香港科技大學

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Mobile Blockchain Distributed Supercomputer

Democratised High Performance Computing in everyone's pocket

Motivation:

Idle processing power of modern smartphones are wasted if the processor does not perform computation. We can create a collective computing platform using 5G, appling blockchain for task assignment and validation.

Source: TOP500 Supercomputer Database

Overview: **Mobile Phones** wastes processing power at idle 5G created extra bandwidth Blockchain can Demand for **High Performance** Number of FLOPS by the largest supercomputers

Impact to society:





Fully utilise available resources



More accessible High Performance Computing



Accelerates medical and scientific research

Sustainability:

Mobile Blockchain Supercomputer

Social

Utilising wasted resource for the common good such as academic research can gain popularity among the general population

Environmental

The high energy efficiency of smartphones leaves smaller carbon footprint than comparable supercomputers

Economic

Researchers can submit tasks with cryptocurrency as incentive to have their task done. Owners of the smartphones will receive the reward

Related Work:



Folding@home - connecting home computers to a distributed computing platform for scientific researches such as protein folding



HTC POWER TO GIVE - harnessing collective processing power of smartphones for medical researches