



RealSet

RealSet revolutionary HD/SD system seamlessly integrates 3D virtual objects into a conventional studio

New level of interactivity

3D graphic objects produced by RealSet remain tied to their exact position in the studio regardless of camera motion, creating the illusion that those graphical elements are an integral part of the studio. The inserted graphics are introduced as a foreground layer of graphics and therefore no chroma keying process takes place. Unlike conventional graphics that are displayed in screen coordinates, RealSet offers new dimensions of interactivity between the encore man and the graphics. The presenter can interact with the inserted graphics objects, events can be simulated in real-time in the studio, and exciting shots are easily produced. The inserted 3D graphics are rendered in real-time, ensuring a perfect and accurate perspective of the object within the studio.

RealSet is the perfect solution for both indoor and outdoor productions, providing captivating graphics for news, game shows, financial, and special events such as election coverage, where complex graphics help enhance the quality of the program. Product placement is another area where RealSet can substantially increase the production's look and feel.

Inserting videos into the studio

In addition to inserting 3D graphics into the studio, RealSet offers the unique capability of inserting multiple video streams and video clips into the scenery. Using video to texture mapping technology, the inserted videos are mapped onto any of the objects in the scene by simply dragging and dropping the video onto the object. Using that technology, virtual plasma screens can be inserted into the studio and huge video monitors can be animated from the studio floor and placed anywhere within the studio.

Up to 12 different full resolution SD video streams can be inserted into the studio or alternatively up to 6 in HD. In addition, RealSet can play and integrate into the studio multiple video clips supporting all commonly used file formats such as AVI, Quick Time, DV, DV25, and MPEG.

Inserting the videos does not add additional delay to the system and a negligible two frames delay is the total delay of the system, with or without the incoming video feeds.

Outdoor productions

RealSet enables broadcasters to position themselves as innovative and creative. Thanks to its extremely accurate camera tracking, RealSet can superimpose 3D graphics and videos outside of the studio. The graphics can be mapped on buildings, rivers or any other object in the environment. It is even possible to "dress up" and map 3D graphics and videos over any physical element such as buildings, etc



Courtesy of Turner , USA

Powerful performance

RealSet implements an intuitive drag and drop operation. All graphic elements are generated by Orad's award winning 3Designer authoring application. A powerful importing module allows direct imports of 3D objects along with their geometry, textures and animation from such modeling software as 3D Studio Max, directly into 3Designer. Each graphic element in the template can be easily associated with the studio camera tracking information. Once associated, the tracking information that is generated by Orad's sensor tracking technology ensures that the inserted object remains tied to its position in the studio regardless of the camera's motion. The operator retains full control of the scale, position angle and all other parameters of the inserted object.

Leveraging from Orad's unique dynamic scene blending capabilities, multiple scenes can be loaded and triggered at the same time by RealSet. Such functionality allows RealSet to control and trigger standard non-tracked graphics such as lower third, full frames or tickers. RealSet, in conjunction with the tracked graphics elements, provides a total graphic solution.



Courtesy of CCTV , China

Integrated workflow

During production, RealSet relies on Orad's advanced Maestro/3DPlay controllers to provide tools for managing the entire production process. Maestro offers immediate access to external databases, embedded preview windows, and playlists, which are instantly created and which support last minute modifications and changes. 3DPlay is a flexible controller, which enables the user to introduce non-sequential logic and rules to the branded graphics, as well as utmost interactivity.

RealSet operates as a standalone or as part of a larger system. RealSet offers a seamless integration to all major newsroom and automation systems such as ENPS, Avid's iNews, OCTOPUS, Dalet, and Control Air.

Product placement

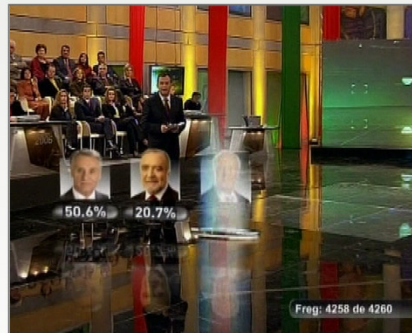
With the growing popularity of Tivo-like systems that detect and erase commercial breaks, RealSet offers an alternative channel for generating advertisement and sponsorships revenues. With RealSet, commercials are inserted into the studio and become an integral part of the production, thereby eliminating the possibility of being erased.



