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**«Conference on Applied Physics,
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**«Technology for extracting instant coordinates of sea vessels in a
selected part of the World Ocean from online maps»**

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Problem statement

Considering the number of ships simultaneously moving in the world's water space between ports of different countries, it is clear that monitoring the movement of ships is an important task.

- The article describes a technology that provides the extraction of information about ships from maps in real time.
- Analyzed the information received



Solution methods



	MarinName	MarinE	MarinN	WaitingTime	MarinMove
1	"Adam"	36.5064	45.3086	" > 24h"	"MoveUp"
2	"Antey"	36.5485	45.3221	" > 1h"	"MoveDown"
3	"Diana"	36.4838	45.2959	" > 24h"	"MoveUp"
4	"Don"	36.5000	45.3062	"0"	"MoveNoN"
5	"Maria"	36.4868	45.2959	" > 24h"	"MoveUp"
6	"Omskiy"	36.5083	45.3093	"0"	"MoveNoN"
7	"Slavyanka"	36.4765	45.2820	" > 24h"	"MoveUp"
8	"Smart"	36.4824	45.2933	" > 24h"	"MoveUp"

- Using MATLAB OCR Trainer in the development of an automatic vessel coordinates recognizer on electronic maps.
- A function has been implemented that returns a table containing the name of the vessel, position of the vessel and the time when these coordinates were determined.
- The difference between the calculated values of coordinates and similar values of GPS coordinates does not exceed 0.01%.



Conclusions

- A technology for extracting information from electronic maps is proposed. It is based on recognizing ship names and calculating their coordinates.
- The availability of the developed technology makes it possible to form a database containing information about sea vessels. Their name, location, direction of travel, etc.
- Further analysis of the information will make it possible to study the peculiarities of the movement of ships, including in sea straits.
- Knowledge of these functions will allow you to build adequate mathematical models. Which describe the movement of vessels required to develop an automated vessel traffic control system.

Contacts

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