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BLOCKCHAIN IN SHIPPING; ARE SMART CONTRACTS THE WAY FORWARD?



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Introduction

Shipping, having been the most recognized industry throughout history, has seen a lot of changes in technological and legal aspects. Autonomous shipping has primitive hopes of a better shipping system of networks over the years

to come. The Maritime industry has always seen updates especially to deal in the logistics and back-end strength that shipping provides. Having been more of a profitable industry, despite the environmental risks and potent laws existing, advancements have straight up targeted

the challenges to an easy extent. One such technological grouping that makes things easy in this field, is the usage of blockchain. Blockchain, in this specificity, means a singular medium of a shared ledger, that allows the tracking of assets and recording transactions in

**THOUGHT
for
the MONTH**

The courage to continue
is what distinguishes
success from failure

WINTSON CHURCHILL

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a business network. This enables a whole of goods or assets that may be of value, to be tracked and traded all over the world.

How exactly will blockchain shipping and smart contracts be of relevance?

A key concerns in supply chain management are simplification, the reduction of paperwork and the avoidance of fraud. In a blockchain process, the shipper retains full control and each party involved can only see data relevant to its role. It could minimize the costs of transactions involving many parties, and the huge amounts of associated paperwork. Ideally, each stakeholder (shipowner, government, regulators, agencies) will provide a node (computer) of its own where the blockchain is replicated.

The Maritime world is a vast, open and tumultuous set of operations, that includes every possible activity that happens in international and domestic waters. The logistics involved in such a world, will need the integration of new age technologies that will eventually become the beacon of transformation. The forefront of such involvement of blockchain would be the smart contracts.

The word smart here, is to denote

the usage of computers involved and the means of automation that helps in the contracts of the cargo, to be noticed of the same importance as the traditionally printed format of the Bill of Lading. The core idea to enable automation rests on the hope that ‘automation ensures performance’. Smart contracts, in simpler terms, are the ones whose execution is automated, it doesn’t need an approval of a human being in presence. The “smart” also brings in the tighter scope of the default to have no changes or revisions made to the agreement or the contract of the shipping in itself, making the ideology behind this scheme to be of a strong nature. This very reason calls for it to be termed a strong contract. The smart contracts, which are often considered strong, will have a non-traditional method of enforcement to be followed, i.e. the means and modes of an arbitrational tribunal and such measures. Instead, these contracts will have a ‘No-possible’ errors to have occurred, given that they are involved in the perfect implementation of the technology here. Smart contracts also are seen to uphold the integrity of the contract, of the contracting parties, making this to be a better alternative to the court’s involvement.

Court in its course of happening and

getting to hear the case, will create an involvement that might change the scope of the case, sometimes interpreting the facts to benefit a single party rather than the intended party to benefit out of that contract.

How does Smart contracts & Blockchain differ from traditional & Electronic Bills of Lading (B/L) ?

Bill of lading, has been the recognized document of title to goods at sea. Goods that were in the cargo, in a jiffy, can’t be physically traded, and the B/, which is the receipt in general to the goods, was traded instead. This came to represent the goods, and later became the right to transfer and liabilities under the carriage contract in the case of any damages, or mis delivery. The need of a B/L grew in significance where eventually it was to collect the delivery of goods, and for this reason it should’ve been to arrive early before the cargo. Over time, the basic need of men arose, and the economy being a connected self to another factors, led the need for shipments higher, and the more the ships, the more the time for a B/L to reach, resulting in dumping of cargo. To combat this, the Electronic bill of Ladings (eB/L) was introduced, but it didn’t get as much appreciation from the shipping industrialists.

Major advancements the electronic reliability also raised the scope of fraudulent measures one can take, to edit or make changes to the eB/L. The electronic version did not support the claims of a bailment or a tortious issue, but only to the contractual remedies. The Carriage of Goods Act 1992, which transfers contractual rights and liabilities, in turn stipulates the documents to which it applies. The application of the Act to electronic bills depends on the Secretary of State triggering section 1(5), and this hasn’t happened either. The 1992 Act, does not apply to eB/L too. The only application sought was through the Hague-Visby rules, making the wording an important task,



and to be focused on advertently. A smart contract, makes the non-practical aspect turn practical, allowing the whole collaboration of a blockchain network a working dream. A blockchain network will be a secure and cryptographically sound network, and a more sequence-oriented payment scheme. Block chains will only operate

after a valid transaction is made on one block prior to before the payment has to be made in another block. This allows the whole idea of a reasonable transaction to take place, rather than a system of credit, by chance if any, to not be floated and also not enable ideas to default over the same takes place. A smart contract will be of a major

difference to the fact that, it also relies on the non-negotiable nature of the contract, where in a fixture note, before fulfilling a B/L, will have certain negotiated points to be added, that and to the extent of negotiations later on will also be permitted. In the case of a smart contract, it allows the whole of automation to take over, making it non-negotiable and also a mandate.



Beneficial criteria of the combination of Blockchain and Smart Contracts:

i. Security and Transparency notched up:

The shipping industry comprises of enormous paperwork, that has to pass through several officials, crewmen and other personnel involved, and this brings in high chances of the documents turning into people's hands that it's not supposed to, or even to ones who are involved in data theft, and having gone into their hands is more of a legal risk. Blockchain hinders this possibility by creating a major force of encryption that would not allow

any third person to have access to the said files. This enables the whole blockchain feature a safe feature compared to the paper presence.

