New tool improves productivity, quality when translating software

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Researchers at North Carolina State University have developed a software tool that will make it faster and easier to translate video games and other software into different languages for use in various international markets - addressing a hurdle to internationalization that has traditionally been time-consuming and subject to error.

If you want to sell or promote a software application in a foreign market, you have to translate it into a new language. That used to mean programmers would have to pore over thousands of lines of code in order to identify every little string that relates to what appears on a user's screen. This could be incredibly time consuming and, even then, there was always room for human error. Programmers have to be certain they are not replacing code that governs how the program actually works.

But now researchers from NC State and Peking University have created a software tool that identifies those pieces of software code that are designed to appear on-screen and communicate with the user (such as menu items), as opposed to those pieces of code that govern how the program actually functions. Once those "on-screen" pieces of code have been identified, the programmers can translate them into the relevant language - for example, translating the tabs on a toolbar from English into Chinese.

"This is a significant advance because it saves programmers from hunting through tens of thousands of lines of code," says Dr. Tao Xie, an assistant professor of computer science at NC State. "Productivity goes

up because finding the 'need-to-translate' strings can be done more quickly. The quality also goes up, because there is less chance that a programmer will make a mistake and overlook relevant code."

As an example of how the software tool can identify errors and oversights made by human programmers, Xie says, the researchers found 17 translation omission errors when they applied the software tool on a popular online video game. The errors were then corrected.

The research will be presented in May at the International Conference on Software Engineering in Vancouver, Canada, and will also be published in the proceedings of the conference.

Source: North Carolina State University