



TransLaw

Chair's Corner

Lisa A. Harig, Chair of the Transportation and Transportation Security Law Section



In this issue of TransLaw, we feature a fascinating article on the use of unmanned aerial systems in the maritime sector. Author Allison Skopec

discusses how drones and related legislation are interacting with the Admiralty Extension Act. In addition, she provides an overview of the maritime industry's adoption of UAS technology for various uses.

We also have reviews of two recent Section programs. In April, former FMC Commissioner William P. Doyle spoke to members about his time at the FMC, and his current position as Chief Executive Officer and Executive Director of the Dredging Contractors of America. In May, the TTSL annual Transportation Security Law Forum was

held at TSA headquarters. This year's topic was "Evolution of Transportation Security Law" and the forum features two excellent panels covering a variety of transportation modes, as well as superb guest speakers.

The Section is sponsoring its annual speed mentoring event for DOT summer interns and other law students interested in careers in transportation and/or transportation security law. The event will take place on Thursday, July 19 from 5:30-7:30 pm at the offices of Stinson Leonard Street LLP. Please see the FBA website and emails for more details.

As always, I encourage each of our members to actively participate in the Section by attending an event and/or authoring an article for TransLaw. If you have an idea for a program or article that you'd like to see, please contact one of the TTSL officers. ❖

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Consulting Editor, FBA: Cathy Barrie

TTSL Section: Annual Forum on Transportation Security Law

As it has done for the past several years, the Transportation and Transportation Security Law Section hosted its annual forum at the Transportation Security Administration (TSA) in Arlington, Virginia. This spring, the section decided to return to transportation security fundamentals, providing an in-depth look at security changes in both aviation and surface modes since the creation of TSA in a program titled “Evolution of Transportation Security Law” held May 14, 2018. The program offered an in-depth historical and practical overview for both private and public sector practitioners.

The afternoon began with welcoming remarks from Roderick Allison, Acting Deputy Administrator for TSA, followed by a keynote address delivered by Francine Kerner, Chief Counsel for TSA. Ms. Kerner focused on congressional, judicial, and agency



Aviation Security Legal Framework Panel from Left to Right: Christopher Bidwell, Kathleen Connon, Roy Goldberg, Kelly Wheaton, and George Brown.

response to transportation security threats and events since September 11, 2001, and presented a visual timeline highlighting the evolution of security measures in all transportation modes.

Following the keynote, George Brown, the Robert Drinan, S.J. Professor of Law at Boston College Law School, moderated a panel on the aviation security legal framework from September 11th to present. The panel featured aviation security experts from the private and public sector, including Christopher Bidwell, Vice President of Security at Airports Council International-North America; Kathleen Connon, Federal Security Director for San Diego International Airport in the Office of Security Operations, TSA; Roy Goldberg, Partner at Stinson Leonard Street LLP; and Kelly Wheaton, Deputy Chief Counsel for Enforcement, TSA. The moderator opened the panel with an academic synopsis of the changes to national security in response to global terrorism incidents and threats. Panelists from the private sector then explained ways in which industry input has impacted the evolution of aviation security, how the judicial process can be used to effect security change, and industry’s role in ensuring that TSA carries out its mission, including the allotment of resources, as prescribed by Congress.

The TSA panelists discussed constitutional issues that arise at the checkpoint, TSA’s unique administrative search authority related to passenger screening, and concerns regarding the protection of screeners. TSA counsel honed in on how the agency works with global partners to address evolving security threats. The panel also fielded questions regarding data privacy considerations for airports and the intersection of civil rights and security.

