

Interoperability Between Blockchains

Much like in the early days of the internet, the landscape of blockchain protocols and the cryptocurrencies which help power them is still largely fragmented. Bitcoin and Ethereum as well as a handful of other chains have developed into relatively stable ecosystems – each as a walled garden in and of itself.¹

This conundrum, whereby the technology of Web3 has been faced with the same challenges as that of Web2, poses a serious challenge to the further adoption of blockchain technology. According to Gartner, it is precisely this lack of interoperability standards that stands in the way of “pervasive blockchain deployment across financial services ecosystems.”²

But there are major efforts underway to address this problem. One of the more ambitious and well-known interoperability blockchains is Polkadot, the brain-child of Ethereum Co-Founder Dr. Gavin Wood. Much like Cosmos, another one of the more established projects in the space, Polkadot addresses the interoperability challenge by creating a multi-chain by means of several so-called “parachains” which are connected to each other, as well as “bridges” to link to external chains.

With the support of the Web3 Foundation as well as a number of high-profile investors, Polkadot is aiming to launch its live network in early 2020.³

The burning question for it and other interoperability chains is whether such fundamental infrastructure will indeed lead to a broad acceptance of blockchain as a base-layer technology for critical industries such as finance, healthcare,

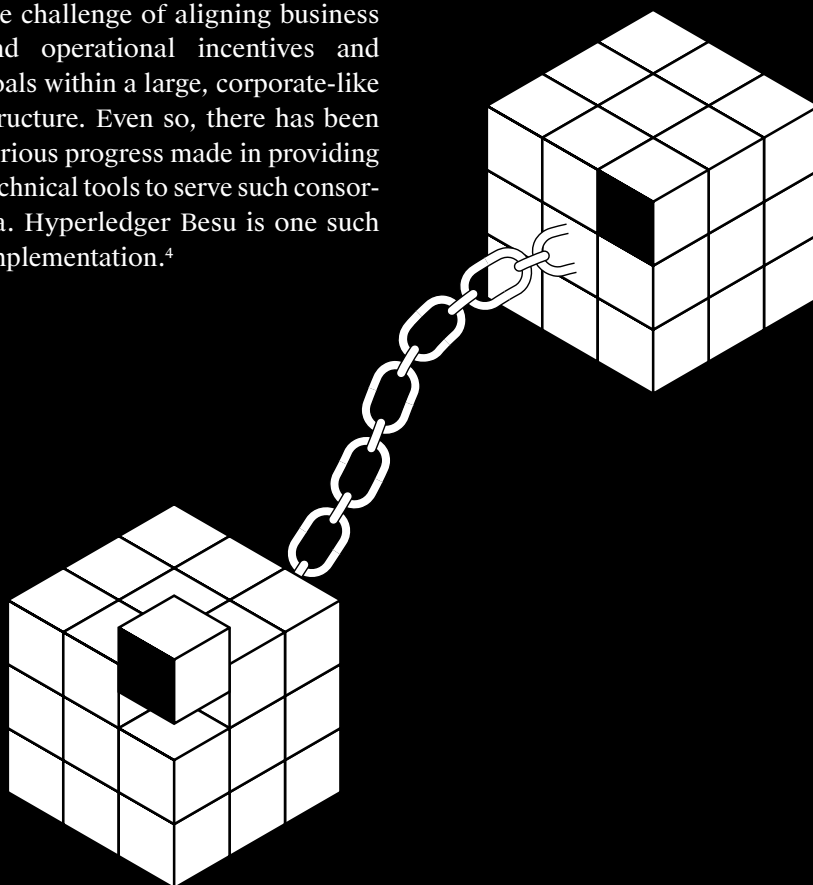
and supply chain management. In these cases, the need to preserve confidentiality has placed an emphasis on private blockchain implementations which may or may not play well with the broader, “world-wide web” of blockchains. At the same time, these industries are large enough (and international enough) to make it difficult to imagine a single blockchain that will meet the needs of all stakeholders in every location and every situation.

Some have tried to pursue the consortium model to build a cross-business or -industry consensus and promote standards. The Enterprise Ethereum Alliance is one such group, while Hyperledger, with IBM as a major contributor, forms another.

This would seem to be the less efficient approach, however, given the challenge of aligning business and operational incentives and goals within a large, corporate-like structure. Even so, there has been serious progress made in providing technical tools to serve such consortia. Hyperledger Besu is one such implementation.⁴

Ultimately, the challenge of ushering in a (near) universal standard for Web3 applications and technology will likely be a market-driven decision with a winner chosen by those who find it easiest to use and most aligned with their needs.

The year 2020 may well see the first baby steps in the development of a wider, more inter-connected blockchain “web” – but it will likely be some time before we see a robust ecosystem without walls emerge.



¹ <https://consensys.net/research/avoiding-blockchain-balkanization/>

² <https://www.gartner.com/en/newsroom/press-releases/09-16-2019-gartner-says-blockchain-deployments-across-financial-services-ecosystems-are-at-least-three-years-away>

³ <https://medium.com/polkadot-network/polkadot-the-foundation-of-a-new-internet-e8800ec81c7>

⁴ <https://wiki.hyperledger.org/display/BESU/Hyperledger+Besu>