Project Innovations & Technological Value Chains

As the DLT provider and implementor, Mavennet will contribute its proprietary platform, Aion for Enterprise (AFE) to the I-DELTA project.

Overview:

AFE is an enterprise blockchain solution built on the foundational components of the Aion public network.

AFE's primary value propositions are:

- Interoperability with the public Aion network, and other public and private blockchains alike
- High transaction throughput
- Hybrid modular architecture that can be tailored for any business need
- Global ecosystem of enterprise clients and developers

Bridges:

AFE uses Aion's Multi-Tier Bridging Protocol (MTBP) to enable cross-chain transactions between itself and any other private or public blockchains. This is done by running special nodes in the connecting blockchain to listen for cross-chain transactions. When a cross-chain transaction is made, these nodes generate a smart contract that sends the transaction to the Bridge Cluster of nodes. The Bridge Cluster builds an internal snapshot of AFE and the connecting blockchain and proposes the cross-chain transaction simultaneously on each. The transaction is then communicated to Aion Clients, which bundle bridge transactions and submit a Bridge Contract to AFE to finalize the cross-chain transaction.

Transaction Throughput:

With its practical Byzantine Fault Tolerant (pBFT) consensus, AFE provides high transaction throughput with over one thousand transactions per block and new blocks added every 2 to 3 seconds. Comparing this to the transaction throughput of the Aion public network (70 transactions per second - tps) and Ethereum (15 tps), one can see how pBFT makes the AFE interoperability offering more applicable for enterprise clients who demand higher transaction speeds.

Hybrid architecture:

AFE's hybrid public-private architecture uses a common suite of products and tools for building enterprise applications and decentralized applications (dApps) on public Aion. This enables AFE and Aion public to be used in conjunction to serve any business need.