

# LIVESTREAMING SETS

In 2020, livestreamed events have increasingly taken the place of in-person experiences, offering a moment for connection with brands, performers and audiences across the globe. How should such events, which are primarily experienced through the flatness of a screen, be staged?

Words Ruth Lang



## **BILLIE EILISH, WHERE DO WE GO? THE LIVESTREAM, LOS ANGELES**

When Billie Eilish's international tour was curtailed with the arrival of Covid-19, Moment Factory joined forces with extended reality company XR Studios to create an hour-long, 13-song augmented digital performance. To regenerate – at least partly – the connection between audience and performer that's paramount for live events, the concert enabled online attendees to engage not only through sidebar chat functions, but by joining the artist on stage via a wall of fans' faces that appeared during the song 'Everything I Wanted'.

**momentfactory.com**  
**xrstudios.live**





We were only just beginning to accept the digital creep encompassing our professional and leisure time when Katy Perry performed ‘Daisies’ for the American Idol final back in May 2020. The set design literally tore apart the constraints of the blank studio environment she initially appeared to be performing in. Through the use of XR – or Extended Reality, in which a performance within an LED set is augmented in real time with a full digital landscape to extend beyond the physical limitations of the stage – Perry was able to interact live with the cartoon-edged world in which she became immersed. She was exploring the set in much the same manner as if it had been constructed, but with the additional freedom that it, too, could freely move around her.

Hailed as making television history, this live broadcast marked a seismic break with a previous reliance upon AR and VR technologies for digital performance. The advent of XR has accepted the limitations of the availability of hardware required for such experiences and instead reappropriated the foundational techniques in ways that enhance and open up new opportunities for our increasingly screen-orientated lives. The technology has developed rapidly over the past seven months, due to its capacity for the production team to work collaboratively on set while being remote from each other, using spaces and equipment that would otherwise be gathering dust. Yet it seems the opportunities it presents not just to emulate, but to enhance these events are here to stay, long beyond when vaccines might permit us to return to our in-person lives once again.

Livestreaming, and the opportunities afforded by XR in particular, are currently led by the music and fashion industries. The visual showcase is an essential vehicle to demonstrate their own creativity, and to generate press. In contrast to the necessarily blank, green-screen environments of AR that rely on postproduction and predetermined camera angles to effectively graft in a virtual context, the nascent technology of XR enables the performer to see, respond to and interact with their digital environment in real time, as seen on the LED walls around them. The movement of the film camera in the space is tracked by sensors and mapped via tools such as Unreal Engine, which then adjust the environment depicted, and provide a parallax effect. This makes the image appear to provide an immersive context for the performance. The resulting ability to explore the virtual environment in real time, as Perry demonstrated, differentiates XR from pre-recorded events, animation or video, with its predetermined outcomes and fixed camera viewpoints. Instead, it

offers a complete environment – with no ‘backside’ to the set, and nowhere to hide – that devolves the agency to drive the event from director to performer, and enables the performer’s creative response to their surroundings to be retained. As JT Rooney of Silent Partners – the designers and producers of Perry’s performance environment – explains, the live interaction this enables reclaims the immediacy of the ‘moment’ in livestreamed events.

The upshot, however, is that whereas once an event’s success hinged on the design of a singular, physical environment, the livestreaming paradigm forces us to consider three distinct yet interwoven domains. First, there’s the limited physical environment of the performance stage, then the limitless digitally animated environment framing the experience. Furthermore, there’s the liminal platform interface through which it is consumed by the audience. All of these must be embedded in the creative process for the event to operate seamlessly.

While seemingly infinite in the possibilities presented for what can be created, the design of spaces for XR still entails some surprising parameters to consider. The limits of the stage boundaries, as well as the physical size and resolution of the LED screen hardware, are as much a factor as the field of view of the cameras, and the server processing speeds (as the digital landscape is rendered in real time). The precision in the staging of lighting and shadow as if the performer were actually in the digital space is imperative. It also requires a certain amount of choreography so as not to interfere with the overlaid digital effects – to accidentally walk through digital walls, or to cast shadows – and thereby reveal the artifice of the animated context that is being performed in.

