

Virtual Reality Storytelling

Spotlight on selected immersive experiences:
how broadcasters, brands and filmmakers embrace VR

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If 2016 was the year that virtual reality was in its infancy, then 2017 is the year in which VR is in its rebellious teenage years. Over the past two years VR technology and hardware have made it into consumers' living rooms, but content still remains hard to come by. It is now the time for content creators to experiment, to explore the boundaries and find out what works and what does not.

2016 was an important year for making virtual reality more accessible and affordable to consumers. With the release of new and more effective head-mounted displays, the VR market has been broadened, which invites storytellers from more traditional genres such as television, film, marketing and of course gaming to make use of the amazingly powerful storytelling techniques VR offers. Today VR devices come in all sizes; in January 2016 Oculus VR added a new headset to the PC-based VR market with the Oculus Rift, then in October Sony made VR available for consoles with the PlayStation VR headset and finally in November Google added a competitor headset to the mobile-based VR gear with its Daydream View headset. But VR hardware is only one piece of the logistical puzzle, as production companies and media agencies must not only figure out how to work with these new languages of VR technologies, but also how to collaborate with users in order to create truly immersive experiences that promise broad success.

Latest Developments in the VR Ecosystem

Although the high-end VR devices by HTC, Oculus and Sony seem to get more attention in the VR ecosystem, mobile-based headsets are still more affordable and available to consumers. At Samsung's press event at the Consumer Electronics Show 2017 in Las Vegas, Tim Baxter, president of Samsung Electronics America, announced that over 5 million Gear VR headsets have been sold to date. According to Samsung, consumers have viewed over 10 million hours of video, which confirms that mobile VR accounts for large amounts of the VR market. A further step toward a bright future for mobile VR is Google's decision to open up the Daydream VR platform to all developers. As of January 24, 2017 any developer can opt-in own applications on Google's platform as long as they meet all Daydream app quality requirements. This change will effect the VR ecosystem as more software options will be warmly welcomed by consumers.

To date there are numerous production companies and media agencies that consider VR a business opportunity. Not only startups are getting love from big media companies, but also well-known filmmakers and production companies hop on board and try to pull ahead in the VR content race, offering exciting new opportunities to all kinds of industries. Particularly TV has been able to benefit from VR-specialized companies that aim at making virtual reality mainstream. VR production studio Here Be Dragons, formerly known as Vrse, for example cooperated with numerous TV networks and channels such as FOX, Viceland and USA Network, to produce innovative narratives and wholly immersive experiences. Further young companies that cooperate with broadcasters and streaming services on a variety of immersive projects are the LA-based immersive media company RYOT, which was acquired by HuffPost in 2016, as well as the VR animation company baobab studios. But apart from cooperations with VR startups, many broadcasters also run their own VR studios, including Sky, Discovery and ARTE.

The Future of VR Storytelling

Over the past year immersive VR narratives have become more commonplace and audiences were able to step deeper into virtual worlds. In 2017 the Sundance Film Festival welcomed VR by introducing a VR film category. Sundance received over 300 film submissions. These offer glimpses of what the future of entertainment and storytelling might look like.

But one of the main challenges which VR content creators face is to find the right balance between viewer agency and narrative guidance, as viewers step into a 360° canvas and have the freedom to choose where to look. The most capturing experiences allow the viewer to interact and to gain a feeling of autonomy. In the most traditional sense of the term 'cinematic', audience interactivity and agency are not included which creates the need to redefine the term. But also storytelling in general has to be reimaged as immersive experiences embrace a new kind of spirit of creative invention. VR has made the possibilities endless and has created the need to make use of them and redefine storytelling.

The future of television, film and marketing narratives will be defined by these possibilities and needs. Virtual reality enables broadcasters and filmmakers to stress the urgency of social or environmental issues or to bring fans closer to their favorite celebrities, to let viewers see through the eyes of others and to take a leap into fictional worlds. Furthermore a new expression and interpretation of brand experience is enabled. As VR is still in its adolescence, there is no one-size-fits-all solution yet, which gives early adopters the power to experiment and unlock creativity.

And indeed, numerous production companies, broadcasters and brands have been very creative and innovative. Especially fictional narratives offer a wide range of possibilities to extend linear television. USA Network and FOX have presented fans with an opportunity to dive deeper into the story of their narratives by providing immersive VR experiences that function as prequels to their series. Fans get to know more about the characters' developments and preceding events that lead to the actual setting of the respective storylines. HBO on the other hand made use of the versatile possibilities by transporting fans of the "Westworld" series directly into the fictional world of the narrative's theme park.

Another opportunity virtual reality offers, is to connect viewers with foreign places and people, revealing either the beauty of floras and faunas all over the world or political and social grievances in various regions that are inaccessible to people of the public. ARTE and BBC for example take viewers to various environments that highlight the unique aspects of nature. In an ongoing long-term partnership Viceland and Samsung also aim to explore the possibilities of journalistic VR, which is examined in a variety of installments and projects.

With Live VR viewers are also enabled to participate in events they cannot actually experience. The 2016 Olympic Games in Rio had been an event of worldwide interest and relevance. A large number of broadcasters has seen this as a chance to engage viewers with the event, the country and the sports teams by offering 360° live coverage of various events at and around the Olympic Games. But also shows to which the public usually doesn't have access, like the Critics' Choice Awards, provide great opportunities to engage audiences.

One challenge broadcasters face when providing immersive experiences is bridging the gap between traditional linear TV and digital content. Many have tried to conquer this challenge by offering mobile apps that supply viewers with traditional as well as additional content. With the emergence of mobile VR, mobile VR apps seem to be a perfect fit. Various broadcasters have thus created and launched specific apps, that make VR content more accessible to the mobile-first generation. No matter which genre the content is assigned to, Discovery's documentaries, Sky's fictional narratives as well as the live sports events of FOX's programming, the VR apps make immersive content available and discoverable to audiences. This in turn leads the way for VR originals that are presented as VR exclusive narratives which would not work in a 2D setting. Syfy, Hulu and ARTE have presented audiences with unique narratives with interactive elements that demonstrate the truly unique possibilities immersive experiences offer. Whereas Syfy and ARTE released immersive installments that accompany other 2D projects, Hulu introduced two episodic formats that reimagine the boundaries of virtual storytelling.

But the distribution of VR content is yet another piece of the logistical puzzle. Besides dedicated apps and online platforms by broadcasters, the VR ecosystem also includes stand-alone VR platforms like Within and Jaunt. Over the past year, social media platforms like Facebook and YouTube have also welcomed VR by offering 360° videos. This swings doors wide open to brands in an effort to increase brand awareness. The three selected branded VR projects are either available on YouTube or on the dedicated apps. The showcases represent different possibilities of expressing brand experience: showcasing the product, impacting audiences emotionally or integrating brands in unique immersive experiences. Filmmakers on the other hand mostly distribute their projects via the stores provided by the headset producers themselves. The selected cinematic VR experiences created by a diverse range of media production companies is a mixture of animated experiences and immersive experiences made of real images. They explore the boundaries of this new medium and invite viewers to create stories of their own.

