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Development of the Unique Rail Vehicle Identification System

Ocean Freight Unique Identifiers for Ships and Containers: Best Practices

Submitted by Rail Working Group*

I. Introduction

1. Global unique identifiers are common in other parts of the transport sector. Global systems for codifying, identifying and otherwise marking cargo are increasingly common in shipping. The length and breadth of this sector's experience in organizing, managing, tracking and uniquely identifying both goods and vessels could potentially be of use to the wider transport industry. In the ocean freight sector, BIC Codes are especially relevant for cargo and IMO Numbers are the standard system used for uniquely identifying ships.

II. Containers

2. An effective, recognized global identifier for containers enables their cross-border transportation and eases the overall logistical process, particularly regarding specific container identification and the asset's allocation to a respective freight forwarder. In the container world global unique numbers are facilitated by the Bureau International des Containers et du Transport Intermodal (BIC) based in Paris. The BIC Code issued by the BIC and used on containers, combined with a set of numbers selected by the operator/owner 7 numbers provides for the unique identification of a container. Critically, codes are not repeated by any other registrar, both at regional and operational levels and this is accepted by various worldwide organizations including:

- The World Customs Organization;
- The International Road Transport Union (IRU);
- The International Union of Railways (UIC);

* This document was scheduled for publication after the standard publication date owing to circumstances beyond the secretariat's control.



- The International Chamber of Shipping (ICS);
- The International Air Transport Association (IATA);
- The International Federation of International Removers (FIDI);

and used globally by over 2400 container owners/operators.

3. So, the unique identifier is alphanumeric comprising 4 Latin letters (the BIC Code) and 7 Arabic numbers of which the last is a check digit. The first three letters are a code for an owner/operator code and the fourth letter is an identifier of the equipment type which will be “U” for containers. BIC does not register the 6 serial numbers, which are left to the owner/operator’s choice “as long as it ensures that each number is allocated only once”.

4. The initial registration of a new BIC code allows one to register up to 1 million containers for a one-time fee of EUR 2,000. The annual renewal of a code certificate costs EUR 475¹. Asset owners can register one business address into the register free of charge. This registration procedure can be done both through a paper application to the Bureau or using an online form. After receiving the application form, BIC starts the registration procedure by checking the availability of the required codes and confirming temporary registration to the applicant. Upon payment of the fee by the applicant, official registration will be validated, and the container fleet may be marked.

5. It is possible (but not usual) to change the BIC. In principle, the marking does not change, even if there is a change of ownership, unless and until the code marking is erased from the container or the code marking is changed to another – duly registered by the BIC and held by the new owner.

III. Ships

6. IMO Numbers were introduced in 1987 by the International Maritime Organization under the IMO ship identification number scheme and initially were aimed at enhancing maritime safety, pollution prevention and strengthening fraud prevention. Since 1996, they have become mandatory for most categories of ships, as well as registered ship owners and management companies. Much like the BIC-Code, the uniqueness of the number is key to its ability to be globally applicable. The IMO Number of a given ship will not change when the vessel’s owner, country of registry or name changes.

7. The structure of an IMO Number is made up of the initial ‘IMO’ acronym, followed by a seven-digit number. The final digit is a check digit used to verify the authenticity of the IMO Number as a whole. The entire system is managed by IHS Maritime, an Anglo-American information services company based in London. IHS identifies and assigns these numbers without charge.²

IV. Marking Conventions

8. The BIC-Code can be found on the front, top, left and right-side and door-end of the shipping container. This visibility makes identification effortless in difficult weather conditions and during intermodal operations. IMO Numbers are also required to be permanently marked in a highly visible fashion, typically on a ship’s hull or superstructure. Passenger ships should carry the marking on a horizontal surface visible from the air. Ships should also be marked with their ID numbers internally. Many manufacturers now assign and affix IMO Numbers during the vessel’s construction phase.

¹ <https://www.bic-code.org/bic-codes/bic-code-registration-procedure/>.

² <https://www.imo.org/en/OurWork/MSAS/Pages/IMO-identification-number-scheme.aspx#:~:text=The%20Number%20consists%20of%20seven,company%20and%20For%20registered%20owner.>

V. Conclusion

9. With the current digital transformation of the supply chain, a permanent identifier for single transportation assets, whether they be massive ships or small containers, helps pairing such individual assets with new digital tracking systems, thereby sharing important information regarding location, condition and status among relevant stakeholders. Today, this level of transparency can be easily leveraged by container owners, terminals, customs authorities as well as related international organizations due to the increasingly digital nature of these systems. The BIC Code Register, for example, offers its own secure applications to allow for seamless data flows across the supply chain. These robust but simple systems are also increasingly part of loan and financing documentation because of the reliability and functionality they provide lenders and lessors.

10. Nowadays, transportation is fundamentally global in nature: The critical supply of food and medicine across vast distances during the COVID-Pandemic has only reinforced this trend. As a result, studying best practices across the supply chain is important. Solutions, such as global unique identifier systems (especially digital-friendly ones) can be adjusted to different asset classes and industries in order to promote effortless and efficient daily operations. What is clear is that in all key transportation assets – cars and trucks, aircraft, ships and containers – there is a common approach requiring a global unique identification system and parallel protocols on how the equipment is marked with the unique identifier. With the Luxembourg Rail Protocol facilitating for the first time a global unique identifier, the rail sector will fall in line with industry practice in other parts of the transportation sector.
