**A essay on maritime law**

**Introduction**

The maritime or admiralty regulation initially appeared in the UK time to meet a very real need in the industrialised nations (Eemmanuel, 2022). For commerce to grow, ships must be permitted to pass between locations with a reasonable possibility of security or fair trade. Due to varying customs, local tribunals or courts were biased. Ultimately, it was decided that only one legal procedure was required to settle conflicts. It is important for ship-owners and captains to understand how their personnel or their family will be compensated in the case that suffer severe injuries or disappear at sea. Workers may be hired from all across the trade route. The formalisation of ports' and shipping corporations' rights and obligations was essential for the development of trade between nations and city-states. Many of the obsolete laws still apply to marine work because the bulk of the challenges and risks are still there. Risky jobs that were, and currently maintaining a seaworthy ship and giving care and attention to the crew have always been top priorities for ship and marine operators. The ship-owners who break the code may be sued in the Admiralty Court or under other Maritime Law-governed appeals laws. These courts have jurisdiction over a wide range of aspects of the marine and passenger liner sectors. As before, sailors who seek compensation for harm suffered at sea may go in with the aid of a marine accident attorney (Eemmanuel, 2022).

In the eleventh century, bills of lading weren't even a concept. Trade among Mediterranean ports began to significantly rise at this point (Boviatsis and Vlachos, 2022). The most reasonable approach to keep the track of the things that were shipped was for the ship's mate to establish a register. Although it most likely began formally, using a registry quickly attained legal status, as least in the some ports. A legislation stating that nothing recorded in the register must be considered seriously if it were in the possession of anybody other instead the keeper was passed about 1350 due to the significance of its accuracy. The registrar would lose his dominant hand, and have most of his property seized if that entered false information there, regardless of who submitted the entry. The functions that would later be completed by the bills of lading's reception role by the 14th century were performed using an on-board record. It appears that exporters still were travelling with their shipment, avoiding the necessity for a separate record of the goods loaded as of yet. Only after the trading customs were altered, and merchants started sending goods to their correspondents at the port of destination even while instructing via letters about the supplied commodity and how to manage it (Boviatsis and Vlachos, 2022).

**Discussion**

**1. Bill of lading functions**

The bill of lading is one of the most important documents for freight and transportation procedures (Arabahmadi, Elsan and Nishadi, 2019). It is a legally enforceable agreement that ensures a straightforward and secure logistics performance while keeping track of the goods being carried from one place to another. As the bill of lading can be issue by the shipping agent, carrier, and logistic company to shipper. Whenever moment the carrier takes control of the shipment, the bills of lading is served. If a maritime carrier uses intermodal shipment along with a residential bill of lading, then this can differ slightly. There are no established guidelines that specify who can issue an entry bill or what requirements must be met. The carrier's bill of lading serves as proof that the exporter or exporter received the goods in good order. The bill of lading contains information about the goods being delivered, the freight classification, the packaging information, any warnings regarding dangerous shipments, if applicable, and the signers of any necessary documents. It also contains the waybill amount or date, the name of the shipper and receiver, the purchase order number or any equivalent security code, the name of the company from which the items are being acquired, and other details (Arabahmadi, Elsan and Nishadi, 2019).

Bills of lading have three primary functions in more details:

**This demonstrates the duration of carriage contract**

The bills of lading specify the kind of cargo, the quantity being transported, and the destination. On occasionally, it will also mention the state of the shipment. It should be remembered that bills of transportation are evidence of a contract those do not create a contract (Wunderlich and Saive, 2019).

 **It acts as a receipt**

Once it gives the shipper a bill of lading, the carrier confirms that the products have been loaded aboard the conveying vessel. The shipper frequently receives several similar bills of lading, which can be sent to different parties all along route to effectively transfer ownership of the shipment.

 **It acts as identify of supplies**

The bill of shipment normally lists the customer or consignee to whom the courier is shipping the goods. However, until the receiving group accepts the shipment's bill of lading, ownership has not actually shifted. Even though the exporter may submit a reproduction of the original freight bills to the recipient as proof of delivery, the cargo will still belong to the owner of those documents. The bill of lading is often only sent to the receiving party once full payment has been made. The terms of shipping are particularly crucial since that specify who is in charge of the goods at each location and who is responsible to pay for it. As though the terms and regulations of the train car may not always be included in the bills of lading (Wunderlich and Saive, 2019).

