App Developer On Designing Apps For Apple Watch, Other Wearables

By **Chris Crum**

It remains to be seen just how popular Apple Watch will be, but there's no question that that the era of wearables is here, and a lot of developers are rushing to get in the game and prepare for the next wave of devices. With these new screens comes new design and development challenges. DataArt is a technology consulting firm that builds custom software and apps for its clients, and has been building out apps for wearables for a while. At the Wearable Technology Show in London this month, they demoed a Fatigue Checker smartwatch app for the Motorola Moto 360 and a Betting Prototype app for Apple Watch and Android Wear. The former helps users check how tired they are based on a quick test that measures user attention and accuracy of speech. The latter enables sports betting operators to offer bettors instant access to fixture, live and results data as well as personalized betting options.

We had a conversation with Denis Margolin, VP of Mobile Solutions for the company, who spoke about the challenges and considerations of building apps for smart watches, including the new Apple Watch, and other wearables.

How many apps have you developed for wearable devices?

Denis Margolin: We have a half dozen or so customer applications in the wild, mainly white labeled for our customers. These range from healthcare apps (such as a heartrate monitor, distance tracker and an app that uses voice to identify levels of fatigue) through screen capture and even an app that controls IoT enabled devices in a smart home.

Which devices have you specifically designed apps for?

DM: We have a variety of hardware we've built for. On the Android side, the LG G Watch R, Moto 360 and Samsung Gear Live. We've also built for the Apple Watch, using the Apple Watch Simulator

What is the biggest challenge in developing for a super small screen size?

Wearables like smart watches represent a shift in design; apps that require lots of user attention, which is typically the goal of most apps, are doomed to fail on the smart watch. And this isn't a problem with the current generation of smart watches, it's a feature of their design. Consider a service like Instagram; for an Instagram smart watch app to be effective, maybe it controls the camera (click a button to take a picture) as opposed to letting users view each other's feeds. Uber's approach, you click a button and a car arrives, is among the better designed for smart watches.

Editor's note: Based on what we saw in Apple's recent demo, the Instagram app does let you scroll through feeds.

What are some other challenges?

DM: Wearables are so much more personal than phones or tablets. To begin with, they're not "with" the user, they're "on" the user. In order to effectively consider how people interact with their wearables, we need to provide more customizable notifications, resolutions, and UI flow. Whereas "zooming in" can be effective for a phone, there is so little screen space on a smart watch that one can only zoom so far before text becomes too tedious to read (no one wants to scroll every other word). We also need to find logical places to split a typical UI into multiple pieces; designing for wearables requires that we don't put everything on one screen.

DataSync setup, proper data exchange architecture, and animations, are among other concerns. Even when considering first generation smart watches (with black and white screens), we see a very fragmented market right now, with multiple companies looking to expand capabilities, and no real standards in place.

Are there certain types of apps you'd advise not bothering to develop for a smart watch?

DM: While they're possible to build, 3D First Person Shooters would be among apps we'd not consider building. In time, could a Google Glass-like device to tether with a smart watch and allow augmented reality shooters? Sure, and children of the 80's can think of this like Lasertag without the vests. But for now, it's about making apps that people use quickly, and then disengage.

What are some challenges that are unique to developing for Apple Watch compared to other smart watches?

DM: Again, the side-by-side layout is a challenge, because it requires one to identify logical break points. The first generation also lacks the ability to change layouts in runtime, has some animation limitations, and doesn't allow developers to navigate styles.

What are some challenges in developing for Apple Watch compared to other Apple devices beyond the screen size factor?

DM: While usability and a new technology are important factors to consider, they are rather easy to master for a professional team and are not a serious setback. In our opinion, the hardest challenge is to understand and master the new interaction paradigm. Smart watches are unlike any other device in terms of how it interacts with the user. Traditionally, you would want to create an app that would capture [the] user's attention and keep him busy as long as possible.

However, smart watch apps should work in a completely opposite fashion, requiring as little attention as possible, providing only the most important information and only when it's crucial. In this regard, smart watch apps are almost anti-apps that require the developer to forget the very instincts he or

she has relied on for years. Instead of retaining users, we need to let them go as soon as we can, and we should focus on predicting the user behavior to provide him with contextual information.

What wearable in your experience has been the easiest to develop for and why?

DM: AndroidWear devices with square screens, like Samsung Gear Live and Asus ZenWatch, are among the easier devices to build for. This is because we don't have to adopt for 2 screen factors. There is a lot of crossover between these devices and classic Android devices.

Do you expect Apple Watch to be a big success?

DM: We expect sales numbers to be higher than for competing devices due to the marketing efforts on Apple's behalf, smart positioning in the fashion sector, and slightly better looks. However, we also expect the abandonment rate for Apple watch to be just as high as for any competitor, which means most of the users will stop using the gadget entirely in the first 6 months.

Unlike other Apple products, the Apple watch does not yet offer a clear advantage over competing products, so we may expect its market performance wouldn't be much different.

However, we expect the next generation to be much more successful if Apple would integrate better sensors and open the road for professional health monitoring apps. At the moment, smart watches lack a killer use case that would justify their existence, that's why abandonment rate is so high. Health monitoring might be such a use case.

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