Constellation Whitepaper

The Dawn of the 4th Industrial Revolution

The World Economic Forum has identified that we have entered the Fourth Industrial Revolution. This industrial revolution, unlike those that came before, can be characterized as the “fusing of the physical, digital and biological worlds, impacting all disciplines, economies, and industries, and even challenging ideas about what it means to be human.” 1 In Salim Ismail’s book, Exponential Organizations, he discusses technologies that are native to this Fourth Industrial Revolution and how organizations can leverage these technologies, as well as the characteristics of successful organizations that have adapted to the changing business ecosystem.

Constellation’s technology will enable the advancement of the digital revolution by creating an ecosystem facilitating decentralized applications throughout a scalable distributed network. Constellation acts as a centerpiece framework that other applications can integrate with, without giving away data security and application dependency. Furthermore, our goal is to leverage existing technologies in distributed computing, big data and machine learning that are widely used among developer communities, and apply them to a decentralized distributed network.

To realize the potential impact of the Fourth Industrial Revolution, rails or pipes will need to be constructed in an entirely new frame of mind. That’s where we come in. At Constellation, we are creating distributing mechanisms between connected devices, software, and digital worlds. These will unlock the ability for engineers to seamlessly create applications that distribute and transact information in a trustless and decentralized way to a global population of smart devices and existing applications.

Disruptive technologies of the Fourth Industrial Revolution will be able to seamlessly interconnect and distribute collected data and transact independently of centralized operations. This will enable cross-collaboration of independent disciplines, technologies, and industries. While Blockchain technology has seen a dramatic rise in popularity and adoption over the past year, there are still some roadblocks that are preventing it from widespread enterprise adoption. In order for enterprise and consumer grade applications to successfully shift a significant portion of their tech stack onto Blockchain technologies, we must rethink the following: ● A new architecture: A Scalable architecture for processing large amounts of data

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● A globally distributed network: Initiating global dispersion of network consensus

● Novel Consensus model: Shifting away from plutocratic delegate selection and transaction validation models like Proof-of-Work or Proof-of-Meme.

● Increased Security: Leveraging a combination of improved architecture and novel consensus models to enable trustless and distributed networks to exist without security breaches

● Ease of engineering onboarding: Enabling developer communities to use known programming languages to tap into the benefits of Blockchain technologies and distributed communities

The Fourth Industrial Revolution has ushered in an era where devices, such as sensors across cars, home automation, wearable watches, home appliances, and automobiles, are collecting more data than we can comprehend: “By the year 2020, it is estimated that the average person will generate 1.5gb worth of data per day. The global IoT market is expected to exceed $1.7T by 2019, more than tripling its size from $486B seen in 2013” 2. Additionally, the use of artificial intelligence and applied mathematics requires high computational demands that are forcing us to rethink cloud computing and storage.

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