**2. Types of bill of lading and the application of electronic bill of lading**

One of the most important shipping documents, a bill of lading is a legally recognised record of the items the shipper has received on board (Petronilho, Fonseca and Zúquete, 2022). It functions as a document of agreement between the shipper and the carrier concerning the freight shipment and a carrier. It serves as the exporter's receipt for the carrier as well. It isn't necessary for an exporter to have received the appropriate payment for the freight before handing it off to the shipper. Due to this, the exporter must maintain some level of control so over shipment until that are paid in full. Additionally, the carrier needs a legal document attesting to the cargo's condition and granting authority to transfer it. By describing the package's circumstances and intended destination, the Bill of Shipping helps the shipper understand how to manage the shipment. Most important, it also includes information about payment recovery in accordance with the mutual consent between the shipper, importer, and exporter (Petronilho, Fonseca and Zúquete, 2022). There are two types of bills of lading that used in shipment industry:

**Negotiable bills of lading**

Anyone who has an original bill in hand is qualified to get the items. It serves as the proof of ownership and control. In order to receive the delivery, the buyer, recipient, or agent must present the original bill; failure to do so will preclude from receiving the delivered goods (Plomaritou and Voudouris, 2019).

**Non – negotiable bills of lading**

The non-negotiable bill of lading lists the name of the recipient without acting as a proof of ownership for the freight. The only function of the bill is to verify the transit of the goods, and the receiver or buyer named in the bill must present identification documentation in order to take delivery.

**Application of electronic bill of lading**

The best way to handle and handle bills of lading processing and one of the tasks and procedures that Snappii successfully streamlines is dealing with loading. To using the Electronics bills of lading these applications use: Smart Bill of lading, Cargo X (Plomaritou and Voudouris, 2019).

**3. Concept of e-bills of lading using block-chain technology**

The blockchain is a distributed ledger-based, decentralised database. This technology has been around for a while the idea of blockchain first surfaced in 2008 (Spanjaart, 2022). This technology's main goals were not to capture or convey documents, but rather to use and transaction involving the digital currency Bitcoin. There is no commonly agreed-upon definition of blockchain, despite the fact that its use and function have gained widespread recognition in recent years. The consensus is that blockchain can be thought of as a collection of secure blocks, which each houses a number of previously verified transaction records, despite the fact that other definitions of blockchain exist. These blocks are linked together and secured by chains of encrypted certificates. The failure of earlier attempts to address these faults by using electronic bills of lading (eBLs) and the shortcomings of the paper bills of lading mechanism led to the proposal to apply blockchain based to bills of lading. The most criticised shortcoming of paper bills of lading is that it slows down transactions, among other drawbacks. On the one side, it has become more usual ever for a vessel to arrive at the discharge port before the transfer of the paper bills of lading because of the rise in vessel speed. However, strict maritime law still mandates that commodities be released in opposition to the initial paper bills of lading (Spanjaart, 2022).

The significant issues may arise as a result, and in most cases the carrier will be responsible for any losses if the goods are released without the appropriate bill of lading (Ratajczak, 2022). The shipping industry has somewhat addressed this problem by using letters of indemnification, although it is still generally thought to be an unsatisfactory position. Earlier attempts to address this problem and streamline the transmission of lading resulted in the implementation of electronic bill of lading systems. The growth of the electronic bills of lading system is being hampered by three key issues, despite recent recognition and interest in it. First, because of the membership requirement, electronic bills of lading members will find it difficult to conduct business with non-members, second, because of the uncertainty surrounding the law, electronic bills of lading have grown unprotected, and third, not all sides involved in global trade, including such port operators but also customs, are able to handle electronic data (Ratajczak, 2022).

While block-chain technology can absolutely avoid double spending, there are a number of other factors that make it less likely to be used for digital bills of exchange lading (Ratajczak, 2022). Block-chain technology requires disproportionately high computer power, which necessitates resources for the necessary expensive hardware as well as enormous amounts of electricity to set up and manage a database for digitally bills of lading. Due to the data encryption calculations and authentication steps associated with adding new transaction records towards the database, block-chain technology as a sql databases is also relatively slow, allowing only a small number of new entries and therefore money transfers to the database within a specific amount of time. It is also theoretically feasible to breach the security layer and interfere with the block-chain database, even though it provides a high level of safeguarding against subsequent alterations of a data, in this case computerized bills of lading (Ratajczak, 2022).

