



ACCENTURE MEDTECH PODCAST

AUDIO TRANSCRIPT

Brian Bushlach, Boston Business Journal:

Extended reality, also known as XR, used to be discussed in the same hushed, reverent tones reserved for futuristic technologies. In the same way people used to talk about flying cars or robot housekeepers, they'd talk about merging the physical and virtual worlds.

Today with us, we have a panel of XR and 3D subject matter experts that will entice us on how XR is claiming back the basics - with 3D that is, like we live in real life.

Join me in welcoming Nathan King and Luciana Jaalouk from Accenture, and Jakrey Myers from Thermo Fisher Scientific.

Nathan King, Accenture:

Let's get right into it! What a pleasure to be discussing this topic today.

I know I'm not alone when I say I can speak to this topic for hours, but our goal today is to leave you with a clear overview of the exciting work we are doing at Accenture, with a highlight on a recent Proof of Concept co-created with Thermofisher Scientific. Not only that, but the work showcased also serves as the building blocks for the rest of our clients, including our internal Accenture network, which goes hand-in-hand with our long-term vision and thought leadership for how organizations AND consumers are shifting their behaviors when it comes to interacting and building with 3D.

A little about me I am a technologist, strategist and an architect and have been involved specifically with XR and emerging technology during my time here at Accenture.

I come from a varied past - as a startup founder, an application developer, and a platform architect with 25 years of start up experience prior to joining the Accenture team. During this time I've seen many cycles and phases of growth in various fields of technology: from nascent to broadly accepted.

Finding a framework for spotting the signs that point toward a future has been part of what has led me here with this team in this development effort. This future is one I refer to as a future of dimensional transformation – as we will start seeing 3-D and spatial content used in most ,if not all marketing, commerce, training, and entertainment. That future in mind I'm extremely happy to be here with my colleagues who see the same bright horizon & with that I'll pass it along to my colleague Luciana.

Luciana Jaalouk, Accenture:

Thank you Nathan for this great intro! My name is Luciana Jaalouk and I am a creative, strategy and delivery program lead, part of the XR Tech Innovation Practice at Accenture. As it goes for my story, I am a creative and artist at heart, I model and design for interactive and immersive 3D experiences on a daily basis, while marrying that with my engineering and rapid prototyping background. And so, being exposed to all these touchpoints goes hand in hand with tying in the user, the required strategy and storyline to adopt; which I usually say is my magical trifecta so to speak. This actually translates into a lot of fun problem solving for really complex industry and consumer challenges, like this one today, while making sure the human, psychological and behavioral aspect doesn't get lost in the abundance of all the new and fast-paced technologies we're forced to face. The purpose with my multidisciplinary role also comes with educating and increasing the understanding of this minute intersection between art, tech, data and psychology, which once branched out, presents endless possibilities for connections. And speaking of connections, I'll have Jakrey Myers connect the dots by passing it along to him.

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Jakrey Myers, Thermo Fisher Scientific

Thanks for having me today Brian, Nathan, and Luci! My name is Jakrey Myers and I lead product engineering and immersive technology strategy at Thermo Fisher Scientific. Over the last year, I have assembled a team of nearly 30 designers, developers, and product managers who collectively are building immersive applications for our business and our customers. This ranges from web3D experiences for configuring or demonstrating our products, mixed reality training for operations and field services, or the creation of digital twins that mirror our production facilities. My passion and interests are both broad and deep but I love learning about how I can help others realize their vision and I am particularly interested in emergence and coalescence of Immersive Technology with Artificial Intelligence. Its wonderful to be here today with you all!

I'll hand it back to Nathan to kickstart

Nathan King:

So, what is the problem we are solving for? We all know the XR market is rapidly growing with proliferating use cases for 3D content. Many Accenture clients are finding challenges when it comes to scaling around those use cases with the many applications in AR & VR, specifically in terms of surfacing, managing and reusing content.

In the past few months, Luci and I have led a 6 to 8 week research study where we have found pockets of success in content management systems that exist today -- that is considering 3D for specific use cases (be it retail, eCommerce, so on...), but clients are still encountering common pitfalls within the broader workflow, reuse, and collaboration for effective delivery of 3D content at scale, AND in multiple formats.

Luciana:

That's absolutely correct Nathan -- and more specifically, as we looked around the marketplace, we found multiple service providers building various portions and capabilities of what we would define a 3D content management system to be, that is -- a system designed to house, manage, deliver AND collaborate around this new form of dimensional media, the 3rd dimension. Existing 3D Content Management

Systems have made strides in the right direction; however key components are still missing for clients with large libraries of assets who need to deploy 3D at scale, specifically when it comes to anything related to cloud storage, security, workflows and reviews, as well as publishing for diverse end-experiences. So there are still various pain points across this workflow...

Nathan:

The recurring questions that we constantly hear come up sound something like this... Where do I save a 3D asset when I am done? How do I quickly get feedback on my asset, and from several people at multiple technical levels? Is there someplace I can look to find assets our team already built or browse through what we own? How do I create a new version of an asset from 3 years ago to use it in an experience I am creating?

These are just some challenges that we see ourselves and our talent deal with everyday... -- So to dig deeper, we took our 6-week market assessment a step further and kickstarted a joint venture between Accenture, ThermoFisher Scientific and Amazon Web Services in a collaborative & co-created Proof of Concept to define and develop the basis and working model of a content management system, specifically to house, organize and deliver dimensional 3D content at scale.

