300cubits is one of the first companies to focus on the use of blockchain applications for the container shipping industry and is banking on the use of its digital currency to address the problem of cargo no shows and rollovers.

Since the project was launched on 1 August 2017, it has minted 100M 'TEU token', of which 2M have been sold in Aug - Sep 2017 or 1,588 Ethers (about $1.8 M at current valuation). Of the remaining 98M 'TEU tokens', 38M will be sold to generate funding for its project development while 54M will be distributed to the container shipping industry's stakeholders.

An initial 20M 'TEU tokens' will be given out to carriers and 20M 'TEU tokens' to shippers, on first-come-first-serve basis from February. Carriers would need to contact 300cubits directly to register their interests while shippers can register from 1 Feb at:

www.300cubits.tech/shipper-sign-up

Chart of the week

Blockchain initiatives in the container shipping industry

Companies	Blockchain application	Date announced	Product roll out plan
300cubits	Digital currency for use as booking deposit in container shipping transactions.	1 Aug 2017	15 Jun 2018
PIL, PSA & IBM	MOU to trial blockchain-based supply chain business network innovations chain and trade finance.	15 Aug 2017	not available
MOL, NYK, K-line with 11 Japanese companies	Consortium to develop trade data sharing platform using blockchain technology.	15 Aug 2017	not available
EY, Guardtime with Maersk & 5 partners	Blockchain platform for marine insurance industry.	6 Sep 2017	2018 onwards
HMM & Samsung SDS	Pilot testing systems for encrypted sharing of data in shipping transactions.	7 Sep 2017	not available
Maersk & IBM JV	Blockchain applications to digitize global trade processes with initial focus on paperless trade and shipping information pipeline.	16 Jan 2018	within 6 months

Blockchain and container shipping

A number of blockchain initiatives involving container shipping have been launched since 2017, but the actual application of this new technology remains limited. While several potential blockchain applications have been identified, none of these products have been released so far.

300cubits, a start-up company established in July 2017, aims to be the first to roll out an actual blockchain application for the container shipping market with a booking deposit system that is scheduled to be launched on 15 June 2018. The system aims to use blockchain technology and a dedicated crypto currency to address the problem of cargo 'no-shows' and 'rollovers' that it claims are the key challenges in the container shipping industry.

The company plans to distribute its own crypto-currency, named 'TEU tokens', to industry participants as the first step in getting stakeholders to adopt the new system. The 'TEU tokens' will be given out to the industry participants at no cost starting on 1 February 2018.

The container shipping industry has been slow in adopting new technology and widespread scepticism remains about the viability of such initiatives. We took the opportunity to discuss with 300cubit's co-founder, Johnson Leung (JL), about the challenges that the industry faces and how it aims to overcome the resistance to the adoption of its new system.

Question : Are No-Shows and Rollovers real pain points for the industry? Various attempts to implement no-show fees and booking deposits have been made previously by carriers, with little success to date.

JL : When carriers told us that 25%-30% of the bookings never show up, we think it is a real pain point. About 70% of the carriers' operating expenses (OPEX) are fixed costs, which makes yield management critical for the carriers. It is impossible for the carriers to have effective yield management when they have to guess which bookings will show up.

All shippers we have met also complain about the rolling being a stumbling block to their 'Just-In-Time' fulfil-ment for their supply chain. Contrary to the perception, rollovers are not a problem only for the medium and small sized shippers. The large shippers told us that rolling also happen to them despite having the so-called "No Rolling" clause in their service contracts with carriers. To all customers, rolling always happens in the most inconvenient time i.e. peak season when there are fewer alternatives to ship.

Question : Booking deposits will not solve the problem of cargo no shows if they are caused by production de-lays at the factories. How would a deposit system fix the No Show problem?

JL : Production hiccups will still happen even when the industry adopts the use of booking deposits. However, much of the No Show or Rolling happens because the counterparties (i.e. both the carriers and the shippers) handle bookings casually. The application of booking deposit will force both sides to seriously evaluate the like-lihood of making their obligations in a booking. And the booking deposit could send useful signals well in ad-vance on whether a booked shipment may happen.

