



ProSet

High-end, HD/SD, virtual studio system providing a new and powerful dimension to any virtual studio production

Total virtual studio solution

ProSet is a complete virtual studio solution which provides tight integration between its dedicated hardware, software and tracking technologies.

ProSet is ideal for all types of productions including children shows, elections, sports, entertainment shows and news.

ProSet supports multiple production payouts according to the customer's needs, and can be used with rundown solutions and multi-channel controllers.

Stunning virtual sets

Utilizing ProSet's powerful importing capabilities, 3D Studio Max and Maya models along with their respective geometry, textures and animations are imported directly into ProSet. Relying on Orad's HDVG video graphics rendering platform, ProSet is equipped with unmatched rendering power that allows even the most complex virtual sets to run in real-time.

Powerful, intuitive and flexible

ProSet is extremely easy to operate; graphics rundowns are created by simply dragging and dropping graphics items into a playlist. ProSet offers a local preview of the entire page including its animation before being sent to air. ProSet receives camera tracking information from the studio camera allowing the operator to view the preview from the exact position of the relevant studio camera.

ProSet includes a set of tools that address the specific needs of virtual studio productions such as positioning the virtual set graphics in the studio, masking, and much more. When working with Ultimatte 11, ProSet supports 2 independent alpha channel outputs which enable the insertion of semi transparent foreground objects into the set.

Advanced shaders and reflections

ProSet offers an extensive variety unique real-time HD/SD depth of field shader that enhances the production's photorealism. With Orad's depth of field shader, the virtual background focuses and defocus depending on the rate of zoom, exactly as it would have had it been a real background. Orad offers other shaders, such as real-time video shaders, that are applied to the incoming video insertions. In addition, bump mapping and displacement mapping are also offered to ensure the highest level of photorealism.

ProSet allows users to create real-time shadow and lighting effects on objects. Scene objects can be set as Shadow Projectors (the light source), Shadow Casters and Shadow Receivers, which provide infinite points enabling parallel shadows for increased realism.

ProSet also offers Cubic Mapping, providing a more realistic reflection on objects, making them appear to be part of a real environment

Free camera movement

Orad offers a full range of camera tracking solutions that address any production need or budget. ProSet can utilize either the Pattern Recognition tracking system, CamTrack for free camera movement, mechanical sensor tracking systems, VR One fully robotic head controlled within the operating system, and Xync infrared tracking system.

ProSet supports all types of broadcast cameras, lenses and tripods. Multiple camera configurations are easily integrated with no reliance on 3rd party technologies. ProSet offers a 360-degree shooting range and by utilizing the Xync infrared tracking system both handheld and crane mounted cameras are supported for total freedom within the virtual set.

Extracting accurately the zoom and focus parameters from the camera lens is mandatory for generating accurate camera tracking data. ProSet is equipped with unique tools that specifically deal with lens distortion and abortion. ProSet supports both digital and analog lenses, box and eng, 4X3 or 16X9 aspect ratio.

Dynamic scene blending

ProSet implements a unique dynamic scene blending architecture. This architecture allows triggering of a multiple number of graphic scenes at the same time using the same system. A virtual background can be generated from one scene while foreground objects such as lower third and tickers can be generated from an additional scene. Both can be then combined into one unified output channel even though generated from independent scenes, providing a total graphic solution.

Intelligent workflow

ProSet is designed to address the dynamic needs of today's production. It allows loading of multiple sets, which can be switched instantly.

ProSet has two working modes: a design mode, in which rundowns are created, and a production mode in which the rundown items are sent to air.

ProSet integrates seamlessly with all types of newsroom and automations systems (such as ENPS, Dalet, OCTOPUS Pebble Beach, etc), and databases.

Controllable by automation systems

ProSet user interface can be triggered manually or remotely by automation systems such as Ross Overdrive, Avid's Control Air, Harris, Snell Morpheus, Pebble Beach, Pharos, SGT, etc in both studio and MCR environments.

State of the art technology

ProSet takes advantage of Orad's HDVG video graphics rendering platform, which supports both HD and SD formats. An internal video delay is provided as part of the system for monitoring video delay.

Orad's bypass mechanism ensures continuous broadcast by switching automatically to an alternate auxiliary signal when the power is cut. The bypass automatically restores the system's settings when the power returns.

To increase system reliability, ProSet runs on a Linux operating system and comes with a dual power supply ensuring that even in the event of power loss ProSet will continue its regular operation.

