Since its inception, the IoT has undergone significant development as its technology touches many areas and IoT applications are related to many industries. The challenges have always been to overcome the slow IoT industry development and the difficulty in adopting it for mass usage.

After a significant amount of research, Dr. Jie Shen, SDChain's Chief Scientist, proposed a new structure in 2013 — the IoT six-domain model — to help various industries properly figure out what the IoT is and how to actually implement it in their industries. The model is a total reference structure, abstracting ideas from various sectors. With this model structure in place, it means that the practical development of the IoT in various industries now has a framework to follow, just like constructing a building to a plan drawing. When you have just bricks and mortar but no construction blueprints, you don't even know where to begin. The first stage is to provide the blueprint with the IoT six-domain model for global IoT industry development.
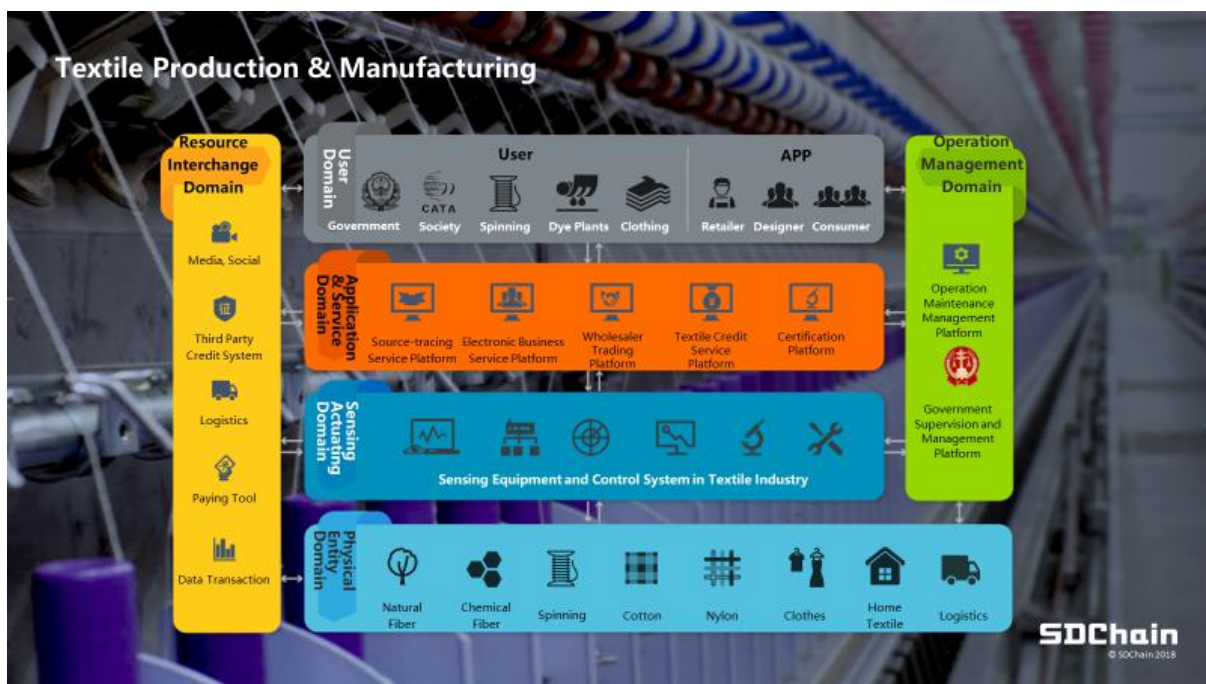
When the first problem is solved, the next one crops up. Although the IoT could resolve some issues in the industrial ecosystem, many problems were still unresolved. Here are two classical examples.

First there is the issue of trust between people and equipment. The future IoT is bound to have significant amount of intercommunication between smart terminals and the real world, and in the end, it is supposed to serve people. In order to resolve the issue of trust between people and equipment, a new technology is required to maintain this system.

The second issue is the confirmation of rights. The IoT is not only simply using some equipment to let you know what the temperature is at home, how the crops in the field are, and so on. It's about getting a large quantity of information from the real world through the IoT, and after big data processing, using the data among various entities and sharing the benefits big data brings. The classic problem is that from obtaining the information to the

distribution and transfer of information, the ownership, user rights, value distribution thereof will all be flowing through different entities, and this will create the problem of confirmation of rights in terms of the data trustworthiness and value as they move around in the network. If we cannot solve these issues at their roots, even if an industry has set up various IoT equipment and has a lot of IoT information, the problem of promoting large scale application in the future will remain unresolved. Blockchain, however, provides a solution to all these problems.

