

Technical Data Rights in the Context of the Marine Industry

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This article focuses on the main legal aspects of technical data rights in the context of the marine industry. The article will overview how the increased volume of data and connected devices and systems has and will impact the marine business and what kind of opportunities are about to arise. We will, of course, also go through the legal questions and considerations around data rights.

In today's connected world, being aware of and in control of the data generated by the products and systems is becoming more and more important. Data awareness creates lots of opportunities for saving money and protecting the environment¹. By collecting and analysing data, companies may get useful information, increase their understanding and knowledge about the product or matter which they are interested in. They could for example learn how to serve their customers better and create innovative solutions to existing problems, improve the efficiency of products, provide predictive maintenance, and even find totally new ways of doing their business. All this should be beneficial for the data collector, product owner and operator and even for the environment. Understanding the data will also be extremely important for ensuring compliance with new laws and regulations (e.g. for shipowners to ensure compliance with IMO's upcoming carbon intensity indicator (CII) and other new regulations, which target cutting emissions).

When the collection of data leads to such a win-win result, what is the issue? The current problem is the lack of regulation, which has led to legal uncertainty regarding the data rights and further to lack of trust, perhaps also to decreased competition and innovation. Who has the right to collect and process data? Can someone actually *own* the collected technical data? Who has the right to access and analyse the data? Who is responsible for the security of data? The situation is completely different in personal data driven businesses, where regulation has already been in place for relatively long time (e.g. EU General Data Protection Regulation). There have been discussions on whether technical data could be intellectual property, trade secret or confidential information of the product owner, user or whether the product supplier or a service provider has the right to freely collect data from the sold product². However, as long as the collection concerns only raw data, can it really be intellectual property or confidential information? At what stage does the data evolve from raw data to enriched data, which could be closer to intellectual property or trade secrets? The questions may be challenging not only from the legal but also from the technical perspective (what is raw data and when exactly does it turn into something else?). There is definitely an urging need for a proper discussion between all the

¹ see e.g. <https://www.rivieramm.com/news-content-hub/how-shipowners-save-costs-through-fuel-monitoring-and-benchmarking-71322>

² See e.g. Legal study on Ownership and Access to Data, Osborne Clarke / EU 2016

relevant experts, scientists and professionals who understand data driven businesses and economics.

What is data?

At the outset, it is important to make clear what we mean by data in the context of this article. There are different kinds of definitions for different kinds of data. It is helpful to make distinction between the different types of data as we should also treat them differently from legal perspective.

Raw data = data which has been generated by digital means, and which has not been processed, analysed or enriched. Not necessarily very useful data without further processing.

Pre-processed data = data which originates from raw data sets, but which has undergone some initial preparation for processing (for example, by combining, filtering or otherwise). Not necessarily very useful or meaningful information without further analysis. Evaluated/Analysed/Processed/Derived data = data that has been manipulated in order to produce meaningful information, of any form. This is data that should be somehow useful information for the recipient of the data, as it gives deeper knowledge about e.g. the condition of product and it could be used as a basis for decision-making.

In this article we focus on data related to ships, their products, systems, assets, surrounding circumstances, voyage and ecosystem. Basically, we are interested in all non-personal data and information which can be useful for creating the most sustainable and economical way of operating a ship and its products and systems. It is worth underlying that we concentrate on non-personal data, which sometimes is also referred to as technical data, operational data or product data. Technical data can be collected from various sources and usually by digital means, for example via sensors, which are located on tangible products. Certain data could also be collected from already existing data sources and external data providers, such as weather data sources. The data could indicate certain conditions of a product such as temperature, vibration, pressure, humidity and so on. The data could also be related to external conditions which could be useful for example for the routing of a vessel voyage such as weather, wind, currents or expected traffic near ports or port schedules. It is also important to have or build a strong database related to the history of different data sets (data related to the history of certain product). With the combination of various data sources, and with the skills of analysing the data to make it meaningful, you may be able to provide very relevant and valuable information for the operators and owners of the ships. The information could enable the ship owners to save money, time, and takes steps to protect the environment. The following examples provide a bit more practical understanding about where data can support the decisions of ship owners and operators:

- How long does it take to get from port A to port B? (relevant data: weather data, traffic data, product data)
- What is the most efficient route in terms of energy consumption and cost from port A to port B? (relevant data: weather data, fuel and energy consumption data)
- When should I schedule a maintenance for product A? (relevant data: product data)

Without data it would be extremely difficult to find the correct fact-based answers to the above questions. Suppliers who are capable of analysing the data and who are experts with the related products, for example engines, are able to monitor the condition of a product and analyse the collected data in a way that they are able to provide very useful information to help crucial decision-making.

