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Virtual Expo: Creating Accessibility and Legacy

NOON SALIH: On September 2nd, 1666, a great fire swept through the city of London. It lasted four days and destroyed the bigger part of the city, changing the face of London forever. It took more than 30 years to rebuild the city. But how it used to be, remains nothing but a memory in the minds of its residents.

Three hundred and fifty years later, in 2016, Londoners and people from around the world were able to not only see what London may have looked like, but also follow the events of the fire and lend a hand in reconstruction.

This was made possible by the video game Minecraft. In collaboration with expert Minecraft builders, the Museum of London built a model of 17th-century London... and then burnt it all down.

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NOON SALIH: For those of you who are not familiar, Minecraft is a videogame that was released to the public in 2011. Basically a virtual lego, it is a space where 3D worlds are created and broken apart, using an endless number of blocks.

JAMES DELANEY: Hi, I'm James Delaney. I'm the founder and director of BlockWorks, which is a sort of design consultancy, which works inside the video game Minecraft.

NOON SALIH: "Blockworks" has been designing museums, galleries and educational institutions in Minecraft, based on the philosophy that people learn better as they play.

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James and his team worked on replicating Expo 2020 in its entirety within Minecraft.

JAMES DELANEY: That's exactly what our company does really; we have this amazing platform through Minecraft that allows people to collaborate from all sorts of different backgrounds, from different social, religious, political contexts to tackle the same design challenges together. And virtual environments like Minecraft allow us to do that.

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NOON SALIH: It is because of Minecraft and similar virtual worlds that more of our legacy — as human beings — could be preserved. It is because of this infinite, man-made space, that any of us can be anywhere at any time, witness the past or be in two places at once.

Those virtual worlds, and Minecraft is only one of them, are how every person on the planet can enjoy Dubai's Expo, wherever they are, through the different virtual platforms:

ALAA ALSHROOGI: VirtualExpoDubai.com, which is a website; the Expo Dubai Xplorer App; the Live@Expo virtual tours; the Minecraft offering, which is a two-pronged offering: one on the marketplace and one on the education edition. And of course these wonderful podcasts are part of the Virtual Expo platform as well.

NOON SALIH: This is Alaa Alshroogi.

ALAA ALSHROOGI: I'm Vice President of Immersive Technologies at Expo 2020, and essentially I'm Creative Lead on the Virtual Expo project.

NOON SALIH: Alaa and the Virtual Expo team oversaw the implementation and delivery of the entire Virtual Expo suite. Besides the virtualexpodubai.com website, which is a replica of the actual Expo 2020 Dubai, there's — as she just explained — the Minecraft game, a smartphone app, live online tours around the site, and this very podcast.

These platforms have become the core of our connectedness and how accessibility came to have a whole other meaning.

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ALAA ALSHROOGI: You can never really tell what's going to grab somebody's attention. So you try and create something as much as possible that different types of people at different moments in time will engage with and love. And then you put it in the world and see what happens.

NOON SALIH: And from here, the multifaceted Virtual Expo project came to life.

Wherever you are in the world today, you are invited to see and experience Expo in whichever virtual way you prefer. Whether you are a gamer, looking for content or just curious to explore the Expo site, we've got you covered.

I'm Noon Salih, and this is Inside Expo, an official podcast of Expo 2020 Dubai, where history is being made.

[INTRO STING]

ALAA ALSHROOGI: All of this began from the time of the bid. So the dream for a virtual offering was always there from a decade or so ago, when Expo 2020 Dubai was bidding for the World Expo. And in the understanding of what the Virtual Expo

would be was the idea of an augmented offering. So whatever the physical Expo was, we would augment it in some way.

Based on that, and driven by the fundamental principle of accessibility, we created the suite of offerings that basically works together as an ecosystem for virtual visitors to be able to access everything that the Expo has to offer.

NOON SALIH: And to deliver on that promise of an augmented Expo, Alaa and the Virtual Expo team worked with a talented group of young creators. Here's James Delaney again, who oversaw the Minecraft iteration of Expo.

JAMES DELANEY: A lot of the times that we see Minecraft in educational environments, it actually empowers the young people; [it] empowers the kids to take a leading role. So we have three lessons for each of the themes, each targeted at different age ranges. So there's quite a wide range of educational content there that deals on everything from sustainability to AI to sort of art and culture. But that's a really interesting resource as well. It's being used in schools around the world.

NOON SALIH: The Minecraft version of Expo is two-parts: a game version and an educational version. The educational version has lesson plans corresponding to the school curricula for students between six and 18 years old, divided into three age groups.