An additional consideration for livestreaming musical performance is the acoustics. While the performer might appear to be in a cavernous concert hall, for example, the »

#### S/S 21 PRADA WOMENSWEAR SHOW, MILAN

Freed from the spatial demands imposed by the presence of a live audience, AMO completely tailored the physical space for Prada’s S/S 21 Milan Show to its digital representation. Inside a 16 x 16-m cube adorned with curtains and carpets, a series of technological ‘chandeliers’ provided cameras for the audience’s viewpoint while adding to the decor.

oma.eu  
prada.com

Agostino Osio



Alberto Mancada







Grégoire Vaille



Courtesy of Louis Vuitton

sound from a flat – and unpopulated – studio environment is potentially hugely different. It is the performer’s choice whether they separate and process the audio or perform live (engineered in the same manner as for a gig – with the same issues that drum recording presents in a studio environment). However, developments in VR technology might yet provide continuity between the spatial design and the acoustic performance.

Another key parameter to consider is audience engagement. Ground-breaking in this regard was Billie Eilish’s livestream concert *Where Do We Go?* in October. Eilish’s planned international tour was curtailed after only three dates. Instead, fans paid \$30 a ticket for an hour-long, 13-song digital performance that brought the themes and environments of the tour to an XR stage. The event has proven to be a closely guarded, and truly ephemeral experience, with little to no web presence after the event – even less than if it had taken place in person. Its elusiveness has brought back the prerogative for being present, that ‘you had to be there’ – wherever ‘there’ might be. Such immediacy of connection between audience and performer is still paramount for live events – through the energy, scenery and the thrill of the immediacy of audience feedback this facilitates. Although the opportunity for gathering together for such events is currently lost, the urgency of fan engagement was key to the creative direction of Eilish’s event by Daniel Jean of Moment Factory.

He introduced the presence of audience – not only in sidebar chat functions and merchandise sales, but also at points enabling them to be present on the stage itself. These are relatively tentative moves of participation in livestreaming that are still lacking in comparison to their in-person counterpart. We are at present still lost in the crowd, without the ability to meet and interact on a more granular basis, to span the distance between the communal experience of an event and the intimate, interpersonal scale of a conversation.

The role and presence of an audience was also embraced by AMO (architectural practice OMA’s research counterpart) in its designs for the S/S 21 Miu Miu womenswear show in Paris in October. The designs acknowledged how the catwalk show offers the opportunity not only to see, but also to be seen, and to »

#### **S/S 21 LOUIS VUITTON WOMENSWEAR SHOW, PARIS**

With a guest list reduced to 200 for each of its two S/S 21 Paris shows last March, Louis Vuitton extended the experience for its virtual audience. Lining the walls – and in some places the floor – of the historical Samaritaine building, green screens featured extracts from Wim Wenders’ movie *Wings of Desire*.  
louisvuitton.com



generate the hype brought by the attendance of high-profile guests that is so essential to the industry. By integrating frames hosting webcams, the watching audience became part of the set. It gave the thrill and surprise of reintroducing the front-row experience, but denied – for now – others the opportunity to see the full outfits worn by the guests.