Data can also be used for doing predictive maintenance, which means the capability to monitor the condition of certain product to estimate and predict when defects might occur and when maintenance should be performed to avoid the defects from occurring. Regular monitoring of the actual condition of machine-trains and operating efficiency of process systems will ensure the maximum interval between repairs, increase the number and cost of unscheduled outages created by machine-train failures, and improve the overall availability of operating plants.³ With this technique experts could recommend certain actions to be made in order to avoid an upcoming failure, which could cause disruptions to the operation of the ship and consequently lead to major costs and losses. For being able to do predictive maintenance, you need to have vast amounts of relevant data about the history of the products. In order to give more practical view, let's go through the following example:

- Supplier has collected and analysed data from certain products for several years and therefore has a vast experience of how to predict events based on historic data. Currently the Supplier is analysing data from a product it has sold to its customer a few years ago. With the help of collected data and the skills to analyse it, the supplier can detect information which indicates that if the ship starts its next voyage without a certain type of maintenance, there may occur a major failure in the systems of the ship during the next voyage. With quick and relatively easy actions they are able to fix the predicted issue while the ship is still in the port before occurring while sailing in the sea. As a result, the ship avoids a major disruption for the voyage and owner avoids loss of time and money.

This example shows that with data one can avoid major breakdowns and resulting monetary damages and losses, as well as the environmental impacts. Data gives factual insights to the condition of the products enabling the user of product to have more control of the lifecycle of the product. This kind of predictability creates trust and enables the product owner to take risks where it is possible and to avoid them when would not be a smart thing to do. Good quality data enables the owner to make decisions based on facts rather than feelings and thoughts. It is also valuable for the product manufacturers and suppliers who will be able to develop the products further based on the product data. They will be able to provide more accurate and efficient services for the product owners. As a result, there are clearly big opportunities for improving the efficiency and sustainable operation of the ship and its systems, to save money and at the same time cut emissions and save environment. When data flows smoothly between all these different parties (ship owner, product manufacturer, supplier, service provider), it can clearly create many benefits, not only for the product owners and manufacturers but also for the whole planet. To realise this big potential of data, we should ensure that there is no legal uncertainty, which could slow down the development. In the next chapters we will go through the legal considerations around data rights.

Legal considerations around data rights.

How should we treat data from the legal perspective? Can data be or can it contain trade secrets, intellectual property or confidential information? How should we treat data as an asset? Can a company A collect data from products which are owned by company B without permission? What about the data that originates from the products owned by company B, but which has been enriched by the processing and analysis of the company A? This data could be very valuable for company B but not necessarily for any other company. Could company A charge company B for the access to this information? If not, what would incentivise company A to keep developing the data?

³ Mobley, R. Keith (2002), *An Introduction to Predictive Maintenance*

Legal professionals do not like uncertainty as we want to base our opinions and advice on the facts and law. However, in the world of data and related legal rights, there has been and there still is uncertainty and unclarity. This uncertainty is however at least to some extent diminishing with the new proposal for Data Act by the European Union (EU)⁴. In the next chapters we will shortly go through different legal theories related to data and the main content of the proposal for EU Data Act.

Intellectual Property

Intellectual Property Rights like copyright, patent and database rights may sometimes be linked to data rights. So far, the conclusions have been that, although suitable to some extent in theory, none of these legal instruments provide proper protection for data in general⁵. Some sort of data, for example a data report created as a result of data analysis, could be considered as intellectual property but at least when we talk about raw data, is not governed by intellectual property rights. Copyright protection can generally be granted to new creations or inventions, which meet certain criteria and minimum standards like creative and original work. Raw data which is generated from a product is not a unique creation which could get intellectual property protection. And even if it was, who would be the creator of it? Patents may apply to software and certain processes for data processing, but again, not in relation to raw data itself. When raw data gets analysed or derived, the situation changes as the analysed or derived data could be subject to intellectual property rights.

