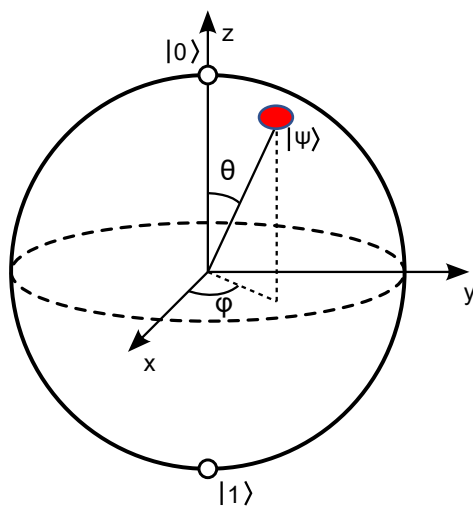


The Quantum Inquiry

Mary Webb (Chair of the task force on the computing curriculum)

Sharon Singh (Secretary, IFIP TC3 Executive Committee)

Andrew Fluck (Previous Chair, WG3.3, now in Tasmania)



State of a qubit



Quantum board game - Entanglion

The Inquiry held its first international webinar on 1st-2nd June 2023, with short presentations by Andrew Fluck (AU) and Priya Angara (CA). The presentations provided an introduction to quantum computing, and showed how these concepts are being taught in some high schools.

The Quantum Inquiry is an initiative of the IFIP TC3 Task Force on the Curriculum. Its aim is to determine if quantum processes should be a part of the school curriculum. If so, how?

Some may argue that quantum computing is in its infancy. There are problems with coherence and error correction. Until it achieves maturity, school students need not worry about it.

Others underline the importance of quantum computing as demonstrated by faster computation times for certain classes of problems. This has led to considerable government and industry interest. We learned in the webinar about quantum machine learning – which looks to optimise Artificial Intelligence with speedy responses from quantum systems.

Just as the general population is becoming aware of the emerging legislative controls for AI, it is becoming important for quantum computing to be understood. It has radically different approaches to problem solving compared to classical digital computers.

In the next step of the Inquiry, we will be looking at quantum computing concepts in the K-12 curriculum. There are arguments for some concepts to be introduced at an early age. Other concepts may have to contend in the crowded school curriculum as students grow.

You can view the [webinar recording](#), get the [Abstracts](#) and [presentation slides](#), send your comments to Mary.Webb@kcl.ac.uk, or access a list of resources at:

<https://docs.google.com/document/d/1kL19bhJ8XJTezVAC5xA717iOvbz9cAVu1qMC6qvIL8M>