The following white paper covers selected storytelling experiences by broadcasters, brands and filmmakers. It is aimed at giving an insight into how narratives incorporate virtual reality. The cases show how VR has the potential to add more human emotion, interactivity and depth to storytelling and how the future of entertainment might look like.

Virtual Reality Storytelling

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BROADCASTER VR

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Broadcaster VR – Introduction

As consumers, we feel the burning desire to be part of our favorite series or show, to really step into the world and engage with our favorite characters. In the age of digital storytelling and social media, consumers have already been able to dive deeper into a show's environment or to be part of an international fan community. Virtual reality has opened up new possibilities of taking audiences even deeper into a narrative. Immersive experiences in VR enable fans to actually engage with these worlds in ways that were not possible before.

Apart from providing bonus stories and extended content for fans, virtual reality also has the potential to change and shape the television landscape in other ways. With a 360° surrounding, content creators must offer interesting visual components no matter where the viewer looks. This opens up completely new ways of how to construct visual narratives. Another factor that turns VR narratives into unique immersive experiences is the possibility of including interactive elements that require the viewer's participation.

Many broadcasters have already embraced the new possibilities and not only used VR to extend its existing programming, but also to bridge the gap between TV and VR and create stand-alone experiences. The following section is dedicated to some of the most innovative immersive experiences broadcasters and streaming services have released in the past months. Broadcasters and streaming services have found different ways of engaging fans with the worlds of fictional narratives by releasing exclusive companion pieces to a show in virtual reality or offering location-based VR experiences. Others offer live coverage of sports or concerts in virtual reality, which creates a feeling of being part of the event and offers new and other perspectives that traditional 2D live coverage cannot offer. For documentaries, VR provides broadcasters with great opportunities as well. Immersive docu-films can raise awareness for environmental or social issues in foreign regions, transport viewers to extraordinary places and even place them right into the middle of breathtaking landscapes or exceptional wildlife. To fully explore the versatility of VR, streaming services and TV channels have also created a variety of VR-exclusive Originals. In order to bundle these experiences, many broadcasters have launched dedicated apps for their VR content, which will be the subject in the final paragraph of this section.

MR. ROBOT VIRTUAL REALITY EXPERIENCE**(USA Network, Here Be Dragons)**

During San Diego Comic-Con 2016, USA Network premiered the "Mr. Robot" VR experience as a first-of-its-kind global VR simulcast. The channel made the content available in the US and internationally to anyone who owns a VR headset and downloaded the Within app.



However, fans had to watch it at a specific time because the content disappeared from the app immediately after the live broadcast. USA Network also hosted an event during Comic-Con at a San Diego baseball stadium with over 20,000 fans attending and gave out branded cardboards and headphones. Attendees of Comic-Con who missed the event could still view the VR piece at a Mr. Robot pop-up location and through a cooperation with Uber.

After Comic-Con, the experience was rolled out across multiple VR apps and platforms such as Within, Facebook 360 and YouTube 360.



Written and directed by showrunner Sam Esmail and starring protagonist Rami Malek, USA Network and Universal Cable Productions partnered with VR tech company Within and VR production company Here Be Dragons to create the content. The experience is a 13-minute, fully-scripted prequel which is more than an advertising piece or a gimmick, but actually one of the first extended narrative pieces of TV content for VR that is truly additive and adds depth to the show.

Virtual Reality Storytelling

Broadcaster VR – Fiction

The production team shot for two days in Coney Island and on the "Mr. Robot" set. Story-wise, the VR experience falls in sync with the third episode of "Mr. Robot" season 2, which aired the day before the experience's premiere.



Viewers step inside the world of "Mr. Robot" and experience a pivotal moment from protagonist Elliot's past. The experience offers an inside look at the character's backstory and is narratively working as a flashback. It focuses on a forgotten date that Elliot had with his former crush Shayla, which took place before the series begins and to which the audience has never been exposed to. The experience assumes that viewers are familiar with season one of the show, and if they are, the VR video and the backstory it tells are emotionally powerful.



However, to viewers unfamiliar with "Mr. Robot", the VR experience manages to raise interest and curiosity which could inspire people to check out why the show is so popular. Consequently, the experience both stands on its own as a self-contained 13-minute film, and also adds depth to the TV episodes.

Virtual Reality Storytelling

Broadcaster VR – Fiction

24: LEGACY - THE RAID (FOX, Here Be Dragons)

From the same production company behind the "Mr. Robot" experience comes 'The Raid', a virtual reality prequel to the latest "24" reboot "24: Legacy" from FOX. The VR film debuted on January 9 and is exclusively available at SamsungVR.com and on Samsung Gear VR headsets.



Roughly six minutes in length, the VR prequel is set nine months before "24: Legacy" begins: viewers are put in the center of a raid against the compound of terrorist leader Ibrahim Bin-Khalid. The mission, which viewers experience with lots of gunshots and explosions all around them, is led by Lieutenant Eric Carter and his team of Special Forces Soldiers. It is the culmination of a decade-long hunt for Bin Khalid. Viewers also meet CTU director Rebecca Ingram, who directs the mission.

Through the VR experience, viewers are therefore already introduced to the main characters and storyline of "24: Legacy", which deals with the aftermath of 'The Raid' in which terrorist leader Bin-Khalid has been killed.



At Samsung's flagship tech center Samsung 837 in New York, FOX and Samsung additionally hosted an advanced screening of "24: Legacy" on January 9. At the event, visitors could truly experience the VR prequel, since Samsung provided special stands with vibrating floors to simulate all the action.

WESTWORLD VR EXPERIENCE (HBO, Campfire, SapientNitro)

"Westworld" is HBO's new sci-fi drama about a Western-themed amusement park that is populated by lifelike androids dubbed 'hosts' and which caters to paying human visitors dubbed 'newcomers'. At 2016's New York Comic Con, which took place one week after the season premiere on October 2, HBO set up a temporary pop-up location including an immersive VR experience that allowed visitors to enter the world of "Westworld" themselves.



The entire 15-minute experience is designed for the HTC Vive and was built internally by HBO in cooperation with Campfire and SapientNitro. To take advantage of the unique experience, convention-goers first had to book an appointment at a booth in

the main NYCC building.

The booth was seemingly operated by Delos Destinations, the company behind the fictional theme park "Westworld". Metal cards featuring the appointment times were handed out to fans that were lucky enough to secure a slot. The actual experience then took place at a temporary pop-up location in NYC that was minimally furnished and designed to look like the "Westworld" arrival hall.