The EU Database Directive (Directive 96/9/EC) aims to protect databases that have been created as a result of a substantial investment, even if the database itself is not an original intellectual creation protected by copyright⁶. The Database Directive does not provide protection for the data itself. The Court of Justice of the EU has sharpened the understanding of substantial investments in a database, clarifying that it aims at protecting the investments in the collection, not the creation of data as a by-product of another economic activity.⁷

Data Act proposal aims to clarify that the Database Directive should not hinder the rights of the users to access and use the data generated by their use of a product, which has been stored in a database. This means that the Database Directive would not apply to the data which will be regulated by the Data Act (databases containing data generated from or obtained by the use of products).⁸

Trade Secrets

The EU Trade Secrets Directive came into effect in 2018 (Directive (EU) 2016/943)⁹. The directive defines trade secret as information which meets the following requirements:

- a) It is secret, meaning that it is not generally known or readily accessible within the relevant circles;
- b) It has commercial value because it is secret; and

⁴ <https://digital-strategy.ec.europa.eu/en/library/data-act-proposal-regulation-harmonised-rules-fair-access-and-use-data>

⁵ Legal study on Ownership and Access to Data, Osborne Clarke / EU 2016, p. 12

⁶ [L_1996077EN.01002001.xml \(europa.eu\)](#)

⁷ See e.g. cases *Fixtures Marketing Ltd v. Oy Veikkaus Ab* (C-46/02, 9/11/2004), *Fixtures Marketing Ltd v. Svenska Spel Ab* (C-338/02, 9/11/2004), *British horseracing Board Ltd v. William Hill* (C-203/02, 9/11/2004), *Fixtures Marketing Ltd v. OPAP* (C-444/02, 9/11/2004)

⁸ EU Proposal for Data Act page 12, and the Chapter X Art 35

⁹ [L_2016157EN.01000101.xml \(europa.eu\)](#)

- c) It has been subject to reasonable steps, under the circumstances, by the owner to keep it secret.

As far as data meets the above requirements, it could be considered a trade secret and subject to protection. However, it must be noted that in some EU member states the local laws require a company actually to take reasonable steps to nominate and identify and report the information as a trade secret. This interpretation would mean that not all information and data, (such as raw data collected from the products) would automatically be trade secrets unless the company has clearly identified the data as its trade secret.¹⁰

Furthermore, as the company should take reasonable steps to keep the data secret in order for the data to be categorised a trade secret, what would that mean in practice? What kind of steps should the owner of a product do if he/she sees the product raw data as trade secret? The product owners know or at least should be aware of the fact that the products which they buy may have certain amount of sensors which collect and send raw data – so could they really argue that they have taken reasonable steps to keep the data as secret? It is clearly questionable whether the collected raw data really could always be considered a trade secret.

Contract law

Freedom of contract is a leading principle under EU contract law. As there has been great uncertainty regarding data rights, it has become the best practice to agree explicitly how and if the parties may collect and process data. The parties could agree that all data is confidential and can only be used e.g. for the purposes of that specific contract or that the party collecting the data may use it for its internal and/or commercial purposes. It is common that the party who is capable of analysing the data and providing data services to the product owner, gets contractual right to collect and analyse the data because both parties benefit from it. It is also common practice that the manufacturer of product has the contractual right to collect data related to its products for the purposes of product development and R&D. However, sometimes the product users or owners tend to be overly cautious about agreeing on data rights because they fear that they lose their control and “ownership” of the data. Usually this is due to the lack of trust and perhaps knowledge. It is of course a real risk that the user or owner of the product gets locked in with one data services provider and is not able to let other services providers to collect and analyse the product data. This is one key reasons for the creation of the EU Data Act.

The EU Data Act will make some substantial restrictions to the freedom of contracting principle. It will lay down rules on how the data holder is allowed to agree and contract with the user and third parties regarding data sharing. For example, data holder will be obliged to provide the data free of charge to the user, with fair and reasonable terms to third parties, and there are even more restrictions on how the data holder can contract with Small and Medium sized Enterprises (SMEs). The EU sees these limitations to the freedom of contracting principle justified to enhance consumer and product user protection. It also clearly aims to protect SMEs and therefore increase the data flow and competition within the union.

¹⁰ Legal study on Ownership and Access to Data, Osborne Clarke / EU 2016, p. 10

EU Data Act

Technical data does not have a clear definition or meaning under the different legal theories and jurisdictions and there has not been a substantive legal framework for technical data, until the latest developments in the EU, where the EU Data Act will be the first proper regulation covering rights and obligations regarding processing of technical data. Many of the open questions will be answered but also further questions will arise. In any case, the regulation will add some certainty, which will be very welcome. According to the EU “The Data Act will ensure fairness in the digital environment, stimulate a competitive data market, open opportunities for data-driven innovation and make data more accessible for all. It will lead to new, innovative services and more competitive prices for aftermarket services and repairs of connected objects”¹¹.