After the IoT added the six-domain model, it would have been quite easy to implement the IoT in various industries because blockchain solved the trust issue for the IoT, but we still felt it lacked something in its business model and ecosystem. The addition of tokens brought about a third force outside of the IoT and blockchain, and these three entities began to form a cooperative and symbiotic ecosystem. Consequently, we had to combine the IoT with blockchain, from research on the IoT to the proposal of the six-domain model, rationalizing the technical framework through the integration of tokens to the activation of the whole ecosystem.

Let's talk about the features of SDChain in more detail. We can look at blockchain in 4 different generations. The first recognized generation was Bitcoin. Bitcoin was in effect using the underlying technology in blockchain to generate a cryptocurrency that everyone trusts. The second generation is Ethereum, and the breakthrough in the Ethereum smart contract has allowed the whole blockchain technology to be used more broadly. The third generation was cross-chain integration with all chains. How to integrate the chains is a topic that will affect how the entire digital space is related to and interconnected with now and future.

The features of the first three generations of blockchain are mainly focused on the continual perfection of the underlying layers to create a foundation for the ecosystem in the future, but there is a very major issue, which is speculative frenzy. Fiat currency was born due to the need to have an exchange medium when society back then bartered for commodities, so it went from the earliest medium of gold to the birth of various paper and fiat currencies in various countries. Cryptocurrency is quite special because cryptocurrencies like Bitcoin were created before a corresponding digital commodity, and this has led to the issue that within the entire blockchain space, there is only a cryptocurrency without tradable commodities, leading to a situation just like having an exchange of coins, but without the significance in such an exchange.

This was just a temporary situation that normally happens to new technology concepts. The final form of blockchain development will be when there is a large amount of digital assets, correlating to objects of equivalent value that targets the trading of these digital assets; this will be more beneficial to the prosperity and development of the digital economy and ecosystem. But from blockchain 1.0, 2.0, 3.0 and up to now, we still have yet to see any digital assets of real value being guided into blockchain - only issuance of more coins without correlating value.

The biggest source of digital assets in the future remains to be from "Things" in the real world. All types of things and commodities have to be projected into digital space to generate big data, and at that point the IoT will create large amount of digital assets that will have

actual value for our blockchain. With these digital assets, there will be actual meaning to driving the constantly iterative development and prosperity in the ecosystem.

The goal of SDChain is Blockchain Generation 4.0, and we will not be like other blockchain generations, solely focusing on the development of underlying layers, but rather, the SDChain will focus on being practical with technical implementations. In one part, the SDChain will be emphasizing the application ecosystem of IoT because the prospect on this is wide open.

On the other hand, the SDChain will also emphasize how we construct, operate and optimize the blockchain's underlying layers, when faced with the IoT application ecosystem, so that both ecosystems can form a symbiotic relationship. Once this relationship is established, the IoT should be able to continuously generate digital assets, and form a self-sustaining economy in the blockchain space.

Blockchain: Reference Architecture
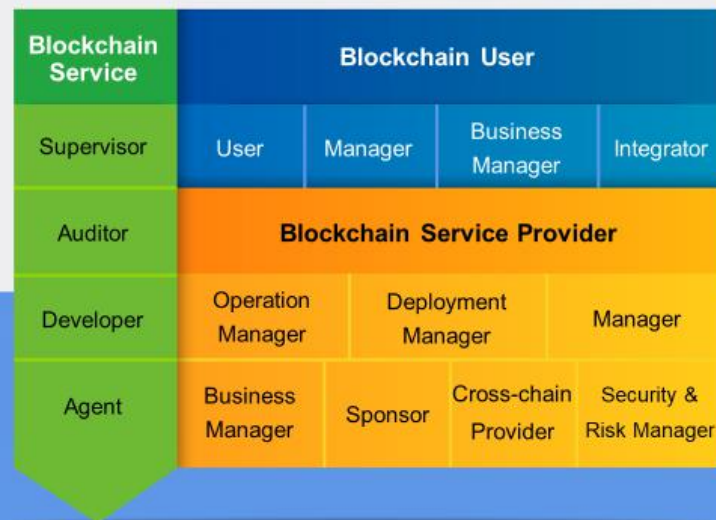
SDChain refers to the six-domain model. This also means the SDChain community's emphasis will be two parts: the first part is using the standard six-domain model to combine the ecosystem influence of the entire community to promote IoT-related planning from the top and to support some of the implementations now and in the future. The second part is to optimize the underlying blockchain that deals with the IoT to create underlying support for the establishment and implementation of the ecosystem in various industries.

In summary, the SDChain looks forward to creating a blockchain ecosystem with trusted IoT digital assets. Simultaneously, the SDChain is applied to the IoT to solve challenges in various industries to create an integrated IoT + blockchain ecosystem.