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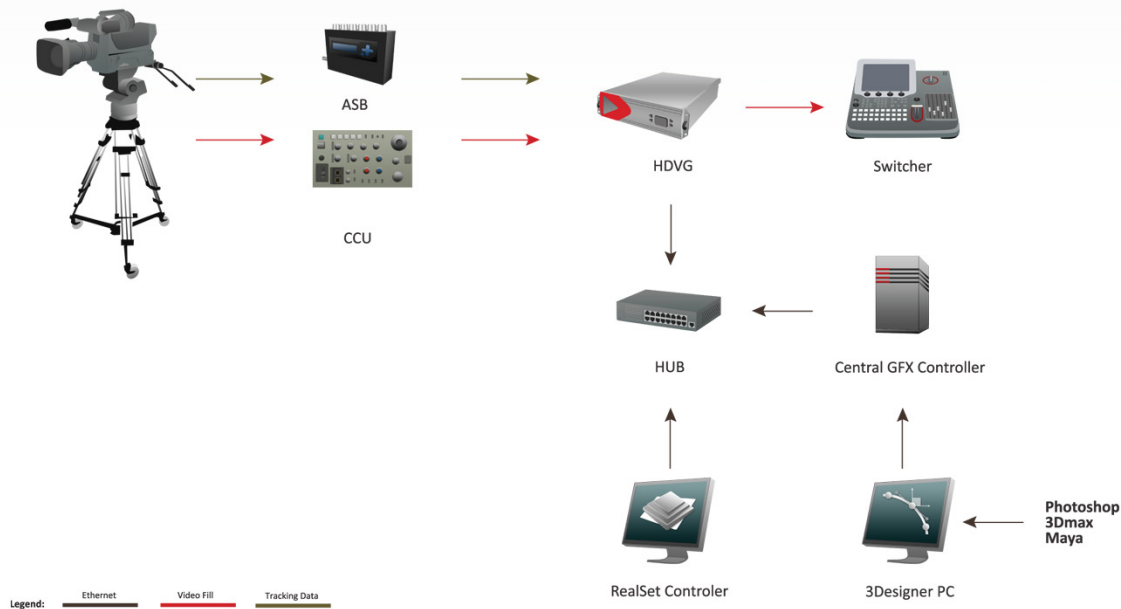
Features

- Seamless insertion of tied-to-the-floor 3D graphics, videos and animation into a conventional studio
- The perfect illustration tool for elections, news, sports, weather, business and game shows
- Supports multi camera productions
- Ideal for studio and outdoor productions
- HD/SD switchable system
- Supports up to 6 full resolution HD inputs or up to 12 full resolution SD inputs
- 2 separated output channels in SD mode
- Dual power supply and laptop hard drives for maximum redundancy
- Scalable system, which provides a basic configuration with easy upgrade path by adding more components
- Last minute updates and modification
- Supports multiple controller applications
- Utilizes 3Designer authoring software for creating stunning 3D graphics with minimal effort
- Interfaces with a series of newsroom and automation systems for seamless integration within existing workflows
- Quick and easy setup and calibration process
- Can work as a standalone or as part of a larger system
- Leverages Orad's one-stop shop strategy – no 3rd party integration is required
- Multiple video insertions with DVE effects capabilities
- Minimal 2 frames delay
- Fully featured operator preview
- Sensorized crane options

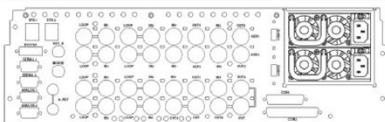


Courtesy of RTP , Portugal

Diagram



Hardware Specifications



Turnkey System Specifications (constant):

- 2.4 GHz Intel Core Xeon Westmere
 - Operating systems: Linux
 - RAM: 6 GB
 - Internal storage: 160 GB system disk optional RAID1 with additional HDD
 - Ethernet: 2X 1000 BASE-T (RJ-45)
 - Ports: 2 serial RS-232 (DB9); 4 USB 2.0 (2 front 2 rear)
 - Control interfaces: PS2 keyboard, PS2 mouse, VGA/DVI
- Physical Dimension:**
- Height: 130 mm
 - Width: 443 mm
 - Depth: 631 mm
 - Weight: 22 kg (approximately)

Redundant Power Supply:

- 100-240 V
- 47-63 Hz
- 2 X 460W (max)

Supported Video Standards:

- HD: SMPTE 260, SMPTE 295, SMPTE 274, SMPTE 296
- SD: SMPTE 259 ITV-R BT.601

Video In:

- SD up to 12 SDI channels, full resolution
- HD up to 6 SDI channels, full resolution

Video Output:

- 2/4 SDI outputs (video key compositing configurable)
- Internal chroma and linear keys
- 2 monitor outputs: 10 bit component YUV (SD/HD); SVHS, composite (SD only)

Video Reference:

- Bi/Tri level Sync with passive loop
- All cross formats are supported in the same frame rate
- SDI from DSK input

Audio Processing:

- Embedded audio 20-bit/48 KHz in SD and 24-bit/48 KHz in HD
- Support for additional audio playback and mix from wav files, clip sources and video insertions

ANC Data:

- Preservation of all VBI data through downstream keyer
- Preservation of Dolby E, 32 KHz and 44.1 KHz PCM embedded audio through downstream keyer

Clip Options:

- Video to texture mapping of AVI, Quick Time, DV, DVC25 and MPEG files

Video Bypass

- Mechanical bypass for power failures
- Logical bypass for application failures