Podcast Name: *ACM ByteCast*
Episode: Neil Trevett - Episode 33

Welcome to the *ACM ByteCast* podcast, a series from the Association for Computing Machinery! The podcast features conversations with researchers, practitioners, and innovators at the intersection of computing research and practice about their experiences, lessons learned, and visions for the future of computing.   In this episode, host Rashmi Mohan interviews guest Neil Trevett. Neil is a pioneer in the world of computer graphics, Vice President of Developer Ecosystems at NVIDIA and President of the Khronos Group, a nonprofit consortium publishing open standards in a variety of computer graphics related areas. He has worked tirelessly to bring about standardization in the graphics world, giving developers the ability to extend and expand the capabilities of their visual systems. His work involved bringing 3D graphics to the web, creation of the GLTF format for 3D assets and , most recently, founding of the Metaverse Standards Forum.

To begin, Neil shares that he has been with NVIDIA for over 16 years now, where his work focuses on helping developers make good use of GPUs. Over the course of his career, he found himself becoming increasingly involved in standardization. In college, he became interested in the visual impact of 3D graphics and has spent the majority of his career in the field. Then, he unpacks the evolution of GPUs (computer evolutionary graphics) from his perspective. David was part of one of the few companies working in the field in the early days of computer graphics. Now, with the work of NVIDIA and the Metaverse Standards Forum, there is an opportunity to bring 3D via open standard to the new platform. Open standards are very effective in building businesses of all kinds. Touching on the additional need for innovation, most companies have a mix of proprietary and open standards. Thus, there is consistency across all three of Neil's major roles.

The right time to do standardization, Neil reveals, is when the technology is proven, pervasive and understood, but has become a bit of a frustration among a team. He clarifies that a well designed open standard doesn't hold a user back, but rather carefully chooses its level of abstraction and will only define the minimum needed to interoperate. Then, he unpacks how you can know you have the right team to develop an open standard. Expertise is key as you will need people who have experience implementing this technology in other places. The other vital ingredient is for the users of the standards to be present during the design process to ensure its capabilities are functional and useful.

Next, Neil explains how 3-D is changing the landscape of e-commerce and online shopping. While we know that 3D is an effective selling tool, it is difficult to have millions of products being generated to display these 3D objects. There are a motivated set of companies who really want 3D capabilities who have been helping companies to develop the software for it. Before wrapping up, he offers an overview of what the Metaverse actually is. For many people, it is simply seen as something bringing together multiple disruptive technologies in new ways. This will create opportunity and disruption on a major scale and will be accessible for all. Finally, he shares what he is most excited for in the field of technology in the coming years.

Key Takeaways:
0:29 - Introduction to today's episode and guest, Neil Trevett.
1:43 - Neil shares about his current role and what drew him to computer science.
5:17 - The evolution of computer graphics.
10:47 - The principles from Neil's day job to his other work.
21:31 - Recruiting teams for developing effective open standards.
27:14 - How 3D in E-commerce is changing the landscape.
33:35 - Including a diverse set of voices on Neil's standard committee.
37:32 - An overview of the Metaverse.
46:47 - Looking towards the exciting future in technology.

Links:
Learn more about [Neil Trevett](#).
Learn more about the Association for Computing Machinery (ACM) at [acm.org](#).
Learn more about the ACM ByteCast podcast at [acm.org/bytecast](#).

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