available digital projector worldwide. For further information see: http://ip.hhi.de/multipro.htm



Comparison of resolution between single and double projection

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