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The maritime industry and mobile applications

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Abstract

Mobile applications are available in app stores on different platforms in order to make it easier and faster for sailors to do their duty. It has seen that mobile maritime applications prepared for seafarers are prepared to assist seafarers in the tasks included in the STCW. We use mobile technologies and devices in many areas to make our lives easier today. While meeting the communication needs of sailors, the variety and prevalence of use of mobile applications produced to relieve professional workloads are increasing. In this research, the data of maritime applications were collected by documentary scanning method, and the data obtained were examined by content analysis method. This study, which examines mobile applications that select individuals interested in maritime activities as a market, will guide the development of need-oriented applications in the field of maritime.

Introduction

Applications for maritime area in mobile device application markets are increasing day by day [1]. Millions of mobile apps are downloaded and used by users around the world [2]. All applications that can be downloaded to portable electronic devices can be evaluated within the scope of the mobile application. Various fee and free maritime applications are available in the application markets.

In addition to its qualities such as taking photos, watching videos, playing music, mobile devices that we support in our business life have an important place in our daily life. The rapid development of technology has allowed us to use multimedia features and applications necessary for business on a single mobile device. The new generation of mobile devices can perform the tasks not only of other electronic devices, but also of some mechanical devices (ruler, compass, sextant, thermometer, barometer, anemometer, etc.) that are often used in the maritime field. Some of these tasks are performed by mobile devices thanks to their internal hardware and some of them are carried out thanks to online internet access.

The rapid development of technology has significantly improved the methods of remote monitoring and monitoring of ships today [3]. Currently, many websites provide ship tracking using an automated identification system to view the ship's real-time location [4]. Thanks to mobile applications, sailors can access ship remote monitoring systems and learn about sea traffic in the region. Projects that provide real-time information about the movements of ships, ports and the current position of ships in ports are now implemented and monitored by users in the maritime sector. Users can access the information database about the ships, construction details, tonnage information of the ships and International Maritime Organization (IMO) numbers online.

Mobile applications are available in app stores on different platforms in order to make it easier and faster for sailors to do their jobs. It has seen that mobile maritime applications prepared for seafarers are prepared to assist seafarers in the tasks included in the STCW contract. Applications such as navigation, shipping, marine safety and ship safety, marine pollution, freight handling and cargo stacking, health, maritime English, collision regulations, communication at sea, freight operations, ship structure and balance, meteorology, maritime law, shipbuilding,

international maritime contracts have been evaluated as marine mobile applications. Mobile apps for the use of marines appear to be designed to assist sailors on one or more missions.

It is seen that the mobile applications offered to users for benefit in the field of navigation are designed to actively use the internal GPS function of the mobile device in hobby activities. Seafarers can use these applications to gain knowledge about the approximate location of the ship on the ships they work on. It is seen that most of the applications in the navigation area can make an amateur-level voyage plan, and the coordinates of the turning points can be printed out of the printers. Some of the applications are tailored for AIS support. When mobile applications are suitable for AIS support establish a connection with an AIS device with Wi-Fi, the targets received from the AIS device can be displayed on the map on the application. In this way, the name, MMSI number, IMO number, call sign, status, speed, route, coordinates, distance from your location can be displayed. There are mobile apps that offer the option of safe distance adjustment and hazard alerts. Marine mobile applications also include functions that allow sailors to measure possible changes in ETA. Applications for viewing route (COG), speed (SOG), maximum speed, road distance, speed average and magnetic route are available in the markets. Sailors can share location, COG, and SOG information with their friends thanks to these applications. In many applications, it is possible to customize map views, highlight shallow areas, mark fishing grounds.

Warnings are given to users by application manufacturers that it is not safe to use applications containing maps in the maritime area for navigation beyond obtaining information. Astronomical navigation calculations and corrections can be easily done thanks to the applications prepared to make astronomical navigation calculations. Mobile apps for sailors provide users with information about points of interest (POI) close to their destination, such as the port authority, marinas and moorings, gas stations, restaurants and bars, shops, taxis, repairs, and dealers. Information such as emergency access phone numbers and VHF channels for marinas is essential for sailors.

Within the application markets there are mobile applications designed to speed up and facilitate calculations related to shipload operations. Some applications are prepared open to ship-specific data entry and analyses are made after the information about the ship's capacity is entered manually into the applications. Thanks to draft survey applications, ballast water calculations, trim and incline calculations can be made, and units can be converted together. Applications support saving calculations as PDF and can connect with printers.

The applications prepared in the field of boat maintenance inform the seafarers about how to do the work, and some describe it with moving graphics. Mobile applications for monitoring machine failures and planned maintenance are available in stores.

Material and Method

Documentary scanning method was used in this study where qualitative and quantitative data were collected in order to determine the use of mobile applications in the maritime field and to determine the characteristics of these applications. The data obtained within the scope of documentary screening were examined by content analysis.

As part of the research, websites of leading applications in the maritime field, followed by mobile app stores on Android operating system and IOS operating system platforms were scanned. The universe of the research is the applications prepared in the maritime field in the app stores. Although it is impossible to examine all the applications prepared for sailors and shipmen in this study, the application download figures shared in the application markets were examined. The main popular applications in the field of maritime affairs were examined within the scope of this study.

Results

Applications produced in the maritime field are very popular. For this reason, the number of applications offered in application stores is increasing day after day. Some applications help seafarers communicate and socialize with each other, thanks to their data-sharing features. With the development of technology, the acquisition of new functions of the internal equipment of mobile devices has increased the frequency of using mobile devices in the maritime activities carried out by amateur sailors for hobby purposes. Applications prepared for navigational purposes in the marine field repeat each other and offer similar functions to users. The number of applications designed in the area of ship machinery on the application markets is less than the number of applications prepared in the field of ship deck. Shipmen who do not have access to the bridge can use mobile applications to track navigational information. The frequency of business use of mobile devices is increasing.

Discussion & Conclusion

There are warnings that some navigation charts in mobile applications are not safe to use as a primary source for seafaring, failure to follow these warnings may endanger navigational safety. As the number of maritime companies supporting the access and modification of security management forms from mobile devices increases,

the applications developed in the field of maritime is expected to enhance as well. It is thought that the effect of mobile applications for remote control and instant response will increase in the transition to fully autonomous sea vehicles and will guide new technologies to be developed in this area.

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