Form follows function:
Mobile use-cases dictates electronic design, not the other way around

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Abstract

The design paradigm for computing has historically been determined by the form factor of the core electronics. Ever since the mobile revolution, that design paradigm has been turned on its head. This talk will focus on the designs of mobile devices such as smartphones and wearables which are purpose built for a specific use-case as well as for the ergonomics of the user. Using teardowns conducted by IHS Markit, details of core electronic and physical designs are highlighted, and evolutions tracked from generation to generation. We will be exploring the 10 generations of Apple iPhones and 4 generations of the Apple Watches as core examples of how form follows function forcing innovative electronic designs to accommodate for this mobile design philosophy. The study is made possible by the IHS Markit teardown and cost benchmarking team over the course of the last 10+ years. The mobile products covered should serve as a good representation of how the semiconductor manufacturers are evolving their products to accommodate mobile design dictated by customer's needs.