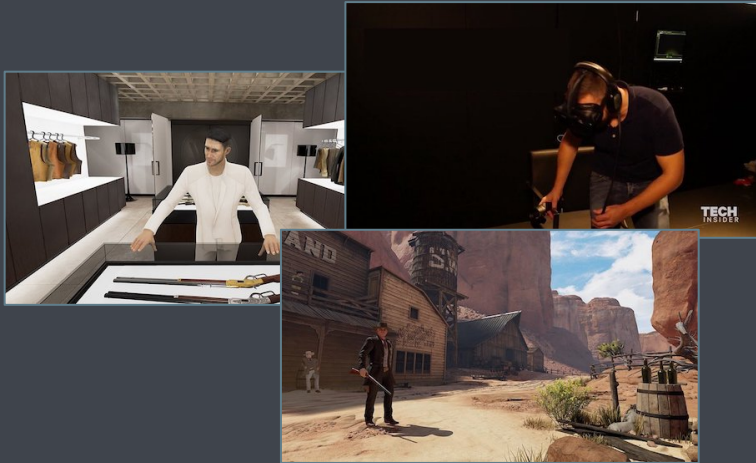


Visitors were welcomed by hosts, which were all dressed in white and fully in character since they behaved very 'robot-like', with robotic stares and typical polite behavior. Visitors then had to choose if they preferred a male or a female attendant to guide them through the experience. While being led down a hallway, which resembled the show's actual set, fans were asked if they were okay with an experience that includes flashing lights, violence, blood, and nudity.

Virtual Reality Storytelling

Broadcaster VR – Fiction

After having been set up with the HTC Vive in a separate room, the actual VR experience began: visitors found themselves in a gun and clothing shop. A virtual host remembered them that there were 'no rules' and handed them a previously chosen gun and hat. Next, they were virtually teleported into the Western-themed environment, which included several Easter eggs for those that have already seen the series' first episode.



The story of the VR experience took place about 30 years before the plot line of the TV series, before the park was accessible for the public. Visitors were still accompanied by the virtual host and got to shoot some bullets for a while. At some point of the experience, however, something didn't seem to go quite well and troubles occurred. The screen turned white and users were called upon to calm down and sit down on a chair, which was actually physically

there in the room.

From that point on, a 360 live action video started playing and viewers were virtually wheeled through the Delos Destination maintenance area.

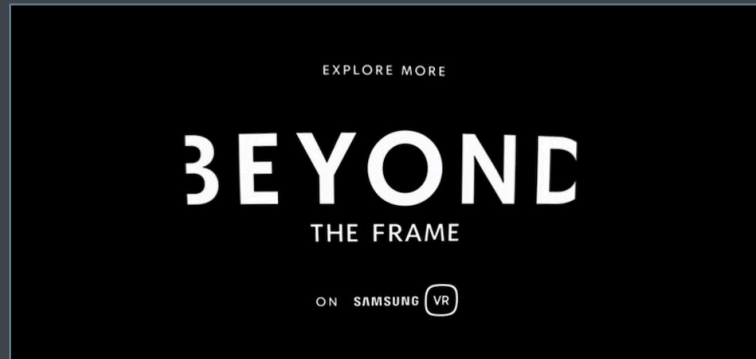


The live-action footage was shot on the actual set of "Westworld". In September 2016, HBO already took to the TechCrunch Disrupt in San Francisco to set up the same immersive experience.

BEYOND THE FRAME

(Viceland, Samsung, Within, Here Be Dragons)

Since late March 2016, Viceland partners with Samsung to produce new immersive virtual reality content in a program titled "Beyond The Frame". Together, the two companies bring exclusive VR content to their viewers and explore the future of VR storytelling.



The installments Viceland and Samsung have released so far are documentaries that cover a diverse range of topics and encourage viewers to connect with places and people all over the world. The experiences are available on either Samsung's virtual reality platform or on Viceland's online platform. "Beyond The Frame" is part of a larger collaboration between Samsung and VICE Media to integrate VR into journalism. Many of the VR experiences on Samsung's VR platform are therefore productions that are distributed by Samsung and Viceland, but produced in cooperation with VR media company Within (formerly VRSE) and the VR production house Here Be Dragons.

One of the first "Beyond The Frame" projects produced exclusively by Samsung and Viceland and powered by Oculus is titled "The White Helmets". The experience was shot with a Samsung Gear 360 and premiered on December 2, 2016 at samsungvr.com. It takes viewers into the war zone of Syria and follows the White Helmets, a voluntary group of civilian rescuers in Aleppo, as they dedicate their lives to save others in their war-torn country.

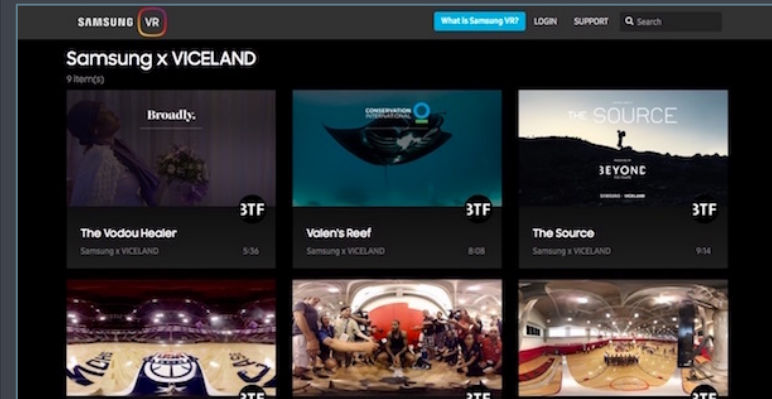
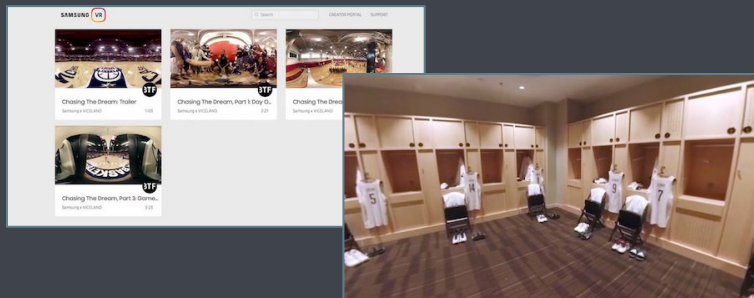


The documentary, which is roughly 6 minutes in length, not only includes short interviews with the White Helmets themselves, but also with those that work behind the scenes of the organization, like coordinators or people teaching safety measures.

Another exclusive installment from Samsung and Viceland is "Chasing The Dream", a documentary about the Olympic men's basketball team during their final weeks of preparation for the Games in Rio.



It premiered on August 17, 2016 on Samsung's VR platform as a three-part experience, with episodes lasting between one and four minutes.



