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Press Release

Paris, 21 September 2022

Deutsche Telekom, Orange, Telefónica and Vodafone together with MATSUKO implement a proof of concept of holographic presence as a simple phone call



- **Deutsche Telekom, Orange, Telefónica and Vodafone together with the deep tech company MATSUKO develop easy-to-use platform for immersive 3D experiences merging virtuality with reality.**
- **Advances in connectivity, thanks to 5G and edge computing technology offered by telecom operators, make it possible to achieve smooth and natural movement of holograms, opening up a range of possible use cases.**

Bonn/ Madrid /London/ Paris, 21 September 2022.- Leading European telecom operators Deutsche Telekom, Orange, Telefónica and Vodafone, together with the deep tech company MATSUKO, have conducted a pilot to make holographic calls as easy and simple as making a straightforward phone call by interconnecting their deployments so that their customers can join a common holographic communication session. The companies are also developing a platform that will combine the real and virtual worlds through a mobile connection, using a smartphone camera to generate a 2D video which is then rendered into 3D holograms in the Cloud to be streamed to viewers in an AR/VR/MR environment with a clarity and sharpness never previously possible.



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The trial platform uses the attributes of 5G connectivity (high speed, high bandwidth and low latency) to overcome some of the challenges in creating realistic 3D imagery which existed until now. Holograms are created using the selfie camera of a smartphone to capture and transmit a real-time three-dimensional holographic image of a person before processing through an advanced 3D rendering engine. It then delivers a 'virtually there' immersive experience and displays it in a virtual environment or overlays it onto a real-world setting, using virtual reality / augmented reality glasses.

Having successfully completed the first phase of the collaboration, the parties will continue improving the underlying technology, with a focus on quality of service. The parties are currently examining the potential for broadcast-like delivery, creating the possibility of entire events or presentations to be conducted virtually with stunning realism. Future applications could include person-to-person or 'few-to-few', enhancing communication in both consumer and business settings. Key to this realism is the use of mobile edge computing technology - so-called 'distributed networks' whereby network and application intelligence is operational further away from the network core - vastly improving both latency and bandwidth, which are essential to ensure the most vivid and reliable VR and mixed reality experience.

The results have been encouraging, thanks to 5G and cutting-edge technology. Previous network-related issues that impeded the smooth and natural holographic movement of the holograms have been resolved. Furthermore, MATSUKO's platform ensures that the end result benefits from better colour and texture resolutions, increasing realism when viewed on a smartphone or other mobile device and without the need for a video headset will enhance the immersive experience.

Alex Froment-Curtil, Chief Commercial Officer of Vodafone, said: "*The metaverse brings a new dimension to the future of connectivity, with exciting new experiences for communicating with friends and family, or even for businesses to connect with their stakeholders. This proof of concept moves holographic communications dramatically on from science fiction to real life smartphones*".

Daniel Hernández, VP Devices & Consumer IoT of Telefónica, commented: "*We are confident that in the near future, we will be able to offer our customers a new way of communicating, using this new holographic technology to deliver a more immersive "virtually there" experience. Our cross-operator collaboration with MATSUKO will help to accelerate this innovation and ensure that it works no matter which operator you choose*".

Karine Dussert-Sarthe, Executive Vice President, Marketing and Design, Orange Innovation, said: "*Thanks to this unique multi-operator collaboration, we are preparing our infrastructure to deliver open, interoperable and easy-to-use holographic communication services. A first but meaningful step towards immersive universes, a world in which Orange will support its customers with new experiences and interaction possibilities*".

Sven von Aschwege, XR Topic Lead Global Devices Partnerships at Deutsche Telekom, said: "*We are in an exciting phase where new technologies are emerging and with them new possibilities. Making phone calls as if the person I'm talking to is standing in front of me is one*



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such dream that is now moving closer to reality. We are testing these holographic calls together with other mobile communications companies. After all, they only really make sense if they work with everyone and not just with a company's customers".

Speaking about the trial, Matus Kirchmayer, MATSUKO's CEO said: *"The objective of initial pilot was to deliver a 'one-to-many' holographic experience with a virtualised broadcast approach that would enable an audience to see an individual present virtually – as a hologram – with stunning realism".*

About Orange

Orange is one of the world's leading telecommunications operators with sales of 42.5 billion euros in 2021 and 137,000 employees worldwide at 30 June 2022, including 76,000 employees in France. The Group has a total customer base of 282 million customers worldwide at 30 June 2022, including 236 million mobile customers and 24 million fixed broadband customers. The Group is present in 26 countries. Orange is also a leading provider of global IT and telecommunication services to multinational companies under the brand Orange Business Services. In December 2019, the Group presented its "Engage 2025" strategic plan, which, guided by social and environmental accountability, aims to reinvent its operator model. While accelerating in growth areas and placing data and AI at the heart of its innovation model, the Group will be an attractive and responsible employer, adapted to emerging professions.

Orange is listed on Euronext Paris (symbol ORA) and on the New York Stock Exchange (symbol ORAN). For more information on the internet and on your mobile: www.orange.com, www.orange-business.com and the Orange News app or to follow us on Twitter: @orangegrouppr.

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About Deutsche Telekom

<https://www.telekom.com/companyprofile>

About Telefónica

Telefónica is one of the world's leading telecommunications service providers. The company offers fixed and mobile connectivity services, as well as a wide range of digital services for individuals and businesses. It is present in Europe and Latin America, where it has more than 365 million customers. Telefónica is a fully private company whose shares are listed on the Spanish stock exchanges and on the New York and Lima stock exchanges.

About Vodafone



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Unique in its scale as the largest pan-European and African technology communications company, Vodafone transforms the way we live and work through its innovation, technology, connectivity, platforms, products and services.

Vodafone operates mobile and fixed networks in 21 countries, and partners with mobile networks in 47 more. As of 30 June 2022, we had over 300m mobile customers, more than 28m fixed broadband customers and 22m TV customers. Vodafone is a world leader in the Internet of Things (IoT), connecting around 160m devices and platforms.

We have revolutionised fintech in Africa through M-Pesa, which celebrates its 15th anniversary in 2022. It is the region's largest fintech platform, providing access to financial services for more than 50m people in a secure, affordable and convenient way.

Our purpose is to connect for a better future by using technology to improve lives, digitalise critical sectors and enable inclusive and sustainable digital societies.

We are committed to reducing our environmental impact to reach net zero emissions across our full value chain by 2040, while helping our customers reduce their own carbon emissions by 350m tonnes by 2030. We are driving action to reduce device waste and achieve our target to reuse, resell or recycle 100% of our network waste.

We believe in the power of connectivity and digital services to improve society and economies, partnering with governments to digitalise healthcare, education and agriculture and create cleaner, safer cities. Our products and services support the digitalisation of businesses, particularly small and medium enterprises (SMEs).

Our inclusion for all strategy seeks to ensure no-one is left behind through access to connectivity, digital skills and creating relevant products and services such as access to education, healthcare and finance.

We are also committed to developing a diverse and inclusive workforce that reflects the customers and societies we serve.

For more information, please visit www.vodafone.com, follow us on Twitter at @VodafoneGroup or connect with us on LinkedIn at www.linkedin.com/company/vodafone.

About MATSUKO

MATSUKO is the first creator of a hologram calling app that fills in that missing element in the existent ways of video conferencing - our presence. It brings people closer, improves relationships and successful collaborations while zeroing down the environmental impact.

Founded in 2017, MATSUKO builds a software-only solution that allows modelling people into three dimensions and transferring them in real space and in real-time. What makes it unique is the use of a single camera found in smartphones or computers. MATSUKO Holographic Presence helps to discover the future of communication today and experience real presence with hologram meetings.

For more information, please visit www.matsuko.com, follow us on Twitter at @MatsukoCompany or connect with us on LinkedIn at <https://www.linkedin.com/company/matsuko/>.