Why Meta's virtual-reality avatars are finally getting legs

October 12 2022

Facebook CEO Mark Zuckerberg smiles as he shakes hands with European Commissioner for Values and Transparency Vera Jourova prior to a meeting at EU headquarters in Brussels, Monday, Feb. 17, 2020. Zuckerberg, unveiled new new avatar legs at a virtual-reality event Tuesday, Oct. 11, 2022. Credit: AP Photo/Francisco Seco, File

Why is it so hard to build a metaverse avatar—a visual representation of ourselves in the digital world—that walks on two legs?

"I think everyone has been waiting for this," said a cartoonish digital version of Meta CEO Mark Zuckerberg, unveiling his new avatar legs and jumping up and down at a virtual-reality event Tuesday. "But seriously, legs are hard. Which is why other virtual reality systems don't have them either."

Early avatar models introduced by Meta, as well as Microsoft, have been ridiculed for appearing as legless, waist-up bodies floating around their virtual worlds.

That's in part because tech companies have been eager to show off their progress in building out virtual-reality environments while still working on the technical challenges of making avatars more human-like and realistic. Meta renamed itself from Facebook last year in hopes of jumpstarting its corporate transformation into a provider of metaverse experiences for work and play.

Zuckerberg described legs as "probably the most requested feature on our roadmap" and said they will be available soon on Meta's Horizon virtual-reality platform. He said the challenge is perceptual, involving how the brain—taking in images seen though a virtual-reality headset—accepts a rendering based on how accurately it is positioned.

Legs are harder to render accurately because they're often hidden from view.

"If your legs are under a desk or if your arms block your view of them, then your headset can't see them directly," he said.

Zuckerberg said the company has been working to improve how its

artificial intelligence systems track and predict where legs and other body parts should be moving.