Another "Beyond The Frame" documentary, "Inside The Story", shows how 360 videos and VR affect journalism and mainstream media. The three-part non-VR documentary is available at viceland.com. Other "Beyond The Frame" projects that are produced by Here Be Dragons are immersive documentaries such as "Valen's Reef", "The Source" or "The Vodou Healer", which focus on urgent environmental or social issues. These are also available on the Within app.

Virtual Reality Storytelling

Broadcaster VR – Documentary

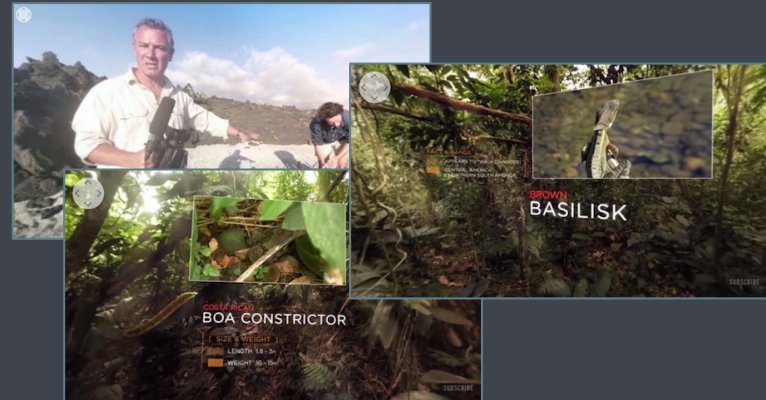
PLANET EARTH II 360 (BBC)

On November 6, 2016, the BBC premiered the much-anticipated nature documentary series "Planet Earth II", the sequel to the landmark natural history series "Planet Earth". Accompanying the on-air episodes, the British channel also released six 360° clips to take viewers on virtual tours to some of the locations that the "Planet Earth II" team has visited over the years.



Each of the six "Planet Earth II" installments is dedicated to different habitats on Earth - Islands, Mountains, Jungles, Deserts, Grasslands, and Cities. The immersive companion experiences were released either shortly before or after the on-air episodes and offer exclusive behind-the-scenes footage shot in 360°. The five-minute clips can be viewed on YouTube and BBC Taster and work best when played on mobile devices using Google Cardboard or similar headsets.

Narrated by the series' narrator David Attenborough, the VR companions take viewers to the Costa Rican Jungle, the canyons of Arizona or to the African savannah.



Viewers can get transported to a beach on Fernandina and watch the team film snakes hunting marine iguanas, or watch the crew track down a snow leopard in the Kashmir Mountains in India. Another experience explores an urban fox's point of view on his journey through the city at night and viewers can immerse themselves in his stroll through the city, finding food, spotting hazards and tracking down other foxes. Additionally, BBC released two audio soundscapes that immerse audiences into Mumbai at night and the jungle, two environments featured in "Planet Earth II". The audios are 360° soundscapes that can be streamed on BBC's website or downloaded via iTunes.

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Broadcaster VR – Documentary

EXPEDITION ANTARCTICA IN 360° (ARTE, Paprika Films, Neotopy)

"Expedition Antarctica" is a project launched by Franco-German broadcaster ARTE that included two documentaries, a video blog and a three-part virtual reality experience that follow Vincent Munier and Laurent Ballesta on their "Wild-Touch Antarctica!" expedition.



The two 2D documentaries, which also aired on TV, center on the extraordinary journey of the Antarctic emperor penguins. The virtual reality experiences follow the scientists and photographers on their expedition and transport viewers to the Antarctica. The three experiences were released on ARTE's website and within the ARTE360 VR app. Each experience is about five minutes in length and explores the overwhelming landscape as well as the penguin colony at different stages of the expedition.

The first 360 video shows the team's arrival at the French research station Dumont d'Urville and takes viewers on a breathtaking journey through the ice. The second experience takes viewers to the moment of the team's first encounter with the penguin colony. The final experience explores the penguin's leap into the sea from different angles. Viewers are transported to the edge of the pack ice, where the scientists watch the penguins dive into the water.



Afterwards, viewers are taken under water and can follow the penguins diving below the ice. The VR experiences were produced by ARTE France, French production company Paprika Films and the production studio Neotopy.

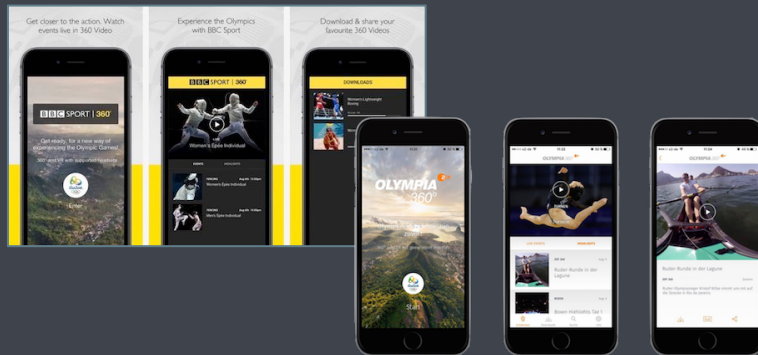
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Broadcaster VR – Live

OLYMPICS IN VR

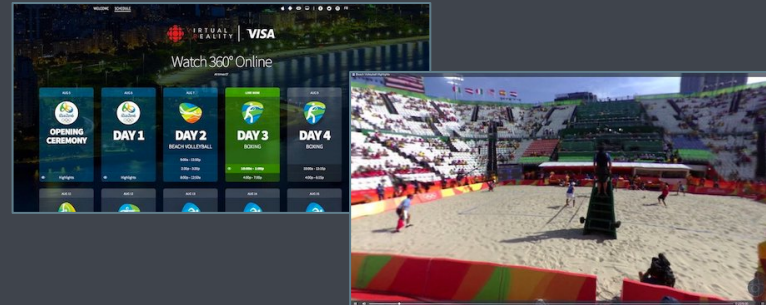
(ZDF, BBC, CBC, France Télévisions, RTVE)

For the 2016 Summer Olympics in Rio, several broadcasters around the world teamed up with the Olympic Broadcasting Service to offer over 100 hours of virtual reality coverage of Olympic competitions and events around the Olympics. The broadcasters, including the BBC, German public broadcaster ZDF or the Canadian CBC, each launched dedicated apps that offered viewers live and on-demand 360° videos of selected Olympic competitions.



The apps were available for mobile devices as well as Samsung Gear VR and/or Oculus Rift. Additionally, all 360° videos were available on their websites. The events covered in 360° often also included special events around the official games, such as the opening and closing ceremonies, highlights of the day or portraits of Rio's hotspots.

CBC had joined forces with Visa to provide the 360° coverage. Other broadcasters, such as the French and Spanish pubcasters France Télévisions and RTVE, also provided their own immersive impressions of selected happenings surrounding the Olympic Games.