Incredible number of video insertions and video clips

ProSet provides 12 video insertions in SD mode or up to 6 video insertions when configured in HD. ProSet allows mapping video clips on any element within the virtual studio. Avi, MPEG, DV, DVC25, Quick Time and other commonly used formats are fully supported and multiple clips can be played at the same time. It is possible to mix between video streams and video clips, as well as mix HD and SD inputs, as all HD formats are supported. ProSet also now comes with 2 SATA drives of 500GB each, configured on Raid 0, which is particularly useful for accelerated playback speed for high bit rate clips. The SATA drives are also available for Raid 1 configurations where mirroring can be used for backup purposes.



Courtesy of RTL CBC, Germany



ProSet

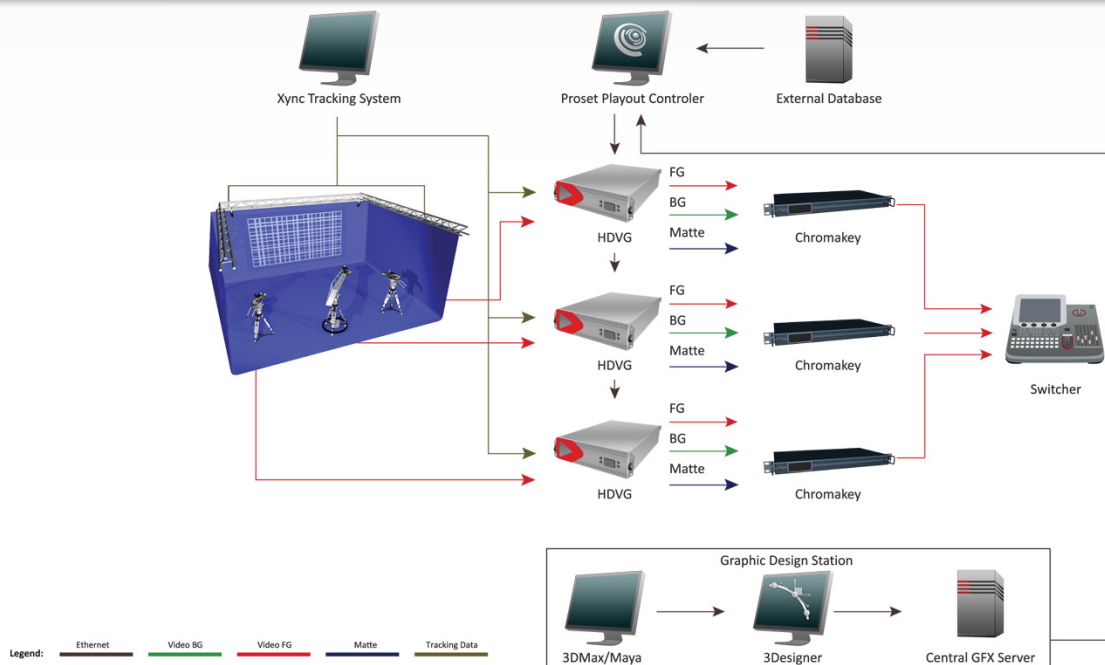
Features

- The most advanced virtual studio solution available
- Seamlessly integrates with all of Orad's tracking systems including Xync infrared tracking, Pattern Recognition, CamTrack, and mechanical sensors
- Integration with all types of tracking methods available on the market today.
- Seamless integration between virtual studio and on-air graphics are both controlled from the same application
- Free camera movement including dolly, handheld and crane
- Does not require any special 3rd party add-ons
- HD/SD switchable
- HD and SD formats are supported
- Up to 6 full resolution HD video inputs and up to 12 SD inputs
- 360 degrees shooting range with sensor or infrared based tracking
- Minimal setup time and calibration
- Minimal video delay
- Can operate as a standalone system or as part of a larger solution
- Easy interfacing to external databases
- Integration with all major newsroom and automation systems
- Dynamic multiple scene loading and blending
- Can play multiple clips in different file formats including: AVI, MPEG, DV, DVC25, and Quick Time
- Extensive shader package such as bump mapping, defocus, displacement mapping and real-time video effects shaders as well as object and layer blending modes
- Powerful render scene elements as textures inside other scenes and layers for complex DVE moves

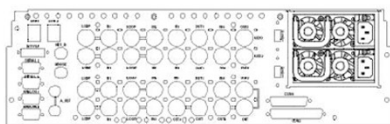


Courtesy of RTL TVI , Belgium

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 keyers
- 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