

# Basic Components of Information System for a Contemporary Maritime Agent

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## Summary

*The Information system "shipAGENT" is conceptually a modular information system based on a client/server technology customized for user-friendly Windows. This modern system is suitable for use both in small shipping agencies with only one office and in large shipping agencies with remote offices and business units. The program is written in English and is modularly constructed using a relational database, leaving the possibility of using all modules or only some of them. At the user's request, the program could be supplemented with additional modules according to their specific needs.*

**Key words:** shipping agent, information system, relational database.

## Introduction

There is not much reference about a shipping agent in literature. Croatia is one of the few countries which have specific provisions on the conditions required to perform the activity of maritime agents in legislation<sup>1</sup> (Croatian Maritime Code, Articles 687-696). In most countries it is regulated by civil or commercial laws. In the Croatian legislation, the concept of a shipping agent is primarily regulated by the provisions of Maritime Code and subsidiary by the provisions of Civil Obligations Act and regulations of Commercial Law. Croatian law does

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<sup>1</sup> The requirements for the conduct of a maritime agent are regulated in accordance with Articles 687-696 of Maritime Code.

not contain provisions which regulate the procedural position of a shipping agent; hence his procedural position is determined by jurisprudence. Jurisprudence confirms that the shipping agent is not passively legitimized for services that he ordered on behalf of and for the account of the shipping company. "Regarding international regulations, this book<sup>2</sup> covers primarily the UNCTAD's (The United Nations Conference on Trade and Development) minimum standards for shipping agents that are made by special intergovernmental assembly of the United Nations concerning the fight against maritime fraud. UNCTAD adopted these standards in March 1988, recommending their use. They are not obligatory but they can determine guidelines for state bodies. Croatia adopted these standards in Maritime Code and Regulations on Shipping Agents. Croatian Association of Maritime Agents brought them to their acts: Statute and Rules of Conduct." (Borčić, 1999)

Therefore, the verdicts from 1965, 1968 and 1969 issued by High Commercial Court of the Republic of Croatia are interesting from the point of taking such a legal position. A shipping agent<sup>3</sup> is actively legitimized which means that he is allowed to represent his principal in court, pursuant to special authorization<sup>4</sup>. The classification of shipping agents was induced by the fact that there are more tasks performed by shipping agents in maritime business.

### **The tasks performed by a shipping agent**

Shipping agencies delivering goods to ports of call require a shipping agent at port to coordinate various details concerning international regulations on navigation. Therefore, agents should be familiar with all jurisdictions the shipper or co-signer visit in shipping; they should maintain certified paperwork and arrange all points of contact for the vessel.

Each port has unique service distributor's procedures and it would be difficult to maintain port operations without the help of a shipping agent. Therefore shipping agents are engaged to provide on-site services based on knowledge of port operations. They can arrange pilotage, tug lines and schedules, as well as provide customs mediation. In short, shipping agent coordinates everything what is needed while the ship is in port. Ships enter and leave the port 24 hours a day and shipping agent works with all engaged parties to ensure the functioning on schedule.

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<sup>2</sup> Borčić, Vojislav. *Međunarodni i hrvatski propisi o pomorskom agentu*. Rijeka 1999.

<sup>3</sup> Responsibilities of the shipping agent to the principal are: not presenting himself as an agent, not acting according to the instructions, non-performance, failing to notify the principal or keep his interest and avoiding responsibility.

<sup>4</sup> The maritime agent may sign a contract of employment of a ship for and on behalf of both contracting parties on the basis of an express authorisation of the contracting parties.

### **Planning**

A shipping agent coordinates arrivals and departures of ships, suppliers' requests and synchronizes pilot's and master's directions. Maintaining a formal schedule is also agent's responsibility as well as providing of relevant information. He creates a crew list and a passenger list and coordinates the personnel required on a vessel for scheduled loading and unloading. He is a contact person for certified signatures.

### **Shipping operations**

A shipping agent should be accustomed to all shipping regulations for all ports. He should ensure compliance with international shipping regulations, safety and policies of the ship's owner. The agent should be knowledgeable in all applicable publications which contain regulations and are certified by particular port of call authorities. He should keep copies of all documents, including records of complaints, insurance and inspection certificates.