France Télévisions released the 'e-Mag Rio 360', a daily interactive online magazine that included interviews with experts and French athletes from different sports, daily highlight moments as well as impressive 360° views of Rio and the Olympic venues. The magazine was only available at francetvsport.fr. RTVE launched a VR app for mobile devices and various headsets that provided viewers with 360° experiences of how some of the country's best female athletes trained and prepared for the Games. The VR experiences available at the 'Vive Río: Heroínas' app also included useful facts, statistics and general information regarding the disciplines presented in the videos.

CRITICS' CHOICE AWARDS VR EXPERIENCE (A&E, VOKE)

For the broadcast of the 22nd annual "Critics' Choice Awards", A&E teamed up with VR production company VOKE to provide live coverage of the event in virtual reality.



Viewers could watch the red carpet show as well as the actual awarding live on the VOKE VR app with Samsung Gear VR or Oculus Rift headsets, on the A&E app with mobile devices or on A&E's website as 360° videos.

The startup VOKE is specialized in the software and the production of immersive video experiences of live events. While the live broadcast of the awards show on television presented viewers with pre-selected perspectives, viewers of the event in VR were able to switch between different cameras.

The commentators were audible within the VR experience throughout the entire event. The red carpet show as well as the awards show are still available to watch in VR at A&E's website and within the apps.



VOKE and A&E had previously teamed up to let fans immerse themselves in a runway show of fashion competition series "Project Runway".

VR APPS BY BROADCASTERS

Apart from offering virtual reality content and 360° videos on their websites and on social platforms such as YouTube or Facebook, many broadcasters have launched their own VR apps over the past few months. Among them are Discovery and FOX Sports, European pay-TV channel Sky, Franco-German TV network ARTE, Australian pubcaster SBS and premium streaming service Hulu.



To provide viewers with easy access to all of their respective 360-degree productions, the apps are mostly available across multiple stores for various mobile devices and headsets. Some of the apps, like the Discovery VR app or the SBS VR app, also allow users to watch the 360° videos via Google Cardboard, whereas Hulu's VR app is only available for VR headsets.

The content available within the apps varies and is mostly a mix of extending show-related content and original VR productions. Users of the ARTE360 or SBS VR apps, for example, can immerse themselves in concerts, short films, shows, series and documentaries as well as a variety of experiences that accompany some of the TV content.

Discovery's VR app initially offered a collection of experiences that aimed at promoting some of Discovery's on-air and digital shows. It therefore includes behind-the-scenes clips from shows like "Mythbusters", "Gold Rush" or "Survivorman". A lot of content has been added over the past years and Discovery now also offers multiple original VR experiences – many of them in cooperation with brand partners. The same applies to Sky VR as the app includes 360-degree video content from sports, entertainment, news and art.

FOX Sports follows a different approach: the app lets viewers experience a range of immersive live sports events. Viewers can watch an event from inside a VIP stadium or choose from several on-field perspectives. The actual TV broadcast is also embedded in the experience, allowing users to watch the TV broadcast while exploring the VR live stream. Furthermore, users can move around to access different functionalities such as an interactive info console providing match-related statistics, rosters and schedules. Inside the video lounge, viewers are provided with a range of additional clips and highlights.

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Broadcaster VR – Originals

HALCYON

(Syfy, Secret Location)

"Halcyon" is an ambitious Virtual Reality project by Syfy, a network known for being at the forefront when it comes to experimenting with new platforms, technologies and storytelling trends.



For its groundbreaking collision of TV and VR, Syfy approached Secret Location, the digital studio that won VR's first Emmy award for its "Sleepy Hollow" VR experience, to create and produce the series. "Halcyon" is a futuristic murder mystery set in the year 2040 that explores the dark side of VR. It follows Detective Julie Dover, who investigates the first real-life murder to take place within VR. What makes the series innovative: the 15-part series consists of ten regular short-form episodes (which air on TV and online) interspersed with five interactive episodes in VR that take viewers deeper into the story.

For the five VR episodes, viewers need to download the "Halcyon" VR app for Oculus Rift or Samsung Gear VR (at a price of 9,99€). The VR app includes all 15 episodes, with the interactive parts allowing viewers to discover the evidence for themselves and helping the main characters solve the crime in the story. "Halcyon" is thus the first series of its kind that bridges the gap between just being a passive audience member and an active participant in the story. Users without a VR headset do not have to worry about missing anything as Syfy offers recaps of the VR episodes for those who are just watching the traditional episodes.

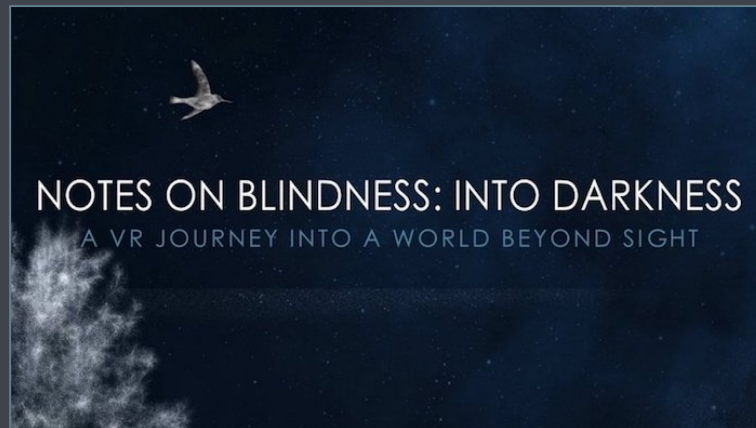


Given the premise and ambition of the series, Syfy also chose an alternative way to debut "Halcyon" by celebrating the international premiere in September on the immersive social VR platform AltspaceVR. People from across the globe (with the exception of the US and Canada, where the series premiered in December) could watch the premiere episode in a virtual room with other users and attend a Q&A with the creators, who were also virtually attending.

NOTES ON BLINDNESS

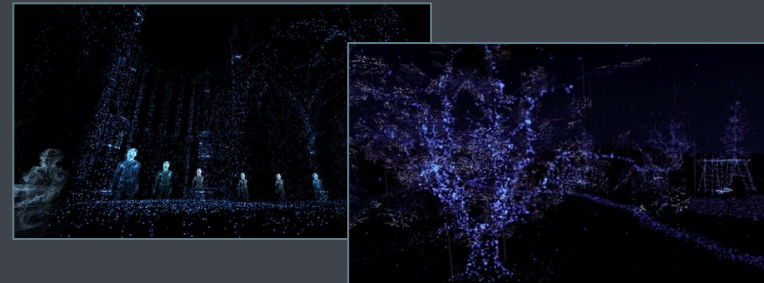
(ARTE France, Ex Nihilo, AudioGaming, Archer's Mark)

"Notes on Blindness" is an award-winning interactive VR journey into a world beyond sight. The project, produced by ARTE France, Ex Nihilo, AudioGaming and Archer's Mark, was unveiled alongside the premiere of the feature film of the same name it is inspired by.



