

FROM STREETVIEW TO THE BATTLEFIELD AND BEYOND

Immersive Media's 360° Viewing Revolution



Immersive Media began as a small, experimental camera system until creating arguably the biggest advance in geospatial mapping innovation of the modern era. The applications quickly expanded to the public, private and defense sectors. In recent years, Immersive Media has become an award winning digital production provider, with projects spanning the nearly all entertainment mediums around the world. The next chapter will begin to hone camera technology



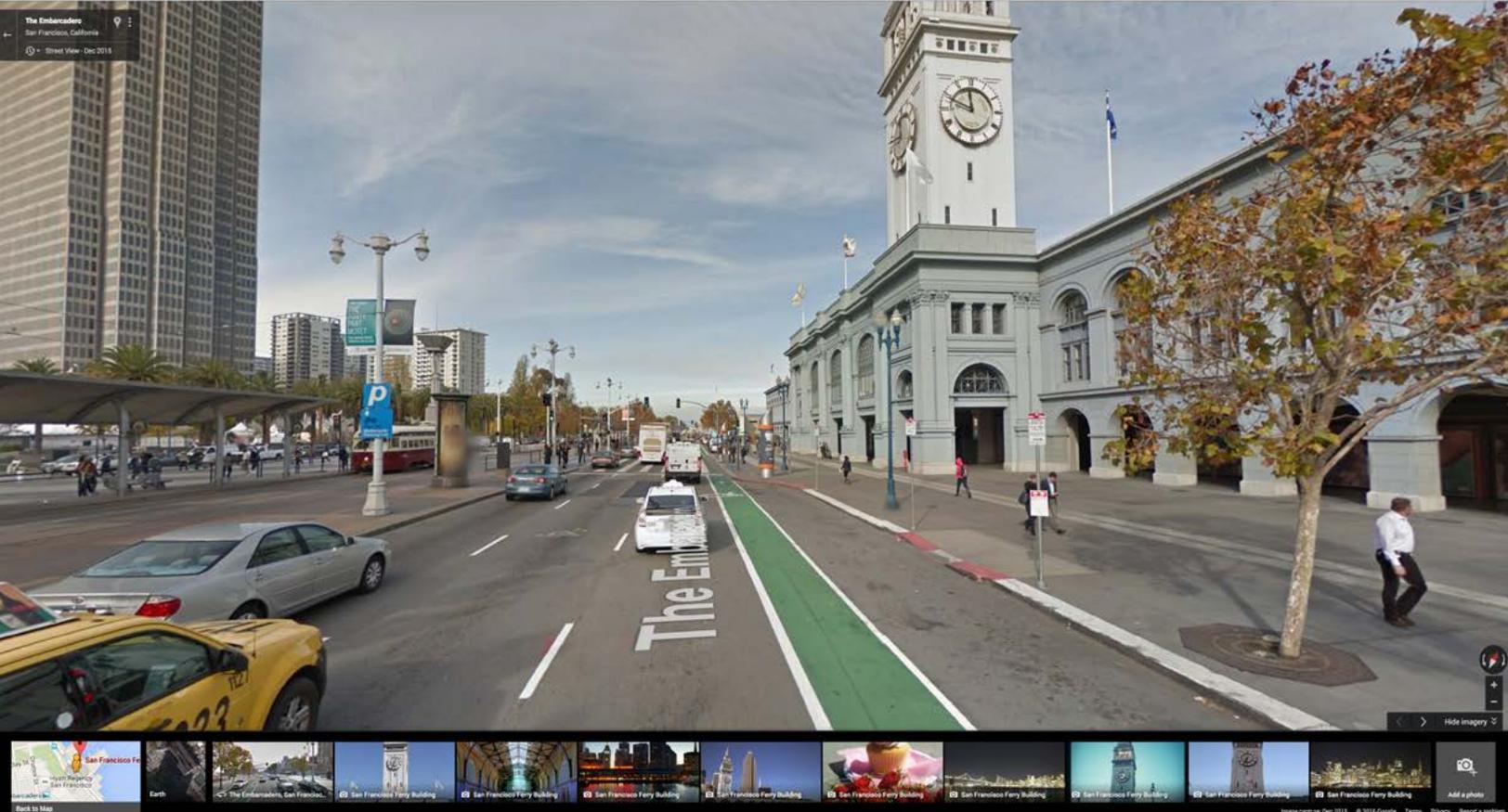
integration and lightweight software packages for virtually any application.