**4. Adaption of block-chain technology for e-bills**

It may guarantee uniqueness a crucial function of the bill of lading, without the need for a membership subscription, blockchain technology is able to usher in a long-awaited revolution in the digitization of bills of lading (Li, Zhou and Yuen, 2022). However, a blockchain-based bill of lading would not take off until it has adequate backing from the legal system. As with any digital bills of lading, a bitcoin bill of lading would not be successful unless. The relevant legal systems provide enough support. Consequently, the remainder of this two international works will be specifically examined in this object: the Delft Rules UN World Conference on Arrangements for the Transportation of Goods Entirely or Partially by Sea as well the draught of the Model UNCITRAL Law on Transferable Electronic Records. The birth of blockchain technology after the Rotterdam Rules were adopted, and the start of the Model's development was not generally publicised a law was initiated (Li, Zhou and Yuen, 2022).

According to UNCITRAL, ownership of a main article instrument, like a bill of lading, warehousing receipt, or even other comparable document, is often a requirement for the exercise of rights in goods covered by papers of title. For this reason, digital bill of lading registry seems to operate like digital bill of lading. The internet bill of affreightment under the registry model embodies the rights in goods via the management of a registration record. There is a genuine risk that the registry approach will be adopted, undoing centuries of advancement and returning to mediaeval books of lading. The method of maintaining the ETR was intended to be based on the fundamental goals and duties of the principal paper bills of lading in an effort to give the digital bill of lading the very same level of legitimacy as the material bill of lading (Li, Zhou and Yuen, 2022).

**5. Advantages and disadvantages of E-bills of lading**

The transferable documents are a desirable use for blockchain technology because that guarantees uniqueness, a crucial component. Additionally, a blockchain-based lading bill would be superior to current and earlier electronic shipments bills. There have been several initiatives to digitise bills of lading. That is always closed, member-only systems that are run by a dependable third party and are based on a central register. Each party who want to participate in a transaction on a closed network must be a registered member. An online bill of lading must be swapped out for a paper one while a quasi is involved (Plomaritou and Jeropoulos, 2022).

 **Leaving off the cost of document shipping from the transportation costs**

This acts as a digital replacement for the typical paper document, making it possible to remove document transit from of the supply chain. With the growing importance of blockchains, some solutions can enable electronic transfers via internet systems, while others offer a replica of the traditional paper process where the transaction is carried out through peer-to-peer blockchains instead of using couriers. Trade parties are essentially no longer required to pay for the shipment of documents, which results in huge cost savings in addition to a time savings that come from lowering transfer speeds to hours instead weeks (Plomaritou and Jeropoulos, 2022).

 **Ensure operation continuity and accelerate document transmission**

The physical damage to a standard paper bill of lading can have serious consequences since procuring replacements especially rapidly can cause significant delays and disruptions for businesses. That has direct experience of thefts affecting delivery vehicles in south area that held shipping papers and led to considerable losses for the concerned businesses. Due to the fact that eBLs are kept digitally, either online or on a public blockchain, that are instantly accessible, may be traded, and trading can continue uninterrupted as a result. This can't go much faster because of the additional security measures put in place (Jugović et al., 2019).

 **Increased security and reduced risk of loss, fraud, and forgery**

The community blockchain systems and encrypted cloud storage are used to transfer and store Electronic Lading Bills. This allows it to be verified and encrypted, nearly completely eliminating the chance that the document will be changed, forged, or stolen. Additionally, two-factor authentication, which is standard in the business, control on visibility and tasks inside the system, of all fact that it is a digital document mean that only one copy is needed instead of the usual three originals. The electronic bills of lading solutions provide unequalled confidentiality and anonymity here between participants to the transaction in compared to the paper-based substitute. All eBL activities, such as eBL alerts, title transfer, amendments, relinquished, and paper switchovers, are also made simple to keep and track (Jugović et al., 2019).

**Disadvantage of electronic bill of lading**

**Administrative cost**

The paper bills are pricey from an administrative perspective. A UK evaluation from the 1990s estimates that handling trade documentation costs the global economy roughly US$420 billion every year. This is a result of the amount of transactions, in part. According to a Maersk assessment from 2014, a shipment of chilled commodities from Africa to Continental Europe may pass through close to 30 individuals and organizations and involve more ever 200 different encounters (Λαζαρέτου and Lazaretou, 2022).

**Practical issues**

The transporter of good is required to deliver the goods to the person holding the bill of lading upon presentation of the first initial bills. The commodities that represent are changed so often in today's global trade that it is unusual for the bill of lad to be available at the discharge line while the commodities arrive. Additionally, bills of lading pass through so many hands as that move from one party to another. Because of this, ship owners frequently supply cargo in exchange for the issuance of an indemnity certificate, shielding from the consequences of doing so without a bill of lading (Nguyen, 2020).

**Exposure to fraud**

It is possible to fabricate or swap paper money, which opens the door to fraud. The English law considers delivery against a fake shipping document to be a misdelivery as the fact that it happened accidentally is not a defence.