The feature-length documentary premiered at Sundance 2016 and is based on an Emmy-winning short film. It documents the experiences of John Hull, who suffered through decades of gradual deterioration until he went completely blind at the age of 48. Hull had recorded his experiences in an audio journal, which documents his anxieties, achievements and his developments throughout the first three years of complete blindness. For the film, Hull and his wife have been interviewed while reflecting on their past. The documentary intermingles different

elements of storytelling and uses original audio recordings and cinematic interpretations to create a poetic and unique story of Hull's path.



The VR experience, available in French, German and English, is based on the cognitive and emotional experiences of John Hull. On their sensory and psychological journey into the world of blindness, users are taken to six different scenes which present special memories and moments Hull had experienced and recorded in his audio diary. His experiences are not presented with any real pictures, but rather as 3D animated figures of blue light. In combination with binaural audio, this creates an unique and overwhelming experience of a world without sight.

The project won the Storyscapes Award at the 2016 Tribeca Film Festival, the Alternate Realities VR Award at the 2016 Sheffield Doc/Fest and Best Online Project at Prix Europa. Since June 30, it is available on the Oculus Store for Samsung Gear VR and, since October, also for iOS and Android devices.

VIRTUALLY MIKE & NORA (Hulu, HuffPost RYOT)

Premium streaming service Hulu offers a variety of VR content from different production companies in the VR section of their Hulu VR app. Among them are 360° videos from National Geographic Channel, Showtime Networks, Discovery Communications, Baobab Studios and more, but Hulu has also started creating and releasing original VR series. One of them is the first sketch comedy series in virtual reality, "Virtually Mike & Nora", for which Hulu teamed up with immersive media company RYOT.



The five-episode series is available on the Hulu VR app for Oculus Rift, Samsung Gear VR and Daydream View headsets. The comedy series explores the possibilities of narratives in virtual reality by turning viewers into characters within the scripted sketches. In every episode viewers either find themselves as participants in sketches or as omnipresent voyeurs. One sketch for example puts viewers into the position of a passenger on an airplane, who is seated between a fighting and later reconciling couple. At some point, the flight attendant directs her questions to the unnamed

character, i.e. the viewer, thus turning the viewer into a character of the story. The audience is also a necessary part of the show's humor as viewers can't interact with the other characters and are unable to react when asked a question for example. All five episodes were shot with Nokia's 360-camera OZO and written, directed and co-created by Nora Kirkpatrick and Mike O'Brien.



Another original series Hulu released is the new virtual reality music series "On Stage". Hulu partnered with ticket company Live Nation to produce the immersive docu-series, which provides a look into the world of music artists and shows what inspires them on and off stage. The first episode transports viewers into the career and life of award-winning artist Lil Wayne. Apart from seeing him perform at Lil Weezyana Fest, viewers get a glimpse into his life off the stage by learning more about his personal passions and inspirations.



BRANDED VR

Virtual Reality Storytelling

Branded VR – Introduction

More and more companies flock to VR for their marketing campaigns and try to wrap their heads around the technology to figure out how to best use it for their brand. While we are probably still at the beginning of what will be seen and possible in the future, several brands have already found pioneering and creative ways to strategically use virtual reality and leverage the qualities of the technology.

VR offers huge possibilities for marketers and can significantly increase the engagement and awareness for a brand. VR experiences add a new and immersive dimension to advertising and marketing campaigns, offer a new and exciting way of storytelling, and can put viewers in the heart of a story. More importantly, they tend to be more emotionally impactful and intense than traditional media. This is backed by studies by YuMe and Nielsen¹ from November 2016, which have shown that brand experiences in virtual reality produce the highest emotional engagement and garner a 27% higher reaction in users than 2D content. On top of that, VR experiences are still relatively novel and therefore memorable for users - and potential customers.

We selected three examples representing the three approaches brands mostly choose for their VR-powered campaigns: demonstrate the attributes, features and functionality of products; sponsoring or integrating the brand in a powerful experience; or using the new way of storytelling to emotionally impact users and bring the brand's message across.

¹ <http://www.yume.com/news/press-releases/groundbreaking-virtual-reality-research-showcases-strong-emotional-engagement>

REIMAGINE

(Etihad Airways, The Barbarian Group, MediaMonks)

"Reimagine", created by tech-centered creative agency The Barbarian Group and produced by digital production company MediaMonks for Etihad Airways, is the first virtual reality film starring an A-list Hollywood actress. Directors Anthony Atanasio and Valerie Martinez chose a cinematic approach for the 5-minute feature, in which viewers join Nicole Kidman (who is Etihad's brand ambassador and had also been starring in a previous commercial for the company) as she travels from New York to Abu Dhabi and prepares for her latest movie role on an Etihad A380 flight.



Viewers follow the actress through each of the cabins on the A380, from Economy, Business and First Class to, lastly, The Residence, Etihad's three-room suite on board. On the way, viewers do not only see the aircraft's luxurious features, but are also introduced to

other guests on board, such as an opera singer and a falconer. Although a headset is not needed, the film is best experienced with a cardboard viewer or Samsung Gear VR, and can be watched on the Etihad VR app or YouTube channel.



Along with the VR experience, Etihad Airways also released a Making Of-feature. In the video, we learn that an Etihad A380 had to be grounded for three days in Abu Dhabi so the crew could shoot on the aircraft, which was fully customized to allow for the installation of a camera rail mounted to the ceiling of the plane. The Residence part of the experience, however, was shot on a sound stage for technical reasons: there was no way to rig the camera the way the crew wanted it to behave on the plane itself. At the point of the release in May 2016, "Reimagine" was one of the most progressive and technically correct 360° films through the usage of a high end camera with a high resolution and extensive post-production that resulted in an experience without seams, holes or flaws.

CAPTURING EVEREST**(Sports Illustrated, Endemol Shine Beyond USA, LIFE VR)**

"Capturing Everest" is a multi-part virtual reality documentary centered on four climbers on their ascent of Mount Everest. It is the first documentary of a complete climb of Everest in virtual reality and the first time viewers are able to experience it from a first-person perspective.



The ambitious project is presented by Time Inc.'s sports media brand Sports Illustrated and produced by Endemol Shine Beyond USA. The ascent took two months and was undertaken by a team of four expert mountaineers in April and May 2016, led by Garrett Madison, a six-time Everest summiteer. The production was a challenge not only due to the extreme and difficult conditions on the ascent, but also because neither of the climbers is a professional filmmaker.

