Press Release

GLF demonstrates how blockchain can transform inter-carrier settlement

ITW Global Leaders' Forum Proof of Concept shows how blockchain-enabled settlement between multiple carriers can revolutionise wholesale telecoms by streamlining complex transactions

London, UK, 23 October 2018: ITW Global Leaders' Forum (GLF) has announced the successful completion of a multi-lateral blockchain Proof of Concept (PoC) involving several of its members. The PoC, led by Colt Technology Services and PCCW Global, in partnership with BT, Orange, Telefonica and Telstra, has demonstrated the viability of a platform that can settle voice transactions between multiple carriers in minutes rather than hours.

The breakthrough is the latest in a series of blockchain PoCs carried out by GLF members and supported by technology partner and blockchain specialist Clear. The trial just completed is the first to involve a multi-lateral series of relationships among the wholesale telecommunications industry, and points to a future of secure and frictionless settlement across the sector.

The GLF is now reviewing options around a potential governance structure to develop the technology further and implement a solution for the industry that replaces existing and cumbersome processes for settlement of voice as well as other types of transactions, examples such as mobile roaming or data on demand.

Carl Grivner, Chief Executive Officer of Colt, said of the latest PoC: "Following the successful trial with live data by Colt and PCCW Global, it was an important next step to prove the use case for blockchain technology in our industry by repeating it with multiple carriers.

"This latest PoC signals nothing less than the future of telecoms, whereby intensive manual practices can be securely automated across the wholesale ecosystem. This is a major step forward by Colt and its partners, meaning we can now invest further resources into driving both our and our customers' businesses forward using the power of blockchain."

Marc Halbfinger, Chief Executive Officer of PCCW Global and the Chairman of the GLF, said: "We are very pleased that this latest Proof of Concept has expanded to include more carriers. It has been a strong belief within the GLF that innovative technologies such as blockchain can be harnessed to improve the overall efficiency of the industry, and it is now clear that the industry can look forward to the benefit of becoming further aligned. Industry cooperation in this area will be a game changer for the whole sector."

The first GLF-backed PoC saw Colt and PCCW Global working bi-laterally to demonstrate how the inter-carrier settlement of wholesale international voice services could be automated through the use of blockchain. By using technology from Clear, the two partners were able to reduce a normally labour-intensive process from hours to minutes.

The PoC was expanded in May, when BT, Orange, Telefonica and Telstra joined the trial to study the viability of the blockchain platform to settle traffic in a multi-carrier environment. The PoC was able to demonstrate that the initial trial that saw successful input of live data feeds into the ledger, enabling traffic to be automatically verified and settled between two carriers, can be scaled to work across multiple touchpoints.

Damien Staples, VP Global Wholesale Voice for BT said: "BT is pleased to have joined this initiative aimed at simplifying key settlement activities between leading global carriers. It is essential that the carrier industry innovates to reduce complexity and reduce operating costs. This PoC has been an important stepping stone in that journey."

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Pierre-Louis de Guillebon, CEO of Orange International Carriers said: "It was essential to establish that blockchain-powered settlement of international voice transactions could be done on a multi-lateral basis and in a secure environment that is able to handle the fast pace of transactions between operators. We are proud to have been a part of that proof."

Juan Carlos Bernal, CEO of Telefónica's International Wholesale Business added: "We believe that blockchain has the potential to drive forward the entire wholesale sector, helping it to gain efficiency as well as acting as a sound base for the launch of vital new services."

Oliver Camplin Warner, Telstra's International Sales and Service Executive said: "We are delighted to be part of this pioneering proof of concept to explore how blockchain can bring increased efficiency, productivity, scalability and security to wholesale telecommunications transactions."

About Colt
Colt aims to be the leader in enabling customers' digital transformation through agile and on-demand, high bandwidth solutions. The Colt IQ Network connects 850+ data centres across Europe, Asia and North America's largest business hubs, with over 27,000 on net buildings and growing.
Colt has built its reputation on putting customers first. Customers include data intensive organisations spanning over 207 cities in nearly 30 countries. Colt is a recognised innovator and pioneer in Software Defined Networks (SDN) and Network Function Virtualisation (NFV). Privately owned, Colt is one of the most financially sound companies in its industry and able to provide the best customer experience at a competitive price. For more information, please visit www.colt.net.

