

Accessibility Features for Augmented Reality Indoor Navigation Systems

Frank Samson, Mussa Ally Dida, Judith Leo, Deogratias Shidende, Godfrey Naman, Sabine Moebis

To download the complete text, click that link.

DOI: https://link.springer.com/chapter/10.1007/978-3-031-63999-9_3

Abstract

Accessibility plays a pivotal role in developing technological tools that strive to promote inclusivity for users of all abilities. Regrettably, many technological advancements have traditionally disregarded accessibility, assuming homogeneous user abilities or treating it as an afterthought. This paper endeavors to provide a review of accessibility considerations on augmented reality indoor navigation systems, to enhance navigational experiences in indoor learning environments. To achieve this, interviews were conducted with visually impaired individuals, to investigate their existing methods of navigation, identify challenges they face, and uncover potential accessibility features that could enhance indoor navigation systems. Additionally, a literature review was undertaken to explore various accessibility features in the context of indoor navigation systems, including localization technologies and pathfinding algorithms employed in indoor navigation applications. Finally, the paper concludes by offering insights into accessibility features specifically tailored for individuals with visual impairments, to facilitate efficient indoor navigation.

Keywords: