TRACKING LAB

WWW.STYPE.TV

THE STYPE BOOK

Tracking and rendering systems
for leading-edge
XR, AR and VR production

PROUD WINNER OF THE
ENGINEERING, SCIENCE & TECHNOLOGY
EMMY® AWARDS

v1.7

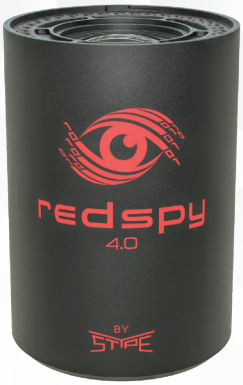
redspy

RedSpy is the world's most popular optical camera-tracking system that sets standards for precision in the industry. It's running finely tuned algorithms that derive tracking data from three different sensors:

#1 Infrared Camera - detects markers on the floor or ceiling
#2 Accelerometer - intelligently interprets shaking and sudden moves
#3 Gyroscope - solidifies the detection of rotational changes

RedSpy is THE solution for camera tracking, apparent from its reputation in the industry. No matter if you're tracking a crane, a pedestal, a steadicam or a handheld camera, you can rely on it to do a stellar job.

RedSpy is suitable for both indoor and outdoor use and supports wireless connectivity.



Film Studios

RedSpy enables real time pre-visualizations for film scenes that include virtual elements. Being able to see the virtual elements while shooting means the crew intuitively do their jobs, as opposed to having to rely on script memorisation and 'pretending' that the virtual elements are somewhere in space. RedSpy's tracking data is stored in FBX and XML file formats, along with LTC timecode and lens distortion data. The stored data includes camera moves, zoom & focus data and can be used at a later time for post-production which has never been easier! RedSpy integrates with all major render engines such as Unreal Engine, Maya, 3dStudioMax, Cinema4D, Blender, ect. via our proprietary plugins and standalone tools.

TV Studios

Join the company of world-renowned television networks such as CNN, MTV, BBC, FOX, SKY and allow RedSpy to transform your set and make scenes come alive by including virtual or augmented reality. Virtual effects in particular can be used for election coverage, sporting events and e-sports shows along with live entertainment events such as concerts or ceremonies. RedSpy integrates seamlessly with all standard rendering engines and also supports direct integration with Unreal Engine via StypeLand plugin for Unreal.

STYPE

Follower

Follower is an all-in-one tracking system that supports talent, object AND camera tracking all at once. Follower features special witness cameras that are positioned around the set, which are detecting the positions of infrared LED beacons. These LED beacons, smaller than a fingernail, can be placed to track your talent, props, and camera tracking including lens encoding with the precision and speed needed by the world's biggest broadcasters and filmmakers. One system can track hundreds of LED beacons, meaning all of your studio cameras and talent can be tracked with 1 system.

It works great indoors as well as in bright sunshine outdoors.

Follower was originally launched in April 2019, when it won the NAB Show Product of the Year award. In 2022, Follower 2.0 was released introducing many improvements and polishing the user experience.

Film Studios

Track all your cameras, props and talent with one system. Make the virtual scenes easier for post-production by tracking real, physical objects and later easily turning them into virtual ones. Receive exact positions of your actors, cameras and props, store the data in FBX and XML file format, along with LTC timecode, and make the magic happen in post-production with much less effort than you're used to as there is no need for manual tracking. The recorded data can be used by all of the major render engines in the industry such as Unreal Engine, Maya, 3dStudioMax, Cinema4d, Blender, ect.

TV Studios

In addition to tracking your cameras, tracking people and props means you can have physical interaction with virtual objects, something that was impossible in the past. Graphics can be made to follow your presenters, animations can be automatically triggered by presenters movements, while simple props can become magical virtual items. Captivate your audience and make your TV show a magical experience!

