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Graphic User Interface Design Principles for Designing Augmented Reality Applications

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Abstract : The reality is a combination of perception, reconstruction, and interaction. Augmented Reality is the advancement that layer over consistent everyday existence which includes content based interface, voice-based interfaces, voice-based interface and guide based or gesture-based interfaces, so designing augmented reality application interfaces is a difficult task for the maker. Designing a user interface which is not only easy to use and easy to learn but its more interactive and self-explanatory which have high perceived affordability, perceived usefulness, consistency and high discoverability so that the user could easily recognized and understand the design. For this purpose, a lot of interface design principles such as learnability, Affordance, Simplicity, Memorability, Feedback, Visibility, Flexibly and others are introduced but there no such principles which explain the most appropriate interface design principles for designing an Augmented Reality application interfaces. Therefore, the basic goal of introducing design principles for Augmented Reality application interfaces is to match the user efforts and the computer display ('plot user input onto computer output') using an appropriate interface action symbol ('metaphors') or to make that application easy to use, easy to understand and easy to discover. In this study by observing Augmented reality system and interfaces, few of well-known design principle related to GUI ('user-centered design') are identify and through them, few issues are shown which can be determined through the design principles. With the help of multiple studies, our study suggests different interface design principles which makes designing Augmented Reality application interface more easier and more helpful for the maker as these principles make the interface more interactive, learnable and more usable. To accomplish and test our finding, Pokémon Go an Augmented Reality game was selected and all the suggested principles are implement and test on its interface. From the results, our study concludes that our identified principles are most important principles while developing and testing any Augmented Reality application interface.

Keywords : GUI, augmented reality, metaphors, affordance, perception, satisfaction, cognitive burden
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