AllWatch - A Software Unification Framework for Wearables

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There are many smartwatch manufacturers that for whatever reason could not or did not want to use Android Wear or Tizen as their operating system. Custom system allows for a better optimization therefore lowering the hardware cost. On the other hand, it closes the access to a very broad, already existing range of applications. These proprietary systems either do not even release SDK, or are not an attractive choice for developers due to the market fragmentation. AllWatch is project that aims to provide a unified way to make simple wearable applications for any operating system. It is lightweight and easy to implement, making it a great way to write apps for wearables running on proprietary OSs. The solution proposed takes a different approach from the current options available. The only work performed by the watch is the interpretation of signals that are sent to it. Moving the execution to a cloud or a phone - besides granting the intercompatibility – takes away the need to use efficient chips, lowering the costs significantly. Tests conducted indicated that even microcontrollers available for less than $3, are capable of running apps made with this framework. Application written once, runs on every watch implementing this solution. It was designed to be compatibile with anything – let it use touchscreen, buttons, colorful or monochrome display. Thanks to the possibility of implementing it on any wearable, making a custom OS would no more result in losing the access to the applications - increasing the value of the watch to a customer. This technology could be applied to any similar device where there is no intercompatibility between the different manufacturers. The best examples are smart mirrors and interactive car desks.