StypeKit

StypeKit is a camera-tracking system for cranes which functions as an add-on for existing cranes on the market. It effectively turns old cranes into modern virtual and augmented reality systems. StypeKit is an ideal solution if you need to track your crane, however unlike RedSpy, it doesn't support tracking handheld cameras. StypeKit is a fully functional mechanical system and it is suitable for both indoor and outdoor use. Modifying your existing crane is not required, so it is suitable even for rented cranes. StypeKit is the product that originally made our brand "stYpe" known around the world, and for a good reason. It just works.

Film Studios

StypeKit's advantages like quick setup of outdoor tracking aren't so important on film sets, so clients prefer to use RedSpy as it offers the most precise tracking they can get.

TV Studios

Like RedSpy, StypeKit is trusted by world-renowned television networks such as CNN, MTV, BBC, FOX, SKY. Allow StypeKit to transform your set and make scenes come alive by including virtual or augmented reality. Virtual effects in particular can be used for election coverage, sporting events and e-sports shows along with live entertainment events such as concerts or ceremonies. RedSpy integrates seamlessly with all standard rendering engines and also supports direct integration with Unreal Engine via our plugin, StypeLand.

HUMAN
CRANE BY STYPE

HumanCrane, a crane designed and produced by stYpe, is the answer to problems experienced with other cranes on virtual production sets. HumanCrane was developed with precision, practicality, and robustness as goals. All crane parts are individually CNC-ed, and each joint can be leveled precisely and quickly, which is critical for professional level virtual effects.

The head of the HumanCrane features the standard Mitchell Mount and can be purchased separately. The bearings of the head are robust, the motors are waterproof and backlash-free, and the joysticks are built for long-term precise operation. This all guarantees extremely smooth operation, even on slowest speeds, providing one of the best motion controls among lightweight crane camera heads. One of HumanCrane's hottest features is the AutoAiming which automatically keeps the desired target in the frame. The crane arm is free to swing in any direction, and the head will aim at the target, while still giving the operator freedom to adjust the shot if necessary.

TV and Film Studios

HumanCrane is a semi-autonomous crane that features AutomaticAiming, AutomaticFocusing, Recording & Playback which comes in handy to record virtual graphics that are not visible to the naked eye. Repeatable shots for daily TV shows or Films are now solved with ease. Great for indoors and outdoors, the HumanCrane is waterproof, backlash-free, and operates extremely smooth. The Head is the standard Mitchell Mount, comes in 2-axis and 3-axis versions, and can be detached and used individually.

STYPE

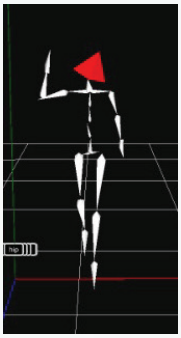
AI Glue

AI Glue is an advanced solution that accurately determines a person's position within a space, identifying whether they are in front of or behind specific graphics—without needing any beacons.

The AI Glue tracking system consists of two high-precision sensors that cover a 4x4 meter area, allowing talent to move freely around AR elements. Positional triggers conceal or reveal AR graphics based on the person's location, creating a more immersive virtual set. With additional sensors, coverage area can be expanded.

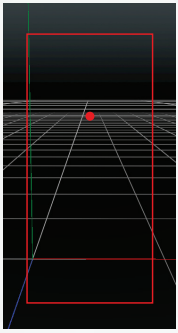
Skeleton tracking





Depth tracking





StypeLand

StypeLand is an affordable rendering solution that takes advantage of the immense rendering capabilities of Unreal Engine. It's a plug-in for Unreal Engine, supports a wide array of its features, including reflection catching, shadow catching, depth of field, and others, and supports AR, VR and XR workflow. That means that green screens, real sets or LED caves are all your friends.

GreenKiller, StypeLand's hottest feature, is a modern keyer we're confident is currently the best in the world, relying on 3D mapping of the cyclorama and highly polished algorithms. The end result is fantastic keying of natural shadows and reflections, absence of outlines, and some great looking hair. :)

StypeLand engines can be controlled by the OneController, a web interface that lets you control multiple StypeLand engines at the same time, and easily control events in them.

Are you ready to bring AR, VR, or XR capabilities to your studio?

