

VIRTUAL PLACEMENT



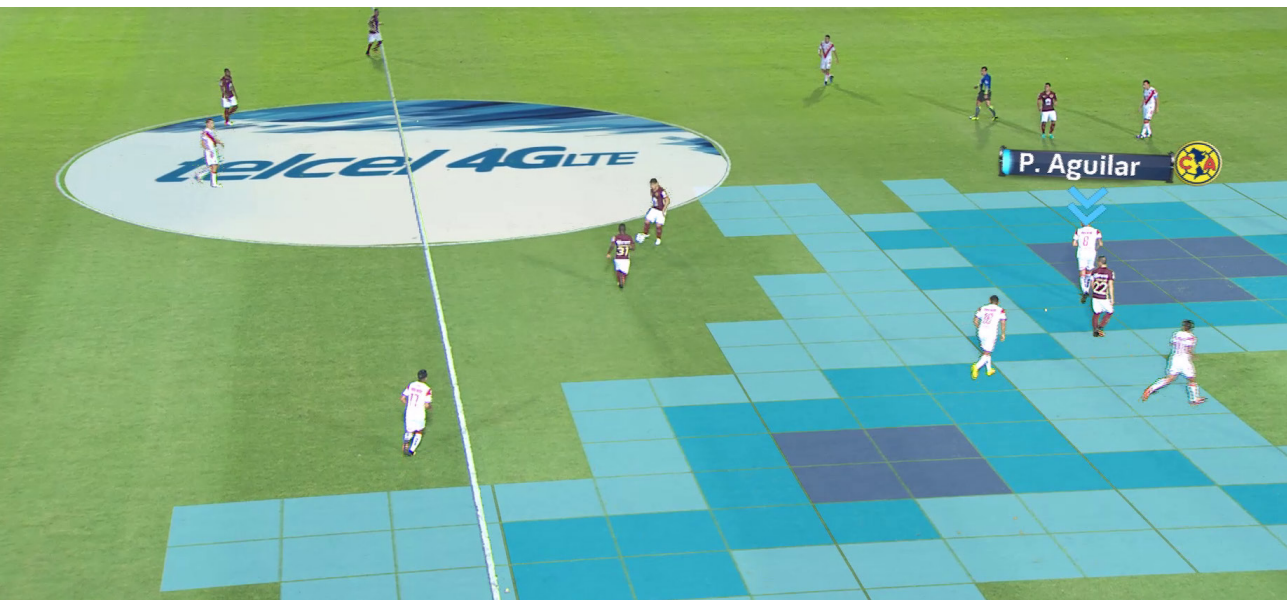
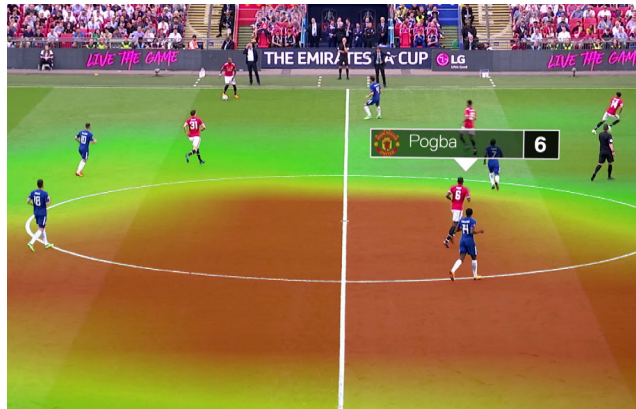
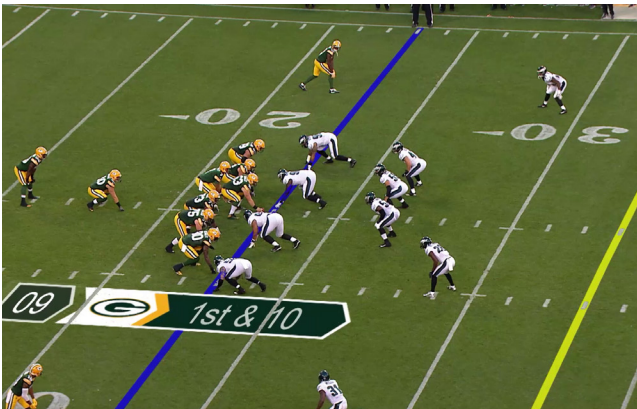
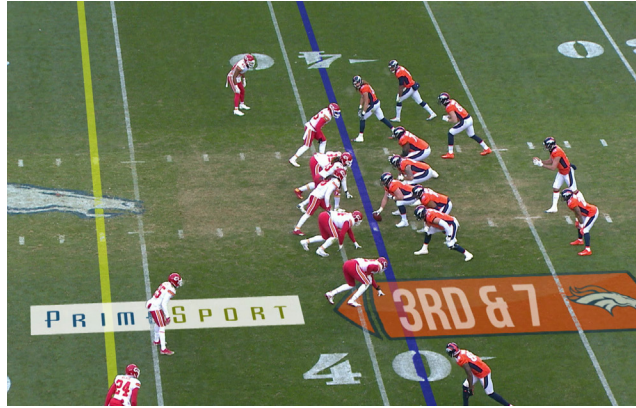
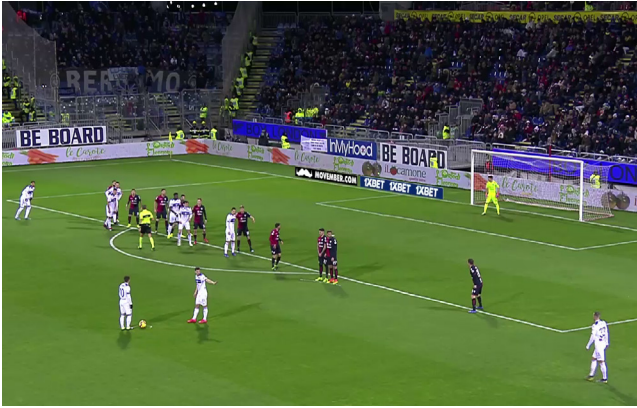
ADVANCED VIRTUAL GRAPHICS MADE EASY

