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28 08 2020 Technology Development Board supports QuNu Labs Pvt Ltd, Bengaluru

for

Commercialisation of QuNu's Quantum Technology Security Products

OVERVIEW

The risk of cyber threats has increased significantly with the advent of a technological innovation and ultra fast computing, and such threats are making huge losses to Data Centers, Banks, Defense, and Enterprise Security Systems.

The M/s QuNu Labs Private Ltd (QuNu),Bangalore, has addressed this security gap by engaging in the development of security products based on quantum technologies. QuNu has launched an array of products all related to the field of Quantum security.



This proposal envisages the commercialization of the Quantum Security products which are targeted at applications in Defence, Govt., Healthcare, Data Centres, Banks and Enterprise Security Solutions. Their modified versions can cater to academic and research institutions for evaluating the technology and diverse applications across several sectors.

What is Quantum Key Distribution?

Quantum Key Distribution (QKD) is a technology by which we can exchange a key for encryption between two ends of a communication link with safety ensured by laws of quantum mechanics.

How is QuNu doing it differently?

The key exchange process is done on a separate fiber channel called the Quantum Channel, on which the information is sent in the form of encoded Quantum bits or "qubits". Generally, encoded photons are used and since the intensity is low, only a few of them reach the other end. Thereafter, by a process of handshaking between the two sides, done via the "classical" channel, both sides arrive at a common, sifted key. This further goes through a process of error correction and privacy amplification to further enhance its secrecy.

The TDB funded QuNu's Project "Development & Commercialization of Quantum Security Product". These will initially include Armos and Tropos. The main goals of this project are detailed below:

- 1. A manufacturing facility will be set up at QuNu's office in Bangalore. This facility will have a capacity of 3 to 5 systems per month. All activities in the manufacturing process, except the assembly of the electronic modules will be performed in-house at this facility.
- 2. Two each of ARMOS and Tropos systems will be reserved solely for internal usage, Regulatory Standards Certification, Field Trials and Customer Demos.
- 3. Ramp up the Business Development Team and related activities to increase the product sales.
- 4. Customer Support operations to provide after sales support.
- 5. IP Protection Filing of Patents and Trademarks to protect IP and brand.

