

# The Legal Ramifications of the Marine Industry in the Digital Age

*An overdue, but essential primer on technology and its impact on the waterfront.*

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The digital revolution has changed the world in which we live and work. People around the world are accustomed to accessing unlimited information instantly with the touch of a button. Digital devices have entered

every facet of life, from simple tasks such as turning on lights in our homes to driving cars. Likewise, the digital revolution has now reached the collective maritime industry, impacting fundamental tasks such as voyage planning, navigation, and communication.

Not always an early adopter of anything new, the maritime industry today is embracing this revolution. Indeed, the presence of devices such as personal computers, phones, electronic chart systems, vessel identification systems, sensors, recording devices, and cameras aboard vessels has lately become the rule, and not the exception. Real-time information that includes weather, electronic charts, engine and critical equipment operating parameters and vessel identifying data is now readily available to vessel crews. As satellite communications becomes less cumbersome and more affordable, expansive enterprise systems between vessels and personnel on shore have become commonplace, with shore-side managers also real-time access to vessel operations.

## A DOUBLE EDGED SWORD

It is indisputable that the digital revolution is poised to enhance safety, protect the environment, improve working conditions, and increase efficiency in the maritime industry. At the same time, the advancement of technology in the maritime industry is not a panacea and with it comes other challenges. Numerous legal issues surrounding now available technologies are manifesting themselves.

Notably, technological advancements have rapidly changed how maritime casualties are investigated and how evidence is developed in legal cases. For example, parties to

a lawsuit would, in the past, present their case by offering witness and expert testimony and documentary evidence such as log book entries, a bell book and charts. There was seldom a case where witnesses completely agreed on the facts. As a result, investigators, courts, and juries were left to weigh the credibility of the witness testimony.

With the advancement of technology into the maritime sector, we are seeing a proliferation of myriad computerized programs, both onboard and ashore, including those that enhance recording position, speed, and heading, voices on the bridge, and rudder angle. In fact, security cameras are now commonplace aboard vessels, shore side, and on the water. Many incidents, therefore, are now captured on video. This technology has made determining the cause of an incident – in some instances – much faster and less fallible.

Several recent casualties have highlighted various problem areas surrounding the deployment of technology on vessels. Significantly, crewmembers are sometimes unable to operate equipment as intended and are unaware of critical features of the equipment. Such competency issues are often due to insufficient training. They also reveal shortcomings in the auditing function of safety management systems. Some cases have involved mariners' failures to use advanced technology in situations where it would have helped prevent the casualties, while others have involved improperly installed or malfunctioning equipment.

## GARDEN VARIETY EXAMPLES

Failure to use equipment meant to aid a mariner in avoiding a collision can undoubtedly result in legal liability. Rules 5 and 7 of the Rules of the Road require a mariner to *"use all available means...to determine if the risk of collision exists."* This rule may now be interpreted to include the use of widely available technology such as digital navigation equipment utilized to maintain a proper lookout and identify collision risks. A mariner is legally negligent if a reasonably prudent mariner would have used such equipment in the same or similar circumstances. Thus, the failure to use available advanced digital technology increases the risk of liability for damages to mariners and vessel owners.

Liability can also flow from the improper or ineffective

use of digital navigation aids. Crews lacking the competence to properly operate equipment can provide a basis for a vessel to be found unseaworthy, leading to liability for cargo, injury, property damage, and other claims. An unseaworthiness finding may also impact the vessel owner's ability to take advantage of such protections as the Shipowner's Limitation of Liability Act, limits of liability for cargo loss and damage, and the ability to succeed on a claim for general average.

Various international codes and United States Coast Guard regulations require vessels to be crewed with properly trained and qualified mariners. Not surprisingly, therefore, the failure to employ crewmembers with the skills necessary to operate modern digital equipment can serve as the basis for a statutory violation. In turn, statutory violations can lead to a finding of negligence per se, civil penalties, and actions against the mariner's license. Casualties stemming from the improper use of digital equipment can also result in costly and time consuming investigations by regulators.

#### MANAGING YOUR RISK: THE WAY FORWARD

The risk of adverse legal ramifications from the presence and use of complicated computerized equipment aboard vessels can be minimized. Mariners should be receptive to using these new digital tools to accomplish old tasks. It is essential that vessel owners provide frequent and effective training to ensure that mariners know how to use the equipment as intended and to make sure their skills keep pace with advancing technology.

Mariners should routinely review manuals and other materials associated with such equipment. Senior mariners should strive to see that their subordinates are competent in the use of this digital equipment. Owners should consider auditing practices which are rigorous enough to identify mariners who are not using digital equipment as intended.

Similarly, mariners must also be familiar with the limitations of such equipment and be wary of overreliance on digital equipment. Indeed, the advancement of technology should complement and enhance a mariner's ability to navigate and complete other tasks but should not be used to displace common sense, the knowledge upon which the technology is based and/or years of experience at sea.

The growing availability of information to vessel crews and owners alike will dictate a change in practices. For example, effective passage planning requires the mariner to gather all information related to the passage and to use that information to appraise potential risks. Mariners have historically looked to onboard resources such as the Coast Pilot, Tide Tables, and the Local Notices to Mariners.

With the availability of internet access aboard vessels, mariners may have more up-to-date information in developing passage plans. This may necessitate using internet resources to secure current information rather than relying on stale information that may be available in paper publications aboard the vessel. Using outdated information when more accurate information is available could be considered negligence. In some circumstances, a crew's practice of not consulting available resources could render a vessel unseaworthy.

Additionally, vessel owners' liabilities are likely to expand as enterprise systems linking vessels to shore in real time grow in sophistication and remotely controlled and autonomous vessels begin to enter service. Certain cargo loss rules provide that carriers are not liable for the loss of damage to cargo caused by the operational negligence of a competent crew on a seaworthy vessel. Likewise, a vessel owner is able to limit its liability under the Shipowner's Limitation of Liability Act if the cause of the loss was occasioned or incurred without its "privity or knowledge." Thus, navigation errors made by the vessel's crew at sea were not within the "privity or knowledge" of the owner. If owners on shore supervise or otherwise exert more control over vessels at sea, however, these defenses could be vulnerable.

In sum, advancing technology as well as its pervasiveness into every facet of life, including the maritime industry, is inescapable. Diligent vessel owners and mariners will embrace the advancing technology and ensure it is being used as intended to reduce the chances of marine casualties and insulate themselves from liability in the process.

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