The second panel explored transportation security in surface modes. Sonya Proctor, Director of the Surface Division in the Office of Security Policy and Industry, TSA, moderated the panel, which featured Kimberly Denbow, Senior Director for Security, Operations and Engineering Services for the American Gas Association; Thomas Farmer, Assistant Vice President for Security for the Association of American Railroads; Traci Klemm, Assistant Chief Counsel for Regulations and Security Standards, TSA; and Ronald Pavlik Jr., Chief of the Metro Transit Police Department. The panelists began by providing an overview of the similarities and differences in how surface transportation modes reacted to the events of September 11th and subsequent threats to surface systems. Industry panelists examined the unique threats facing their modes and recognized the challenges that come with open systems and the free movement of people. Panelists emphasized the importance of industry and federal government collaboration, with examples such as the creation of TSA’s security pipeline guidelines and information sharing with Canada regarding rail security threats. TSA representatives noted how regulations can build on voluntary standards and streamline security efforts across industry. The panel concluded by discussing evolving threats to transportation security, including Unmanned Aircraft Systems (UAS) and public protests.

Lisa Harig, Partner at Stinson Leonard Street LLP, closed the program with remarks on behalf of the Transportation and Transportation Security Law Section. Attorneys from private practice, federal agencies, and industry associations, as well as law students, attended the event, which drew over 130 participants. ❖

Game Of Drones: Unmanned Aerial Systems In The Maritime Sector

Allison N. Skopec

Introduction

On February 25, 2018, Italian fashion house Dolce & Gabbana asked its nearly 600 guests at Milan Fashion Week the unthinkable: to turn off their wi-fi connections. After nearly an hour of pleading with the audience, the show finally began. But instead of millennials stomping down the runway in designer threads, eight quadcopters holding jewel-encrusted handbags buzzed down the runway. The appearance of unmanned aerial systems (“UAS”) or drones created a sterile, vaguely militaristic contrast to Dolce & Gabbana’s otherwise flamboyant Fall Winter 2018/19 collection.¹

As drones invade the fashion world, they have also leaked into almost every sector imaginable—and the maritime industry is not immune from UAS’ reach. While drones are not a part of the historical maritime vocabulary, they have nonetheless started to enter the maritime industry. But their long-term legal implications are unresolved and largely speculative. Companies are designing commercial UAS for the private sector and, if successful, they are likely to permeate our daily lives just as automobiles and the internet once did. Sometimes called “disruptive technologies,” more and more firms are creating “task forces” devoted to emerging technologies such as drones, artificial intelligence, the internet of things, and distributed ledger technologies. Disruptive innovation is a theory by Clay Christensen, a professor at Harvard Business School, who posits that companies with ample resources and intellectual leaders end up failing in a market because they do not catch on to disruptive market shifts. This theory is as relevant as ever in today’s fiercely competitive legal industry.

Appurtenances Within Admiralty Jurisdiction

The Admiralty Extension Act

In 1948, President Truman signed the Admiralty Extension Act (“AEA”) into law, which expanded the scope of original jurisdiction held by federal courts sitting in admiralty. Pursuant to the AEA, admiralty jurisdiction included ship-to-shore torts and did not affect or amend federal or concurrent state jurisdiction of maritime torts.² The statute provides that “the admiralty and maritime jurisdiction of the United States extends to and includes cases of injury or damage, to person or property, caused by a vessel on navigable waters, even though the injury or damage is done or consummated on land.”³ The bedrock principle behind the AEA is that, in order to properly invoke jurisdiction pursuant to the AEA, the injury must emanate from a vessel in navigable waters. The party who invokes jurisdiction must also allege vessel negligence, which relates to a defective appurtenance or negligent navigation as well as tortious conduct of the crew that results in an injury on land. Furthermore, the AEA applies only to a vessel and her appurtenances – thus, the

AEA’s framework will be essential when looking to how to classify UAS in the maritime context.

What are Appurtenances?

General Maritime Law (“GML”) allows seaman three routes for recovery: (1) Jones Act; (2) Unseaworthiness; and (3) Maintenance and Cure. Under an unseaworthiness claim, a vessel, including “her crew and **appurtenances**,” must be reasonably fit for the vessel’s intended purpose. But what exactly are appurtenances?