### **Communication**

A shipping agent is available during the hours slated for communication with the ship's owner. Besides being a contact for certified signatures he is also the main point of contact in port for all concerned, for the crew and port authorities. His communication duties include many relationships with various agencies in port, including business and public relations. All communications are recorded in a book for reference. It is possible to extend contact hours if required.<sup>5</sup>

The shipping agent must be familiar with the International Maritime Dangerous Goods Code, or IMDG<sup>6</sup>, for the necessary retention and transportation of any hazardous materials (Croatian Maritime Code, Article 57).

Maritime agency services are services relating in particular to the navigation, ships and their employment with special regard to: the assistance and clearance of ships, mediation in concluding contracts of employment of ships, their sales and purchase, building and ship repair, insurance of ships and cargo, safeguard of the ships' interests, supply and manning of ships, care for crews and passengers (Croatian Maritime Code, Article 688).

Today's world displaces one paradigm by the other (a new one) and that is where change, development and differentiation happen. Today's companies need better and quicker ways of achieving results of quality managers (Nadrljanski, Batinica, 2010, p. 2).

Shipping agents should be versatile and have multitasking skills. In many ways, the skills possessed by managers are the most valued resources of the organiza-

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<sup>5</sup> Modern electronic systems allow communication 24/7.

<sup>6</sup> IMDG Code is a set of rules for monitoring maritime traffic. It entered into force in accordance with Article 57 of Maritime Code.

tion. Lack of managerial skills can defeat the most successful activities and in many cases can lead to the collapse of the organization (Nadrljanski M., 2010, p. 23).

### **Shipping agent - definition and classification of rights and duties**

Shipping agent is a very significant aspect of Maritime Code, and is a relatively new legal and economic category (Contracts of Maritime Agencies, Articles 687-696). There is a common saying that the importance of something is best explained by the history of its development and the struggle for survival (Katičić, 1951). Throughout history, duties of a contemporary shipping agent were performed by a ship owner who was also the commander of a ship. Through navigation development, the functions of ship owners and masters have been separated. Ship owner starts managing navigation from the land, while master takes care of all the administrative formalities when entering or leaving port, procurement of cargo to be transported, and its loading and unloading. With further development of shipping and trade, these duties were assigned to a shipping agent<sup>7</sup>. In navigational operations agents perform under the general or special authorization in the name and for the account of the principal, and not on their own behalf and for their own account (Skorupan, 2006).

### **Legal Terms**

In contemporary commercial and maritime practice, the contracting shipper never performs all obligations under the shipping contract personally. Most shippers are corporations which act only through their agents. It is essential that all contemporary shippers subcontract with other companies in order to perform specific aspects of shipping business or its part. Shipping agent is a legal or natural person registered in Shipping Agent Registry to conduct shipping agency activities, in accordance with the provisions of Maritime Code<sup>8</sup> (Ordinance on Shipping Agent's Performance, Rights and Duties, Article 5).

Employee agent is a natural person holding the license of a shipping agent who on behalf and for the account of a shipping agent directly performs shipping

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<sup>7</sup> Duties regulated in Article 689, Croatian Maritime Code: Under a maritime agency agreement based on a general authorisation the maritime agent undertakes, for and on behalf of the principal, to perform all services or all services of a specific type in the field of his activity. A maritime agency agreement based on a general authorisation must be drawn in writing. An agreement that is not drawn up in writing shall have no legal effects. In case of doubt as to the limits of the general authorisation it shall be deemed that it refers to the clearance activities. If a maritime agent deals exclusively with mediation or with the stipulation of contracts of employment of ships, in case of doubt as to the limits of the general authorisation, it shall be deemed that it refers to the mediation for stipulating such agreements, excepting bare boat charters, charters by demise and time charter for a whole ship.

<sup>8</sup> Maritime Code (Official Gazette 181/2004) was adopted on 8 December 2004, and entered into force on 29 December 2004.

agency activities, particularly dispatching activities. To meet requirements of the Ordinance, he has to dispose of his own funds of at least 120,000 HRK, or other adequate guarantees in banks, financial institutions or other companies. These guarantees may be replaced by the appropriate national or international insurance. Guarantees or insurance must be available for the entire duration of his activity as a shipping agent.

Maritime Code defines contract of maritime agency as a contract by which the maritime agent undertakes to perform maritime agency services and services of assistance, mediation and representation, for and on behalf of the principal, on the basis of a general or special authorization, whereas the principal undertakes to reimburse the maritime agent for the expenses and pay to him a remuneration. It is specified which services can be classified into maritime agency services. Maritime agents perform a very wide range of tasks, or may participate in mediation in concluding majority of transactions related to ships, and they have a significant role in assisting the commander of the ship, crew and passengers. He is a person who represents or intermediates in maritime business based on maritime agency agreement. The shipping agent is an institution within maritime law and maritime economy, as it is stated in literature (Borčić, 1992).

