INTELLECTUAL PROPERTY APPROACH OF THE MARITIME PILOT IN THE INTERNATIONAL COMMERCE

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LIST OF ABREVIATIONS

Abbreviation	Full text
CISG	UN Convention on Contracts for International Sale of Goods
NY Convention	Convention on the Recognition and Enforcement of Foreign Arbitral Awards, also known as the New York Convention (entered into force on June, 7th, 1959)
CAF	Currency Adjustment Factor
MA	State of Maranhão, Brazil
RSHI	Jiangsu Rongsheng Heavy Industries (Chinese shipbuilder)
DNV	Det Norske Veritas (is a Norwegian classification society)
VLOC	Very Large Ore Carrier
CMI	International Maritime Committee
IMO	International Maritime Organization
SOLAS	International Convention for the Safety of Life at Sea
STCW	Standards for training, Certification, and Watch keeping
COLREGS	International Regulation for Preventing Collisions at Sea
MARPOL	Maritime Pollution Regulations
IAMSAR	International Aeronautical and Maritime Search and Rescue Convention
UNCLOS	The United Nations Convention on the Law of the Sea
USC	United States Code
VHF	Very High Frequency (radio)
US	United States
MV	Motor Vessel
POB	Pilot On Board

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1. INTRODUCTION

When using a car, it is possible to have an idea where the "mother company" was born, but not really where it was made, in what plant it was assembled. Even worse, by entering in a building, there is no way to know from where all raw material came from.

When seeing or using an iPhone, it is very interesting, but it is written there, on the its back: "Design by Apple in California Assembled in China"[1]. So, many questions and answers can be easily thought: (i) the simple phone referred to, usually is a simple result of an international business transaction[2], (ii) possibly an International Joint Venture[3], (iii) maybe an arrangement for taxation purpose according do the Law[4], (iv) perhaps for some secrets[5] or (v) just for something else…

Anyway, International commercial cross-border transaction and different contractual arrangements are just happening right now, and they are always changing according to the trends of globalization. All this process has been a result of many contracts, conventions, international agreements, Worldwide Institutions and so on.[6]

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1 The example of an Iphone, by Apple, is just ilustrative and does not refer to the Author personal opinion, does not want to promote or disapprove of the product. It is being used on the "Liberty of Free Speech" (from First Amendment to the United States Constitution, Dec 15th, 1791) and it is just for this Academic Purpose.

2 *see* Horn, Norbert , Unit 1. June, 17, 2013. Cologne, Germany, International Commercial Law Seminar - 2013 – Binder II

3 University of California: International Program - Structuring an International Joint Venture. School of Law. August 6 – 17, 2012. United States.

4 *see* overview from p. 1-12. Jr – Schadewald 2011

5 *see* point of view from p. 73-99. Gibson – Johanna – 2005

6 *see* Michael P. Malloy, Phd, Unit 13: Global Influences in US Contracts. University of California, Davis – Class Materials 2011

Back to the concrete case above – the iPhone - if the screen of that set stops working just after it was sold, Apple (this case, as example, manufacturer and seller) must give the consumer a brand new one. The client does not need to care, It really is an Apple's problem. And that the way it must be in California[7].

For sure, Apple (or any leading corporation) had a strong legal support for assembling in China. Certainly, the iPhone was forced to come from China by following a market tendency. [8]

It is important to start from the point that the iPhone "is designed in California".

According to the Professor Sunder, "The Intellectual Property" includes copyrights, trademarks, trade secrets and patents. [9] And, the "design" of iPhone includes the trademark of Apple, patent(s) and, for sure, many trade secrets (software, etc.).[10]

As a matter of fact, also, in the case above, the iPhone was "made in China" and it may be delivered anywhere in the world.

Actually, to make an iPhone available for sale in each Apple Store all ways of transportations will certainly be used in the role chain: by air, road, train and ship.

By the way, almost reaching the subject of this study, from all means of international transportation, ships are the cheapest, carrying 90% of all worldwide and cross-border trade. [11]

So, in this context of part of today's globalization, where "transportation by ship" is a reality in International Commerce, this study is going to overview the importance of

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[7] California Civil Code, Section 1792-1795-8.

[8] *see* Dispute Resolution in International Commerce and Investment Cologne, Germany, International Commercial Law Seminar - 2012 – Binders

[9] *see slide page 1, Intellectual Property in a Free and Democratic Society* Cologne, Germany, International Commercial Law Seminar - 2013 – Slides – Sunder, Madhavi

[10] *Apple Inc. v. Samsung Electronics Co. Ltd.* et al., C 11-1846 & C 12-0630

[11] United Nations Conference on Trade and Development. 2010.

vessels for International Trade, showing a little of different kind of ships (for specific usage) and an overall of (International) Maritime Law.

Narrowing, this research will focus in the Maritime Pilot, disserting a little about this secular (or millenary) importance of this 'expert' and his importance in keeping Vessels, cargo, terminals, lives and, mainly, the Environment safe.

Before the conclusion, there is a challenging approach of the Pilot's Intellectual Property to analyze a particular point of view of the priceless (or difficulties of valuing) for Intellectual Property of the Pilot in the International Trade scenario.

2. Maritime Transportation importance for International Trade

Adam Smith displays trade taking place on the basis of countries exercising absolute advantage over one another.[12] Today, 'New Trade Theory' tries to explain empirical elements of trade that comparative advantage-based models above have difficulty with. These include the fact that most trade is between countries with similar factor endowment and productivity levels, and the large amount of multinational production (i.e., foreign direct investment) that exists. New Trade theories are often based on assumptions such as monopolistic competition and increasing returns to scale. One result of these theories is the home market effect, which asserts that, if an industry tends to cluster in one location because of returns to scale and if that industry faces high transportation costs, the industry will be located in the country with most of its demand, in order to minimize cost.

Although new trade theory can explain the growing trend of trade volumes of goods, Shiozawa, based on much more general model, succeeded in giving a new explanation on why the traded volume increases **when the transport cost decreases**.[13]

12 *see* Marrewijk 2007

13 *see* point of view from p. 141-187. Shiozawa 2007

Modern sea transport is a highly efficient method of transporting large quantities of goods. Commercial vessels, nearly 35,000 in number, carried 7.4 billion tons of cargo in 2007.[14] Transport by water is significantly less costly than air transport for transcontinental shipping.[15]

Sea transport has been the largest carrier of freight throughout recorded history. Although the importance of sea travel for passengers has decreased due to aviation, it is effective for short trips and pleasure cruises. Transport by water is extremely cheaper than transport by air, despite fluctuating exchange rates and CAF (Currency Adjustment Factor) charges to account for such.

