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A Tagging Algorithm in Augmented Reality for Mobile Device Screens

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Abstract : Augmented reality (AR) is a type of virtual reality aiming to duplicate real world's environment on a computer's video feed. The mobile application, which is built for this project (called SARAS), enables annotating real world point of interests (POIs) that are located near mobile user. In this paper, we aim at introducing a robust and simple algorithm for placing labels in an augmented reality system. The system places labels of the POIs on the mobile device screen whose GPS coordinates are given. The proposed algorithm is compared to an existing one in terms of energy consumption and accuracy. The results show that the proposed algorithm gives better results in energy consumption and accuracy while standing still, and acceptably accurate results when driving. The technique provides benefits to AR browsers with its open access algorithm. Going forward, the algorithm will be improved to more rapidly react to position changes while driving.

Keywords : accurate tagging algorithm, augmented reality, localization, location-based AR
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