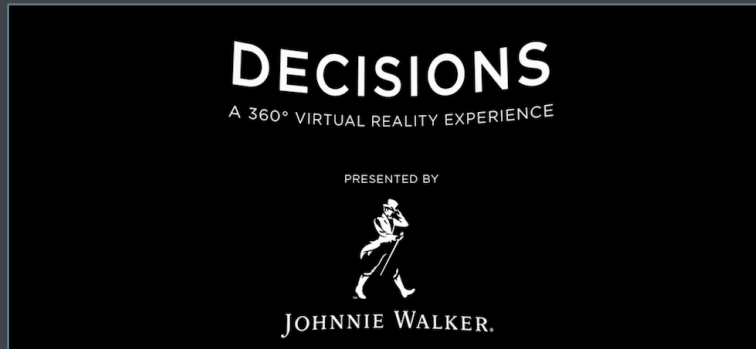
To capture the footage, the team's main equipment were a variety of GoPro VR rigs that were either stationary, body-mounted or rigged to zip lines. Since it was no typical production, the postproduction, which entailed combing through two months' worth of daily video, was very important.



Sports Illustrated debuted the trailer of "Capturing Everest" at the Sundance Film Festival 2017 in January. The production will be released in early 2017 (there is no exact date yet) on Time Inc.'s dedicated virtual reality platform LIFE VR and Sports Illustrated's digital properties in 360-degree video. On the LIFE VR cardboard app and Sports Illustrated properties the documentary will be available for free. The version for HTC Vive, Oculus Rift and Samsung Gear VR might be offered as paid premium. At the moment, Time Inc. is also still approaching other brands about sponsorships of the series.

DECISIONS**(Johnnie Walker, Samsung, VaynerMedia)**

In November last year, Diageo-owned whisky brand Johnnie Walker launched an intense and powerful VR campaign as part of its Join the Pact program, which urges consumers to stop drunk driving by having them take a pledge to never drive while intoxicated.



"Decisions" places viewers in the front seat of a fatal drunk driving accident and shows the devastating consequences one wrong decision can have. The four-minute 360° video weaves together three different stories of passengers in three different vehicles. In one vehicle, a woman receives a call telling her she is getting the job she wanted. She is offered to stop by a bar to meet her new colleagues, where she drinks a couple of beers to celebrate and bond with her new co-workers before getting back in her car to drive home.

In the second car, a young couple heads out to enjoy their first date night after the birth of their baby. In the third, three friends are on

a night out. The video cuts back and forth between the three vehicles before they eventually "meet" and the viewer sees the crash unfold in slow motion.



The experience can be accessed on YouTube, Facebook, and New York Times VR and was produced by digital agency VaynerMedia in cooperation with Diageo's Digital and Culture & Partnerships teams. It is also compatible with the common VR headsets, including Samsung Gear VR, Oculus Rift, HTC Vive, and Google Daydream. Diageo chose virtual reality to leverage the immersive qualities of the technology to directly and emotionally impact consumers. More user experiences utilizing VR technology are planned for the future.



CINEMATIC VR

Telling stories in VR not only concerns broadcasters and brands, but of course also traditional filmmakers. While the term cinematic VR covers a wide variety of high-quality, stereoscopic 360° video experiences (including most of the experiences featured in this whitepaper's previous sections), this section focuses on stand-alone narrative or scripted VR experiences. We are in the dawn of a new era in narrative filmmaking. Apart from the VR filmmakers experimenting with the technology since its early days, Hollywood and its key players also keep getting more and more interested in immersive VR and have started exploring the technology's creative and financial potential. Big companies such as 20th Century Fox and Disney and directors like Steven Spielberg and Guillermo del Toro have already been investing in VR projects or are involved in VR studios. And film festivals from TIFF over Sundance to Cannes all have incorporated VR into their programming. This is good and important for the nascent VR industry, as many experts estimate that the influence of Hollywood and traditional filmmakers will be critical for the technology to really lift off, with their content drawing in mainstream audiences. People need something - ideally a vast selection of compelling, high-quality content that makes a lasting impression - to make them want to buy VR headsets.

Virtual reality presents the film industry with new opportunities to tell a story, but the technology also reinvents the language and production process of filmmaking. Challenges include directing and maneuvering the viewer's focus to make them see what the filmmakers want them to see, or deciding on the degree of interactivity. Should the viewers simply be on-looking or feel like they belonged inside the narrative, creating an unparalleled connection between the viewer and the story? There are more and more experiments breaking the fourth wall or even making the viewer a character inside the film, which also raises the question of whether we are watching these films or playing them.

In this section, we included a selection of cinematic VR experiences that couldn't be more different, but that all cracked the code of VR storytelling in their own way. They show that beyond the masses of hacky short films that can be watched with a VR headset, there has been an evolution and arising new level of quality of VR films and experiences, which feel natural in the medium and represent an important leap forward for the industry.

MIYUBI

(Felix & Paul Studios, Funny Or Die, Oculus, Headspace Studio)

Another film that made its debut at this year's Sundance Film Festival is "Miyubi" by Felix & Paul Studios, the company's most ambitious project to date. With a length of 40 minutes, it is the longest VR movie ever made - more than twice as long as the majority of other cinematic VR experiences.



"Miyubi" is a scripted comedy (a genre VR has not really been known for in the past) and was written by Owen Burke, the editor-in-chief of FunnyOrDie. In the movie, the viewer embodies a Japanese toy robot that is given to an American boy for Christmas in 1982. Over the course of one year, the viewer becomes a part of the boy's family and gets an intimate look into their troubled lives. "Miyubi" includes multiple mini-plotlines involving each member of

the family, plus several easter eggs and hidden scenes (one of which features a cameo by actor Jeff Goldblum) that might encourage viewers to re-engage with the experience to find all of them. At Sundance, "Miyubi" managed to win over the crowd of filmmakers, as the film feels familiar because of its length, somewhat traditional scripted story and cast of "real", recognizable actors (apart from the cameo of Jeff Goldblum, veteran actor Richard Riehle appears in the film as the family's grandfather).



The film is considered a bridge between traditional movies and the world of VR in that it is demonstrating how conventional filmmaking skills can translate to making VR movies. "Miyubi" took six months to produce and was funded by Facebook's Oculus. Facebook will also have the exclusive rights to the movie, which is expected to be publicly released in late February or early March. It will be available on the Oculus Store for Samsung Gear VR and Oculus Rift.

DREAMS OF O

(Felix & Paul Studios, Cirque du Soleil)

At this year's CES in Las Vegas, award-winning virtual reality studio Felix & Paul released "Dreams of O", the latest VR experience in cooperation with entertainment company Cirque du Soleil.



Felix & Paul Studios again tapped filmmaker François Blouin to co-direct the 12-minute experience, which submerges viewers into an abridged version of Cirque du Soleil's 'O', an aquatic live performance show featuring acrobats, synchronized swimmers and divers. Viewers experience a dream-like, surreal aquatic spectacle consisting of dives, acrobatics, fire and bizarrely beautiful characters. Matching the innovative and jaw-dropping theatrical productions Cirque du Soleil is known for, "Dreams of O" takes virtual reality to new heights as the first 360 experience to feature and combine underwater and slow-motion shooting in VR.

The experience was shot over the course of three days and required Felix & Paul Studios to significantly modify their proprietary camera technology.