Ship transport can be over any distance by boat, ship, sailboat or barge, over oceans and lakes, through canals or along rivers. Shipping may be for commerce, recreation or the military purpose. Virtually any material that can be moved can be moved by water; however, water transport becomes impractical when material delivery is highly time-critical.

Containerization revolutionized ship transport starting in the 1970s. "General cargo" includes goods packaged in boxes, cases, pallets, and barrels. When a cargo is carried in more than one mode, it is intermodal or co-modal.

Ships and other watercraft are used for ship transport. Types can be distinguished by propulsion, size or cargo type. Recreational or educational craft still use wind power, while some smaller craft use internal combustion engines to drive one or more propellers, or in the case of jet boats, an inboard water jet. In shallow draft areas, such as the Everglades, some craft, such as the hovercraft, are propelled by large pusher-prop fans. Most modern merchant ships can be placed in one of a few categories .[16]

2.1 Main Categories of Ships

14 *see* p. x and. 32. UNCTAD 2007
15 *see* page 4 – 6. Stopford 1997
16 Dominique 1999

Bulk carriers, such as the Sabrina I seen here, are cargo ships used to transport bulk cargo items such as ore or food staples (rice, grain, etc.) and similar cargo. It can be recognized by the large box-like hatches on its deck, designed to slide outboard for loading. A bulk carrier could be either dry or wet. Most lakes are too small to accommodate bulk ships, but a large fleet of lake freighters has been plying the Great Lakes and St. Lawrence Seaway of North America for over a century.

Container ships are cargo ships that carry their entire load in truck-size containers, in a technique called containerization. They form a common means of commercial intermodal freight transport. Informally known as "box boats," they carry the majority of the world's dry cargo. Most container ships are propelled by diesel engines, and have crews of between 10 and 30 people. They generally have a large accommodation block at the stern, directly above the engine room.

Tankers are cargo ships for the transport of fluids, such as crude oil, petroleum products, liquefied petroleum gas, liquefied natural gas and chemicals, also vegetable oils, wine and other food - the tanker sector comprises one third of the world tonnage.

Refrigerated ships (usually called Reefers) are cargo ships typically used to transport perishable commodities which require temperature-controlled transportation,
mostly fruits, meat, fish, vegetables, d airy products and other foodstuffs.

Roll-on/roll-off ships, such as the Chi-Cheemaun, are cargo ships designed to carry wheeled cargo such as automobiles, trailers or railway carriages. RORO (or ro/ro) vessels have built-in ramps which allow the cargo to be efficiently "rolled on" and "rolled off" the vessel when in port. While smaller ferries that operate across rivers and other short distances still often have built-in ramps, the term RORO is generally reserved for larger ocean-going vessels.

Coastal trading vessels, also known as **coasters**, are shallow-hulled ships used for trade between locations on the same island or continent. Their shallow hulls mean that they can get through reefs where seagoing ships usually cannot (seagoing ships have a very deep hull for supplies and trade etc.).

Ferries are a form of transport, usually a boat or ship, but also other forms, carrying (or *ferrying*) passengers and sometimes their vehicles. Ferries are also used to transport freight (in lorries and sometimes unpowered freight containers) and even railroad cars. Most ferries operate on regular, frequent, return services. A foot-passenger ferry with many stops, such as in Venice, is sometimes called a waterbus or water taxi. Ferries form a part of the public transport systems of many waterside cities and islands, allowing direct transit between points at a capital cost much lower than bridges or tunnels. Many of the ferries operating in Northern European waters are ro/ro ships. See the Herald of Free Enterprise and M/S Estonia disasters.

Cruise ships are passenger ships used for pleasure voyages, where the voyage itself and the ship's amenities are considered an essential part of the experience. Cruising has become a major part of the tourism industry, with millions of passengers each year as of 2006. The industry's rapid growth has seen nine or more newly built ships catering to a North American clientele added every year since 2001, as well as others servicing European clientele. Smaller markets such as the Asia-Pacific region are generally serviced by older tonnage displaced by new ships introduced into the high growth areas. On the Baltic sea this market is served by **cruiseferries**.

Ocean Liner is a passenger ship designed to transport people from one seaport to another along regular long-distance maritime routes according to a schedule. Ocean liners may also carry cargo or mail, and may sometimes be used for other purposes.
Ocean liners are usually strongly built with a high freeboard to withstand rough seas and adverse conditions encountered in the open ocean, having large capacities for fuel, food and other consumables on long voyages.

Cable layer is a deep-sea vessel designed and used to lay underwater cables for telecommunications, electricity, and such. A large superstructure, and one or more spools that feed off the transom distinguish it.

A **tugboat** is a boat used to maneuver, primarily by towing or pushing other vessels (see shipping) in harbors, over the open sea or through rivers and canals. They are also used to tow barges, disabled ships, or other equipment like towboats.

A **dredger** (sometimes also called a dredge) is a ship used to excavate in shallow seas or fresh water areas with the purpose of gathering up bottom sediments and disposing of them at a different location.

A **barge** is a flat-bottomed boat, built mainly for river and canal transport of heavy goods. Most barges are not self-propelled and need to be moved by tugboats towing or towboats pushing them. Barges on canals (towed by draft animals on an adjacent towpath) contended with the railway in the early industrial revolution but were outcompeted in the carriage of high value items due to the higher speed, falling costs, and route flexibility of rail transport.

A Multi-purpose ship (sometimes called a general cargo ship) is used to transport a variety of goods from bulk commodities to break bulk and heavy cargoes. To provide maximum trading flexibility they are usually geared and modern examples are fitted for the carriage of containers and grains. Generally they will have large open holds and tween decks to facilitate the carriage of different cargoes on the same voyage. The crew will be highly competent in the securing of break bulk

cargoes and the ship will be equipped with various lashings and other equipment for sea fastening.

"VALEMAX" – Today's largest bulk ship!

The first *Valemax* vessels were ordered on 3 August 2008 when Vale signed a contract with the Chinese shipbuilder Jiangsu Rongsheng Heavy Industries (RSHI) for the construction of twelve 400,000-ton ore carriers. The development had reportedly started in 2007.[17] The contract, worth $1.6 billion, was the world's biggest single shipbuilding contract by deadweight tonnage.[18] [19] So, each Valemax had the cost around US$134 million dollars. The first Chinese-built *Valemax* vessel, *Vale China*, was launched at the Nantong shipyard on 9 July 2011 and delivered on 25 November 2011.[20] [21]

Author (João Mateus Borges da Silveira) on Pilot Boat in front of MS Berg Neblina – 'the newest of Valemax Class Vessels' (Picture on March, 26th , 2014 by the Author)

[17] China Set to Deliver Two Mega-ships to Vale. Caixin Online, 6 July 2012.

[18] Breaking News: DNV awarded class for the world's biggest shipbuilding contract ever!, Det Norske Veritas, 9 September 2008.