About PCCW Global
PCCW Global is the international operating division of HKT, Hong Kong's premier telecommunications service provider, which is majority-owned by PCCW Limited. Covering more than 3,000 cities and 150 countries, the PCCW Global network supports a portfolio of integrated global communications solutions which include Ethernet, IP, fibre and satellite transmission solutions, international voice and VoIPX services, managed network & security services and our expanding "as-a-service" solutions including OTT video and Unified Communications.

PCCW Global is headquartered in Hong Kong, and maintains regional centres in Belgium, China, France, Greece, Japan, Korea, Singapore, South Africa, the United Arab Emirates, the United Kingdom and the United States of America. To learn more about PCCW Global, please visit www.pccwglobal.com.

About HKT
HKT (SEHK: 6823) is Hong Kong's premier telecommunications service provider and leading operator in fixed-line, broadband and mobile communication services. It meets the needs of the Hong Kong public and local and international businesses with a wide range of services including local telephony, local data and broadband, international telecommunications, mobile, and other telecommunications businesses such as customer premises equipment sales, outsourcing, consulting, and contact centres.
HKT offers a unique quadruple-play experience in Hong Kong delivering media content on its fixed-line, broadband Internet access and mobile platforms jointly with its parent company, PCCW Limited.
HKT also provides a range of innovative and smart living services beyond connectivity to make the daily lives of customers more convenient, whether they are at home, in the workplace, or on the go. For more information, please visit www.hkt.com.

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

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and internet products and services; and converged fixed-mobile products and services. BT consists of Consumer for UK domestic customers, Enterprise for UK SME's, Global Services for multi-national corporate customers, and Openreach as custodian of the UK national network. BT Group plc is listed on stock exchanges in London and New York. For more information, visit www.btplc.com

About Orange
Orange is one of the world's leading telecommunications operators with sales of 41 billion euros in 2017 and 149,000 employees worldwide at 30 June 2018, including 91,000 employees in France. The Group has a total customer base of 260 million customers worldwide at 30 June 2018, including 199 million mobile customers and 20 million fixed broadband customers. The Group is present in 28 countries. Orange is also a leading provider of global IT and telecommunication services to multinational companies, under the brand Orange Business Services. In March 2015, the Group presented its new strategic plan "Essentials2020" which places customer experience at the heart of its strategy with the aim of allowing them to benefit fully from the digital universe and the power of its new generation networks.

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 or to follow us on Twitter: @orangegrouppr.
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About Telefonica Business Solutions
Telefonica Business Solutions, a leading provider of a wide range of integrated communication solutions for the B2B market, manages globally the Enterprise (Large Enterprise and SME), MNC (Multinational Corporations), Wholesale (fixed and mobile carriers, ISPs and content providers) and Roaming businesses within the Telefonica Group. Business Solutions develops an integrated, innovative and competitive portfolio for the B2B segment including digital solutions (Big Data, Cloud, IoT and Security) and telecommunication services (international voice, IP, bandwidth capacity, satellite services, mobility, integrated fixed, mobile, IT services and global solutions). Telefonica Business Solutions is a multicultural organization, working in over 40 countries and with service reach in over 170 countries.

About Telstra
Telstra is a leading telecommunications and information services company. We offer a full range of services and compete in all telecommunications markets in Australia, operating the largest mobile and Wi-Fi networks. Globally, we provide end-to-end solutions including managed network services, global connectivity, cloud, voice, colocation, conferencing and satellite solutions. We have licenses in Asia, Europe and the United States and offer access to more than 2,000 points of presence across the globe. For more information visit www.telstraglobal.com.

About Clear
Clear builds blockchain-based wholesale services clearing and settlement platforms for entire industries, and the economies that support them. Using smart-contracts and state-of-the-art cryptography, Clear's technology platforms enable enterprises to transition from current inefficient and manual processes to real-time trading and clearing on a global scale without compromise. By partnering with industry leaders, sustainable supporting economies are created, fostering evolution and innovation for the benefit of all participants. Clear aims to build a global infrastructure that allows organizations to leverage the opportunities and meet the challenges created by digital transformation, reduce costs and increase coordination and cooperation. Let's make it Clear. To learn more about Clear, please visit www.clearx.io.

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