Cambridge Quantum Computing Performs the World's First Quantum Natural Language Processing Experiment

CAMBRIDGE, UK, April 7, 2020 – Cambridge Quantum Computing ("CQC") announces that they have used the "natively quantum" structure of natural language to open up an entirely new realm of possible applications by translating grammatical sentences into quantum circuits, and then implementing the resulting programs on a quantum computer and actually performing question-answering. This is the first time that natural language processing has been executed on a quantum computer. Furthermore, by achieving the results without relying on quantum RAM, CQC scientists have created a path to truly applicable quantum advantage within the Noisy Intermediate-Scale Quantum ("NISQ") era.

By using CQC's class-leading and platform-agnostic retargetable compiler t|ket⟩™, these programs were successfully executed on an IBM quantum computer, achieving "meaning-aware" and "grammatically informed" natural language processing - a dream of computer scientists since the earliest days of the computer age. CQC looks forward to providing further details in the near future including ways to scale the programs so that meaningfully large numbers of sentences can be used on NISQ machines as they themselves scale in quantum volume and using other types of quantum computers.

The full article with details and links to the appropriate GitHub repository is noted below:

Please click here

About Cambridge Quantum Computing

Cambridge Quantum Computing (CQC) is a world-leading quantum computing software company with over 60 scientists across offices in Cambridge (UK), London,

San Francisco, Washington, DC and Tokyo. CQC builds tools for the commercialisation of quantum technologies that will have a profound global impact.

CQC combines expertise in quantum software, specifically a quantum development platform (t|ket)™, enterprise applications in the area of quantum chemistry (EUMEN), quantum machine learning (QML), quantum natural language processing (QNLP) and quantum augmented cybersecurity (IronBridge™).

For more information about CQC, visit www.cambridgequantum.com