17 January 2025

Quantum Blockchain Technologies plc
("QBT" or "the Company")

Bitcoin Mining - Method C AI Oracle

New AI Oracle version with FPGA implementation: From simulated mining with historic blockchain blocks to real-time pool mining with current blockchain blocks

Quantum Blockchain Technologies (AIM: QBT), the AIM-listed investment company focused on a disruptive R&D and investment programme within the blockchain sector, is pleased to announce a breakthrough achievement for its predictive Bitcoin Artificial Intelligence ("AI") model mining tool.

This tool, known as Method C AI Oracle ("AI Oracle"), is now performing live Bitcoin mining of current blockchain blocks, (*i.e*., around block count 879,000, after Method C has been "retrained" to deal with current blockchain blocks).

The Company's board of directors believe this is a significant milestone, since this proprietary technology has been used in trials to mine Bitcoin with a competitive advantage against the same hardware without the AI Oracle implementation. The material competitive advantage in mining enabled by the AI Oracle may be achieved either by (i) reducing the energy cost of mining by approximately 30%; or (ii), accelerating the mining speed at current energy consumption and costs with approximately a 30% greater hash rate.

Method C AI Oracle – Performance and Implementation

The AI Oracle achieves these material advantages through being able to predict the likelihood of an input to SHA-256 to produce a winning hash above a certain level of difficulty. Should the AI Oracle calculate that the current SHA-256 input will not be successful in finding the winning hash, it skips that calculation and moves on to the next input. In the Company's announcement of 24 October 2024, it reported that irrelevant (or non-winning) SHA-256 computations were being avoided almost 50% of the time, but that performance result was obtained through lab tests simulating historic mining blocks, *i.e*., not real-time mining on the current blocks of the Bitcoin blockchain.

The Company has now "retrained" the AI Oracle to operate on current blocks of the bitcoin blockchain and it has completed work on a Field Programmable Gate Array ("FPGA") implementation of the AI Oracle, as per the patent application filed by the Company (see announcement dated 15 January 2025 :"I**mplementation of Binary Decision Trees**") which is now mining *current* Bitcoin blockchain blocks and avoiding irrelevant SHA-256 computations approximately 30% of the time.

As a result of this improvement, QBT's proprietary logic gate architecture implementation of AI Oracle has commenced mining in real-time with a Bitcoin mining pool, which is already demonstrating quantitative material advantages compared to the same real-time hardware mining without AI Oracle.

As the Company is deploying AI Oracle on limited hardware resources available to the Company at this time (*i.e*., an FPGA chip), the pool mined shares of Bitcoin are comparatively minimal but the same FPGA chip with the AI Oracle results in an approximate 30% advantage over an FPGA chip without the AI Oracle version.

In other words, had the AI Oracle been implemented on ASIC chips, the Company believes it would boost an ASIC chip's mining performance by approximately 30%. As of today, QBT is using an FPGA, which has the hashing power of a very small fraction of an ASIC, but is still showing an

approximately 30% improvement which is the Company's key goal, mainly for validation and demonstrative purposes.

Following the filing of its new patent application referred to above, the Company is now in a position to demonstrate its FPGA-based live Bitcoin mining, via a mining pool, to potential clients who it anticipates primarily will be hardware manufacturers.

The board of directors currently believes that working in commercial partnership with a major hardware manufacturer via a licensing agreement, will be the most logical route to market, principally due to the cost benefits to QBT when transferring its disruptive technology from an FPGA to the most competitive ASIC in the market.

Francesco Gardin, CEO and Executive Chairman of QBT, commented, "Following almost three years of R&D efforts, the AI team working on Method C has delivered its first irrefutable result, with a new version of Method C AI Oracle, which can now be used to mine the current blockchain blocks in real-time with an approximate 30% improved performance. This has been made possible thanks to retraining the Method C model and to a very efficient hardware implementation of the AI Oracle, which forms the core of the "I**mplementation of Binary Decision Trees"** patent application.

"We believe this has the potential to be a major breakthrough for the entire Bitcoin mining industry, as QBT has developed an AI Oracle which can either reduce the energy cost of mining or increase the speed of mining at current energy costs, by approximately 30%, which it can prove through live demonstrations."

This announcement contains inside information for the purposes of Article 7 of the Market Abuse Regulation (EU) 596/2014 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 (''MAR''), and is disclosed in accordance with the Company's obligations under Article 17 of MAR.

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For further information please contact:

Quantum Blockchain Technologies Plc
Francesco Gardin, CEO and Executive Chairman +39 335 296573

SP Angel Corporate Finance (Nominated Adviser & Broker)
Jeff Keating +44 (0)20 3470 0470

Leander (Financial PR)
Christian Taylor-Wilkinson +44 (0) 7795 168 157

About Quantum Blockchain Technologies Plc
QBT (AIM: QBT) is an AIM listed investment company with a strategic focus on technology related investments, including a special regard towards Quantum Computing, Blockchain, Cryptocurrencies and AI sectors. The Company has a disruptive R&D and investment programme in the dynamic world of Blockchain Technology, which includes Bitcoin mining and other advanced blockchain applications.

Glossary of Terms

ASIC: An Application-Specific Integrated Circuit is an integrated circuit chip customized for a particular use, rather than intended for general-purpose use. ASIC chips are typically fabricated using metal-oxide semiconductor (MOS) technology, as MOS integrated circuit chips.

Bitcoin Mining: Bitcoin mining is the process of using computer hardware to do mathematical calculations for the Bitcoin network in order to confirm transactions. Miners collect transaction fees for the transactions they confirm and are awarded Bitcoins for each block they verify.

Block: Blocks are files stored by a blockchain, where transaction data are permanently recorded. A block records some or all of the most recent transactions not yet validated by the network. Once the data are validated, the block is closed. Then, a new block is created for new transactions to be entered into and validated.

Hash: A hash is the output of a hashing function, which is a mathematical function that converts an input of arbitrary length into an encrypted output of a fixed length.

FPGA: A field-programmable gate array is an integrated circuit designed to be configured by a customer or a designer after manufacturing – hence the term "field-programmable". The FPGA configuration is generally specified using a hardware description language (HDL), similar to that used for an application-specific integrated circuit (ASIC).

Method C: A Machine Learning based development by QBT R&D team which is composed by an AI model to be trained and an AI Oracle (the result of the training of the model). The Oracle assesses in real time the likelihood of an input to SHA-256 to generate a winning Hash.

Oracle: It is an intelligent system which is designed for only answering questions and has no ability to act in the world.

Retraining: Model retraining refers to updating a deployed machine learning model with new data. The aim of retraining an AI model is to ensure that it consistently provides the most correct output.

SHA-256: Secure Hashing Algorithm (SHA)-256 is the hash function and mining algorithm of the Bitcoin protocol, referring to the cryptographic hash function that outputs a 256 bits long value.