A shipping agent has many duties:

- handling ship formalities during the arrival and departure (he is among the first to arrive on the ship)
- collecting data on cargo, crew and port requirements
- procuring supplies, crew
- taking care of medical services and other needs of the crew
- supervising cargo
- completing documentation upon leaving
- taking care of the bill of lading, accounts, freight, customs and other documents
- ordering towing and piloting
- arranging ship repairs

### **Information system used by a shipping agent - agency**

Successful operation of a maritime company and successful managing of a shipping agency are inconceivable without adequate data, information and knowledge. Therefore, data, information and knowledge can be comprehended as a kind of resource of a maritime agent.

Interest in the problems of managing information resources is increasing rapidly in recent years. Until recently, maritime agents dealing with problems of data management used to have only a passive role at the level of the relationship with their clients. However, it was realized that we should develop new operating relationships between information system used by an agent and other parts

of maritime company - the relationships that will be a part of the company organization, which in turn, would improve achieving its objectives.

Data and information are perceived as organizational resources that should be invested in, and which should be taken care of. The mentioned changes and improvements are gradual and require carefully planned and professionally designed programs, which depend on the shipping agent's intended use and control of information.

Strategic planning of information resources is used for:

1. Linking information technology and information systems with strategic business planning of maritime economy;
2. Assisting in creation of control mechanisms for plan implementation process;
3. The creation of an information framework which will provide further analysis and design. This will allow coordination of specially developed database and information systems and ensure that the information they provide is consistent.

A shipping agent has to act expeditiously in making decisions. The results of his actions could be disastrous or, on the other hand, lucrative for the financial status of his principal. In order to be updated, he must have a constant and fast access to any information needed. Using shipping software improves quality and saves time. It can help a shipping agent to prepare and organize ship and port documentation, generate reports, track company's business in history and use communication services, such as an e-mail, fax, telex and video communication in a manner most suitable to his work requirements.

### **The shipAGENT PRO system**

For this purpose there are programs used to automate maritime agent's tasks. In this paper we are going to illustrate an information system called the shipAGENT<sup>9</sup> (<http://www.edss.ee/ShipAgentPro>, access 2012). It is a modular information system developed by using modern tools for the development of information systems based on client / server technology and is performed using user-friendly Windows. The system is suitable for use both in a single agency office as well as in large shipping agencies with remote offices and business units. The program was created in Croatia, but it is written in English language. Since it is created modularly, using a relational database, it is possible to use all or only some of the modules. On clients' requests, the program can be supplemented with additional modules according to their specific needs. ShipAGENT system is communication-oriented and it can be installed in one or more work-

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<sup>9</sup> The ShipAGENT PRO system is a software package developed by InfoExpert d.o.o. 51000 Rijeka, Lorenzov prolaz 13. (16 August 2011)

stations (PCs) via a local area network (LAN). In remote offices / business units it uses modem connection and telephone lines.

#### **Modules in the shipAGENT PRO system**

- Call – This is the basic module of the program that can be used independently. It consists of all data related to the ship's visit in a port of call from its notice of arrival to its departure. It contains a lot of data concerning the ship itself, entering and leaving the port, Statement of Facts, the quantity and type of the loaded and unloaded cargo, expenses and invoices, manifest, bills of lading, and so on. The module can be used independently but its true value is in combination with other modules.
- Cargo – This is a module for monitoring announced and performed loading and unloading. It includes the data of cargo operations, cargo types, cargo units, quantity, cargo codes and cargo description. The number of operations and cargo types per call is not limited.
- Deposit – It monitors information about requested and security deposit: payer, the date of the requested deposit, the amount requested, the currency, the amount paid and method of payment, bank statement number and the date.
- Facts – It is a module that tracks all data related to significant events on board and in port, necessary for the document Statement of Facts. It includes: the date and time of inception, the date and time of completion, the code and a description of events.
- Invoices – This module tracks all expenses and bills of the ship, including agent's expenses which are transferred into Disbursement Account. The data include: service provider, payer of services, types of services, the number and date of the document, quantity, the price in USD and HRK, Value added tax (VAT) and reclamation label.
- Extra Invoice and Credit Note – It collects data and prints additional accounts and various Credit Notes.
- Manifest – This module is used for collecting all the data for the preparation and printing of cargo and freight manifests.
- Bill of Lading (B / L) – It collects all the data for the preparation and printing of standard bill of lading.
- Exchange Rate – It collects information about buying rate, middle rate and selling rate for all major currencies.

