Qulabs Software India Pvt Ltd

National Quantum Mission

It's great news for all the Quantum Visionaries who are working in the field of Quantum Technologies and is a big leap for the future of Quantum Technology in India. The government of India approved 6003 Cr INR for Quantum technology specifically for Quantum communication, multinode Quantum communication network with Quantum Memories.

"The Union Cabinet, chaired by the Hon'ble Prime Minister Shri Narendra Modi, today approved the National Quantum Mission (NQM) at a total cost of Rs.6003.65 crore from 2023-24 to 2030-31, aiming to seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology (QT). This will accelerate QT led economic growth, nurture the ecosystem in the country and make India one of the leading nations in the development of Quantum Technologies & Applications (QTA)."

https://pib.gov.in/PressReleasePage.aspx?PRID=1917888/

Qulabs is working on full-fledged long distance Quantum Communication and is developing the building blocks of Quantum Networks like Room temperature Quantum memory, entangled photon source, single photon source, Quantum Random number generator and the software stack to support that. Qulabs developed India's first Quantum Network Simulator "QNTSim" which will lay the foundation towards development of multi-node entanglement distributed quantum networks in India. Qulabs has also developed world's first software-based quantum random number generator which is a completely transparent 'no-black box' solution of QRNs accessible across any smart devices. The innovative technology has the capability to extract randomness from remotely located Quantum Computers.

Qulabs is developing India's first Room temperature Quantum memory, that can scale the quantum communication at very large distances.

Qulabs is growing its efforts in the practical establishment of Quantum Networks in India and is destined to support India's most ambitious and important National Quantum Mission.

CABINET DECISIONS

19 April 2023

National Quantum Mission

Cabinet approves National Quantum Mission

Deliverables

- Developing intermediate scale quantum computers with 50-1000 physical qubits in 8 years in various platforms like superconducting and photonic technology
- Satellite based secure quantum communications between ground stations over a range of 2000 kilometres within India
- Long distance secure quantum communications with other countries
- Inter-city quantum key distribution over 2000 km

CABINET DECISIONS

19 April 2023

National Quantum Mission

Cabinet approves National Quantum Mission

Deliverables

- Multi-node quantum network with quantum memories
- Four Thematic Hubs (T-Hubs) to be set up in top academic and National R&D institutes on the domains -
  - Quantum Computing
  - Quantum Communication
  - Quantum Sensing & Metrology
  - Quantum Materials & Devices

CABINET DECISIONS

19 April 2023

National Quantum Mission

Cabinet approves National Quantum Mission

Benefits

- Seeding, nurturing and scaling-up scientific and industrial R&D
- Creation of vibrant & innovative ecosystem in Quantum Technology
- Acceleration of QT led economic growth
- Making India a leading nation in development of quantum technologies & applications

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CABINET DECISIONS

19 April 2023

National Quantum Mission

Cabinet approves National Quantum Mission

- Total cost of **Rs.6003.65 crore** from 2023-24 to 2030-31
- Mission to develop magnetometers with high sensitivity in atomic systems and Atomic Clocks for precision timing, communications and navigation
- Support design and synthesis of quantum materials such as superconductors, novel semiconductor structures and topological materials for fabrication of quantum devices
- Single photon sources/detectors, entangled photon sources to be developed for quantum communications, sensing and metrological applications
- To be implemented by Department of Science & Technology in partnership with other departments

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