Jakrey:

Absolutely - we've been making tremendous strides internally at Thermofisher, and proving out the long-term efficiency and success is what we were after with the Accenture and AWS team; as well as having a teaser showcase of what an application or system could look like... With that work, we found that the ultimate goal within a few years' timeline is to enable everyone to become a creator, in other words to democratize the use and access of 3D assets across teams and organizations. AWS is a crucial player in the story as well, as they have the backend infrastructure to support the management of these assets in a easy-to-deploy, cost effective, and secure way.



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The true competitiveness factor revolves around having a serverless ecosystem that allows for microservice-based infrastructures and architecture to be re-used and re-surfaced, acting as a hub. As a result, we are able to provide inherent connectivity between our enterprise systems, our high-fidelity 3D data, and our human resources who can now collaborate in novel ways, rapidly solve problems, and gain new insights.

Nathan:

Having said all of that, when Luci and I were brought together with Jakrey to solve for this specific need, the three of us immediately understood each other and knew it was only the start of a much larger initiative that we are solving for... on the metaverse level if I may say so.

We led the work in a co-creative fashion with Jakrey and his team, which was crucial to developing a POC that met the needs of a real-world use case. AWS was building the blueprint for the backend, and as their solution solidified, the Accenture team started to develop the foundations, UX and Front-end, as well as the long-term business case and value proposition for our clients. ThermoFisher and their team of designers and developers were heavily involved in the User Research and Experience and provided critical review of design wireframes and feature prioritization. All three parties were involved and invested in delivering a foundational prototype within 6 weeks. There is a uniqueness to how we worked, and it is directly linked to the understanding of the uniqueness of 3D inherently, and Luci has a nicely structured way to summarize it.

Luciana:

Why is 3D so unique? Yeah so, from the content side, considering 3D and the assets themselves - The real challenges that make working with 3D so special and complex come down to three main elements.

First - Compared to regular 2D assets, say a video, an image capture, or even code, you are only ever dealing with one file that constitutes a final deliverable. With 3D, the asset is actually comprised of multiple elements that can, when re-usability is taken into account, vary each time ... that includes the geometry, the materials or wrapper, and the textures or surface variations at the very least, and in advanced instances, the animations and the scenes or environments the 3D asset lives in.

Secondly - There is a 3rd dimension to account for, and again this is obvious, but most systems are not built to properly support or visualize a z-axis. I may be able to see a view from one perspective but if I need to look at the back or bottom of the object - I'll need to request another view.

And thirdly - there is a need for it to be used in many applications and environments that vary in formats and requirements; that translates to 3D content having multiple "resolutions". For instance, let's take a relevant medtech example that applies to the world we live in today. Let's say you are building an application for a cryo-electron microscope training or review - a device as complicated as it sounds ha-ha. Essentially as Jakrey has described to us before, it is a room-size device that ThermoFisher uses to increase our understanding of the covid virus with 3D imaging of its structure. So this training experience or application will need, at the very least, two different levels of detail. One if it's being built for let's say, an immersive experience, and another for a marketing need. For the first option, if the experience is to be built for mobile or a standalone headset, then lower polygons and simplified textures will be needed. For the second option and if it is instead being developed for a 4K video render for so and so marketing purposes, then a maximum resolution with high-polygon count and very detailed textures & materials will be required.

To summarize, this all culminates into the hierarchies and structures of logic in the backend tying these assets together in a 3-dimensional front-end viewer, logic that needs to be stored and configured.



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Jakrey:

What could a system like this do?

Tying in to Luci's last point, the magic of building a platform that can and DOES solve for all the above is its ability to be hyper-modular and agnostic to all these variations.

What our partnership is solving for is the ability to provide a single source of truth for users, whether they be technical or non-technical, like marketers or sales or leadership, in order to reuse and power many experiences of all natures - be it showcases, training, visualization or even entertainment.

This system serves as the very basis and starting point of all of our media experiences in the future.

Additionally, and just as exciting, the re-use of assets across a wide range of use-cases and applications becomes a driving factor for competitive advantage, time to market, and cost savings. The content management system allows for seamless updates of 3D assets that are visualized across various applications. In fact, in many situations this will enable us to offer multiple solutions for different end users in different departments, at the same cost as a single application or use case.

Nathan:

Thank you so much Jakrey - We've just touched on the tip of the 3D content iceberg in this discussion... but we love to have conversations about the topic. 3D is one of our passions. We have evaluated over thirty "3D CMS" providers and can help guide you toward the right solution for your needs now and in the future whether it is this one, one of our many partners or something wholly new.

If there is one thing to take away from our discussion today, 3D is not a future-play; it's happening today and quickly becoming commonplace, and soon companies will have to scramble to catch up if they do not establish the correct groundworks; which luckily we can both advise on and build!

The journey from here is a centralized one, where product updates and reviews are dynamic and live, and where the focus is less about managing 3D but using it intelligently to focus on creating meaningful experiences AND transforming commerce, training, field operations, and most importantly consumer experiences.

Finally - if you are listening to this and want to continue this conversation, with either Luci & myself at Accenture regarding how we are helping clients overcome XR challenges or Jakrey at ThermoFisher regarding his great work implementing this from the ground up, we encourage you to reach out via our contact information on the landing page.