In admiralty, a vessel’s appurtenances are commonly defined as anything “attached to the vessel or used by the vessel that is essential to fulfill the vessel’s mission or operation,” and thus they are subject to maritime liens on the vessel.⁴ While each Circuit Court of Appeals has a slightly different test, the United States Court of Appeals for the Fifth Circuit distilled the appurtenance test to three factors: (1) whether the equipment is attached to the vessel, (2) whether the equipment is “utilized in a manner fundamentally related to traditional maritime activities,” and (3) whether the accident occurred on the vessel.⁵ Simply put, appurtenances subject to a maritime lien on a vessel are that which are “indispensable to the accomplishment of the enterprise in which she was about to engage.”⁶ Further, an appurtenance can have separate ownership from the vessel owner, can be intangible, and does not need to be onboard or installed on the vessel at the time of its arrest.⁷

The fact that an appurtenance does not need to have the same owner as the vessel involved has created legal ambiguities in complex situations, particularly for lessors of vessel equipment, whether under true or financed leases. This is because a lessor under a finance lease of an appurtenance may “only utilize U.C.C. Article 9 to perfect its security interest and may not a preferred ship mortgage under the Ship Mortgage Act. The only consensual security devices accepted for recordation are vessel mortgages, either ordinary or preferred.”⁸ Thus, a finance equipment lease “cannot meet the filing requirements as a vessel mortgage because the mortgage must cover some interest in a vessel and a finance lease grants a security interest in the leased equipment and not a security interest in the vessel,” and is still subject to maritime lien attachment even if removed from the vessel.⁹

A real-life example is found in the Deepwater Horizon litigation.¹⁰ Defendant Anadarko argued that the drilling mud inside the well at the time of blow-out was an appurtenance of the vessel, Deepwater Horizon, because the mud “was essential to the vessel’s mission and under its control.”¹¹ Thus, Anadarko argued, it was not material whether the mud was off the vessel and in the well because it could still be classified as

a vessel appurtenance.¹² United States District Court Judge Carl Barbier disagreed. However, UAS are distinguishable from this situation and likely would be classified as a maritime appurtenance under the Fifth Circuit test **as long as** the drone was engaged in an activity related to the vessel.¹³

Drone Legislation

Aerial drones are regulated by Title 49 of the United States Code – Transportation, specifically falling under Subtitle VII – Aviation Programs, 49 U.S.C. §§40101 to 50105.¹⁴ To ensure the highest level of aviation safety, the FAA has been given authority by Congress to regulate airspace use, management and efficiency, air traffic control, safety, navigational facilities, and aircraft noise at its source.

In 2012, Congress passed the FAA Modernization and Reform Act, which encouraged the acceleration of UAS programs within U.S. airspace by relaxing previous restrictions on UAS activity. In 2016, Congress modified the 2012 Act by passing the FAA Extension, Safety, and Security Act, which extended the act for 14 months. Notable passages include calling for an increased focus on cybersecurity by creating a “framework of principles and policies to reduce cybersecurity risks to the national airspace system, civil aviation and agency information systems using a total systems approach that takes into consideration the interactions and interdependence of different components of aircraft systems” and addressing drone regulations through the creation of requirements for identification, classification (including public and civil), and creation of an online database.

While states are preempted from regulating airspace as they see fit, the FAA has released guidelines identifying ways in which states can create specific laws related to land use, zoning, privacy, trespass, and law enforcement operations as they relate to UAS. Further, states may be allowed to pass regulations involving operational UAS restrictions on flight altitude, flights paths, and operational bans. For example, it is within a city’s purview to ban people from operating UAS within city limits, within airspace of the city, or within certain distances of landmarks. However, mandating equipment or training for UAS related to aviation safety, such as geo-fencing, will most likely be preempted because those regulations would not be consistent with federal regulations.

Uses For Drones In The Maritime Industry

After the White House created the UAS Integration Pilot Program in late 2017, which incentivized commercial drone companies and the FAA to work together to increase development, major players such as Amazon, Google, and Walmart rushed to create a privately-funded and -operated air-traffic control network separate from the current federal system, enabling widespread operations at low altitudes. According to federal regulators and industry officials, commercial drones in the U.S. are expected to begin limited package deliveries within a few months, which will have far-reaching consequences on supply chain logistics.¹⁵

Vessel Resupply and Supply Chain Delivery

The U.S. military has used drones for resupply for many years, but the use of this technology for private sector resupply is enormous. The current state of affairs is such that, in order to send urgent medical supplies, mail, documents, spare parts, or provisions to a vessel underway or at anchor, owners and operators must rely on conventional means for delivery, such as boats, barges, or sending the vessel to port to tie-up alongside a pier. However, these options are time-consuming and expensive. The reality is that resupplying a vessel is a common occurrence, and in some cases, supplies are needed when the vessel is still far out to sea or with its next port of call undetermined. This is where UAS technology will come into play.