[19] China: RSHI Launches World's Most Advanced VLOC for Iron Ore Supplier Vale. Shipbuilding Tribune, 11 July 2011.

[20] *Vale China* (30059). *DNV Exchange.* Det Norske Veritas. 2011-11-29.

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MS “Berg Neblina” and “Vale Brasil”[22] are ‘Valemax’ vessels. Valemax class size ship is the largest bulk vessel today, projected by Vale (Brazilian Mining Company). These “giants” were designed to transport Iron Ore from São Luis (MA – Brazil) throughout the world . The cargo capacity is around 400,000 ton.

“Vale China” is another of the ‘Valemax’ ships.

[22] Vale gets 1st China-built mega iron ore carrier, market shudders. International Business Times, 12 July 2011.

“Vale Maranhao” is another of the ‘Valemax’ ships.

2.2 Overview of Maritime Law

Admiralty law (also referred to as **maritime law**) is a distinct body of law which governs maritime questions and offenses. It is a body of both domestic law governing maritime activities, and private international law governing the relationships between private entities which operate vessels on the oceans. It deals with matters including marine commerce, marine navigation, marine salvaging, shipping, sailors, and the transportation of passengers and goods by sea. Admiralty law also covers many commercial activities, although land based or occurring wholly on land, that are maritime in character.

Admiralty law is distinguished from the Law of the Sea (United Convention on the Law of Sea), which is a body of public international law dealing with navigational rights, mineral rights, jurisdiction over coastal waters and international law governing relationships between nations.

Although each legal jurisdiction usually has its own enacted legislation governing maritime matters, admiralty law is characterized by a significant amount of international law developed in recent decades, including numerous multilateral treaties.

Prior to the mid-1970s, most international conventions concerning maritime trade and commerce originated in a private organization of maritime lawyers known as the International Maritime Committee or CMI. Founded in 1897, the CMI was responsible for the drafting of numerous international conventions including the Hague Rules (International Convention on Bills of Lading), the Visby Amendments (amending

the Hague Rules), the Salvage Convention and many others. While the CMI continues to function in an advisory capacity, many of its functions have been taken over by the International Maritime Organization, which was established by the United Nations in 1958 but did not become truly effective until about 1974.

The IMO has prepared numerous international conventions concerning maritime safety including the International Convention for the Safety of Life at Sea (SOLAS), the Standards for Training, Certification, and Watch keeping (STCW), the International Regulations for Preventing Collisions at Sea (Collision Regulations or COLREGS), Maritime Pollution Regulations (MARPOL), International Aeronautical and Maritime Search and Rescue Convention (IAMSAR) and others. The United Nations Convention on the Law of the Sea (UNCLOS) defined a treaty regarding protection of the marine environment and various maritime boundaries.

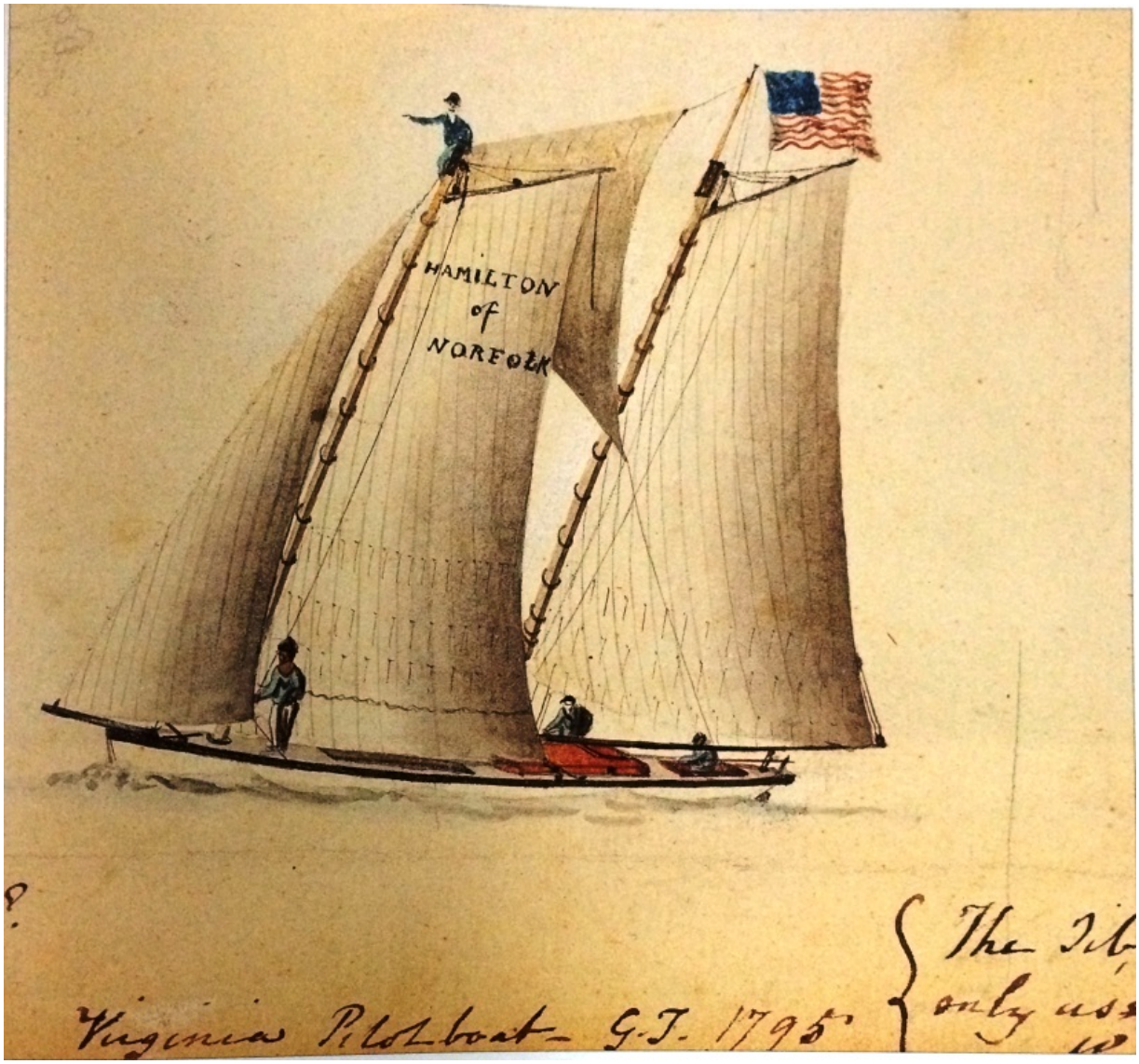
Once adopted, the international conventions are enforced by the individual nations which are signatories, either through their local Coast Guards, or through their courts.