THE ORIGINS OF AN ERA

Just over 20 years ago, the world's first full-motion, fully immersive movie was revealed in Los Angeles by Immersive Media. This event took place at a bleeding-edge tech conference known as SIGGRAPH. That first video, created with a multi-sensor camera on a tripod filming kids playing basketball, would be the beginning of rapid change in how we consume video data. Visionary engineers began the challenging task of taking this technology to the mainstream, so that our video watching experiences could mimic the way we see the real world. The R&D efforts were tremendous, with Immersive being awarded 27 patents, with 464 claims and 347 citations.

Roughly a decade later, the organization emerged from a quasi R&D hibernation to launch its first 360° camera, the Dodeca. The first big undertaking to put it to use was an ambitious one: The Geoimmersive City Collection project. The purpose was to send Volkswagen Beetles adorned with Dodeca camera systems out to cities all across the US and Canada, collecting georeferenced video of major streets and roadways.

Soon, this "street view" video attracted the attention of some major technology innovators. Among those early suitors was Google, with a keen interest on rolling this unique video collection into their popular mapping platform. Thus, Google Streetview was born, touting 35 cities in its first iteration and amassing 75 million views in less than a week.



SKY HIGH PRICING FOR SATELLITE IMAGERY

In the early part of the 21st century, detailed geographical imagery was expensive and highly restricted to certain organizations. The vast majority of collection was limited to satellite data. Companies such as Microsoft and Google were paying millions of dollars to license the imagery in an effort to enhance their mapping platforms. Immersive Media's ground level mapping system, "a satellite on tires", could map a city for a fraction of that cost, in the low six figures.

Armed with this newfound capability, Google was set to leapfrog competitive platforms and curate groundbreaking new footage of our roads and cities. You could now virtually visit tourist attractions, a prospective neighborhood or confirm the location of a storefront business. This gave map users unprecedented access to the world around them and it's now the global benchmark for how we experience georeferenced video and still images.

BOOTS ON THE GROUND

It was not long before the US government took notice and began to look for ways to leverage this ability as well. The wars in Afghanistan and Iraq unveiled many logistical challenges, from unreliable or dated mapping information, to the inconsistencies of destroyed (or nonexistent) infrastructure.

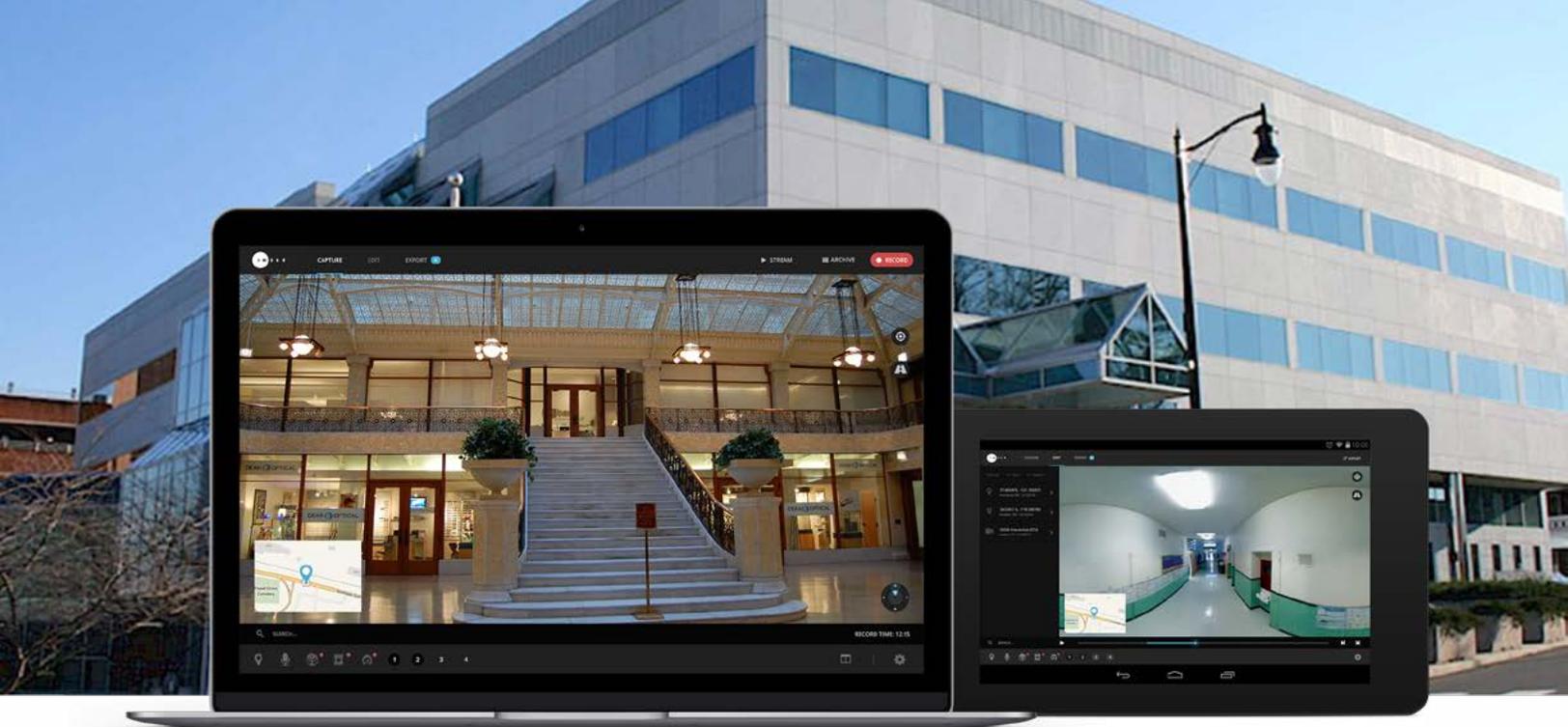
Some of the military leadership began to lament that technology back home was not being used appropriately on the battlefield. If a soldier's wife could use Streetview for accurate visual data from her home to the grocery store, why couldn't the soldier have the same luxury along a supply route in southern Baghdad? Immersive Media sensed an opportunity to package its technology for the hardscrabble terrain of the middle east and southwest Asia.

