Manufacturing SIG Proposal

Note: This Special Interest Group will be created if there is enough interest from community members in this idea. If you are interested in joining this group please join the group's mailing list by clicking on that link and then clicking on the 'Join This Group' button. You are welcome to post an introduction email to the list, ask questions or make suggestions. The Chairs of the group will also post there when the group launches and will share details about next steps.

Title/Name

Hyperledger Manufacturing SIG

(other suggestions Hyperledger Industrial Internet Special Interest Group, or Hyperledger Industrial SIG)

Introduction

Industrial digital transformation is a key challenge and opportunity for countries around the world. Although technological approaches and implementations may vary from economy to economy, the core focus of industrial digital transformation is to combine emerging ICT technology with traditional technologies and link areas such as production and logistics to provide new drivers for the development of traditional industries.

Specifically, the focus of industrial digital transformation is to achieve trusted interconnection among enterprises, people, equipment and objects. Therefore, problems such as difficulty in guaranteeing transmission security and authenticating data rights, unreliable data, and the high cost of reliable multi-party collaboration are inevitable during the implementation process.

Blockchain technology, as a product of the integration of digital encryption technology, network technology, computing technology and other information technology, involves multiple parties and features immutability, transparency and traceability. It works as an excellent solution to multiple problems in industrial digital transformation.

Currently, blockchain technology has been applied to many aspects of industry, such as production, storage, logistics, sales and finance. Many application scenarios and successful application cases have emerged, including production chain monitoring, supply chain management, equipment and storage management, product tracing and financing, all of which promote industrial digital transformation. However, the current applications of “industry + blockchain” are mostly being explored by individual companies. There has not yet been development and use of systematic architecture and relevant agreements and standards are yet to emerge.

At the same time, the long history of industrial development with numerous sectors has caused problems with interconnection, such as with heterogeneous identifiers and data. How to realize heterogeneous data interaction and interoperability between different industrial blockchain systems, how to establish a unified identifier system, and how to build an infrastructure that realizes the interconnection and interoperability of industrial blockchain are issues that need discussion and collaboration.

Given the factors mentioned above, it would be of great benefit to establish the Hyperledger (Name to be confirmed) SIG to serve as a bridge between manufacturing and related industries and the blockchain industry, and provide a platform to explore industrial blockchain. The SIG could help different parties work together to study options for the integration of blockchain in various industrial processes and sub-sectors, summarize typical application scenarios, and promote standard-setting and application projects. Based on this, the SIG would study the development of a universal infrastructure in the systematic application of industrial blockchain in response to the difficulty of cross-subject interconnection in the industrial sector, and explore a feasible reference architecture.

Therefore, we believe that it is meaningful and necessary to establish a SIG dedicated to “industry + blockchain” under Hyperledger, the world’s leading open source blockchain organization.

Scope

The activities of the (Name to be confirmed) SIG include:

- Identifying problems in different industrial scenarios and analyzing new applications and new business models generated by the application of blockchain technology.
- Sharing stories of successes, failures, opportunities and challenges.
- Selecting Industrial blockchain best practices.
- Identifying common infrastructure for the interconnection of industrial blockchains and proposing reference architecture.
- Identifying conferences and other opportunities to connect face to face, as well as submitting talks or presenting as a group at events.
- Identifying different protocols across different industrial sectors and scenarios to build standardization across different parties and efforts.

Potential Work Products

- Produce documentation such as best practices, whitepapers and reports to encourage better understanding of the use of blockchain in different industrial scenarios.
- Host sub-groups, and in-person meetings intended to accelerate the SIG’s mission and foster a sense of community among members.
- Carry out surveys and identify common infrastructure for the interconnection of industrial blockchains and propose reference architecture.

Collaborators

This SIG will collaborate with other Hyperledger groups, Linux Foundation Open Source Networking, other non-profit blockchain and industrial organizations such as Alliance of Blockchain Industry, Z-park (ABI) and Alliance of Industrial Internet (AII).
Interested Parties (TBD)

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Proposed Chair (TBD)

Co-Chair: Jiagui XIE from China Academy of Information and Communications Technology.

Co-Chair: Jiannan Guo (Jay) from RootChain.

Co-Chair: XXX from XXX (international experts).