Shows created by Prada in collaboration with AMO have a longstanding history of livestreaming, but pre-corona experiencing the live event always held primacy. Architect Giulio Margheri, who leads AMO's work with Prada, notes how the spatial demands imposed by the presence of a live audience always used to drive the spatial concepts of their designs. But switching to a purely livestreamed format for the S/S 21 womenswear Milan show in September liberated these spatial demands. Instead, it presented a vital opportunity to evolve rather than replicate past formats, to reconsider the forms of introducing audience participation, and to reconceive the perception of space. OMA created the industrial Deposito space within Fondazione Prada specifically to provide a vastness and height for use in such events. However, the shift online elicited a desire to revisit the more personal, domestic scale of a traditional *salone*, increasing a sense of intimacy with, and proximity to, the collection. Tapping into a theme that Miuccia Prada described as 'exploring the relationship between technology, machine, and the girl', the resulting 16 x 16-m cube adorned with curtains and carpets brought a sense of the familiar to the spectacular. AMO introduced a series of technological 'chandeliers' that provided cameras for the audience's viewpoint along with screens for further details – acting as both medium and message. Unlike for XR, or for events where the audience is present, the limited point of view afforded by these environments liberates them from the need to be fully designed and constructed. The physical space is instead tailored to its digital representation, with the design having more in common with the parameters of scenographic or cinematographic space.

Will livestreaming or in-person events take precedence in the hierarchy of design objectives post-Covid-19? The general consensus is that both will continue to exist, the common ground being the need to accommodate human inhabitation. But livestreaming provides radical new parameters that have to be addressed in order to create meaningful and impactful experiences.●



#### KATY PERRY AMERICAN IDOL FINALE, LOS ANGELES

During the live broadcast of the 2020 American Idol finale, performer Katy Perry appeared within a cartoon-edged landscape that extended beyond the physical limitations of the stage. The XR-enabled set was conceived by Silent Partners Studio in collaboration with XR Studios as a reinterpretation of Perry's music video for 'Daisies', directed by Vallée Duhamel.

[silentpartnersstudio.com](http://silentpartnersstudio.com)  
[xrstudios.live](http://xrstudios.live)

#### ELLIE GOULDING PERFORMANCES, LONDON

Commissioned by and hosted on Vevo, three live performances by English singer and songwriter Ellie Goulding – shot in only one day in July 2020 – combined mixed reality with AR and XR set extension. Co-created by Mars Studios, Nocte, Pulse Films and more, the performances featured virtual environments that unravelled in real time, 'continuously shifting into place to frame cinematic moments of unimagined realities'.

[marsstudios.one](http://marsstudios.one)  
[nocte.co.uk](http://nocte.co.uk)  
[pulsefilms.com](http://pulsefilms.com)



## LIVESTREAMING market overview

- 01** Livestreaming technology has been around since 24 June 1993, when computer scientists based at Xerox PARC in Palo Alto, California, broadcast audio and film footage of a performance by a band called Severe Tire Damage in real time via the internet, to an audience reaching as far as Australia.
- 02** With the advent of coronavirus prohibiting in-person concerts, livestreaming is becoming a market go-to, with the platform Bandsintown hosting 28,000 livestreams between March and June 2020 for its 58 million users, according to *Rolling Stone* magazine. Emerging artists are key players here, with 76% of these streams produced by artists of less than 10,000 followers, though the costs involved in using XR limit its use to larger-scale productions at present.
- 03** When American rapper Travis Scott announced he would hold a 15-minute-long concert within Epic Games' *Fortnite* in April 2020, it was attended by an audience of 12.3 million concurrent players, while the livestreamed Bang Bang Con virtual show performed by BTS in June 2020 was viewed by an audience of 756,600, and generated between \$19 million and \$26 million in ticket sales for the single event.
- 04** Virgil Abloh's Louis Vuitton livestreamed menswear show hosted in Shanghai in August 2020 drew 95 million viewers across WeiBo, Douyin, Tencent and OOH, along with 3.3 million viewers on Instagram, 1.6 million on Twitter, 335,000 on Facebook and 84,000 on the Louis Vuitton website, according to Fashion United.
- 05** XR technologies worldwide were predicted to grow from \$18.5 billion in 2019 by 48.3% each year, reaching more than \$1,005.9 billion by 2030, according to P&S Intelligence. Increasing availability of 5G connectivity will enable richer XR events to be streamed more smoothly – Accenture PLC estimates 5G connections to reach 187.9 million in the US, 464.3 million in China, 102.8 million in Japan, 87.5 million in India, and 45.8 million in Russia by 2025.