Section 2 of Article III of the United States Constitution gives original jurisdiction in admiralty matters to the federal courts. The federal courts have exclusive jurisdiction over most admiralty and maritime claims pursuant to 28 U.S.C. § 1333.[23] Under this statute, federal district courts are granted original jurisdiction over admiralty actions "saving to suitors," a right to file suit for most of these actions in state court.

A state court hearing an admiralty or maritime case is required to apply the admiralty and maritime law, even if it conflicts with the law of the state, under a doctrine known as the "reverse-*Erie* doctrine." The *Erie* doctrine, derived from *Erie Railroad Co. v. Tompkins*[24], directs that federal courts hearing state actions must apply state law. The "reverse-*Erie* doctrine" directs that state courts hearing admiralty cases must apply federal admiralty law. This distinction is critical in some cases.

3. **The Maritime Pilot**

[23] Title 28 of the United States Code
[24] *Erie Railroad Co. v. Tompkins,* 304 U.S. 64, 58 S. Ct. 817, 82 L. Ed. 1188 (1938)



Pilot schooner Hamilton, Norfolk – small pilot boats like this one were in use in the first part of the eighteenth century on the Chesapeake Bay.
Watercolor by George Tobin of the Royal Navy, 1794-1795.[25]

3.1 Introduction

Any seaman will agree that danger stalks him less malignantly in deep ocean than in the shoals, rocks and current that surround him as land is approached. Ships may founder in storms at sea, but far more have been lost approaching their destination, either through ignorance of the local waters or temporary inattention. Even if a vessel carries up-to-date detailed charts for every harbors, particularly those involving river entrances, are subject to shifting shoals which can change between the survey and the printing of the chart. A seaman whose life is spent in a certain area will nearly always manage better than a stranger, however experienced and well-equipped

25 *see* page 39. Gunliffe 2001

that mariner may be. The ship's master is frequently lacking in the latest information and, like many deep-sea sailors, he may be better able personally to ride out mid-ocean storms than to thread his way among tight-knit shoals. His need for local knowledge is therefore critical.

To meet this universal requirement, ports of every continent from time immemorial been served by pilots offering their wisdom to newcomers and regular visitors alike. Without them, the loss of life and property which the sea has extracted since classical times would be even greater than it has been. The value of ships has always been high; their cargo higher still, and their human lives cannot be priced in money terms, just as the environment. Taking the right pilot has always been one of the best investments according to Maritime costumes and Admiralty doctrine.[26]

San Francisco Pilot Boat[27]

3.2 A Brief History of Pilotage

Every profession in the world has been born of necessity: each has grown from crude, and often erroneous ideas and practices, into the experts and scientific knowledge of today.

Pilotage is no exception; it has had a long and checkered history, reaching back 4000 years to the days of Abraham. In his days there were pilots of Ur of Chaldea.

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26 *see pages 9 -15.* Gunliffe 2001

27 Photo by Michael Slater · Copyright © 2004 Michael Slater
Read more at http://www.boatingsf.com/photo/700925-san-francisco-pilot-boat#Goik4XzqXfYtBBT5.99

Ur, with its harbors and docks, was the great seaport of that Empire, though its ruins are far inland today, owing to the natural changes taking place throughout the centuries. In the days of Hammurabi, contemporary with Abraham, a code of laws was promulgated in which are found several statutes relating to shipping and to which some of our present shipping laws can be traced. In those laws it was laid down that a pilot's fee was to be two shekels of silver. Penalties for losing a ship or accident thereto were also laid down.[28]

Passing down the centuries, in the 12th century, the inhabitants of the Island of Oleron, in the Bay of Biscay, were a prosperous and progressive seafaring community who had a code of laws founded on the traditions and usages of the sea. This island furnished Richard I of England with a large portion of his fleet for his crusade to the Holy Land, and there is a strong indication that crusaders, being impressed by these laws, brought them back to England and they were embodied into the English code.[29]

Further on in history it is found that Henry VIII made Sebastian Cabot (1474 – 1557) 'Grand Pilot of England'. Incidentally, the Spanish King, Charles the Fifth, made him 'Pilot Major of Spain and official examiner of Pilots'. In Britain, in 1514, a society was formed for the training of pilots. Those to be trained had to be 'bold and fearless'. This society was really the origin of Trinity House. King Henry VIII granted the original Charter, which incorporated the then Trinity House with the 'Guild of Mariners', a guild which had been in existence for some time and had functions of a semi-religious and charitable nature.

The main object of the charter was to give power and authority to the Guild of the Trinity to make rules for pilotage, thus preventing foreigners and possible enemies from acting as a pilot. The result naturally led the control of the sea and land-marks. In this context, the work of the Corporation was extended around the coast of England and Wales. So, since its incorporation, the Trinity House has greatly increased its pilot work, and is now the Pilot Authority for the London District, as well as for some 40 ports in various parts of Great Britain. It is important to remember that the Charter on which

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28 *see pag 13.* Prince 1970

29 *see pages 9.* Gunliffe 2001

the constitution of the Corporation is now based is that granted by King James II in 1685.[30]

In English Law, Section 742 of the Merchant Shipping Act 1894 defines a pilot as "any person not belonging to a ship who has the conduct thereof". In other words, someone other than a member of the crew who has control over the speed, direction, and movement of the ship. The current United Kingdom legislation governing pilotage is the Pilotage Act 1987.

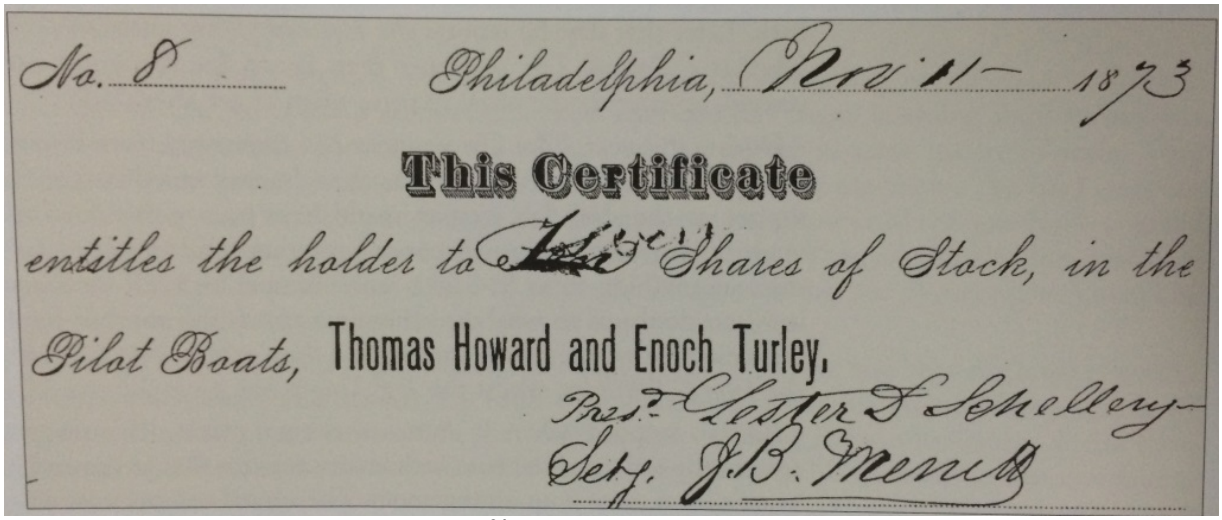
The Great Britain Pilotage organization ‘model’ is the standard, almost worldwide. Anyway, the obligation of the pilotage was settled and basically for reducing accidents and safety of the vessels, cargos, human lives and (today, mainly) the environment.