This was a joint effort between Blockworks and the Expo team.

JAMES DELANEY: We worked really closely with the Expo learning team and the school's program that they already have. We also employed educational consultants who are very familiar with curriculum standards around the world. I think one thing we tried to connect to was the UN SDGs, which a lot of school curriculums are looking towards.

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JAMES DELANEY: And it's not just people from Dubai, not just people from the UK; it's really people from around the world who are seeing this. And I think many of them will probably be discovering what Expo is for the first time, you know. Minecraft has quite a young audience at the moment. So a lot of these are sort of seven to 13 year olds who are probably learning about the World Expo for the first time, which is great.

NOON SALIH: As for the game version, it has the Expo map as its world. You're led by the three robot mascots of Expo: Terra, Opti and Alif. And when you solve a puzzle or unlock a treasure chest, your reward is a throwback in time to previous Expos.

ALAA ALSHROOGI: And we showcase three: the Great Exhibition, of course the Brussels Atomium and the Paris Eiffel Tower. These structures allow you to explore and understand that this is a very, very deep, very old event and allows you to kind of immerse yourself in those structures as well.

NOON SALIH: Another take on the immersive experience of Expo is available on the virtualexpodubai.com website. It brings the entire Expo at your fingertips in 3D... with all of the pavilions, exhibits and open spaces, designed with meticulous detail.

But how was a project this massive conceived?

NICOLAS MOIES-DELVAL: Analyzing site maps, every single pavilion where they were going to be located, how they were built, looking at architectural blueprints... So each pavilion, but all the rest as well. You have different booths, you have all the visuals, all the flags. For the new year we had fireworks. And so you have to make sure that visually it's great, breathtaking, and that people are really enjoying an

experience. But from a technical standpoint, it's got to be sturdy and it's got to be working.

NOON SALIH: This is Nicolas Moies-Delval, the Managing Partner at Dogstudio, the enterprise that developed the Virtual Expo website. Dogstudio was asked to replicate the physical site, which is twice the size of Monaco and has 200 pavilions, into a virtual experience that is as close to the real thing as possible.

NICOLAS MOIES-DELVAL: Expo is an amazing event, right? It's something that is breathtaking, but not everybody can travel. So the idea was to open that up to the world. And, in addition, to the people who were able to travel, to bring as many people from around the world to live the experience, as well as possible: discover the pavilions, be able to go around and to discover the content that is linked to each of those pavilions.

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NICOLAS MOIES-DELVAL: We're talking about architectural masterpieces, built by amazing architects from around the world, like the biggest names. Right? And so you can't just take a 3D file or receive it and then change it. No. That's also the thing... You need to respect the work that has been created and to pay tribute to what you're doing from a web perspective.

NOON SALIH: The first thing you see on the Virtual Expo website is a bird's eye view of Expo 2020 Dubai. You can choose to view the website in daytime or nighttime mode, and you can livestream events and performances taking place at any given time. You can zoom in and out, choose a district, or visit any of the pavilions.

This matter of accessibility was the impetus to this huge process. It is the very question that the Expo team kicked off the project with.

ALAA ALSHROOGI: I think the ultimate aim was accessibility: accessibility to the site, accessibility to the content within all of the beautiful exhibitions and the shows and the performances and the talks and the dialogues. There's so much that happens. Anyone in the world can connect with the themes and the learnings and the meaning behind the Expo, and what it's trying to share.

NICOLAS MOIES-DELVAL: From the get-go, it was a clear goal or KPI that we had with the Expo team, in general, that it needs to be universal. We need people from around the world, on virtually any device, to have access to it, no matter where they are. So from a 3D-perspective and a WebGL perspective, making sure that it is accessible and that it's not making your browser crash, or that it doesn't take 10 minutes to load. So that was a challenge, but an exciting one. And I think we managed to deliver it.

ALAA ALSHROOGI: The Virtual Expo is sort of our Meta experience. So it recreates the Expo site in its entirety and captures all its pavilions in 360 degrees. And these 360-degree tours allow you to look at, for example, an art installation on the wall or maybe a video, click on it and watch it more closely. Maybe you went through the pavilion very quickly and didn't have time to internalize these things. You can go back and visit on Virtual Expo and learn a little bit more. So there is a very deep re-creation of the site and all of its pavilions and all of its exhibitions.

NOON SALIH: One thing that is probably worth mentioning here, to give you a better idea of how massive this project is, is that your regular browser is not geared to view 3D files.

