

## **QuintessenceLabs, Tech Mahindra and BT demonstrate an end-to-end video messaging solution secured by Quantum Key Distribution (QKD)**

### **Solution will be showcased at the launch of the UKQNetel Quantum Network**

**London, March 26th, 2019:** QuintessenceLabs, Tech Mahindra and BT are proud to showcase an end to end video messaging application secured by QKD. This work coincides with the announcement today of the launch of UKQNetel - the UK's testbed for Quantum Key Distribution (QKD). The new UKQNetel quantum network connects the Quantum Communications Hub at Cambridge to BT's Global Research and Development Headquarters at Adastral Park, showcasing UK's first practical quantum-secured ultra-fast network.

Unlike traditional encryption techniques, Quantum Key Distribution (QKD) is secured by the laws of physics so it will remain invulnerable to increasing computational power, new crypto attacks or quantum computers.

Tech Mahindra's Makers Lab has developed a quantum encrypted peer-to-peer video communication and file transfer application. Makers Lab is the research and innovation arm of Tech Mahindra. The WebRTC solution works by creating a secure room to enable peer to peer WebRTC communication that is secured with keys provided by the QuintessenceLabs' qCrypt Key Management Server. Once the key is synchronized and any communications thereafter are encrypted and un-hackable. The world where quantum and physical collide has a potential to disrupt not just communication on an encrypted plane but the way Artificial Intelligence (AI) would be used.

Mike Ashwell, Head of UK Makers Lab said that "Tech Mahindra is delighted to be working with BT and QuintessenceLabs in Quantum technologies and whilst this project in the early stages of development, the commercial opportunities are immense, it's a very exciting time to be getting involved".

QuintessenceLabs' provides core technology, as well as the key management solution, qCrypt. This is the glue that brings together the underlying technical QKD system (which pushes the quantum keys upwards into qCrypt) and the application layer on top (which consumes the quantum keys). The separation of these layers has enabled for example Tech Mahindra's video application to be developed without any dependency on the underlying QKD system, demonstrating how this advanced technology can ultimately be used. The only interface for Tech Mahindra was an integration based on the KMIP standard to QuintessenceLabs' key management server.

"Quantum communications will deliver the highest level of security, keeping our sensitive data secure from sophisticated attacks including those from quantum computers" stated Dr. Vikram Sharma, Founder and CEO of QuintessenceLabs. "QuintessenceLabs is delighted to participate in this ground-breaking deployment which will demonstrate the power and value of quantum key distribution to future users."

Andrew Lord, Senior Manager of Optical Networks Research at BT said "We are thrilled to work with QuintessenceLabs and Tech Mahindra on the development of this application – made secure by quantum keys. The success of quantum security rests as much on secure applications as it does on the underlying physics, because the applications make the physics useful."



### **About Tech Mahindra**

Tech Mahindra represents the connected world, offering innovative and customer-centric information technology experiences, enabling Enterprises, Associates and the Society to Rise™. We are a USD 4.9 billion company with 121,840+ professionals across 90 countries, helping over 935 global customers including Fortune 500 companies. Our convergent, digital, design experiences, innovation platforms and reusable assets connect across a number of technologies to deliver tangible business value and experiences to our stakeholders. Tech Mahindra is the highest ranked Non-U.S. company in the Forbes Global Digital 100 list (2018) and in the Forbes Fab 50 companies in Asia (2018).

We are part of the USD 21 billion Mahindra Group that employs more than 200,000 people in over 100 countries. The Group operates in the key industries that drive economic growth, enjoying a leadership position in tractors, utility vehicles, after-market, information technology and vacation ownership.

### **About BT**

BT's purpose is to use the power of communications to make a better world. It is one of the world's leading providers of communications services and solutions, serving customers in 180 countries. Its principal activities include the provision of networked IT services globally; local, national and international telecommunications services to its customers for use at home, at work and on the move; broadband, TV and internet products and services; and converged fixed-mobile products and services. BT consists of four customer-facing units: Consumer, Enterprise, Global Services and Openreach. For the year ended 31 March 2018, BT Group's reported revenue was £23,723m with reported profit before taxation of £2,616m.

British Telecommunications plc (BT) is a wholly-owned subsidiary of BT Group plc and encompasses virtually all businesses and assets of the BT Group. BT Group plc is listed on stock exchanges in London and New York.

For more information, visit [www.btplc.com](http://www.btplc.com)

### **About QuintessenceLabs | [www.quintessencelabs.com](http://www.quintessencelabs.com)**

QuintessenceLabs is a global leader in quantum-enhanced cybersecurity solutions. Our products provide the strongest protection for data wherever it is, integrating quantum technology with high-value security capabilities. These include the world's fastest true random number generator, a high performance key and policy manager, and integrated encryption solutions, as well as advanced quantum key distribution capabilities, to keep organizations secure today and prepared for tomorrow. The company is headquartered in Canberra, Australia.