As the United States Supreme Court stated in *Ex Parte Macneil* (1872)[31]:

> The obligation of the captain to take a pilot, or be responsible for the damages that might ensue, was prescribed in the Roman Law. The Hanseatic ordinances, about 1457, required the captain to take a pilot under the penalty of a mark of gold. The maritime law of Sweden, about 1500, imposed a penalty for refusing a pilot of 150 thalers, one-third to go to the informer, one-third to the pilot who offered, and the residue to poor mariners. By the maritime code of the Pays Bas the captain was required to take a pilot under a penalty of 50 reals, and to be responsible for any loss to the vessel. By the maritime law of France, ordinance of Louis XIV, 1681, corporal punishment was imposed for refusing to take a pilot, and the vessel was to pay 50 livres, to be applied to the use of the marine hospital and to repair damages from stranding. In England (3 George, ch. 13, if a vessel were piloted by any but a licensed pilot, a penalty of £20 was to be collected for the use of superannuated pilots, or the widows of pilots.

The need for pilots was rapidly recognized in colonial America. Just as example, one of the first statutes dealing with pilotage in the US was the act of February 8, 1766, passed by the Pennsylvania colonial legislature. The act created a board of wardens for the Port of Philadelphia, and authorized them to examine persons who presented themselves to be licensed as pilots for the Delaware Bay and River.[32] [33]

30 *see pages 14-17.* Prince 1970
31 *Ex Parte Macneil, 80 U.S. 236, (1872)*
32 *see pag 982.* Parks – Jr 1994
33 *see pages 47-65.* Gunliffe 2001


No. 8 Philadelphia, April 1873

This Certificate

entitles the holder to [redacted] Shares of Stock, in the

Pilot Boats, Thomas Howard and Enoch Turley.

Pres.t Lester S Shelley

Sec.y J.B. Merrick

Pilot Certificate of Philadelphia, 1873[34]

Today, ships are becoming bigger and bigger, following a market tendency for reducing freight price. As the pictures above (and Appendix I), the "Valemax", shown on photos above of MS Vale Brazil, MS Vale China, MS Berg Neblina and MS Vale Maranhao, these new VLOC vessels can transport 400,000 tons of iron ore.

Important to emphasize that accidents are few and pilots certainly are not dealt with so drastically as in ancient times. Happily, accidents from negligence or inefficiency are rare. The organized pilotage services the world over are manned by the pick of seafaring men, men who have been disciplined and trained under traditional customs of the sea, men who are prepared to accept the responsibility of handling any vessel under almost any condition of weather, by day or night, men that take a great pride in their job and whose proudest boast is that they can handle the largest ships and put them alongside a quay in such a manner that they 'would not crack an egg'. Conrad also remarked that to a seaman, a pilot was 'trustworthiness personified'. This must be the ideal of every pilot.[35]

3.3 The Pilot and his Intellectual Property

34 *extracted from page 55.* Gunliffe 2001

35 *see pag 19.* Prince 1970

Text writers, law encyclopedias, law dictionaries, and courts have defined this term. According to the Encyclopedia Britannica (11th ed.) pilot is *'a person taken on board at a particular place for the purpose of conducting a ship through a river, road or channel or from or into a port'*. This definition of Encyclopedia Britannica is simple, concise, and probably as accurate as any.

In many instances the definition of the term may be specifically given by statute. Indeed, the need to define the terms has most often arisen where allegations of pilot without licensure, i.e., contrary to statute, have been brought. Several US state statutes, for example, have dealt with the "taken on board" loophole by specifically stating that guiding ships from a towboat or other small craft is a form of piloting. See, e.g., Rhode Island Gen. Laws §46-9-4.

> **2012 Rhode Island General Laws**
> **Title 46 - Waters and Navigation**
> **Chapter 46-9 - Pilots – Rhode Island Sound, Narragansett Bay, Sakonnet River, and Tributaries**
> **Chapter 46-9-4 - Piloting without license.**
> **§ 46-9-4 Piloting without license. –** It shall be unlawful for any person not licensed as a pilot under this chapter to pilot or offer to pilot a vessel not exempt from the provisions of this chapter. It shall likewise be unlawful for any person on board, a tug or towboat to tow a vessel not exempt from the provisions of this chapter, unless the vessel shall have on board, or be under the control of, a duly licensed state pilot.

At the present time, at least, there is one court decision which has attached peculiar significance to the phrase "taken on board". The Oregon Supreme Court, in *State v. Turner* (1898)[36], had before it, the validity of an indictment charging Captain Turner with the piloting without a state license. Turner had lashed his towboat to the side of a vessel and was allegedly piloting the vessel by directing the movements of the towboat. The court held that Turner was not a pilot in the usually accepted definition because he was not on board the vessel. Unquestionable, as a criminal charge was involved, the court was inclined to test the validity of the indictment in the strictest possible manner.[37]

Pilotage, as it has been focused in this research, in admiralty[38] [39] [40] is the act of a pilot conducting a vessel over the pilot grounds. And, the pilot ground[41] is that