Utilizing an inventive deployment structure in partnership with Aegis security, ballistic armored SUVs were outfitted with Immersive Media's cameras & recording equipment.

Former special operations contractors oversaw the collection element of over 15,000 miles in Iraq and 5,000 miles of roadways in Afghanistan. These projects, respectively known as Project Tourist and Project Traveller, provided US and allied forces with a tremendous advantage in foreign terrain. Integrating the georeferenced video data into the military's Tactical Ground Reporting System (TIGR)

provided the warfighters with unparalleled access to visual information for





reconnaissance, targeting and forensic analysis.

In addition, this same technology was installed on combat vehicles in theater. The 360°, full motion video technology improved the effectiveness and understanding of the U.S. military's operations. With an unimpeded field of view, warfighter teams solidified their tactical superiority in dangerous urban environments while improving the safety of their soldiers.

In addition to aiding real-time missions, the videos also provided an invaluable record of events for post-operation analyses. They allowed key leaders to study high-risk environments, enemy tactics and allied responses from a multitude of angles and viewpoints. This intelligence was used for operational planning, as well as training and simulation purposes.

All told, this system helped eliminate blind spots along key transportation and supply routes. It improved the early detection of security breaches and persons of interest. It increased the efficiency and expediency of emergency responses. And it led to better critical decision-making before, during and after operations.

BACK ON THE HOMEFRONT

Home of wealthy industrialists and prominent pharmaceutical companies, Somerset County, NJ is often on the frontlines when it comes to public demonstrations and protests. And in today's heated and fragile political climate, public safety and response planning are more critical than ever.

Somerset County officials needed a way to acquire more detailed, accurate information of its facilities and infrastructure. It also wanted a better view and understanding of crime-heavy environments and "hotspots" where public demonstrations and events occur. Such information would help county leaders, planners and first responders improve emergency planning, crisis management, live event monitoring, crime surveillance, operations briefing and workforce training.