The main purpose of the act is to empower the product user (e.g. shipowner as the owner and user of ship and its products) to get more control of the data generated from or by the use of the product. One of the key obligations for a data holder (the party who has collected data from product) is that they will have to provide easy and direct access to the data generated from or by the use of the product. The manufacturer and supplier of the product will not be allowed to even collect any data from the product without having a contractual arrangement in place with the owner. These will be major clarifying changes to the current situation where there have been no laws about who can collect data. However, it may be that this has been the contractual practice in many cases.

Another major change is that the user of the product will be able to allow third parties to request data from the data holder (which usually is the product supplier), in which case the data holder will have to provide the data to the third party. The data holder will be allowed to request a compensation or at minimum the direct related costs (this depends on the size of the third party as the act looks to protect SMEs) from the third party for getting the data. This should lead to a situation where the data may flow quite smoothly without barriers from product to manufacturer, to owner of product and to third parties. It will also increase the competition between service providers as the data will not anymore be in the hands of just one player but competitors will have the chance to get the data and thus they should be able to use the data for providing competing services to the product user. These are all positive scenarios as with smoother flow and increased competition the products and services should develop faster, which should lead to increased efficiencies and eventually benefits for the environment, planet, and people.

There are of course some issues with the proposal. It will be difficult to determine what kind of data needs to be provided to the product user and third parties and what kind of data is out of scope. In the beginning of this paper, we made distinctions between raw and other type of data (processed, derived, analysed data). The Data Act proposal does not make such distinction and therefore creates uncertainty and raises questions. It seems to make an effort to capture only raw data and keep derivative and analysed data out of scope, but this is not stated clearly. Also, in practice when sensors collect data from products and transmit it to data collection units, and onwards to cloud, a lot happens to data during that journey, which may make it challenging to determine which data sets are “raw” and which data sets already contain some enrichments, processing and derivatives. So, there is a big question on what kind of data exactly will be in the scope of the Data Act. Connected products (IoT products) may generate a huge amount of data, with different technical requirements and costs to make it accessible. Therefore, it would be essential that the EU would define the data more precisely and link the definition more to raw data only.

It is also questionable that when talking about business-to-business context, why the data holder should give the data free of charge to the user. In the end it is the manufacturer who

¹¹ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1113

takes the financial risks for designing and building the product with the required data accessibilities. The free of charge requirement is more understandable in the consumer market.

There are also some further interesting provisions in the proposal. During the Covid-19 pandemic it became clear that governments and public bodies should have at least some kind of right and legal mechanism to get data from commercial players in case it is necessary for the public security and health of people. The proposal includes provisions on this topic. Public bodies will have the right to request data in case of e.g. public emergency, and the data holders will have to reply to the requests within certain deadlines. In general, this should be a good thing but situations may arise where different public bodies interpret emergencies in different manner and as a result this could create issues for certain markets if the threshold for emergency is too low. Replying to requests could take enormous effort and time from companies for which they may feel that they should also be compensated.

As mentioned earlier, businesses have so far been relying on the freedom of contracting. With the Data Act proposal EU introduces clear restrictions for the freedom of contracting principle. This is a bureaucratic risk especially for the manufacturers and suppliers as they will need to strictly follow what kind of contracts they need to put in place and what kind of terms and conditions they are allowed to agree upon. The proposal aims to protect smaller companies who may not have capacity to negotiate balanced terms and contracts with bigger companies for the data access. The idea is of course understandable but as we have seen with the GDPR, the bureaucratic mandatory sample clauses dictated by the EU, are not always the most efficient way of doing business. As the aim of the act is to enable smooth flow of data between different players, it should not create bottle necks for the process with too much bureaucracy.

Another concern is related to the territorial scope of the act and the potential disadvantage of an EU based service provider compared to a third country service provider which does not have to follow the data act. The territorial applicability of the act should not empower third country data service providers against EU based data service providers.

All in all, the Data Act is very much needed not only for making the markets more efficient but also to clarify at least some of the legal questions that we have had for a long time already. It will be interesting to see how the Data Act works in practice and what kind of further developments there will be both on the legal and technical side. In theory the proposal creates not only obligations but also lots of opportunities for companies. A manufacturer who has been the only one having the data related to its products will have to share it with others but the manufacturer will also get the opportunity to get data from other manufacturers and service providers. So, in theory at least it creates an opportunity to expand the data processing and analytics services. Ideally it should lead to better quality and increased competition with potentially lower prices. The final content of the Data Act is still under negotiations and the final version of the act will apply from 12 months after the entry into force of the regulation.
