Mobile Software Development

e-Guide

Mobile technology isn't a fad. The emergence and continued expansion of mobile phones, tablets, and their associated applications have created a potluck where every major company is trying to put forth its best dish. The need for smarter development tools and methodologies continues to grow as businesses tie their names and reputations to companion apps, and while we continue to see improvement in the design and functionality of these offerings, we're yet to really scratch the surface. It's a technological gold rush, but there are new challenges to consider when developing mobile apps, as well as unique coding languages born from on-to-go devices. Even if the landscape has changed, the need for guides detailing best development practices remains strong.

In This Mobile Development e-Guide

Building Mobile Apps the User Can Trust

By Philip Lew

With the advent of smartphones and other mobile platforms, users have quickly shifted from conventional desktops to these new, highly sophisticated devices in a variety of shapes and sizes, including wearable computing devices. This rapid migration to the Internet of Things includes many specialized objects such as thermostats, refrigerators, and blood pressure monitors that are connected to the Internet, enabling the user to control them remotely while the devices collect mounds of data. This real-time connectivity has led to software applications that allow the user to track data, analyze trends, and control and configure the device. As intelligent and sophisticated as these resources are, they do pose user experience challenges.

With mobile applications, user experience (UX) becomes even more complex due to mobile's natural characteristics: wide audience use, varied environmental conditions, and a user's personal relationship that may develop with the device. As

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mobile applications inundate the app stores, mobile user experience is gaining serious attention because some software companies are wondering why their apps are not getting acceptance while others with fewer features gain traction. If a user cannot operate a mobile app in thirty seconds or less, he will most likely uninstall it and search for another.

Some of the key factors that should be considered when designing the mobile user experience need to focus on how the mobile device and its software operate, how the buttons work, and how easy it is to perform everyday tasks. However, there's a key factor missing: Few think of the user experience in terms of trust. Yet trust is one of the most critical components in the user expereince design that will lead to continued and long-term usage of an application. It is just as important as the user's efficiency and effectiveness (which are more

related to the pragmatic aspects of user experience) in using the application. Without it, users could easily become dissatisfied and use another application or subconsciously not use the application again. The bottom line is that if users cannot trust that their applications are secure and come from a trusted source, they will lose confidence not only in the application but also in the service provider.

To begin to evaluate and improve trust, there needs to be a model for organizing and characterizing the concept of trust. In other words, what characteristics do your friends and the people around you have that instill you with a sense of trust? What makes you trust them? Some possible characteristics and behavior include:

• They are prompt and on time (reliable).
• They do what they say they will do (commitment).
• They are straightforward, easy to read, and not complicated (transparent).
• They clearly communicate (no hidden agendas).

When you think about a software application, it should include these same basic requirements in order to instill user trust. Therefore, these same trustworthy human characteristics should be mapped when developing an app. The objective is to design an application with trust in mind as a product quality attribute and then evaluate and improve how well the application fosters user trust.