Owners and operators are limited in their options for urgent deliveries to vessels, but those limitations are dissipating now that companies are embracing UAS innovation. For instance, in January 2016, a UAS operated by A.P. Moller Maersk A/S successfully completed an at-sea delivery of a small package from a barge to a tanker through the use of an aerial UAS. Maersk conducted this UAS test over “a relatively short distance of 247 meters,”¹⁶ and the package contained a 3 lb. tin of Danish butter cookies. This light weight should not be discouraging to the industry because the U.S. military already has drones, such as the Snowgoose, that can carry up to “600 lbs of supplies in [their] configurable cargo bay[s].”¹⁷

Even though the flight distance in this case was somewhat short, industry should be optimistic because, as technology advances, future deliveries could involve longer flight distances, heavier payloads, and a wider variety of uses. As UAS integrate into the maritime sector’s supply chain, companies may save thousands of dollars per vessel each year on small yet essential vessel deliveries. In other words, a UAS effectively limits or alleviates the need to pay to hire a boat and crew to make deliveries, and also increases safety in dangerous sea conditions by reducing the human element in at-sea transfers. Also, the advantages of UAS in shipping extend beyond delivery of supplies to all types of vessels. Other proposed uses include inspections of tanks aboard tank and cargo vessels and lashing aboard cargo or container ships. In some cases, UAS may become valuable surveillance tools that enhance vessel safety in ice navigation and surveillance in anti-piracy measures. By using drones for resupply, companies may eventually be able to avoid sending an entire ship on an equipment delivery to a tanker. More recently, Wilhelmsen Ships Service announced that it sees drones as the “natural extension” of the company and that it will start “delivering essentials via drone for its ships service unit.”¹⁸

While UAS were initially developed for government and military operations, over the next five years, growth in the commercial and civilian market of the UAS industry is generally predicted to surpass that of the defense industry.¹⁹ But while research, development, and manufacturing for UAS technology continues to rapidly evolve, regulators have struggled to keep pace. Consequently, the legal issues that

surround the use of UAS remain complex, and in some areas, unsettled. And, as with any new innovation, there are benefits and risks--commercial UAS are no exception.

Vessel Inspection, Port Maintenance, and Safety

Besides resupplying vessels, companies are increasingly utilizing drones in the energy sector in performing inspection work by reducing costs and increasing efficiency and safety. Due to their sturdiness of materials, UAS are capable of operating in some the most challenging environments in the offshore industry and could be used to meet requirements before oil and gas exploration is approved, such as those related to surveys of ice, rig inspection, and tracking of marine life.

UAS have many applications for the off-shore industry, they can "survey and identify elements of a rig or vessel for leaks, damage to piping, structural defects, or other irregularities in locations that are difficult to access or dangerous for human intervention, such as offshore risers, flare stacks, and undersides of offshore structures."²⁰ In fact, a UAS was reported to have incredibly "completed the inspection of the derrick, a heli-deck, and four cranes in two days, more than two weeks quicker than estimates of what would have been required under current inspection options."²¹

Finally, the need for routine, yet dangerous, human inspections can gradually be eliminated through drones that are monitored safely by workers in a control room. Remote monitoring still allows instant assessments and feedback to the vessel or offshore superintendent. This in turn reduces costs, increases efficiency, and significantly reduces the risk to human life during essential maintenance without eliminating jobs.

