LISTENING TO THE SOUND OF BIRDS AT SUNSET

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ABSTRACT

The reason we really appreciate the sunset may be the same reason introverts look so natural. That's the beauty of being able to appreciate peace and quiet. Introverts are seen as people who do not like to socialize. However, they do not hate parties or entertainment, they simply see them as barriers to communication.

Introverts don't consider time spent eating a good dinner and watching a good movie on TV as wasted. On the contrary, they see such nights as a necessity. It's a fun time they enjoy before they go out into the world again. We can say that about a third of the population is introverted.

**Keywords:** Lidar, ROS, odometry, cloud server.

1. INTRODUCTION

The reason we really appreciate the sunset may be the same reason introverts look so natural. That's the beauty of being able to appreciate peace and quiet. Introverts are seen as people who do not like to socialize. However, they do not hate parties or entertainment, they simply see them as barriers to communication [1].

Introverts don't consider time spent eating a good dinner and watching a good movie on TV as wasted. On the contrary, they see such nights as a necessity. It's a fun time they enjoy before they go out into the world again. We can say that about a third of the population is introverted.

2. DEVELOPMENT OF A NAVIGATION SYSTEM FOR MAP BUILDING

The reason we really appreciate the sunset may be the same reason introverts look so natural. That's the beauty of being able to appreciate peace and quiet. Introverts are seen as people who do not like to socialize [2]. However, they do not hate parties or entertainment, they simply see them as barriers to communication.

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| Türkiye'de Gün Batımının En İyi İzlendiği 10 Yer | Etstur ...**Figure 1.** Example of a constructed room map |

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|  |  |
| --- | --- |
|  | (1) |

**Table 1.** Sunset Time

|  |  |  |
| --- | --- | --- |
|  | Ankara | Van |
| 1st June  | 20.00 | 19.30 |
| 2nd June | 20.01 | 19.31 |

From the example, you can see that the scanning distance increases sequentially from the minimum to the maximum value. In the process of scanning, the angle of rotation of the sensor changes sequentially from zero to 360 degrees. If for the given angle an obstacle is found, the distance to it and the angle of rotation are memorized. At the next scanning radius, this angle is no longer used to reduce the time of this procedure.

A=B+C (1)

C=E-H (2)

**3. CONCLUSION**

Thus, this paper presents the results of research in the field of navigation of mobile robots, the proposed technology of navigation of a group of robots using a cloud service with the use of a single server designed to collect information from sensors of robotic equipment and use it to build a map of the working space. An example of a constructed map of a room using sensors of a mobile robot is given. An example of a possible design of a mobile workplace used to build a map of the area is given. The structural diagram of the cloud data storage for the construction of the terrain map is developed [4]. The structure of the data collection server is developed and the algorithm of the mobile platform in interaction with the cloud server is proposed. The developed application performs the following functions: displaying the list of mobile devices registered on the server; displaying the room plan; generating the ground map based on the data from the cloud storage; accumulating information about the environment of the mobile platform to build a ground map.

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