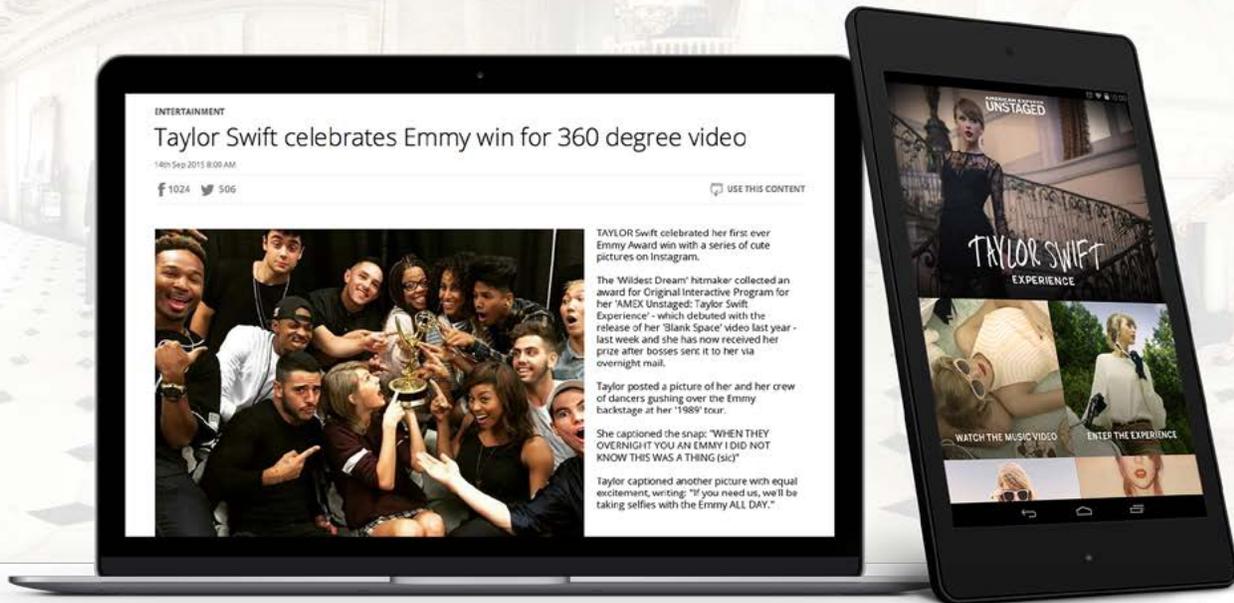
Only one question remained: how to acquire such an inordinate amount of county details and real-time visual information. Thus, Immersive Media's technology was deployed to provide useable intelligence on roads, critical infrastructure, key surveillance points and augment existing map data with integration to

ArcGIS and ESRI.

Immersive Media technologies aided SCPO on a number of fronts. 360° interactive videos of county facilities and infrastructure improved preventative security, emergency preparedness and tactical planning. With more accurate details related to chokepoints, access areas, evacuation routes and high-risk environments, county leaders can develop enhanced operational plans and make better, faster decisions.

Having 360° cameras in key hotspots helped monitor public events and crime activity. This not only gave an unparalleled, real-time perspective for first responders and law enforcement teams, it also aided the justice process. County prosecutors used the 360° videos in court proceedings as visual evidence, recreate crime scenes and portray key events. Jurors were virtually placed at the scene, with GPS coordinates and timing details to determine specific locations, distances or moments in time.

Somerset County officials also utilized the videos for training, simulation and briefing purposes. This gave its forces a real-world understanding of situations, locations and procedures before



operations commence. Perhaps the most surprising and welcome benefit of Immersive Media technologies was the reduction in operational expenses for curating digital data. Because the videos are captured once and in high-resolution detail, there was a tremendous money and time savings in documenting, analyzing, storing and accessing visual archives.

This made county planners, emergency responders, law enforcement teams and prosecutors more efficient in their day-to-day operations.

WHAT'S NEXT?

Since 2010, Immersive Media's focus has shifted to providing radical technological approaches to traditional mediums. This includes live events broadcast, real time,

in 360° to computers and mobile devices. Immersive Media captured its first Emmy win for the production of Taylor Swift's "Blank Space" app and music video. This was the first of its kind in the 30-plus years of modern music video production.

Immersive also entered into a joint venture with Digital Domain 3.0, in order to leverage the firms' complementary technology portfolios for the fast-rising virtual reality (VR) market. After one year of numerous achievements and successes, Digital Domain Holdings Ltd purchased Immersive Media, as the upstart carried a valuation in excess of \$90 million. Indeed, it had come a long way since those early days at SIGGRAPH and the numerous homebrew assemblies of 360° video & photogrammetry in the years since.

As part of a much larger parent company, Immersive Media is now embracing a new chapter. The US firm will now set its sights on the Situational Awareness market, bringing a next generation of software based mapping and video assets to the military, intelligence community and various entities within federal, state & local governments.



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