



Zero Density

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CASE STUDY

Zero Density & FOX Sports

Industry-leader Zero Density enabled **FOX Sports** to bring an extraordinary coverage to the NASCAR audience with state-of-the-art virtual studio utilizing **Reality Virtual Studio**.

Read the detailed best practice for an **exclusive look** at behind the scenes of this enormous virtual studio production, all the **Zero Density products** that are being used and **insights from the FOX Sports team**.

Ahead of the Race

FOX Sports already left a giant mark on 2019 with its **first**, brand new, state-of-the-art, multi-purpose virtual studio in its Charlotte facilities. This high-tech studio marks a milestone not just for the channel's long history but also changes the landscape of virtual studio production. FOX Sports chose **Reality Virtual Studio** to power its virtual set while covering the most popular spectator sport in the United States: **NASCAR**.

60' x 60' physical studio with 50' x 47' green screen zone transforms into a massive 360° area that take in the entire race track inside to follow the race real close-up. **Real-time data visualization tools** of Reality Virtual Studio enable the FOX team to showcase analysis of racetracks, cars and raceshops. With **augmented reality**, FOX team also hosts the complete set of race cars into the studio and even strip them to the single screw, offering unique insights to the fans.

Zero Density's real time node-based compositing platform enables the most photo-realistic production, giving FOX Sports team the tools to create **captivating and immersive content** for the audience in a 360° environment.



"The biggest thing ZD brings to the table is that realism that you need with a virtual set. They understand everything that goes into making these sets achieve that hyper-realism that's necessary to take production to the next level." said Zac Fields, SVP of Graphic Technology and Integration at FOX Sports.

FOX Sports employs 5 cameras, 5 Engines for each camera and 5 more Engines as backup. The real time visual effects are rendered by these engines for each camera view. The designers utilize 8 **Reality Editors** which is used to design the virtual studio, and other virtual content and effects that will go live on the show.

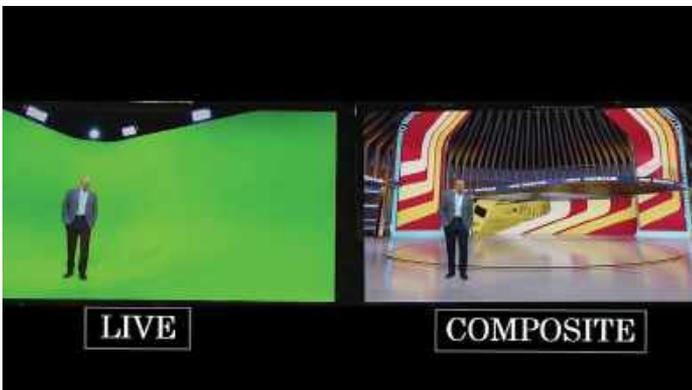
This pioneer set is used seven days a week in a daily show called **Race Hub** and on the weekends there are pre and post shows, wrapped around **NASCAR** programming such as NASCAR Victory Lane and a weekend edition of **Race Day** and **Race Hub**.



Reality Studio Configuration tool enables the FOX team easy navigation to load which project with which “.rgraph” (Reality compositing node graph) to any Engine. **Reality Studio Launcher** loads Reality-Studio-configured setups to 10 separate Engines at the same time with just one click. With **Reality Engine Monitor** the FOX operator team can oversee all systems pre, during and post show and intervene if necessary, from one screen. With **Reality Action Builder**, Fox Sports team can create pre-defined action items that will be used On Air. These action items can be an animation or graphics fed by **real-time data**.



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“Zero Density, built upon Epic’s Unreal Engine, offers the most powerful features in real-time graphics, empowering the creation of photorealistic environments.”

Chupinsky, **Senior Designer at FOX Sports** said that “Every piece of Zero Density’s pipeline is vital to achieving the profound **illusion of melding the virtual world with the physical**—from their robust and flexible handling of camera tracking and lens data, **powerful keyer, and compositing pipeline** to their nodal based setup, intuitive control application, and responsive and accommodating technical support. Zero Density, built upon Epic’s Unreal Engine, offers **the most powerful features in real-time graphics**, empowering the creation of photorealistic environments. An additional benefit to being built upon Epic’s Unreal Engine include the vast online community and training resources.”

Initially founded as an R&D company, ZD aims to identify the gaps in the industry and develop creative products to fill these gaps. The **disruptive product** of Zero Density is shaping the **future of media** with every new release of its **cutting-edge product** Reality.

More Best Practices

Zero Density & Riot Games

The world's leading virtual studio and augmented reality solution provider, Zero Density enabled Riot Games to bring the Elder Dragon to the stadium during the Opening Ceremony of 2017 League of Legends Championship in Beijing, creating a memorable experiences for millions of fans and players worldwide.

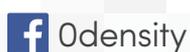


Zero Density & TF1

The biggest sport event of 2018 has reached a new level of reality with Zero Density's Reality Virtual Studio. France's most popular network and also the most viewed TV channel in Europe, TF1 adopted Reality Virtual Studio technology for its virtual set and reached new levels of reality, immersion and interaction throughout its program "Le Mag" World Cup broadcast. Set design by DreamWall.

Zero Density & Streamteam

Streamteam chooses Reality Virtual Studio to power its 4K/UHD remote production hub and virtual studio, marking one of the biggest broadcast investments in Finland. Zero Density teams up with Broadcast Solutions Finland to enable Streamteam to handle Finnish Ice Hockey League in their state-of-the-art virtual studio in Helsinki to be broadcasted by Telia. The set design is created by DreamWall.



www.zerodensity.tv