Question : Why cant the industry just use cash or more established crypto-currencies like bitcoin to address the issue?

JL : Use of any existing currencies, either fiat or crypto, comes at a cost, i.e. one would bear out-of-pocket or opportunity costs. For example, putting down a cash deposit require more working capital and interest ex-penses for the shippers. The same interest expenses will apply with the use of bitcoin. On the other hand, TEU tokens would be given for free to the industry participants. When the industry participants use these TEU to-kens, the transaction fees could also be paid out of the TEU tokens given to them.

Question : The prices of crypto-currency are extremely volatile. How would shippers and carriers obtain any cer-tainty of the compensation that they will receive from using such systems?

JL : Firstly, once the booking counterparties have a financial stake in the booking process, they tend to fulfil their obligations when a booking is made i.e. the shippers will send in cargo and carriers will load the cargo. So the booking deposit serves more as a deterrence to default on a booking than a transfer of value from one party to the another. Hence, value storage may not be an important function in a booking deposit. In the unlikely event that one party defaults and the value of compensation matters, having deposit that is volatile in value is still superior than today's status quo where the parties receive zero value in compensation.

Question : You plan to give the tokens for free. How would you make money?

JL : We plan to charge 0.7% of the total deposit amount in each booking as transaction fee. So we collect a per-centage of the TEU tokens given out as our income. We can also sell these TEU tokens in the public exchange when we need fiat currencies. To the users, they effectively return a portion of TEU tokens given to them. So it is free for them.

Question : Will you do KYC (Know-Your-Customer) checks during the token sale and customer on-boarding period to reduce the potential counterparty risks?

JL : We will do thorough KYC in our upcoming token sale. So each token buyer will have to register and identify themselves. We will do background check individually for each buyer before we sell our tokens to these buyers.

Question : Would the public blockchain be too slow to be used for actual container booking deposit systems?

JL : Our Booking Deposit Module is hosted on the Ethereum Blockchain. Through numerous system tests, we have seen response time, i.e. time for Ethereum blockchain to register a transaction, between few seconds to few minutes. We have design our system with majority of the system logic taking place off-chain, which also helps minimize the burden on the Ethereum blockchain. We would migrate our system to an even faster public blockchain or private blockchain when the traffic on our Booking Deposit Module justifies such migration.

Question : How could users cash out their TEU tokens?

JL : There are over 8000 crypto exchanges in the world where users can convert their crypto currencies into fiat currencies. We will seek to create a liquid secondary market for the TEU tokens through listing in the large crypto exchanges and engaging market makers. Moreover, industry users will also be able to sell their tokens through peer-to-peer and over-the-counter practice by listing their buy or sell interests on a notice board that we will provide.

Question : 300cubits' solution appears to be easy for the other parties to replicate. How do you ensure that stakeholders continue to use your system if the booking deposit solution is eventually adopted?

JL : Since we are giving the TEU tokens for free to the industry stakeholders who could demonstrate their case to use the TEU tokens, we do not see much incentive for others to create another token for the same purpose as ours. Parties interested in replicating what we do can request free allocations from us and we will evaluate on a case by case basis. However, we see incentives for the booking portals to get the benefits of the booking deposit features or carriers who want to keep the entire booking deposit system in house while using the TEU tokens. In those cases, where the participants choose to use a different platform for making such deposits instead of the 300cubit Booking Deposit Module, it would reduce the amount of commission income that we charge users for using our module. Despite this, we plan to open our program code wherever it makes commercial sense to us, and this includes offering interested stakeholders the option to develop their own booking deposit modules.

Question : What would users expect to see in 300cubit's Booking Deposit System that is due to be released on 15 June ?

Our solution is based on making container shipment booking deposits. As such, the first release of our system is a stand-alone Booking Deposit Module that will not include other functionalities such as shipping order, schedule or track and trace. The Booking Deposit Module is being developed based on the feedback received from over 20 industry participants who have attended the system demonstration or tried the prototype. These users want a solution that is simple to adopt and can be used as an add-on option when they make bookings. The development objective is to provide a functional digital currency transmission system that requires no system alteration and little adoption efforts at the side of the users while automation maybe optional for the future releases.