The ship AGENT program applies a large number of different codebooks. The most important are:

- Party – This is a separate database, integrated in the shipAGENT program, and includes data of all business partners doing business with an agent. All of them are labelled with business role, meaning that one partner can have multiple roles (owner, principal, shipper, receiver, for-

warder, agent, service provider, P & I club, surveyor). It contains: partner's code, partner's name, country, address, postcode, city, Post Office Box; Telephone: country code and city code, phone number 1 and 2, fax number 1 and 2, mobile phone number, e-mail address, contact person's name and identification number.

- Ship – This is a separate database, integrated in the shipAGENT program with the data of all the ships agent works with. It contains: ship's code, ship's name, flag, the owner, the port of registry, Call Sign, GT<sup>10</sup>, NT<sup>11</sup>, DWT<sup>12</sup>, LOA<sup>13</sup>, Draft, Type, Built, Capacity (Grain, Bale, TEU<sup>14</sup>) and IMO No<sup>15</sup>.
- Other codebooks: Flag - according to ISO codebooks<sup>16</sup> of countries, Port - according to the UN codebook of ports<sup>17</sup>, Cargo Type, Cargo, Ship Type, Berth, Service type, Currency – according to ISO letter and numerical currency code list, Call type, Fact, Branch Office, Clause, Unit, Packing and other additional internal codebooks. They can be created and edited on request.

### **Program functionality**

#### *Data Entry*

Holding the cursor over the fields while entering data, you get a short instruction (mini help) on how to enter data.

#### *Browsing the database*

There is a possibility of looking for your business partner by his name (or part of it), country, type of partnership and the city.

Ships can be found by their name (or part of it), flag, their type and the owner.

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<sup>10</sup> Gross tonnage – an index related to a ship's overall internal volume and calculated by measuring a ship's volume from keel to funnel, to the outside of the hull framing.

<sup>11</sup> Net tonnage

<sup>12</sup> Deadweight tonnage – the amount of weight a ship can carry without riding dangerously low in the water.

<sup>13</sup> Length overall – the maximum length of a vessel's hull measured parallel to the waterline.

<sup>14</sup> Twenty-foot equivalent unit – a unit of cargo capacity often used to describe the capacity of a standardized intermodal container.

<sup>15</sup> International Maritime Organization numbers – unique identifiers for ships, for registered ship owners and management companies.

<sup>16</sup> International Organization for Standardization

<sup>17</sup> United Nations Code for Trade and Transport Locations (UN/LOCODE); <http://www.unece.org/cefact/locode/service/location.html> (access 2013)



Ports of call can be browsed by year, the business unit, dispatch number, the ship, and the principal.

#### *Reports and documents*

There are various lists which could be obtained from the database (for business partners, ships ...): conditions and movement of ships, invoice, manifest, bill of lading, statement of facts, deposits, financial statements (by party, debtors, fee report - with criteria, fee totals - cumulative or with details), statistics and graphs, fax and e-mail reports.

The program is functional and widely applicable. The configuration necessary to work with the shipAGENT is not demanding: personal computer (PC) with 16 MB RAM (recommended Pentium processor), Windows 95 or Windows NT operating system, modem for remote maintenance, connection to the local area network (for multiple units) and a printer. It is easy to learn how to use a program for a person who has basic computer skills and is familiar with Windows and the Internet.

Although the program is useful and greatly facilitates shipping agent's tasks, his managerial abilities in overall business process should not be neglected. The main objective of managing a business process is not automation, but focus on the processes themselves and effective management. It does not necessarily imply automation but optimization. Business processes are a key factor in the integration of the company organization, while the information technology is just supporting tool in business processes (Nadrljanski Đ, Nadrljanski M, 2010).

#### **Conclusion**

Duties and responsibilities of a shipping agent are regulated either by Maritime Code (in Croatia) or by civil and commercial laws, as it is elsewhere in the world. This fact emphasizes severity and complexity of tasks performed by a shipping agent. Agents should be versatile and have multitasking skills. In order to simplify and organize such demanding tasks, there are computer programs which can be used by single agency offices as well as large shipping agencies with remote offices and business units. The ShipAGENT is created modularly, using a relational database, so it is possible to use all or only some of the modules. It can be supplemented with additional modules according to specific needs of a client. It is functional, easy to use and does not require complex operating system.

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