



WHITE LIGHT

LIGHTING • AUDIO • VIDEO

Immersive Mixed Reality Environments



SmartStage.tech

It's Virtually Reality



What is SmartStage?

SmartStage is an immersive video environment which replaces the traditional green screen element of a virtual studio and allows the presenters and audience to see and interact with the content around them.

The set-up is scalable to fit any size studio space and allows both lighting and reflections to immediately appear more natural.

With a disguise media server driving the heart of the solution, WL has pioneered an innovative workflow which sits on a robust broadcast-grade infrastructure, delivering 24/7 operation in demanding live environments.

The technology can be used in range of markets and was awarded the 2018 IBC Innovation Award for Content Creation.



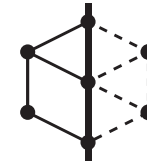
Mixed Reality Environment
True engagement



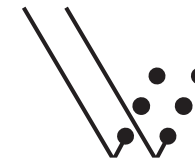
No Green Screen
Real lights and reflections



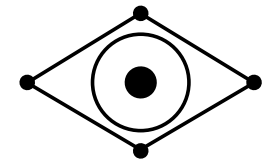
Infinitely Scalable
Any location, any footprint



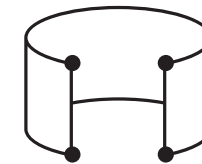
Render Engine Agnostic
Integration of real & virtual content from popular render engines inc. Unreal, Unity & Notch. Live data-driven graphics.



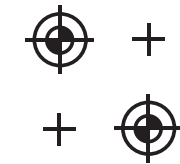
No Colour Key
No colour spill. Complete freedom of costume and lighting - natural lighting & reflections on props and outfits.



Better Talent Engagement
Presenters interact with their environment naturally - no confidence monitors, natural eye lines.



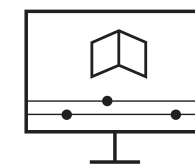
Truly Immersive Production
360° limitless environment created visually on set, with integrated AR graphics and lighting in the same system.



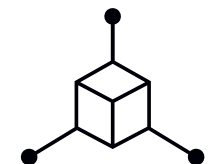
Fast Accurate Calibration
Calibrate cameras & lenses in a matter of minutes. Balance colour between virtual and real environment using automated colour calibration.



Intuitive & Immediate Control
Real-time creative iteration. Fast decisions made on the fly.



In-production VFX
Real-time engines and visualisation workflows mean that more creative decisions can be made in production.



Full 3D Visualisation
Visualise & work out shots in advance, increasing coordination, reducing duplication.

Technical Overview: How SmartStage Works

SmartStage uses disguise media servers to generate content to the perspective of each camera. This allows feeds into the LED video walls to be cut whenever the camera feeds are cut. The servers also generate delayed or composite camera feeds, key and fill for front-plate/augmented reality content, along with a perspective preview for the camera operator. This means they don't have to work 'blind' if the live environment is not cut to them.

Camera tracking systems feed the positional data and field of view of the camera into the disguise media servers, allowing content to be generated in real-time to the perspective of the camera. Content for the LED walls, 360-degree set extension and any augmented reality foreground objects are all created and tracked as one synchronised, gen-locked system.

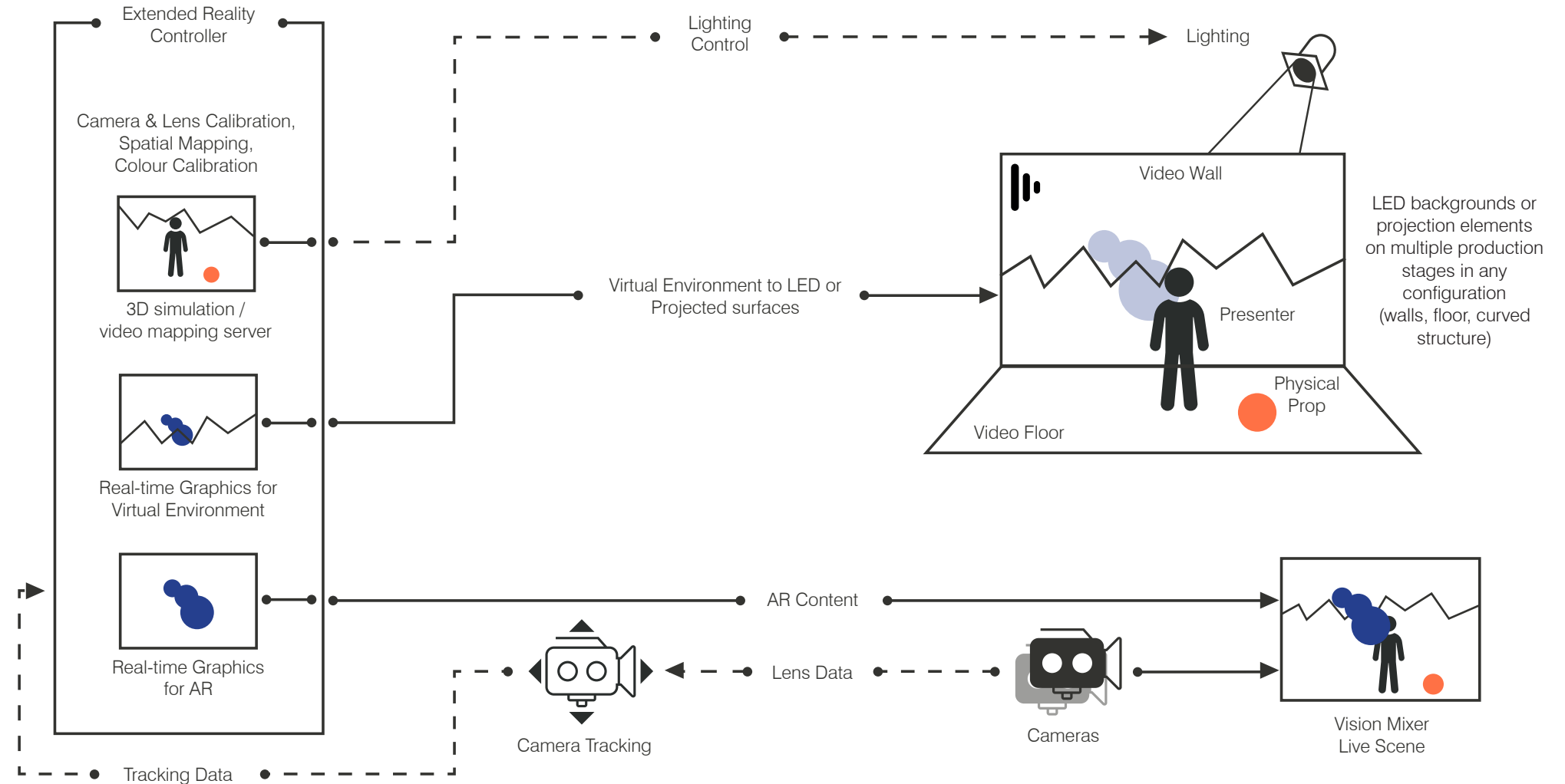
A physical LED video environment is created to display the content for the presenter and audience, using specialist LED panels which have been designed as the result of extensive R&D. This environment can be standalone or integrated as part of a studio set.

