



Virtual Graphics & Enhancements

Virtual Advertising Insertion

For All Sports

VIRTUAL PLACEMENT

PRODUCT INFORMATION SHEET

ADVANCED
VIRTUAL
GRAPHICS
**MADE
SIMPLE**



VIRTUAL PLACEMENT ALLOWS STATE-OF-THE ART VIRTUAL GRAPHICS TO BE ADDED TO LIVE PRODUCTIONS WITHOUT THE NEED FOR A SPECIALIST OPERATOR OR EXPENSIVE CAMERA SENSORS.

Based on highly-advanced real-time image-processing algorithms, ChyronHego's Virtual Placement is the most sophisticated tool on the market for the delivery of striking virtual graphics into any live broadcast.

The system analyses incoming camera movement in real-time allowing the easy and robust addition of virtual tied-to-surface graphics. Virtual product placement and advertising, scores and statistics, sponsor logos and even animating sponsor messages on virtual LED screens are among the many solutions Virtual Placement is able to deliver across a wide range of different productions.



TRACKED GRAPHICS BASED ON IMAGE PROCESSING

Virtual Placement combines several complementary tracking algorithms. These algorithms power multiple built-in tracking engines to deliver a comprehensive product capable of working with any type of broadcast content, including live sport OBs or downstream on a cut feed, removing the need to be on-venue.

ANCHOR TRACKING

The basic version of Virtual Placement can be enhanced with an Anchor Tracking module which delivers an additional camera-tracking engine designed specifically for downstream use. The module features ChyronHego's Cut-Sense technology which allows virtual enhancement to be added downstream just as effectively as it can be on outside broadcasts.

SPORT-SPECIFIC MODULES

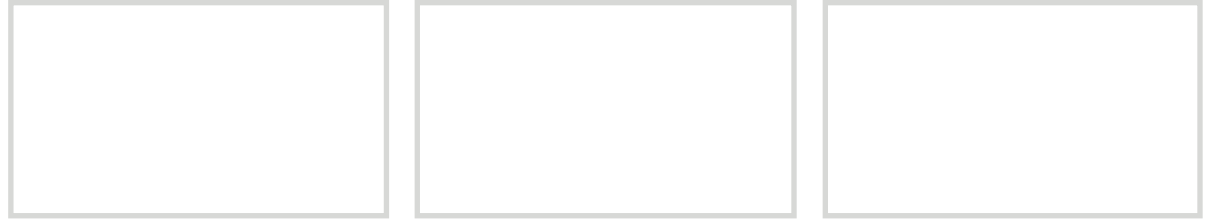
The modular structure of Virtual Placement means optional sport-specific modules can be delivered to meet your bespoke requirements. These modules use line detection to add yet another layer of tracking and toolsets tailored to each sport to transform Virtual Placement into a sophisticated analysis tool delivering features such as the virtual offside line and distance to goal graphics. Virtual Placement is for all sports, including Football, Basketball, Tennis, Cricket, Badminton, and Rugby.

REAL-TIME PLAYER-TRACKING VISUALISATION

Virtual Placement can plug into player-tracking technology such as ChyronHego's market-leading TRACAB® player-tracking system. Broadcasters can apply TRACAB data in real time using Virtual Placement to deliver highly-advanced analysis features such as live player markers, statistics and tracking graphics.

ADVANCED
VIRTUAL
GRAPHICS
**MADE
EASY**

HOVER TO VIEW LARGER IMAGE





KEY
FEATURES

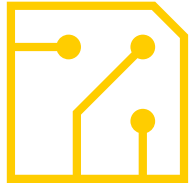
Easy-to-use solution for the addition of virtual graphics to live broadcasts

Intuitive image-analysis technology enabling fast and easy setup

Multiple real-time camera-tracking engines

Multi-purpose functionality enabling use on OBs or downstream

High ROI. Output multiple video streams from a single source to tailor advertising to different audiences and regions.



TECHNICAL SPECIFICATIONS

- Please refer to the Installation Guide for detailed technical specifications and installation instructions.

BASE SYSTEM CONFIGURATION

- Microsoft® Windows® 7 Ultimate 64-bit O/S
- Quad-Core Intel® Xeon® Processor
- 8GB RAM
- NVIDIA® Quadro® K2000 Professional Series Graphics Accelerator
- 200GB SSD System Storage
- Keyboard and mouse

POWER

- 2 x 740 Watt Redundant AC-DC high-efficiency power supplies
- AC Input 100-240V, 60-50Hz, 9 Amp Max, 3.2 Amps @120VAC Typical

DIMENSIONS

- The system chassis mounts in a standard 19 in. rack.
- **Height:** 2RU, 8.9 cm/3.5 in.
- **Width:** 43.7 cm/17.2 in.
- **Depth:** 63 cm/24.8 in.
- **Weight:** 22.7 kg/50 lbs.

VIDEO STANDARDS

- SD 576i 50Hz 16:9/4:3 (PAL)
- SD 486i 59.94Hz 16:9/4:3 (NTSC)
- HD 720p 50/59.94Hz 16:9
- HD 1080i 50/59.94Hz 16:9
- HD 1080p 50/59.94 Hz 16:9

INPUTS/OUTPUTS

- **Input:** 1 x SDI Input on a 75 Ω BNC Connector
- **Output:** 1 x SDI Output on a 75 Ω BNC Connector
- **Genlock:** Bi-level & Tri-level Analogue Genlock, 3G-SDI, HD-SDI, SD-SDI on a 75 Ω BNC Connector
- Single RS232 port
- 2 RJ45 Gigabit Ethernet connectors
- 4 USB 2.0 ports rear

5 REASONS

VIRTUAL PLACEMENT

Virtual Placement allows state-of-the-art virtual graphics to be added to live productions without the need for a specialist operator or expensive camera sensors.

Based on highly-advanced real-time image processing algorithms, Virtual Placement is the most sophisticated tool on the market for the delivery of striking virtual graphics into any live broadcast.

1

No complex camera calibration

- Virtual Placement is based on optical tracking, so there is no need to place instrumentation on the cameras to track movement.

2

Multi-purpose functionality

- Use Virtual Placement on OBs or downstream.

3

Revenue-generating and amazing flexibility

- Realistic virtual product placement and advertising, scores and statistics, sponsor logos and even animating sponsor messages on virtual LED screens are among the many uses of Virtual Placement.



4

Easy to operate

- Virtual Placement is intuitive and designed without the need for specialist hardware or specialist operators.

5

Anchor Recognition

- A special Anchor-tracking module uses scene-cut detection technology to cope with the challenges of placing virtual graphics into multi-camera feeds. As a result, the system can be used downstream on a cut feed, removing the need to be on-venue.

ABOUT CHYRONHEGO

ChyronHego, a portfolio company of Vector Capital, is a global leader in products, services, and solutions for the broadcast and sports industries. Specializing in live television, news, and sports production, ChyronHego offers some of the industry's most widely deployed solutions — including Lyric®, the world's most popular broadcast graphics creation and playout offering; the all-new CAMIO® Universe newsroom workflow; and TRACAB® Optical Tracking, the global leader in optical sports tracking systems as well as Click Effects, the most proven and versatile stadium broadcast family of graphics products. Headquartered in Melville, New York, ChyronHego also has offices in the Czech Republic, Denmark, Finland, Germany, Mexico, the Netherlands, Norway, Singapore, Slovak Republic, Sweden, and the United Kingdom.

For more information on ChyronHego, visit www.chyronhego.com.

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