It is to be noted that various paperwork and documents pass through several hands but during transportation, the chances of documents running into wrong hands are very high and they might be subject to manipulations or tampering which would compromise the security of the documents. But with the advent of Blockchain, documentation need

not be transported manually since information about the documents can be sent to the relevant parties by way of encrypted code which ensures the security of the documents. With the help of Blockchain, the shipment or a package can be tracked throughout its course of transportation and cases of theft or fraud are easily eliminated.

ii. Reductions in Trade Finance Costs:

Incurring of Trade Finance Expenditure by Shipping Companies can be

largely attributed to clerical errors, excess documentation, delays and other operational discrepancies. Shipping Companies, with the use of this system, can easily prevent the same, by the scope of errors made to drastically reduce in picture, making the whole of expenses get reduced by a significant amount.

iii. Faster Processing and Real-Time Tracking of the Shipment:

The age-old tracking is often seen to be glitching or not accurate. The reliance it has on over the network availability can't always be of trust. Technology is often evolving and old sonar radio frequencies and related equipments need more ascertaining than before. Smart Contracts when used, any function for which the documents are made can be instantaneously executed. This also enables safer and easier tracking of the cargo. As there is a sequential markup of execution of the payments, these updates can also be of a notice to the shipping companies of their discrepancies.

iv. Market entry made easy:

Shipping has always been a format of the colonial power's methodologies. Despite new forces of rules and regulations like the Hague-Visby Rules coming into effect, it hasn't completely gone digital like a lot of nations prefer. Digitalisation is a process to eradicate human errors, and to provide advancements in the processes and practice that is already existing. By the use of Smart Contracts and Blockchain, the shipping industry will get a new update in its system of operations, making the whole medium more attractive and ensuring. There will be new investors in the technological aspects, let alone the cargo. The once prevalent rigour regulations that were once prevalent

which include the usage of manual documentation and other traditional methods will be eradicated by this means, allowing the convoluted laws and disputes to be drastically reduced with the help of blockchain.

Certain Shipping advancements relating to the usage of Blockchain:

A. Marine Insurance Blockchain:

Ernst and Young and Guardtime, in collaboration with various service organizations around the world, launched a Marine Insurance Blockchain Platform which is set to be an economic option for the shipping companies. This platform will also aid insurers, third parties, clients and brokers with excess documentation, duplication, breach of security and legal disputes.

B. Blockchain Platform for Global Shipping:

A.P Moller-Maersk and IBM, in early 2018, created "Tradelens", a global trade platform built on IBM's blockchain technology. This will reduce the cost of shipping, improve transparency and eradicate manual documentation and other traditional and age-old practices. They've got on-boarded over 100 organizations, including inland carriers, ocean carriers, ports, harbours, terminals and freight forwarders spanning three continents- Asia, Africa and Europe.

Conclusion:

Smart Contracts and Blockchain networking in logistics, especially to the scope of shipping and maritime-related segments, will be a game changer in the course of its successful implementation, allowing the networking and transparency to grow multi-fold. This enables a reduction in many illegal activities

as well, starting from smuggling of goods to human trafficking. The transparency in the cargo's details brings a great advantage to the identification of the offenders as well, given the fact the data is traced back electronically, through a wide system of databases, allowing the search to have results faster than before. Smart Contracts by its features will yet equip itself in a more stringent method of delivery system, as the automation will lead to the absence of payment upon default by the seller. Though a little discreet in its methods, when made a little more relaxed to the obligations part, will make a great system of monitoring as well as fulfilling of contracts.

There are certain drawbacks to this combination as well. As we all know, hacking is not a magician's trick to the world. It is a skill, one can develop and target any cloud media for data at his best. Blockchains are a form of encrypted small-sized cloud packages, and to hack one isn't a tough task, but this isn't the only doom. Efficient counter-hack measures can be taken and given more R&D that will allow the whole operation to work. This also creates minor unemployment as there is riddance of middlemen agencies, clerks and many other skilled labourers. This very turn of events needs balance to be restored, and to provide a compensatory employment for those who operate it too. In addition to these, some agencies might operate it as a shell organization, or even worse could be a front to terrorism networks, and it'll be us who'd be encrypting their data too. Thus, it can still be a way forward, when there are enormous measures taken to tackle these challenges, along with the factors of trial and error, with real-life applications to be in effect ■

EU LAUNCHES NAVAL MISSION TO PROTECT RED SEA SHIPPING



The European Union launched on Monday a naval mission to the Red Sea "to restore and safeguard freedom of navigation" there.

The "defensive maritime security operation", dubbed Eunavfor Aspides, comes after Iranian-aligned Houthi militants started attacking international shipping in the Red Sea in support of the Palestinian militant group Hamas in its war with Israel.

"The European Union is responding swiftly to the necessity to restore maritime security and freedom of navigation in a highly strategic maritime

corridor", the EU's foreign policy chief Josep Borrell said in a statement.

"Within its defensive mandate, the operation will provide maritime situational awareness, accompany vessels, and protect them against possible multi-domain attacks at sea," the statement added.

The statement did not specify how many vessels would be involved and an EU spokesperson did not immediately respond to a request for comment. But EU diplomats previously told Reuters it would initially involve three vessels under EU command as

part of the EU's so-called Common Security and Defense Policy (CSDP).

Germany already sent an air defence frigate earlier this month to join the mission, and two diplomats have told Reuters that France and Italy would also contribute.

The EU said the mission would be active along the main sea lines of communication in the Bab al-Mandab Strait and the Strait of Hormuz, as well as international waters in the Red Sea, the Gulf of Aden, the Arabian Sea, the Gulf of Oman, and the Gulf

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