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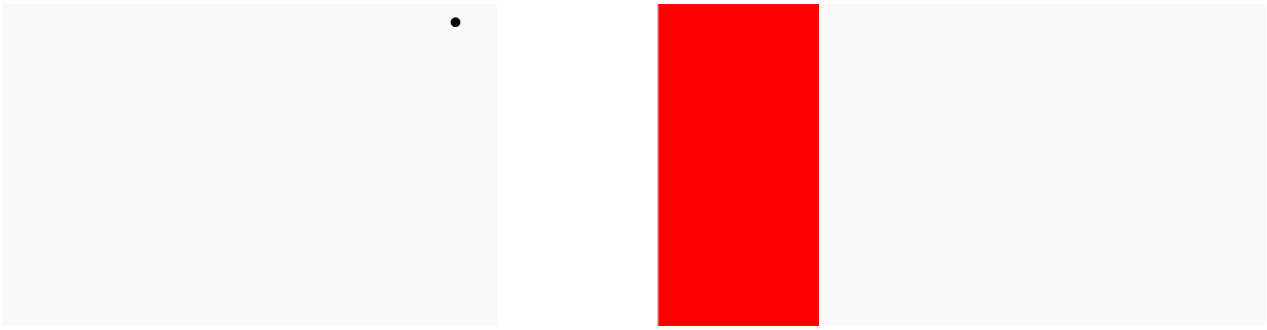
[36] *State v. Turner*, 34 Or. 173, 55 P. 92 (1898)
[37] *see pages 982-984.* Parks – Jr 1994
[38] *Georgia*, 1928 AMC 531, 31 F. 2d 759 (W.D.N.Y. 1927)
[39] *Skomvaer*, 1923 AMC 15, 286 F. 711 (S.D.N.Y. 1922)
[40] *Mobile Bar Pilots' Ass'n v. Comissioner of Internal Revenue*, 1938 AMC 1052, 97 F.2d 695 (5th Cir 1938)
[41] *Cooley v. Board of Wardens of the Port of Philadelphia*, 53 U.S. 299 (1815)

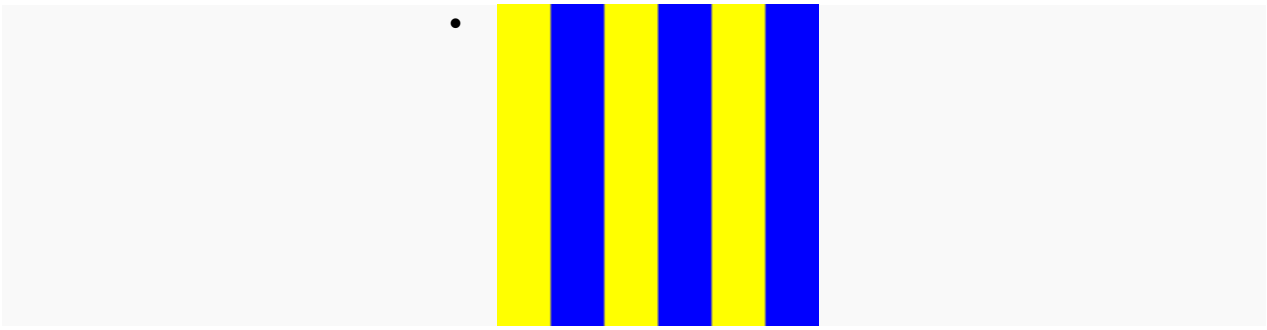
portion of the waters over which the pilot is required, usually by statute or regulation, to steer and direct movements of a vessel.

In most pilotage zones in the United States (and also in Brazil), arrangements for posting pilots are made via VHF radio between ship and a pilot station or pilot vessel. The local pilots, being members of an organized nonincorporated association, service each vessel by turns. Arrangements for outbound pilotage are generally made by telephone (or email) between a steamship agent and the association's dispatching watch stander.[42] The vessels also use the following flags to indicate (H) pilot on board or (G) I require a pilot[43]:



Signal flag **H (hotel)**

"Pilot on board"



Signal flag **G (Golf)**

"I require a pilot"

A pilot must be licensed by some authority, either federal or state, in order to lawfully carry out his or her duties. In the United States, vessels engaged in the coastwise trade must be piloted by holders of Coast Guard-issued licenses, while

42 *see pag 985.* Parks – Jr 1994

43 XXXXXX

vessels involved in foreign trade (including US flag vessels sailing on register) must employ state-licensed pilots. The coexistence of authority has attached to it a long and interesting story, a story that is still being written.[44]

There can be little doubt that federal government, pursuant to the Commerce Clause of the U.S. Constitution, is empowered to regulate all pilotage upon the navigable waters of the United States. The First Congress in 1789 felt it best to leave the regulation of local pilotage grounds to the various states, however. Each of the colonial governments had seen fit to legislate upon the topic, involving different schemes and standards depending upon local geographic and commercial conditions. Respect for the resultant state statutes led to the passage of the Act of August 7, 1789:

> Until further provision is made by Congress, all pilots in the bays, inlets, rivers, harbors and ports of the United States shall continue to be regulated in conformity with the existing laws of the states respectively wherein such pilots may be, or such laws as the states may respectively enact for the purpose.

That section, codified as 46 U.S.C. §8501 (a) now reads: "Except as otherwise provided in this subtitle, pilots in the bays, rivers, harbors, and ports of the United States shall be regulated only in conformity with the law of the states." Later, Congress supplemented this section to avoid conflicts between neighboring states. 6 U.S.C. §8501 (b) reads: "The master of any vessel entering or leaving a port on waters that are boundary between 2 states, and that is required to have a pilot under this section, may employ a pilot licensed or authorized by the laws of either of the 2 states."

So, a pilot is a mariner who guides ships through dangerous or congested waters, such as harbors or river mouths. **Pilots are expert shiphandlers who possess detailed knowledge of local waterways. And all his expertise is his Intellectual Property.** With an analogy of Professor Sunder classes on Trade Secret (based on 'negative know-how')[45], pilots, as long as they have a "Negative know-how", they have a protected trade secret by its own profession because they must know all the dangers: winds, rocks, sand banks, water currents, strength of tide, etc., so they know exactly WHAT NOT TO DO. Besides, they must have a very special "feeling" of all kinds of vessels, engines, tugboats, etc. Important to emphasize that some of these

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44 *see pages 991-999.* Parks – Jr 1994

45 *see slide page 5, Intellectual Property in a Free and Democratic Society* Cologne, Germany, International Commercial Law Seminar - 2013 – Slides – Sunder, Madhavi

ships are just giants (see Vale Brazil, Vale Maranhao, Berg Neblina and Vale China above, each one with the capacity around of 400,000 tons).

The Uniform Trade Secret Act with California Amendments, codified as CA Civil Code §§ 3426-3426.11 reads:

> § 3426.1(d) "Trade secret" means information, including a formula, pattern, compilation, program, device, method, technique, or process, that:
> (1) Derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and
> (2) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

So, the code says that “Trade secret” means ‘information that derives independent economic value’. And also, there is an implied (in number 2) requisite of keeping the information secret, for a logical and systematical way to close the chain and having the Intellectual Property clear, as its own protection.

As it has been demonstrated, the pilot must have deep and accurate technical formation of the peculiarities of his pilotage zone: local traffic, dangers, marine currents, tides, winds, naval architecture, maneuvers, etc. (= information). All this condensed knowledge is a lot of information and the pilot himself (or herself…) keep it protected by (i) his “license”, when the ship is in a pilotage zone and (ii) by the peculiarity (= secrecy) and danger of conducting a ship through a river, road or channel or from or into a port where there is no sense (for the captain or ship’s owner) to risk the vessel, cargo, human life and, mainly, the environment. So, the knowledge of the pilot fulfill completely the requirements of Trade Secret according to CA Civil Code §§ 3426.1(d) - (= information + secrecy).

As it has been seen above, Pilotage is one of the oldest professions, as old as sea travel itself, and it is one of the most important in maritime safety. The economic and environmental risk from today's large cargo ships makes the role of the pilot essential. Because maritime pilots have advanced to the top of the maritime profession and are responsible for the most dangerous part of a voyage, they are generally well compensated.

The Florida Alliance of Maritime Organizations reported that Florida pilots salaries range up to US$400,000 annually. This was similar to other US states with

large ports.[46] A 2008 review of pilot salary in the United States showed that pay ranged over US$500,000 per year. [47].

And, this special economic value of the pilot and its secular usage in the maritime commerce makes even clearer that the pilot knowledge is a very special example of trade secret (Intellectual Property) which has been 'traded' for hundreds of years.

Nowadays, the value of this intellectual property is becoming higher and higher, as the vessels are becoming bigger and bigger (so, more and more dangerous) that Pilot compensation has been controversial in many ports [48] , including Los Angeles and Long Beach, California, especially regarding pilots who are employed by public agencies instead of acting as independent contractors.[49]

CONCLUSION

In today's globalized world, all companies are either structuring or restructuring themselves to have better products with lower prices. International Transactions of all kinds have been a reality as never and, for reducing price, anything can be worth as long as it is legal and safe.

And, one tendency, incredibly, is to use all kinds of transportation but, mainly, by vessels, which are, by far, the cheapest, cleanest (eco-friendly) and the oldest. As we have seen in this small research (above), 90% (ninety per cent) of all international commerce is being done by ships. And ships are becoming more and more precise, specific, safer and bigger.

Along the transportation in the waters, in synthesis, the dangerous part is when the voyage is (a) at the very beginning or (b) at the end. Actually, most literature says

46 *see pp. 14A* Peterson 2010
47 Dibner 2008
48 Jacklet, Ben (2004-10-19). "Columbia pilot pay attracts port's eye". Portland Tribune.
49 Palmeri, Christopher; Yap, Rodney (1 December 2011). "Los Angeles Port Pilots Steer for $374,000 a Year While Long Beach Profits". New York, New York: *Bloomberg Businessweek*.

that maritime danger to the ship is almost always in the pilotage zone. So, the history had shown the humankind the necessity (i) to have pilots, who are very specialized seamen, very well trained, up-to-date and always ready to assist and guide the vessels throughout a river, road or channel or from or into a port, avoiding dangers such as local traffic, winds, rocks, sand banks, water currents, strength and time of tide, naval architecture, maneuvers, depth of each place, etc. And also (ii) to require pilots 'on board' in the pilotage zone. So, internationally, (a) besides of having pilots always ready, because ports never stop, (b) there is an implied rule of obligation of usage of pilots in the pilotage zone.

So, the profession of pilot, as old of history of humankind, has in this context a very strong and condensed knowledge (information), protected naturally by peculiarity (secrecy) and by law. Importantly, the Law requires POB (Pilot on Board) at the Pilot Zone. So, both arguments make everything the pilot knows a trade secret and and Intellectual Property. And, as an IP, the pilot has always been paid, historically, for his specific know-how.

Today, as ships are becoming bigger and bigger, more and more complexes and the pilots more organized the price have been increased a little, but, if we calculate the pilot price per ton historically, we will certainly see that there is a dilution of the pilotage price.

In other words, if we see the price of the new "Valemax" above (US$134 million dollars, the cost of each of four first ships in 2008) and the cargo of 400.000 ton of Iron Ore (in Feb, 2014, each ton of Iron Ore was US$121.02), worth US$48,408,000.00, we will have the ship and cargo valuing, at least, US$182 million dollars. Today, according to the list attached (APPENDIX II), there is a fleet of 35 "Valemax". All of them were designed to load (here) in São Luís, State of Maranhao and go worldwide. So, for these 35 "Valemax" with cargo, only these thirty-five vessels and the iron ore on them, there is the amount of US$6.37billion dollars "floating" in every voyage.

Even if a pilot earns, in this case, one or two million dollars annually, there is no other way to conclude that the price of the pilot (or of his trade secret) is just priceless. And this is very logically and mathematically thinkable when we just calculate

the price or risk of vessels, cargoes, terminals and ports, human lives and, mainly, the environment.

Finally, back to the same example of the phone, as long the phone is much more than a simple (and old) payphone, it is, altogether: a computer, a GPS, a camera, a scanner, a radar, a banking service (almost an ATM machine), thousands of books, songs, videos, movies, storage all personal data, including emails, contacts, messages, etc. Once someone misses, loses or do not have it available anymore, and this person, being a huge investor (=ship owner) is IN DANGER (= ship calling for pilot) he/she will just buy another "smart phone". The price of this smart phone will always be worth it!

APEENDIX I
FOLLOWING THE PILOTAGE IN THE BIGGEST BULK VESSEL OF THE WORLD

On March, 25th, 2014, after being invited by Pilots José Roberto Taranto and Giancarlo Cuquel, I had a wonderful experience of being present in a maneuver in a Valemax class ship.

We were supposed to be on POB (Pilot On Board) at 8:30 a.m., so we took the Pilot boat approximately one hour before it, so, around 7:30 a.m. We used the boat below.

Seabay Charlie Pilot Boat (Picture on March, 26th, 2014 by the Author)

Inside the pilot boat, besides the crew, we were six people: two pilots (required for the maneuver for the Valemax Vessel), two Trainees for Pilots and me.

From Left to Rigth – Pilot José Roberto Taranto, Me (João Mateus Borges da Silveira), three trainees for Pilos (Vitor Fernandes, Antonio Silber and Julius Cesar) and Pilot Cuquel - (Picture on March, 26th , 2014 by the Author)

Arriving on ship, on boarding time, we used the pilot ladder, which seemed difficult and dangerous and it was really tough. First thing I concluded: the Pilot must be strong and brave because taking a rope ladder like this shown in the picture below on a rainy night would be quite risky and extremely hard.

Author (João Mateus Borges da Silveira) riding the pilot ladder - (Picture on March, 26th , 2014 by the Author)

As soon as I arrived inside the MS Berg Neblina (one of the newest Valemax Class Ship), I got astonished how huge this VLOC (Very Large Ore Carrier) really is.