**6. Risk of Electronic bill of lading**

The bill of lading's susceptibility to fraud is among the most fundamental concerns associated with its computerised format (Goldby, 2019). The latent danger of being hacked into exists despite the fact that protective measures are always possible and might possibly get better in the future. Notably, decryption methods can offer a very high level of significance security, but total and unwavering security is unthinkable. Additionally, traders are hesitant to employ electronic bills of lading because those logically believe that overall, the risks exceed the advantages. One can respond that since the suspected fraudster must be knowledgeable about computerised systems, scams using electronic bill of lading are incredibly uncommon. To put it another way, if hackers are successful in breaking into an encryption-decryption system, that may still have access to data. The situation is made worse by the fact that, despite the particular knowledge required to construct a fake or fake duplicate of the genuine bill of lading, the created copy cannot be distinguished from the real thing. In comparison, a conventional bill of lading's forgery is easier to spot it a replica that was made fraudulently using a computer. The conventional bill of lading's written format makes it particularly difficult to accurately copy (Goldby, 2019).

 **Conclusion**

This essay focuses on the maritime law as this law share history in the introduction. This essay that describe about the bill of lading functions and application that use to creating the bills. In essay that cover the bill of lading types as these are explain in report and there is explanation of block chain technology for electronic bills of lading that block chains critically evaluate in this report. In essay there are advantages and disadvantages of electronic bills of lading as this describe the risk of electronic bills of lading.

 **Reference**

Arabahmadi, M.R., Elsan, M. and Nishadi, E. (2019). Comparative study of bill of lading function as title document. *Journal of Civil Law Knowledge*, [online] 8(1), pp.89–100. doi:10.30473/clk.2019.6159.

Boviatsis, M. and Vlachos, G. (2022). Sustainable Operation of Unmanned Ships under Current International Maritime Law. *Sustainability*, 14(12), p.7369. doi:10.3390/su14127369.

Eemmanuel, O. (2022). *‘Forum shopping in the context of Recognition and Enforcement of International Maritime Arbitration Awards’: A Comparative Analysis of UK, USA, and Western Pacific Region Approaches*. [online] papers.ssrn.com. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=4283491 [Accessed 5 Jan. 2023].

Goldby, M.A. (2019). *Managing the Risks of Switch Bills of Lading*. [online] papers.ssrn.com. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3384502.

Jugović, A., Bukša, J., Dragoslavić, A. and Sopta, D. (2019). The Possibilities of Applying Blockchain Technology in Shipping. *Pomorstvo*, 33(2), pp.274–279. doi:10.31217/p.33.2.19.

Λαζαρέτου, Τ. and Lazaretou, T. (2022). The use of electronic bills of lading in shipping and the legal issues arising. *dione.lib.unipi.gr*. [online] doi:10.26267/unipi\_dione/2056.

Li, X., Zhou, Y. and Yuen, K.F. (2022). Blockchain implementation in the maritime industry: critical success factors and strategy formulation. *Maritime Policy & Management*, pp.1–19. doi:10.1080/03088839.2022.2119614.

Nguyen, T.M.L. (2020). *Utilizing Blockchain to Digitalize Bill of Lading Process at Company X*. [online] www.theseus.fi. Available at: https://www.theseus.fi/handle/10024/340906 [Accessed 5 Jan. 2023].

Petronilho, F., Fonseca, H. and Zúquete, A. (2022). *The state of the art of the electronic bill of lading*. [online] f1000research.com. Available at: https://f1000research.com/articles/11-991 [Accessed 10 Nov. 2022].

Plomaritou, E. and Jeropoulos, S. (2022). The digitalisation in chartering business: special reference to the role of e-bill of lading in the bulk and liner markets. *Journal of Shipping and Trade*, 7(1). doi:10.1186/s41072-022-00129-2.

Plomaritou, E. and Voudouris, I. (2019). *The Relationships of Bill of Lading, Charterparty and other Transport Documents*. [online] papers.ssrn.com. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3528584.

Ratajczak, O. (2022). DEMATERIALISATION OF BILLS OF LADING USING BLOCKCHAIN FROM THE LEGAL PERSPECTIVE. [online] (121). doi:10.26408/121.03.

Spanjaart, M. (2022). *The Straight Bill of Lading in a Paperless Future*. [online] papers.ssrn.com. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=4226551 [Accessed 5 Jan. 2023].

Wunderlich, S. and Saive, D. (2019). The Electronic Bill of Lading. *Advances in Intelligent Systems and Computing*, pp.93–100. doi:10.1007/978-3-030-23813-1\_12.