Marine Pollution and Government Contracts

Another application of UAS centers on outfitting drones with emission sensors to enable monitoring of emissions from vessels, with the aim of reducing marine pollution. UAS be used for efficient gathering of information to detect and quantify discharges or spills in an effort to mitigate environmental impact in times of disaster as well as enforcing regulatory environmental schemes. The drone trend has already taken off with environmental protection groups and inside shipyards. Drones are being used in the fight against ocean plastic build-up, with the U.S. government and corporations teaming up with scientists to protect fragile marine ecosystems.²² According to the Drone Major Group, "the flexibility and utility of [drone] technology will transform the data collection process, providing scientists with a new means to accurately map and survey those areas most under threat from plastic contamination."²³

Likewise, shipyards have started to target marine pollution in their own way. For example, in 2015, Remontowa Ship Repair Yard inspected the interior of a cargo tank using a drone to take videos and photographs of the tank surface to assess the condition of the tank's protective coatings and to identify any defects that required repair. Just a year

later, Martek Marine announced it had been included on a framework contract by the European Maritime Safety Agency for using remotely operated drones to monitor and prevent pollution by vessels.²⁴ Later in 2016, the Istanbul Metropolitan Municipality's Marine Services Directorate announced that it will "use drones to monitor marine pollution in the Bosphorus in efforts to improve surveillance and fine enforcement."²⁵ Currently, drones have been used in the US to monitor reefs and marine life, but no regulations exist for the monitoring of marine pollution from vessels.

Conclusion

When discussing disruptive technologies, Clayton Christensen explained that "empowering innovations transform complicated, costly products that previously had been available only to a few people, into simpler, cheaper products available to many. Empowering innovations create jobs for people who build, distribute, sell and service these products."²⁶ This is the bedrock of embracing UAS. While there will always be risk concerns, such as malfunctioning drones, rogue actors (see the White House lawn drone incident of 2015)²⁷, or lack of uniformity between local laws and federal regulations, the good of UAS technology must be outweighed with potential risks. While the law is currently silent on the matter, for purposes of admiralty jurisdiction, it is likely that UAS technology will be eventually classified as maritime appurtenances of a vessel if the drone is used in a manner consistent with established appurtenance classifications. Legally, this sets the emerging commercial drone industry up to disrupt the maritime sector through its potential applications in the maritime, energy, shipping, offshore, and ship construction markets, as well as through environmental protection measures. ♦

Allison Skopec is a recent Tulane University School of Law graduate ('18) and an incoming associate at Winston & Strawn LLP in New York City. The opinions and views expressed in this article are her own. This article is intended to provide general guidance and does not constitute legal advice or guidance.

Endnotes:

¹Trevor Mogg, *Dolce & Gabbana drones fly the catwalk at Milan Fashion Week* (Feb. 25, 2018), <https://www.digitaltrends.com/news/dolce-and-gabbana-drone-fly-catwalk/>.

²46 U.S.C. § 740 (2012).

³*Id.*

⁴*Id.*

⁵*Drachenberg v. Canal Barge Co., Inc.*, 571 F.2d 912 (5th Cir. 1978).

⁶*Turner v. United States*, 27 F.2d 134, 136 (2d Cir. 1928).

⁷*The Great Carter*, 1924 AMC 1074, 1075 (S.D.N.Y. 1924); *See Stewart & Stevenson Servs., Inc. v. M/V Chris Way MacMillan*, 890 F. Supp. 552, 561-62, 1995 AMC 2995 (N.D. Miss. 1995) (In *Stewart*, the propellers and a tail shaft

removed from the vessel and which could have been used on a sister ship were held subject to a mortgage lien on the vessel where the owner evidenced an intention that the items be used aboard the vessel and they were essential to general navigation or the specific voyage upon which she was engaged. *Id.* at 562. The court ruled that components of a vessel, even though readily removable, “which are essential either for her general navigation or for the specific voyage upon which she is embarked become a part of the vessel itself and thus constitute appurtenances or apparel of the vessel.”)

⁸Stewart F. Peck and David B. Sharpe, *What is a Vessel: Implications for Marine Finance, Marine Insurance & Admiralty Jurisdiction*, 89 Tul. L. Rev. 1, 26 (2015).

