Why are you focused on 'multi-party interchange'?

Interchange of value is nothing new – it's thought that humans began bartering with each other some 8000 years ago. Verifying authenticity of goods is a primary concern for barter-based interchange, as all parties must protect themselves against receiving misrepresented value. Otherwise, they may have little recourse after the fact should a problem ensue. But as modern, innovative interchanges have become more complex, the need to manage both authenticity and trust has become a major roadblock.

In the barter system, inspection of goods was really the only way to prove authenticity and validate value. Barter could be a very inconvenient arrangement, however, especially when interchanging goods that were difficult to transport. This led to the evolution of certain portable items becoming generally accepted as a medium of exchange – gold, silver, precious stones, and the like – but it also made authenticity harder and introduced the need for a level of trust in the trading partner.

Around the 7th century BC, the kings of Lydia began punching their marks into electrum nuggets – guaranteeing that each could be trusted as a carrier of a specific value of precious metal. It was still necessary to reach confidence that the nuggets received were authentic, but the penalties of counterfeiting were so severe that, as long as the bond between king and value was accepted, these nuggets helped remove some of the friction from interchange. This use of trusted carriers of value succeeded because it shifted the need to have trust in a partner to trust in the sovereign – usually (but not always!) a safer proposition. Over time, those stamped nuggets of electrum were replaced with precious metal coinage, minted with increasingly sophisticated measures to better assure authenticity.

Eventually precious metal coinage was replaced by paper currency that represented an equivalent in metals held by the issuer – introducing the notion of currency as a bearer instrument representing value located somewhere else; the bearer of that currency could demand that the issuing institution exchange the paper for the amount of gold it represented. The bearer trusted that the institution that issued currency had the gold to back it up (but they still had to be satisfied that the instrument itself was authentic). This was the trust anchor underlying world economies until the early 1970s, when governments began shifting from currencies backed by gold to fiat currencies – backed only by the government's declaration that such currency was legal tender for payment of debts. This system works when governments are stable but begins to fall apart when trust in the government falters.

One last point – humans have always felt it necessary to keep their own records of all interchanges. In fact, some of the earliest known writing, on clay tablets, does nothing more than list out inventories and accounts – as accurate record-keeping is necessary to, once again, manage trust. Even as ledgers have moved from clay to paper to electronic bits, the fact remains that everyone still holds their own books – as has been the case for millennia.

Although the medium of interchange shifted from precious metals, to metal-backed bearer instruments, to fiat currencies, what _never changed_ is the concept of a 'transactional' system of interchange: point to point, centralized, and scrupulously recorded by each individual party. What _has changed_ is the complexity level for interchanges.

Most interchange of value is simple and straightforward. You have something I need, I have the trusted carrier of value you want, we make the exchange, scribble in our own books and move along. The process started to complicate some when we began substituting credit for currency. Now a centralized

third party has to get involved to validate that I'm creditworthy and you will be paid. Still, a very common exchange that has been streamlined over the years to make it as frictionless as possible.

But many interchanges of value that occur every day have become very complicated. For instance, in the US it still takes 3 days to settle a stock trade even though the markets have dematerialized. Now, in addition to the buyer and seller there are several banks and brokerage houses, none of which trusts each other, and therefore all parties perform their own validations and reconcile their own books.

In most geographies, central parties have emerged to choreograph the process. There are examples of complex transactions in every industry that are still bound by processes that pre-date the digital age and in many cases quite literally first became codified in the iron age. The complexity of many interchanges is driven precisely by the need to maintain trust in the system. When it can't be managed directly between the principals, third parties and centralized systems step in to manage trust.

Interchange remains a linear, centralized, transactional process where each party is responsible for managing trust and maintaining records. This has been sufficient for thousands of years, and over the past 50 or so computing systems have done a great job supporting these centralized, transactional systems for managing records. But in many ways technology has now become the master of process, and forces limitations on how value can be interchanged.

Organizations of all stripes want to do something more meaningful than just simple transactional workloads. They want to really transform the way they do business, and are starting to express this in the form of a new category of applications called 'multi-party' – a category that is not limited to individual platform options, eliminates any sort of hard dependencies, and is open to cloud deployments so that they have freedom of choice. They are fed up with modeling their business processes around a technical implementation that may or may not meet their actual needs.

They want a mechanism that will improve interworking amongst disparate business infrastructures to speed up transactions, improve efficiency, protect transaction data, reduce large-scale hacking of accounts, build trust by regulators, lower auditing cost, and more. The representation of assets of value as digital tokens may very well be the best approach towards addressing these challenges. This is the focus of the InterWork Alliance.