Author after boarding, on the the Captains bridge - (Picture on March, 26th, 2014 by the Author)


Ships photo from Captains bridge - (Picture on March, 26th, 2014 by the Author)

Curiously, I checked the flags to see whether the Vessel was signing correctly if "The pilot on board" (white and red) was there besides the Brazilian flag, which informed that the Vessel was in Brazilian waters!

Brazilian and "Pilot on Board" flags - (Picture on March, 26th , 2014 by the Author)

As soon as we got inside the Ship's Gangway (photo below), both pilots (Mr Jose Taranto and Giancarlo Cuquel) introduced themselves, the trainees and me to the Captain, Mr Sunil Sharma (from India), explained the maneuver to the Captain and started the proceedings: calling the tug boats, arranging the crew, asking the Captain to prepare the engine, checking the equipment, etc.


Pilot José Roberto Taranto explaining the maneuver in the AIS (Automated Information System)

(Picture on March, 26th, 2014 by the Author)

Once the maneuver was explained by both pilots, the Captain Sunil Sharma started to look to both pilots, José Roberto Taranto, inside the ship, while the pilots were giving orders to the tug boats and chief officer and second officer of the Vessel and Giancarlo Cuquel, that stayed in the Captain bridge, looking outside the exact positioning of the tug boats, people, traffic of ships, etc.

Captain's Bridge - Picture on March, 26th, 2014

Lastly, the four tug boats boats arrived. Each one with an average of 75 tons of bollard pull.

From from bow to the aft part, it was used the tows Caue, Alegria and Sossego - Picture on March, 26th, 2014 by the Author

Quicly, they were all tied to the Vessel.

Tow Octanus, positioned at the poop- Picture on March, 26th, 2014 by the Author

Tow Alegria at prow slant and Tow Sossego at prow - Picture on March, 26th, 2014 by the Author

Just after positioning the tug boats, communications with the four them, the terminal and other ships (traffic) got extremely intensive, so, both pilots used different channels on the VHF: channel 14 to talk with pilots; channels 12 and 13 with tugs; and channel 15 with terminal, basically.

Pilot José Roberto Taranto using VHF approaching terminal while Captain is tense (and with a radio in the hand)

Picture on March, 26th , 2014 by the Author

Traffic intenseIntense traffic and tow a tug boat ready to pull the Ship, if necessary while the Vessel is approaching the terminal

Picture on March, 26th, 2014 by the Author

There were uncountable commands (machine, wheel, tows, cables, ropes, etc) to different people (officer, captain, other ships, terminal, crew, other pilot, chief of machine, officials in service, etc.). All those commands I really could never explain the routine because there are none. The job of the pilot involves a lot of feeling, attention, expertise, calm, psychic prepare, and, besides, good health condition.

MV Berg Neblina touching the defenses at Pier IV at Terminal Ponta da Madeira – São Luís (MA) – Brazil

Picture on March, 26th , 2014 by the Author

MV Berg Neblina alongside and passing cables at Pier IV at Terminal Ponta da Madeira – São Luís (MA) – Brazil

Picture on March, 26th, 2014 by the Author

At the end of maneuver everyone had the very good feeling that the Captain was relieved because his ship was safe, and it was perfectly tied

From right to left, Pilot José Roberto Taranto, Captain Sunil Sharma, Me (João Silveira) and Pilot Giancarlo Cuquel

Picture on March, 26th, 2014 by the Author

Actually, and after all, it was a wonderful job! The ship, cargo, terminal, human lives and environment, once again, were completely safe! Congratulations to the Pilots and Captain!

APEENDIX II
LIST OF VALEMAX VESSELS

Ship name	Shipping company	Year	Yard number	IMO number	Status	Notes
Daewoo Shipbuilding & Marine Engineering						
Vale Brasil	Vale Shipping	2011	1201	9488918	In service	
Shandong Da De (2013–)	Vale Shipping	2011	1202	9572329	In service	

Vale Rio De Janeiro (2011–2013)						
Vale Italia	Vale Shipping	2011	1203	9572331	In service	
Shandong Da Ren (2014–) *Vale Malaysia* (2012–2014)	Vale Shipping	2012	1204	9572343	In service	
Shandong Da Cheng (2014–) *Vale Carajas* (2012–2014)	Vale Shipping	2012	1212	9593919	In service	
Shandong Da Zhi (2013–) *Vale Minas Gerais* (2012–2013)	Vale Shipping	2012	1213	9593957	In service	
Vale Korea	Vale Shipping	2013	1214	9593969	In service	
STX Offshore & Shipbuilding						
Vale Beijing	STX Pan Ocean	2011	1701	9575448	In service	
Vale Qingdao	STX Pan Ocean	2012	1702	9575450	In service	
Vale Espirito Santo	STX Pan Ocean	2012	1703	9575462	In service	
Vale Indonesia	STX Pan Ocean	2012	1704	9575474	In service	
Vale Fujiyama	STX Pan Ocean	2012	1705	9575486	In service	
Vale Tubarao	STX Pan Ocean	2013	1706	9575498	In service	
Vale Ponta da Madeira	STX Pan Ocean	2014	1707	9575503	Launched	

Vale Maranhao	STX Pan Ocean	2013	1708	9575515	In service	
Jiangsu Rongsheng Heavy Industries						
Vale China	Vale Shipping	2011	H1105	9522972	In service	
Vale Dongjiakou	Vale Shipping	2012	H1106	9532513	In service	
Vale Dalian	Vale Shipping	2012	H1107	9532525	In service	
Vale Hebei	Vale Shipping	2012	H1108	9532537	In service	
Vale Shandong	Vale Shipping	2012	H1109	9532549	In service	
Vale Jiangsu	Vale Shipping	2013	H1110	9532551	In service	
Vale Caofeidian	Vale Shipping	2013	H1111	9532575	In service	
Vale Lianyungang	Vale Shipping	2013	H1112	9532587	In service	
Vale Majishan	Vale Shipping	2013	H1113	9532599	Launched	
Vale Tianjin	Vale Shipping		H1114	9532604	Ordered	
Vale Rizhao	Vale Shipping		H1115	9532616	Ordered	
Vale Ningbo	Vale Shipping		H1116	9532628	Ordered	
Vale Sohar	Oman Shipping Company	2012	H1125	9565065	In service	

Vale Liwa	Oman Shipping Company	2012	H1126	9566514	In service	
Vale Shinas	Oman Shipping Company	2013	H1127	9566538	In service	
Vale Saham	Oman Shipping Company	2013	H1128	9566526	In service	
Bohai Shipbuilding Heavy Industry						
Berge Everest	Berge Bulk	2011	BH416-1	9447536	In service	
Berge Aconcagua	Berge Bulk	2012	BH416-2	9447548	In service	
Berge Jaya	Berge Bulk	2012	BH416-3	9447550	In service	
Berge Neblina	Berge Bulk	2013	BH416-4	9447562	In service	