Real-Time Mobilization of Computer Software Applications (#5798)

Leveraging view virtualization and transformation services for a seamless mobile user experience

This technology is a novel software for transforming and customizing software application views that can be specifically applied to the conversion of computer applications into mobile-friendly interfaces. One of its two central components is a virtual view that creates an abstract view of each application and virtualizes those into user-interface elements that can be easily manipulated. This approach exposes the application view as a set of user interface (UI) elements that are easy to manipulate. The second key component is transformation services that can be programmed into a technology platform to operate in the virtual view in real time. The virtual view provides a simple application programming interface (API) to allow easy implementation of view transformation services that further improves the performance of the mobilized applications.

These two components create a user-friendly view on a smartphone or tablet device for any operating system or application. Unlike traditional remote computing, this Georgia Tech solution intelligently suppresses traffic to reduce mobile data usage. It also lowers the budget and time necessary for mobilization.

Benefits/Advantages

- **Comprehensive**: Overcomes speed, traffic, and interface limitations of basic remote computing
- **Resourceful**: Allows for seamless function without a high data usage burden
- **Efficient**: Applies unique transformation services to accelerate and enhance the user's mobilized application experiences

Potential Commercial Applications

This technology has the potential to significantly improve user access to important enterprise software applications via a mobile device. Rapid mobilization of enterprise applications could advance the operations of any business or organization that uses shared applications for various functions:

- Accounting
- Human resources
- Project management
- Customer relations

Background/Context for This Invention

Conventionally, a computer application can be run on a smartphone or tablet through remote computing, which requires zero code mobilization and also provides the full functionality of the application. This does not, however, allow for customization of the user experience as it differs on a mobile device from a computer. The Georgia Tech mobilization platform overcomes this restraint through an API that has demonstrated significant reduction in users' actions-per-task as well as traffic consumption.

Note: This is just one of several technologies for application mobilization and wireless computing developed by Raghupathy Sivakumar and his team. [Click here](#) to see the other available innovations.

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More Information

U.S. Patent Issued - 9,760,236

Publications

For more information about this technology, please visit:
https://licensing.research.gatech.edu/technology/real-time-mobilization-computer-software-applications

Images:

The automated sequential delivery of multiple fluids. A varying number of delay gates imprinted in the branches are shown in the figure.

COVID-19 and flu saliva test on paper: (A) The automatic sequential delivery of multiple reagents required for virus test; (B) Water pouring into the device triggers the virus assay, allowing the presence of SARS-CoV-2 and influenza A & B viruses to be visually identified by the color changes in the corresponding detection spot