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ABSTRACT SUBMISSION FOR 2nd UK MOBILE, WEARABLE AND UBIQUITOUS SYSTEMS RESEARCH SYMPOSIUM

Topics: Mobile, Wearable, Sensing and Ubiquitous Systems; Applications and implications of Mobile, Wearable, Sensing and Ubiquitous Systems; Experiences and evaluation of Mobile, Wearable, Sensing and Ubiquitous Systems; Mobile systems in the Internet of Things ecosystem

Participatory Design Fiction as a Method for Innovation in Everyday Wearable IoT Systems

As of early 2019, the most widely accepted wearable IoT devices in 2019 are fitness trackers, smartwatches and, increasingly, earpieces [1]. These items are unobtrusive refinements of existing technologies, designed to a conservative aesthetic for mass-market acceptance. What of more innovative forms and functions? How to make a wearable IoT device that enhances users' everyday lives without - necessarily - fading into the background?

This research describes study, currently in progress, of a novel method of Participatory Design Fiction [2] to understand the desires and tastes of users of wearable IoT technology for everyday situations. Insights gained from the users' own fictional creations were used to inspire the design of technology probes, which were then released to those same users for evaluation in the wild.

For such an evaluation to be feasible, each technology probe [3] had to be at least plausibly wearable by the user to whom it was issued, meeting a minimum standard of aesthetic and sensorial tolerability. Furthermore, the probes' minimum functionality had to address other established obstacles to adoption of wearable technology, including privacy and IoT integration [4].

Results so far seem to support the idea that Participatory Design Fiction can yield actionable insights for innovation in everyday wearable IoT technology, as well as for reflecting on the implications for the role that technology might play in society.

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