An intelligent robot to exterminate Internet bugs

June 3 2013, by Cécilia Carron

Credit: 2013 Alain Herzog

(Phys.org) —BugBuster: one bot can test almost every function on a website. This tiny revolution for web developers means great gains in time and reliability.

To overcome problems that come with using websites, which can be annoying and bring extensive financial consequences for large companies, the start-up BugBuster has invented the first intelligent tool that finds out on its own how to interact with an application whose code it tests according to various possible scenarios. It notes the problems to designers as screen captures. The robot, currently available in beta form, will save a lot of time for designers and provides increased reliability. In the next few days, two of the designers of this technology from the Operating Systems Laboratory of EPFL, Olivier Crameri and Renault John-Lecoultre, will present their system in the United States during two major conferences for specialists.

And how does a designer ensure that an entire application, which can contain hundreds of screens, is working properly? Testing websites still poses problems to web developers because existing tools are incomplete and full of loopholes. For each change to a small part of the code, it is necessary to test functionality and ensure that it does not cause collateral damage to the site. The start-up's first product allows developers to combine the automatic exploration of the technical elements with a very intuitive Javascript API for specifying functional properties.

Simply enter the URL onto the company's website and press "start." The automatic and intelligent explorer analyzes the source code and guesses where to click and what values to enter in order to maximize code coverage. It then identifies the bugs on screen captures and provides detailed information on debugging.

And when the system reports an error—that is precisely what it is. "False positives are not possible. This level of reliability brings a considerable savings of time," said Olivier Crameri. The system works on a subscription basis for a particular website and can also test mobile applications. It supports all HTML5 applications. Distributed via the "cloud" it will be commercially released in a few months.

Until now, no test has existed that can validate, for example, all the possibilities when it comes to an application in which user interaction is required, as with filling out a form. The strategy is to schedule the test scenarios, which are long and tedious to write, considering that the user clicks here and there… and then to automatically replay each change. Via the integration of a few simple lines of code, the new bug hunter can solve this problem and systematically test all possibilities.

Provided by Ecole Polytechnique Federale de Lausanne

Citation: An intelligent robot to exterminate Internet bugs (2013, June 3) retrieved 24 April 2024 from https://phys.org/news/2013-06-intelligent-robot-exterminate-internet-bugs.html