⁹*Id.*

¹⁰*Id.*

¹¹Second Supplemental Brief of Appellant Anadarko Petroleum Corporation in Support of Petition for Rehearing En Banc, pg. 1-3, *In re Deepwater Horizon*, 772 F.2d 350, 2014 WL 7235579 at *1-3, (5th Cir. Nov. 5, 2014).

¹²*Id.*

¹³*Drachenberg v. Canal Barge Co., Inc.*, 571 F.2d 912 (5th Cir. 1978).

¹⁴49 U.S.C §§ 40101-50105 (2012).

¹⁵Andy Pasztor, *Coming Soon to a Front Porch Near You: Package Delivery Via Drone* (March 11, 2018), <https://www.wsj.com/articles/coming-soon-to-a-front-porch-near-you-package-delivery-via-drone-1520798822>.

¹⁶*Id.*

¹⁷Tyler Rogoway, *Snowgoose is the Pentagon's Low-Cost Resupply Drone of Dreams* (March 24, 2015), <https://foxtrotalpha.jalopnik.com/snowgoose-is-the-pentagons-low-cost-resupply-drone-of-d-1699921499>.

¹⁸Betsy Lillian, *Global Maritime Groups Sees Drones as*

'Natural Extension' of Company (May 18, 2017), <https://unmanned-aerial.com/global-maritime-group-sees-drones-natural-extension-company>.

¹⁹Pamela Cohn et al., *Commercial Drones are here: the future of unmanned aerial systems* (Dec. 2017), <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/commercial-drones-are-here-the-future-of-unmanned-aerial-systems>.

²⁰Sean T. Pribyl, *Drones: Is the Maritime Industry Ready?*, *Maritime Reporter* (July 2016), <https://magazines.marinelink.com/Magazines/MaritimeReporter/201607/content/drones-maritime-industry-513108>.

²¹*Id.*

²²Anne-Marie Causer, *Using Drones to Tackle Ocean Plastic Pollution*, <http://www.maritimejournal.com/news101/pollution-control/using-drones-to-tackle-ocean-plastic-pollution>.

²³*Id.*

²⁴Michelle Howard, *New Project Uses Drones to Monitor Ship Emissions*, *Marine Technology* (Nov. 21, 2016), <https://www.marinetechologynews.com/news/project-drones-monitor-emissions-541640>.

²⁵*Drones to Enforce Pollution Fines in the Vosporous*, *Safety4Sea* (Oct. 2, 2016), <https://safety4sea.com/drones-to-enforce-pollution-fines-in-the-vosporous/>.

²⁶Clayton M. Christensen, *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, HARVARD BUSINESS REVIEW PRESS (May 1, 1997).

²⁷Michael S. Schmidt, *Secret Service Arrests Man After Drone Flies Near White House* (May 14, 2015), <https://www.nytimes.com/2015/05/15/us/white-house-drone-secret-service.html>.

The TTSL Section Holds Lunch & Learn Series: A Conversation with Former FMC Commissioner William P. Doyle

On April 25, the Section hosted a special guest, William P. Doyle, ME, Esq, Former Commissioner of the Federal Maritime Commission and the new CEO & Executive Director for the Dredging Contractors of America. Nominated by President Barack Obama and unanimously confirmed by the Senate, Commissioner Doyle served from 2013 to 2018.

While at the FMC, Commissioner Doyle led several trade delegations and during this program he provided attendees with insight on the shipping alliances and the role and responsibilities of the FMC. The program was moderated by board member and past Section Chair, Thomas Lehrich where the attendees learned about various developments in port operations and waterway dredging. Commissioner Doyle also presented on the dredging projects and the Army Corps of Engineer's role in new-starts as it relates to port readiness.

The group had a lively question and answer session on port ownership, COSCO's state ownership, and the nature of the container liner industry. The Section holds a Lunch & Learn

lecture series periodically throughout the year and announces upcoming events through its mailing list, website, social media accounts, and this newsletter. ❖



From left to right, moderator Thomas Lehrich, board member and former Section Chair sits with William P. Doyle, ME, Esq. Former Commissioner of the Federal Maritime Commission.



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Federal Bar Association
1220 N. Fillmore St.
Suite 444
Arlington, VA 22201