

Annotation

In this thesis, a tool for finding the coordinates of the object in space was modeled to facilitate and reduce the time of finding the defect on the site.

The first section of the thesis presents theoretical information about local positioning technologies. Also, the advantages and disadvantages of these technologies are given, as well as the choice of a certain technology for this thesis is substantiated.

The second section presents the methods of local positioning and the conclusion on the application of these methods.

The third section describes MEMS sensors and brief information about them, the mathematical part of the sensor data, finding the Euler angles, characteristics, as well as the choice of sensors for this thesis.

In the fourth section the functional and basic electric scheme, the description of this scheme, and also algorithm of finding of coordinates of our defect is resulted.

This thesis consists of an explanatory note of 74 pages, includes 24 illustrations, 3 drawings and 30 references.

Key words: MEMS sensors, gyroscope, accelerometer, GSM.