AT&T Foundry and Caltech Leading the Charge on Quantum Networking Technologies

The AT&T Foundry innovation center in Palo Alto, California is joining the California Institute of Technology to form the Alliance for Quantum Technologies (AQT). The Alliance aims to bring industry, government, and academia together to speed quantum technology development and emerging practical applications.

This collaboration will also launch a research and development program named INQNET (INtelligent Quantum NEtworks and Technologies). The program will focus on the need for capacity and security in communications through future quantum networking technologies.

> " *Quantum computing and networking holds the potential to radically transform how we connect as a society. It will make the impossible possible, as the internet once did... The AT&T Foundry was founded to advance new products and services through innovation and collaboration. It's the ideal place for this work as quantum technologies become a rapidly developing field in industrial research.* "
>
> **Igal Elbaz**, *Vice President, Ecosystem and Innovation, AT&T*

Quantum networking is the process of linking quantum computers and devices together. This creates fast and secure networks beyond anything possible today with traditional processors.

The field is still in its early stages. But these technologies could change our lives profoundly and rapidly as early as the next few decades, some experts predict.

Quantum networking will enable a new era of super-fast, secure networks. AT&T, through the AT&T Foundry, will help test relevant technologies for commercial applications.

One of the first areas of study will be relevant benchmarking of quantum entanglement distribution in commercial fiber provided by AT&T. Quantum computers won't have a keyboard, monitor or mouse. They will be complex physics experiments with cryogenics for cooling lasers and other solid-state, electronic, optical and atomic devices. Moving quantum computing from the R&D lab to the real world requires solving technical and engineering challenges.
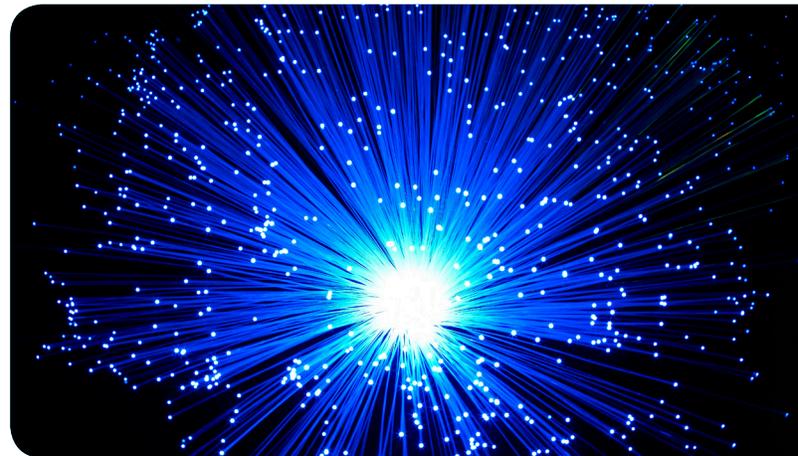
The AT&T and Caltech team will be meeting these challenges through INQNET and its research and development program using quantum technologies as the new resource to solve challenging, pertinent problems.

The INQNET program is primarily focused on:

1. Quantum Networks and Communications towards the Quantum Internet

2. Quantum Algorithms and Simulations

3. Quantum Machine Learning & Quantum AI

> For more information click **here**

The Policy Forum
at **AT&T**