NICOLAS MOIES-DELVAL: A browser is originally not made to have 3D in it. It's not a PlayStation or XBox. And so we worked with 3D files, which were humongous, right? Like architectural files from pavilions, things like that. So, the number of

vertices and the textures were way too big; you cannot put on a browser because your computer will crash, plain and simple.

What we had to do is optimize every single one of those 3D files. So we had like a small army of 3D designers going back into every single one of those pavilions and then optimizing as much as they could, and transforming into the right format so that it could work into WebGL, so 3D for web.

NOON SALIH: And while the developers of the Virtual Expo website had a team dedicated to optimizing each 3D file, the Minecraft designers had a team flying over the actual Expo measuring the height of each pavilion, for an accurate replication of the skyline. And although in the Minecraft version, you get a pretty unerring duplicate of Expo, there are little things here and there that make the videogame experience out of the ordinary. James Delaney told us about one such thing.

JAMES DELANEY: One of the things that we built that you can't quite do in the real site, is you can actually swim through this sort of recreation of an aquarium environment. So one of the tasks is to kind of identify this species of coral that's going instinct. So you actually swim through this sort of tunnel of water with all these amazing fish and sea life and sea animals, and you've got to find and preserve these species of corals. So that's quite a fun part of it.

NOON SALIH: And in another quest, once you complete the hunt, you unlock a set of wings and fly around the site.

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ALAA ALSHROOGI: Experiencing the site in person is breathtaking, but experiencing the site in Minecraft is adorable, in a way that only people who play this game can understand. It's all blocky and nothing's perfect — like everything is a

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block and our blocks are, I think, a meter by a meter. And there's a wonderful silliness to the way the characters move that's clunky and adorable; you can't have that in the real world. There's a lot of very interesting characters at the Expo, but when the whole world is created in this mad sort of way, that's really, really fun.

MUSIC

NOON SALIH: Another virtual offering that adds an extraordinary dimension to the Expo experience is the Expo Dubai Xplorer App. A smartphone app that has on-site and off-site versions. The off-site version is another way for you to experience Expo from anywhere using your smartphone. But the on-site version is there to guide you through a more whimsical journey, if you do make it to the Expo site.

ALAA ALSHROOGI: The off-site experience feels like a video game. Actually, it was created in Unity, which is a video game engine. And all of the details of the site are recreated quite faithfully, but in this really magical, other-worldly style. So it's a little bit brighter in terms of the colors; it's a little bit... It feels a little dreamy. And then there's the on-site experience.

The onsite experience obviously doesn't recreate the site for you because it assumes that you're there in person. But what it does is it adds a layer, a digital layer on top of the site when you're there, usually in augmented reality.

NOON SALIH: So if you are walking around the site, your phone would buzz indicating a treasure chest that you need to look for, or that an Expo character wants to talk to you and show you around the site.

ALAA ALSHROOGI: And this was our way of kind of making the site, which seems quite large, a little bit more manageable, or a little bit more approachable through thematic threads.

NOON SALIH: Making the site manageable and helping visitors absorb the most out of the experience was the inspiration behind yet another virtual doorway to Expo: Tailored, guided live tours that take you around the site and inside the pavilions, and offer you a bit more information on the backstory of each pavilion. But what is even more innovative, is that audiences can engage with the show guides, ask questions, and communicate through the live chat.

Archival Recording
Excerpt from Live from Expo

Hayyakum Everybody! Welcome to another episode of Live@Expo. My name is Tschego Seakgoe and I will be your host this evening. We have another fantastic jam-packed show for you guys this evening. We are going to be visiting some exciting pavilions: Seychelles, Cuba and Brazil. We are going to be having exciting stops in between those pavilions and before we get started I want to remind you that this is an interactive show...

Back to the interview with Alaa Alshoroogi:

ALAA ALSHROOGI: The Live@Expo tours are on a number of different social media platforms. So they're on Facebook, YouTube, Twitch, and TikTok, and of course on Virtual Expo. What they allow you to do is to go with a guide into any pavilion and explore the interior of that pavilion, understand the journey by having somebody from the pavilion talk you through their thoughts and their intention.

NOON SALIH: In case you are wondering, those platforms are designed to remain on the web for as long as the web lives.

ALAA ALSHROOGI: Even the legacy of the project is in the design. So we know that these platforms will continue to have a life after the event has finished, because the knowledge and the learning and the themes, and everything that they encapsulate, will continue to be relevant. All of them are here; the events that took place here, the conversations, even the way that we were playing and interacting with an event like this is captured forever.

