WM-1611: Computer-Aided Bug Reporting System for GUI Applications

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Application: Bug reporting in GUI-based software applications

Technology Background: If they have not done so already, smartphones and tables will soon replace laptops and desktops as the primary devices used by people around the world for carrying out typical computer-assisted tasks. Mobile applications will continue to become more complex, and will be the primary focus of millions of developers worldwide.

In order to properly create and maintain these "apps", developers will need enhanced support, particularly with regard to the prompt confirmation and resolution of bug reports. Unfortunately, current issue tracking systems typically rely on unstructured natural language descriptions in their reports. This highlights the underlying challenge that bug reporting systems must accomplish; that is, bridging the lexical gap between reporters of a bug and developers tasked with resolving the bugs.

We have developed an improved bug-reporting system that could easily be incorporated into existing bug tracking systems. The bug reporting system uses a novel analyze and report generation paradigm that enables a user/reporter to provide a developer with actionable information about a software bug – the automated analysis techniques extract the necessary information. In general, the system is configured to provide bug reporting functionality for one version of a software code base, and is particularly useful tool for testers and beta users of an app prior to its release to the general public.

Intellectual Property: Issued United States Patent No. 10,083,106

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