Film Studios

StypeLand offers two possible film workflows: the first one is the Stype XR workflow for driving the LED screens for in-camera VFX. This is a super-advanced version of what's commonly known as nDisplay, with a drastically simplified setup, and seemingless color calibration. Set extensions are also supported, and implemented in such a way that it's impossible to tell the line between the LED screen and the set extensions. Transparent objects and foreground objects are supported as well in this setup.

The other film workflow StypeLand offers is intended for traditional green screen and augmented reality setups. Here StypeLand displays the live previsualisations, while simultaneously recording the tracking data. The recorded data is later used to render the graphics in the final quality, with all of the GPU-heavy effects, like volumetric lights, turned on.

TV Studios

Using Unreal for your live shows means you can have incredibly sophisticated virtual sets as part of your shows, immersing viewers on a deeper level where reality and illusion are becoming harder and harder to distinguish.

OneController

OneController is a centralized web based interface for complete control of all your Unreal Engines from a web browser. Any number of authorized devices can use OneController at the same time; be it mobile devices, tablets or computers, which gives flexibility to your team. It can be accessed from the same room or from the other side of the world, and then control in real time what happens in the Unreal Engines on set.

Once logged into OneController, your team can trigger events, play animations, grab external data, make your own playlists, designate actions to team members depending on their role, as well as many, many other things. Running multiple engines for virtual production doesn't have to be hard.

StypeMovie

StypeMovie app records the tracking data and packs it into an XML file for use in post processing. If you are aiming to use programs like Maya, 3dStudio, Cinema4d, Blender (etc.) you'll be happy to know that the data can be easily converted into FBX files, and in the process correct perspective and lens distortions are applied so that everything is ready to render the images properly.

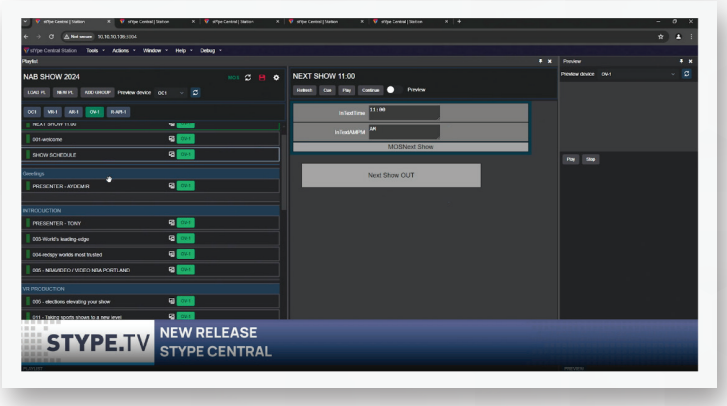
Vinten Virtual Add-On

Vinten Virtual Add-On is a stYpe tracking product that turns standard Vinten 75, Vinten 750 and Vinten 900 Fluid Heads into Vinten Virtual Fluid Heads. It is a bolt-on kit requiring no modification to enjoy full virtual and augmented reality capabilities. In the past, we only offered encoding for Vinten 950, which required physical modifications. We still offer this option, however with the introduction of Vinten Virtual Add-On, we are offering an option to convert Vinten 75, 750 and 900 models into tracked fluid heads. This allows for a ready to deliver, stellar augmented and virtual reality effects, all without any modifications to the original hardware.

Stype**Central**

StypeCentral is the latest innovation in the StypeLand product family. As a next-generation Graphics Playout Control System, StypeCentral is designed to streamline and elevate graphics management and playout for both live and recorded studio productions.

In the fast-paced world of live news and studio production, precise control of graphical elements is essential. StypeCentral meets these demands with its web-based interface, offering intuitive playout control and smooth integration with existing newsroom workflows. Producers can effortlessly create, manage, and trigger real-time graphics, player stats, and other dynamic elements—all within their familiar newsroom systems.



STYPE

Television Academy

PROUD WINNER OF THE

ENGINEERING, SCIENCE & TECHNOLOGY

EMMY® AWARDS

CONTACT US: www.stype.tv | hi@stype.tv