MUSIC

ALAA ALSHROOGI: Accessibility doesn't end when the event ends, in our case, it keeps going. And that sort of ephemeral nature of seeing the Expo in person.... maybe you've seen it in person, and so your reflections on the virtual site are a memory of a place. And maybe they're the only memory you have of this place and your only interaction with it. And they're still powerful, and they will persist for as long as we're able to provide them.

NOON SALIH: This enormous virtual ambition was based on very realistic facts. Alaa and the Expo team went through a mapping exercise, where they listed all the types of visitors who would come to Expo, and imagined how they would engage with it.

ALAA ALSHROOGI: What was interesting about that exercise is we looked at visitors not as personas, so not as a teenager or a mother or a traveler, but we looked at people as behavioral archetypes — so a knowledge seeker, a fun seeker. Because a teenager might be a fun seeker that eventually becomes a knowledge seeker two hours later.

NOON SALIH: And it was just as big a project for all the partners too.

NICOLAS MOIES-DELVAL: It is one…. I think it's probably our biggest achievement. So it is another milestone; it is another step into who we are as an agency, and the type of work that we can deliver.

Why Expo is so special to us is that, this is the biggest translation of who we are today. We'll still do these major platforms with a lot of content, but we do a lot…. I think we are renowned now as well for all of the more experiential platforms with a lot of 3D, and really pushing on the WebGL side and on the creative development side.

NOON SALIH: Nicolas also said that this is Dogstudio's most awarded project to date, winning the famous FWA people's choice award for 2021. Whereas for James, Expo 2020 Dubai was the largest project Blockworks ever built in Minecraft. In terms of scale, but also in terms of the ultra-intricate detail.

ALAA ALSHROOGI: All of these platforms required a lot of work. And I think the one wonderful thing about working with all of these vendors — and all of them are small and medium enterprises — the most amazing thing is the level of passion and dedication to what this could be, and now what this is.

So the details were important, and we would fret about the thickness of lines or the dialogue in a quest. All of these different vendors who come from very different backgrounds really put heart and soul into this. So yeah, we're very lucky to have worked with very passionate people.

MUSIC

ALAA ALSHROOGI: I'm very happy with the outcome. I think we definitely achieved our objectives of accessibility. I mean, we've had tens of millions of visits to the Virtual Expo website. So people have seen and enjoyed all of what Expo has to offer and explored pavilions and watched ceremonies. We have millions of

Live@Expo viewers, who a lot of them are wonderful, and they keep coming back and they keep telling us, "Thank you for letting me see my country pavilion, even though I'm in Nepal and I can't make it in person."

NOON SALIH: And I couldn't help but wonder, which of them is Alaa's personal favorite Expo virtual platform.

ALAA ALSHROOGI: That's not a fair question. It's like asking me who my favorite child is. I think, like our viewers, I probably have different favorites depending on the day. And depending on my mood, I'm not always in the mood for a playful show. I'm not always in the mood for exploring a website. I'm not always in the mood to look at augmented reality activations. But some days I really am. And I think we are also virtual visitors, even though we're the creators. We still spend time going through the site. So it's hard to pick a favorite.

MUSIC

NOON SALIH: While this episode was in production, the Live@Expo tours was nominated for the prestigious Producers Guild of America Innovation Award, alongside shows produced by big players such as Disney, Apple and Atlas V. The award will go to a new media program that innovatively elevates the audiences' viewing experience. The winner will be announced on March 14. Best of luck to the Expo 2020 Dubai team.

And here's one last fun fact for you. This podcast which you have been listening to for the past four months, is also part of the Virtual Expo suite.

ALAA ALSHROOGI: The purpose behind the podcast is really to pull in an ever-growing audience that is fascinated with audio and finds it to be the most approachable medium sometimes.

We wanted to offer three different podcasts for our listeners. One is this podcast, Inside Expo. But then we also have the People and Planet podcasts, and the People and Planet podcast allows us to share the thematic week learnings, and there are 10 thematic weeks, with audiences. And these are a series of talks that run over the entirety of Expo. And they're very much driven by the United Nations SDGs, the Sustainable Development Goals, or the Global Goals as they're also called.

And the last podcast is the Innovate with Purpose podcast, which is the Expo Live grant program. So the Innovate with Purpose podcast allows us to share the stories of global innovators that have come through the Expo Live program.

NOON SALIH: You can listen to all three shows, and all the past episodes of this show, Inside Expo, by browsing through Virtual Expo's very own website.

Inside Expo takes you behind the scenes at Expo 2020 Dubai, sharing our stories and others across the 170-year history of this global event. Learn more by visiting VirtualExpoDubai.com.

Inside Expo is produced by Kerning Cultures Network.

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