"Dreams of O" is currently available on the Oculus Store for the Samsung Gear VR, but there are plans to bring the experience to other VR headsets as well. In addition, Felix & Paul Studios plans to launch a dedicated Cirque du Soleil app for a variety of VR headsets, which will not only feature "Dreams of O", but also the two previous collaborative VR experiences, "Inside the Box of Kurios" and "KÀ The Battle Within".

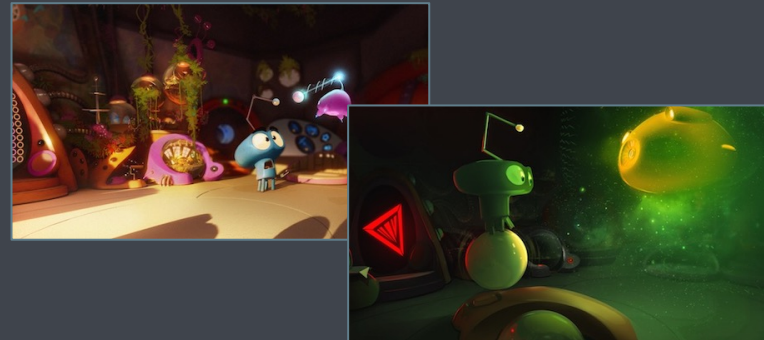
ASTEROIDS!**(baobab studios)**

Following the award-winning "INVASION!", one of the most-watched experiences on Samsung Gear VR and Oculus Rift to date, VR animation studio baobab studios released its highly-anticipated second production "ASTEROIDS!".



The 10-minute animated VR comedy brings back the two aliens Mac and Cheez from "INVASION!". In the second installment, viewers are again part of the story and this time take on the role of a helper-bot who is not taken seriously by its alien owners. At key moments of the interactive cinematic VR short, however, viewers have the opportunity to influence their relationship with Mac and Cheez. For example, when Cheez is accidentally knocked out of the ship, viewers can (but do not have to) participate in his rescue, which will change the attitude Mac and Cheez have towards the little robot

(i.e. the viewer). "ASTEROIDS!" therefore feels like a film because of its narrative experience, but also has game elements since the viewers are a character and the film runs in real time.



"ASTEROIDS!" was written and directed by Eric Darnell, co-founder of baobab studios and director of hit movie franchise "Madagascar". For the second episode, baobab studios also managed to bring another Hollywood star on board, with Elizabeth Banks lending her voice to alien Cheez (actor Ethan Hawke was the narrator of the first episode "INVASION!"). The second episode debuted at Sundance Film Festival 2017, where it has been an 'Official Selection'. "ASTEROIDS!" first becomes available on Samsung Gear VR, before also launching on other headsets.

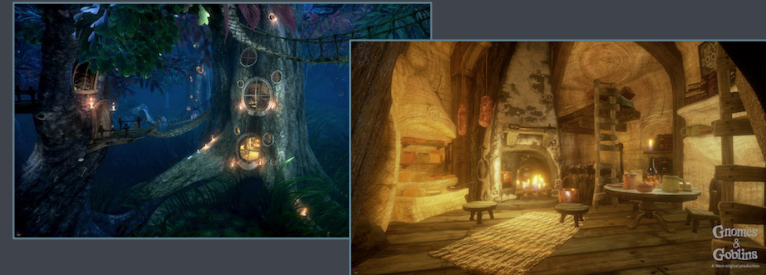
GNOMES & GOBLINS**(Jon Favreau, Reality One, Wevr)**

"Gnomes & Goblins" is the first VR project by director Jon Favreau, who is best known for films like "Iron Man" and "The Jungle Book". For his first leap into the new medium, the director partnered with immersive media content studio Reality One and virtual reality studio Wevr (whose underwater experience "theBlu" led him to the idea to also experiment with VR).



Rather than creating a passive cinematic VR experience, Favreau opted for a massive, interactive fantasy world that is pushing the boundaries of virtual reality storytelling. Viewers are immersed into a magical forest, which they can explore freely and at their own pace, including picking up objects and opening doors. But more importantly, viewers also interact and develop a personal relationship with the world's characters, the goblins. While exploring and experiencing the environment, viewers will notice a tiny goblin scurrying around. It reacts to the viewer in real time depending on the way they are acting toward him. How viewers

choose to interact with the goblin also determines where the story goes. The result is an experience somewhere between a game and a movie, which Favreau describes as close to lucid dreaming.



The experience was developed using Wevr's VR character AI framework and released as a free preview for the HTC Vive via Wevr Transport, Steam and Viveport in September last year. A version for Oculus Rift followed a little later. As the version currently available is only a preview, viewers can look forward to future updates that will offer more adventures and reveal more of the story. In the long term, Favreau wants to extend the world and for players to be able to develop ongoing relationships with the goblins and gnomes that will change and evolve over time. Fans, critics and experts alike shared their excitement about "Gnomes & Goblins", highlighting the breathtaking quality, beautiful design and incredible detail. Above all, the VR experience gives a glimpse of possible future VR evolutions, which allow viewers to step inside fictional worlds and build their own stories and personal narratives.

DEAR ANGELICA (Oculus Story Studio)

At this year's Sundance Film Festival, Oculus Story Studio, which already won an Emmy for its animated VR short "Henry" last year, debuted its new virtual reality film "Dear Angelica".



Directed by Saschka Unseld, the 12-minute film is an innovation in both its narrative and storytelling. Viewers find themselves inside of a daughter's mind (voiced by Mae Whitman), who lost her actress mother Angelica (Geena Davis) at a young age and is reminiscing about her late mother. The story of grief and loss plays out in a series of painted memories, with the scenes constructing themselves around the viewer as individual brushstrokes rendered in real-time. The heartfelt interactive viewing experience is unlike anything that has existed before and immerses viewers in a way that is not possible on a movie screen, but can only truly exist in VR.

To place viewers at the center as the daughter's words and memories unfold around them, "Dear Angelica" was entirely built within VR. Art Director and main illustrator Wesley Allsbrook used Quill, a creative tool developed by Oculus, to paint the dreams and memories of Angelica's daughter frame-by-frame and entirely by hand from the same perspective as the audience.



Oculus actually built Quill for the project, and the creative tool evolved with the artistic needs of Allsbrook. Quill is now available for free on the Oculus store and lets everyone create art themselves using the Oculus Touch controllers. "Dear Angelica" is exclusively available for Oculus Rift on the Oculus Store.

About VAST MEDIA:

Founded in 2010, VAST MEDIA is a Berlin-based media consultancy helping major international broadcasters, digital producers and creative agencies discover the best digital projects, social media campaigns and content trends around the world.

Among VAST MEDIA's products is VAST BUZZ, a unique B2B platform which features thousands of case studies of the most creative and engaging digital marketing campaigns for TV shows, online extensions, digital originals, VR productions and branded entertainment.

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