# Article information:

An Occupancy Grid Mapping enhanced visual SLAM for real-time locating applications in indoor GPS-denied environments - ScienceDirect  
<https://www.sciencedirect.com/science/article/abs/pii/S0926580518311506>

# Article summary:

1. A new Real-Time Locating System (RTLS) is proposed that can be adapted and deployed for a broad range of indoor locating applications.

2. The RTLS uses the respective advantages of a sparse map and an Occupancy Grid Map to improve accuracy.

3. Experiments have been conducted to evaluate the localization accuracy of the proposed system, with results showing its feasibility and applicability in providing real-time and accurate localization for a wide range of applications within constructed facilities and the built environment.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy, as it provides detailed information on the technical approach taken to develop the RTLS, as well as experimental verification results that demonstrate its effectiveness in providing real-time and accurate localization for a wide range of applications within constructed facilities and the built environment. The article also provides three examples to highlight potential applications, including path planning and real-time navigation, geo-tagged date collection, and location-aware point cloud updating.

The article does not appear to be biased or one-sided in any way; it presents both sides equally by providing an overview of related prior research before introducing its own research objective, scope, and contribution. Furthermore, all claims made are supported by evidence from experiments conducted on the proposed system.

There are no missing points of consideration or unexplored counterarguments in this article; all relevant information is provided in detail. There is also no promotional content present in this article; it focuses solely on presenting factual information about the proposed RTLS system without attempting to promote any particular product or service.

Finally, possible risks associated with using such a system are noted throughout the article; for example, it mentions that there may be limitations due to existing infrastructures not being available in certain environments or economic infeasibility for wide deployment.

# Topics for further research:

* Real-time localization accuracy
* Path planning and navigation algorithms
* Geo-tagged data collection methods
* Location-aware point cloud updating techniques
* Infrastructure limitations for RTLS deployment
* Economic feasibility of RTLS deployment

# Report location:

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