KDDI, Telefónica, Mawari and Sturfee revolutionize online shopping with the 5G MEC powered XR Digital Twin Store project in alignment with GSMA Foundry Telco Edge Cloud (TEC) Trials Initiative

Barcelona, Spain, March 1st 2023 – Sturfee and Mawari, in partnership with KDDI and Telefonica, are proud to announce the 5G MEC powered XR Digital Twin Store, a new project aimed at demonstrating the power of XR technologies in creating a sense of co-presence and togetherness. The project will be showcased at the Mobile World Congress Barcelona 2023.

The project allows a shopper in a physical store to connect with a remote shop assistant through the use of 5G technology and augmented reality capabilities. Shop assistants can serve Spanish-speaking shoppers in a store in Ginza, Japan, with assistance from an operator in Spain, while Japanese shoppers are assisted from Tokyo. Mawari's decentralized 3D & XR content delivery platform "The Mawari Network" coordinates the service, connecting to the appropriate cloud rendering server for the XR-Tuber application.

Sturfee's Digital Twin platform enables retailers to create, host, and connect digital twin shops to physical stores. The key element of the platform is Sturfee's Visual Positioning Service (VPS) that connects the digital and physical spaces together and synchronizes user activities across spaces. Mawari's XR-Tuber captures operators' facial motions and voices, encoding them, and streaming them to the digital human's cloud rendering servers for lip-syncing, rendering, and streaming processes, providing a hyper-realistic 3D digital human avatar with low latency and high-fidelity.

KDDI and Telefonica provide low latency and high-speed network connections for seamless transmission of data, making the 5G MEC powered XR Digital Twin Store project a true showcase of the potential of XR technologies. To ensure certain Quality of Service (QoS)-level network connection, the project scope also includes testing and implementation for the Quality on Demand (QoD) API from the GSMA Open Gateway initiative.

The project is a testament to the innovative power of XR technologies and their ability to create a sense of co-presence and togetherness, even when individuals are separated by great distances. "We could confirm the power of XR technologies in creating a sense of co-presence: the feeling of being together in a place, despite being separated by great distance, by utilizing KDDI's and Telefonica's 5G edge resources," says Katsuhiro Kozuki, Head of XR Development Department at KDDI Corporation. "We would like to innovate life experiences and behaviors with 5G and technological evolution for age of Beyond 5G and 6G".

 "This is an amazing case that shows the great value of the Telco Edge Cloud when combined with 5G and advanced technologies like XR, Digital Twins or Virtual Positioning Services to deliver new ways of human communication and new tools for sectors like Retail, taking us closer to future scenarios like the Metaverse that are based in the connection of digital and physical worlds," says

Juan Carlos García, SVP Technology Innovation and Ecosystems at Telefónica. "It has been a great experience to work with our partners KDDI, Mawari and Sturfee to make this possible".

"We are thrilled to join forces with KDDI, Telefonica and Sturfee to harness the power of 5G and XR technology and create a new level of personalization and immersion for shoppers. By eliminating the barriers with the Mawari's real-time rendering and XR streaming SDK, we've enabled a real sense of presence, and also provided a more empathetic and personalized customer support that truly enhances the shopping experience." says Luis Oscar Ramirez Solorzano, Founder and CEO of Mawari.

"We are excited to see national operators like KDDI and Telefonica using our Digital Twin Platform to create, host, and connect digital replicas of stores to actual stores. It is amazing to see the beginning of a new form of immersive shopping services our platform can enable, easily integrating Mawari's XR Tuber service." says Harini Sridharan, Chief Technology Officer at Sturfee. "VPS is key in connecting physical and digital worlds to power such exciting co-presence experiences".

"We're very excited to complete this GSMA Foundry Telco Edge Cloud trial with KDDI, Telefonica, Mawari and Sturfee. This collaboration represents yet more innovation available to see at MWC Barcelona 2023, underpinned by the GSMA Open Gateway initiative and the Quality on Demand API. When coupled with 5G powered Telco Edge Cloud capabilities this trial enables truly innovative ways to shop; blurring the lines between the physical world and XR," said Henry Calvert, Head of Network, GSMA.

About KDDI Corporation
KDDI aims to provide new experience value by expanding and coordinating various life design services, including those related to commerce, finance, energy, entertainment, education, and healthcare, while focusing on conventional telecommunications services, such as those related to smartphones, cell phones, FTTH, and CATV. We dynamically provide services attuned to customer needs and market conditions through a multi-brand strategy that encompasses "au," "UQ mobile," and "povo."
https://www.kddi.com/extlib/files/english/corporate/ir/ir-library/sustainability-integrated-report/pdf/kddi_sir2022_e.pdf

About Telefonica
Telefónica is one the largest telecommunications service providers in the world. The company offers fixed and mobile connectivity as well as a wide range of digital services for residential and business customers. With more than 383 million customers, Telefónica operates in Europe and Latin America. Telefónica is a 100% listed company and its shares are traded on the Spanish Stock Market and on those in New York and Lima. www.telefonica.com

About Mawari
Mawari is a pioneer in Cloud Rendering and Streaming technologies. Our core technology has been validated in the market through repeated success in the XR industry with over 40+ deployments to date worldwide. The Mawari Network is a decentralized 3D & XR content delivery platform that breaks the bottlenecks of infrastructure supply for real-time rendering, and the lack of local

compute power on XR Devices. We do this by orchestrating a decentralized network of GPU-powered nodes that run the Mawari Engine, a proprietary technology stack that allows to render interactive 3D content and stream it efficiently in real-time to mobile XR devices at scale.

About Sturfee

Sturfee is a computer vision startup focused on creating metaverse-ready maps of the physical world that can be used for Augmented Reality, Digital Twin, and Autonomous applications. Mobile operators use Sturfee's platform to deliver immersive experiences for retail locations, venues and campuses; these experiences are available both as on-site AR content and as remote virtual mode. The key element of the platform is the Visual Positioning Service (VPS) to determine where a camera is looking in the real world; this enables persistent Augmented Reality content and shared presence across AR and VR modes. Sturfee's cloud service creates 1:1 large-scale city models and private 3D indoor maps using various datasets ranging from mobile phone scans, professional scanners, and satellite 3D data, and is tightly coupled with ubiquitous indoor-outdoor VPS service.

About GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

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