SmartStage is rendering engine agnostic which means we can bring in content from popular engines such as Unity and Unreal, whilst also harnessing the power and flexibility of Notch which runs natively on the disguise servers. Using real-time rendering engines means content and resolution is completely scalable as nothing needs pre-rendering.

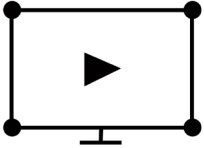
The studio lighting is closely integrated and can be included as an extension of the digital canvas to create a fully immersive environment. Not only does the LED video environment naturally light anybody inside SmartStage, the studio lighting can also be replicated in the virtual world and controlled by the studio lighting desk; seamlessly blending the real and virtual environments.



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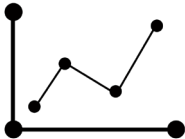
Key SmartStage Applications



Broadcast. As a replacement for traditional green screen workflows, SmartStage unleashes the power of a mixed reality environment to take virtual studio production to the next level. Gone are the challenges of lighting green screens, allowing Lighting Directors to regain creative control over how they light productions. Presenters and guests can see and interact with the content around them, creating more natural engagement and immersing them in a space which feels real. SmartStage is scalable to suit any sized studio and can even be integrated as part of a real studio set.



Education. As remote learning and streamed presentations become increasingly popular, SmartStage offers the perfect solution for lecturers and students to engage with dynamic content within a natural environment. SmartStage is scalable to fit the smallest space whilst creating the illusion of any environment the presenter chooses - even jumping between locations at the push of a button. With lecturers and guests feeling naturally at home within the mixed reality environment, using the technology requires zero training or zero rehearsals. In contrast to traditional video conferencing, students feel more involved in the sessions by seeing themselves and their peers onstage.



Corporate. SmartStage allows corporate presentations to become more dynamic and engaging than ever before. Whether it's providing the backdrop to a presentation with a live audience or linking multiple global offices, SmartStage provides a robust, scalable solution to suit all. With increasing pressure within businesses to reduce carbon footprints and travel costs, SmartStage provides the perfect solution for employees to host engaging presentations to their clients and peers from anywhere on the planet - interacting with live data, props and presentation content. Multiple SmartStages can even be linked to create true global collaborations like never before.

White Light: Creative Solutions, Technical Excellence

SmartStage is a product that has evolved from a bespoke solution created by WL's R&D department for a specific project. As a company with 50 years' experience, we have formed an unparalleled reputation of working closely with our clients to offer the exact technical requirements for

their projects. We have one of Europe's largest inventories of lighting, audio and video equipment and oversee the hire, sale and installation of this latest technology. Alongside this, we also offer the following services:



Installations

We offer clients complete turn-key solutions for broadcast installations. These include:

- Creative technical input for any size of project from our experienced in-house teams
- Ownership of the entire project, from initial consultancy and design, to on-site installation and on-going SLA support packages
- Strong relationships with manufacturers, with immediate access to the latest technology and developments

Technical Production

From outside broadcasts to studio productions, WL can supply the complete technical production on any project. This includes:

- Technical design, creative input, equipment and crew; allowing us to recreate the same look and technical set up on a reoccurring basis
- Ability to scale work as well as react to short lead times
- Manage large scale and complex logistics including international projects



Video



Lighting



Audio



Set Technology



Mixed Reality



#ItsVirtuallyReality



Photo credit: MalfMedia and Round the Bend



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