Comparative Study of Mobile Applications Testing Techniques for Context Events

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The increase of mobile devices with rich innovative features has become an enabler for developing mobile applications (mobile apps) that offer users an advance and extremely-localized context-aware content. Mobile apps receive and process events from both internal and external sources due to the changing context to produce the appropriate output. These events need to be tested to ensure that an application behaves correctly. The goal of this study is to present a comparative study of mobile apps testing approaches focusing on context events. We defined the comparison criteria that comprise six key points, events identification, method of analysing mobile apps, the testing technique, classification of context event, validation method and evaluation metrics to enable us answer the research questions. Several approaches from the literature were analysed to evaluate their effectiveness. Results from our study show that the popular approaches offer limited coverage of mobile app context events. This is because they consider only a few selected context events in mobile apps for test case generation. This study identifies the limitations and the possibilities for improving context events coverage for effective testing of mobile apps.

Keywords: Mobile application, GUI Events, Context Events, Testing Technique.

A Review on Human Pedestrian Movement System using Agent-Based Simulation and Discrete Event Simulation

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Human pedestrian is a complex behavior which involves various inputs and outputs and requires a lot of decision making process. By understanding fundamentals of Discrete Event Simulation (DES) and Agent-Based Simulation (ABS), it is found that both are suitable to simulate this complex movement. This paper proposed the idea of understanding how, in its basic knowledge, these two simulation models can be combined together to enhance human pedestrian movement in high density crowd areas. Its effectiveness might not be achieved without understanding factors that may affect pedestrian's traffic flow.

Keywords: Agent-Based Simulation (ABS), Discrete Event Simulation (DES), human pedestrian.