THE MARKET'S MOST SOPHISTICATED TOOL FOR THE DELIVERY OF STRIKING VIRTUAL GRAPHICS INTO ANY LIVE BROADCAST

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

Virtual Placement is ChyronHego's simple-to-use visual storytelling solution for incorporating striking virtual graphics into any live broadcast without the need for specialized operators, expensive camera sensors or lengthy calibration processes. A mainstay of ChyronHego's live sports production ecosystem, Virtual Placement is the umbrella label for ChyronHego's real-time data visualization products designed for sports operators, which also includes Virtual 1st and Virtual Football.

- Using **Virtual Football**, operators can insert FIFA®-certified virtual offside lines (VOL), distance to goal measurements and carpet goal ads on the soccer pitch / in stadium
- Using **Virtual 1st**, operators can insert virtual lines of scrimmage, 1st down markers and sponsored advertisements for American Football



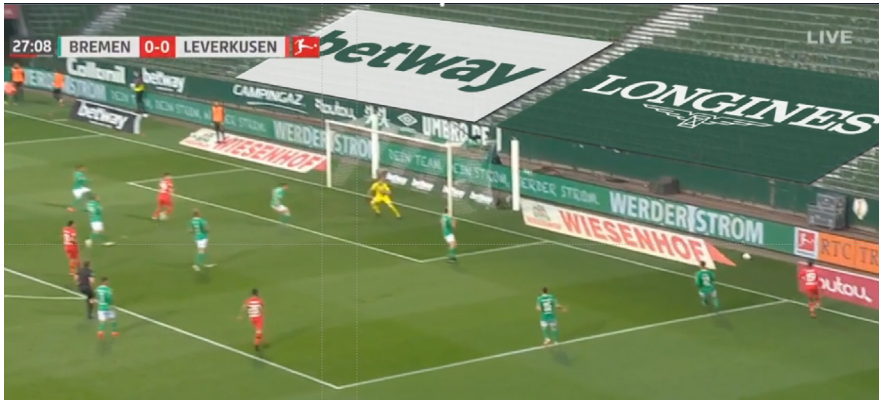
Using Virtual Placement, operators can quickly place virtual advertising elements and other sponsored enhancements within live video. Virtual product placement and advertising, scores and statistics, sponsor logos and even animating sponsor messages are among the many solutions Virtual Placement can deliver across a wide range of different productions.

Able to feed four independently sponsored outputs from a single system, Virtual Placement helps localize content to different regions and empowers regionalized content and advertising strategies for linear and OTT content rights holders.

Via unique integration to TRACAB®, the Emmy® Award-winning camera-based player tracking system, Virtual Placement allows broadcasters to leverage real-time data for highly advanced gameplay analysis features (e.g., live player markers, statistics and tracking graphics).

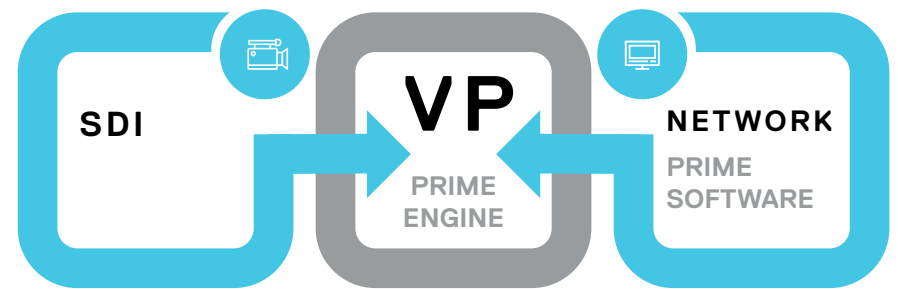
READY FOR THE RETURN

DELIVERING THE POWER OF LIVE DATA



Tightly integrated to the PRIME Graphics Platform, Virtual Placement allows you to harness PRIME's rich CG capabilities for enhanced fan engagement.

This integration allows you to create and insert data-driven 3D graphics, virtual advertising elements and other sponsored enhancements on field or within live video.



- Virtual Placement creates camera data and chromakey
- PRIME Engine can then render the PRIME scene inside the calibration and inherit the chromakey

KEY FEATURES



EASY DEPLOYMENT AND CALIBRATION

- No need for specialized operators, expensive camera sensors or lengthy calibration processes. Virtual Placement allows operators to quickly create a calibration through an input and implement optical tracking without the need of specialized camera encoder hardware.
- A single Virtual Placement system can output 4K or HD, offering greater flexibility to do more with less.



BOOST SPONSORSHIP REVENUES

- **Multi-Output Mode** allows operators to output multiple feeds from a single input source with different sponsored graphics on each channel. This powerful feature helps localize content to different regions and empower regionalized content and advertising strategies.
- A single Virtual Placement system can feed four independently sponsored outputs to maximize ROI through game day sponsorships.



POWERFUL SET OF RICH VISUAL ANALYSIS TOOLS

- **Automatic Chroma Keyer** removes the need for rekeying and simplifies the keyed graphics workflow, especially when dealing with changing conditions like shadows on parts of the pitch.
- **Trajectory Tool** allows operators to create 2D ball trajectories within Virtual Placement for interactive gameplay analysis.
- **Scene Tracking** gathers metrics without using pitch lines or sensors to create a panoramic image and 3D point cloud for the system to reference for on field visualization.
- **Cue Points** allows operators to make points in the video to jump back in time in the record train for quick reference.



ADAPTABLE TO REMOTE WORKFLOWS

- Optimized for REMI and GREMI (graphics/replay remote integration) workflows, **Virtual Placement** supports a variety of downstream production workflows (Audio GPI, VANC, Audio only). The system doesn't even need to be inside the production truck at the stadium.



SOPHISTICATED SPORTS-SPECIFIC MODULES

The modular structure of Virtual Placement means optional sport-specific modules are accessible for covering Football (Soccer), American Football, Basketball, Tennis, Cricket, Badminton, and Rugby.

TECHNICAL SPECIFICATIONS

SUPPORTED FORMATS	SDI, H.264
NUMBER OF INPUTS/OUTPUTS	Up to 3 in 5 out in HD, or 3in1 out in 4K-UHD
EMBEDDED STORAGE	1 x 256GB SSD per camera input
GENLOCK	Genlock: Bi-level & Tri-level Analogue Genlock,3G-SDI, HD-SDI, SD-SDI on a 75 Ω BNC Connector.
SERIAL CONNECTIONS	Single RS232 port
ETHERNET PORTS	2 RJ45 Gigabit Ethernet connectors
INTERNAL REPLAY SERVER CHANNELS	Record 3 HD-SDI channels
REPLAY SERVER INTEGRATIONS	File export to EVS, Grass Valley, Evertz replay servers
SUPPORTED CODECS	MJPEG; DNxHD; H.264 / MPEG-4 AVC / MPEG-4 part 10
SYSTEM DIMENSIONS	<ul style="list-style-type: none">•Height: 2RU, 8.9cm/3.5in.•Width: 43.7cm/17.2in.•Depth: 63cm/24.8in.•Weight: 22.7kg/50lbs
POWER REQUIREMENTS	<ul style="list-style-type: none">•2 x 740-Watt Redundant AC-DC high-efficiency power supplies•AC Input 100-240V, 60-50Hz, 9 Amp Max, 3.2 Amps @120VAC
MINIMUM OPERATING SYSTEM REQUIREMENTS	<ul style="list-style-type: none">•Microsoft® Windows® 10•Ultimate 64-bit O/S•Quad-Core Intel® Xeon® Processor•8GB RAM•NVIDIA® Quadro® Professional•Series Graphics Accelerator•SSD System Storage•Keyboard and mouse

SERVICES

ChyronHego is known for its end-to-end customer service. We partner with our customers from the initial project design, to project management, training, on-air launch support and post-launch follow-up.

PROJECT MANAGEMENT AND COMMISSIONING

Project Management and Commissioning are part of the turn-key services that we offer. This ensures your investment is properly installed from Day One by a certified ChyronHego representative.

DESIGN AND OPERATION TRAINING

We offer Design and Operation training, either in your facility or via our on-line web portal. Our expert trainers can teach your staff the most efficient way to create and deliver stunning content for your productions.

EXTENDED WARRANTIES

Finally, all ChyronHego products come with a One (1) year factory-backed warranty (parts, labor & software upgrades). Extended Warranties on all your purchases can be added at any time for an annual fee. Please contact our sales professionals.

ABOUT CHYRONHEGO

ChyronHego is ushering in the next generation of storytelling in the digital age. Founded in 1966 as Chyron, the company pioneered broadcast titling and graphics systems. With a strong foundation built on over 50 years of innovation and efficiency, the name Chyron is synonymous with broadcast graphics. ChyronHego continues that legacy as a global leader focused on customer-centric broadcast solutions. Today, the company offers production professionals the industry's most comprehensive software portfolio for designing, sharing, and playing live graphics to air with ease. ChyronHego products are increasingly deployed to empower OTA & OTT workflows and deliver richer, more immersive experiences for audiences and sports fans in the arena, at home, or on the go.

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