Decentralized Applications Are the Inevitable Trend of Future Internet Development

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The topic of decentralization is very popular nowadays. This is due to the popularity of the blockchain which makes this term very popular. This article also talks about the topic of decentralization, but not specifically about the blockchain, it is about the future Internet applications.

The origin of the Internet is a distributed, decentralized IP network connecting the world, but because the IP address is hard to remember, then the domain name come out, and there is a centralized distributed root domain name service. The first application of the Internet is email service, which is a completely decentralized service. People can directly realize peer-to-peer communication through the email services all over the world. Later, there was Web service, which is also a decentralized information service composed of Web sites located worldwide.

However, with the development of the Internet, Web services have portal sites, search engines, chat software, social network services, e-commerce services, etc. These Internet applications have gradually formed the current highly centralized service provided by certain service providers; this has formed the current Internet oligopoly monopolizing these highly centralized services. These oligarchs have almost all Internet data, which is far from the origin of the Internet. It gradually loses the value and spirit of the Internet.

I believe that the future Internet will not forget its original intention and slowly return to the decentralization when the Internet originated. This trend is also indirectly confirmed by the popularity of blockchain and its applications. Blockchain applications are also a kind of Internet application, in line with the original intention of the Internet. As I wrote in my blog post "Internet privacy protection is the inevitable upgrade of Internet consumption": With the popularization and application of Internet services, people have begun to be dissatisfied with only being able to use Internet services, but hoping to use Internet services that can actually

protect user privacy! The future Internet services must be decentralized services that can more effectively protect user privacy.

For the current Internet applications, in addition to the blockchain application, there is another application with a long history - email service is also a decentralized application. If you have an email address, you can send email to all people in the world and do not need to care about which email service the other party uses. This is different from highly centralized social applications that both parties of social applications must use the services of the same service provider to connect with each other.

However, the current decentralized email service cannot meet the requirements that the future Internet service must be a service that highly protects user privacy. Therefore, according to the development trend, the email service must be a fully encrypted email service. Only in this way can meet the user's privacy protection needs. To achieve email encryption, there are currently many encryptions solution in the market that use closed private protocols that are not feasible, because this cannot be supported by all application software, and it cannot become a wildly used decentralized application. Even though some email encryption solutions use international standard technology, they are very difficult to use and cannot be widely used.

The email encryption and digital signature services implemented by MeSign Technology adopt the S/MIME international standard technology that has been widely accepted and adopted. It is based on this standard technology to innovate the automatic application for certificates, the automatic configuration and use for certificates, and the automatic exchange of public keys and automatic timestamping, it directly integrate these services into the email client software - MeSign App, which innovatively implements fully automatic email encryption and digital signature services that is as easy as sending cleartext email, making encrypted email services not only suitable for the future requirement of decentralization, but also meets the application requirements that people attach great importance to privacy protection. Therefore, encrypted email service must be one of the important applications of the Internet in the future.

Let's look at the blockchain application again. Like the email encryption application, it also

uses private key digital signature and public key encryption technology, also uses timestamp technology, and uses a distributed database (one is to store block data, one is to store email data). This comparative analysis is to illustrate a technology application trend, that is, future Internet applications must use the digital signature of PKI technology to prove the digital identity of people and things to protect privacy, and must use the certificate encryption technology to achieve the encryption protection of key data, and must use the timestamp technology to prove the trusted time of the event, and it also must be a distributed decentralized user data management, rather than relying on a centralized service provider alone for the service we need. For example, taxi-hailing services will no longer need the current highly centralized taxi-hailing service providers, but decentralized services that directly connect the car demander and the car service provider.
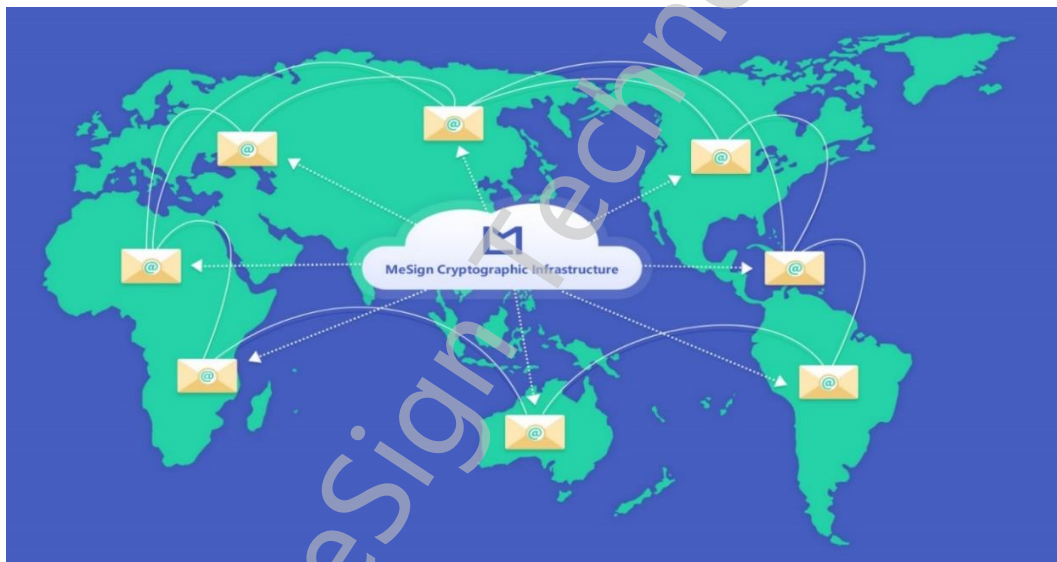
To realize the transformation from highly centralized to decentralized applications, it is first necessary to change the current system architecture of user identity validation and service provision. The identity validation service must be separated from the service provider, which can be like a block chain, digital signature is used to prove their identity, and everyone is on the chain to prove their behavior without relying on a centralized database; it can also be that the identity validation service is provided by an independent third party in a distributed and decentralized manner, and each Internet service provider is only responsible for providing services to users, so that users' Internet consumption behavior will not be accurately portrayed by big data, which can effectively protect user privacy. Of course, these are all current assumptions. I hope that this solution can be continuously improved and evolved in future

Internet application practices and become a future decentralized Internet application solution that can effectively protect user privacy.

In short, I believe that decentralization is a future Internet development trend. Whoever catches this development trend, whose application can become the next outlet, and who can win in the fierce competition of Internet services. This is worthy of thought and action by Internet practitioners.

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