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## Abstract

When busy juggling career, family and social demands, it is all too easy to lose sight of the importance of maintaining health and wellbeing through taking breaks from and recovering after work. Given the abundance of attention-grabbing smart devices that notify us at inopportune moments, another mobile app that tells us to stop checking our phones and focus on non-work activities seems counterintuitive. Instead, a separate system such as a tangible user interface (TUI) that acts in the periphery of our attention without aggravating the information overload we are exposed to, could be the way forward. A number of TUI interventions have been designed but there is a woeful lack of evaluative research investigating the efficacy and user experience use of communication technology has increased our ability to be constantly connected with each of these roles. Throughout the day we get notified about work emails, personal messages, social media updates, etc. While on one side there is the benefit of gained flexibility in terms of when and where to work [14], these new ways of switching between work and nonwork are also associated with more work-life conflict, which in turn is correlated with stress [21]. Often these notifications can be a distraction if they conflict with the role we are conducting at that given time: for example, when we get a work email in the evening, or a Facebook update whilst in the office.

Drawing from boundary theory and relevant HCl work, we highlight how mobile apps may not be the best solution to such boundary challenges, as they do not distance the user from the source of distractions, i.e. the smartphone. We therefore encourage future work in HCl to explore the pose lacking, people report feeling stressed and

yet the designers do not report on the insight gained. As a result an independent academic study was conducted on a prototype version of the Durr that vibrates every five minutes [19] (Figure 1). Harrison and Cecchinato [19] found that wearing a personal and subtle reminder of time slipping-by maximized the use of their productivity, for example making them less prone to overrun meetings.

Three of the designs in this category have been made to resemble a physical button. Bossy [24] is a desktopbased button, designed with flexible workers in mind, and it is intentionally not a mobile app, but rather a TUI shaped as a big button with a disguised screen (Figure 2). It acts as both an input and output device: after connecting to one's productivity tools (calendars, to-do lists, etc.) and wearables, it displays top three priorities. Users can then complete, snooze or order them by tapping on the surface. In addition, it has built-in health and wellbeing reminders to create better habits, such as standing up and drinking more water. *CanFocus* [29] and Saent [31] are switching off the light in a room to signify, for example, when one is leaving the office to head home. It could potentially be used also as a work from home desk lamp that communicates to co-workers and supervisors when one is in working mode or not.

## **Recovering from Overload and Stress**

The final set of examples takes us to the end of a working day, when feelings of stress and burnout are likely to continue even after leaving the office as a result of poor boundary management and control. The designs presented here recall Hallnäs and Redström's slow technology [17] to enable reflection and recovery from a busy lifestyle.

Collins and Cox [11] found that gaming is successful in promoting post-work recovery and thus reducing stress. The designer Ishac Bertran developed Slow Games [5] a tangible exploration of what gaming and slow technology could lead to (Figure 8). His idea is that users can only play one move a day, in order for them to reflect on their use of technology.

People have several preferred ways to recover from a stressful day at work, such as drinking a glass of wine. Researchers involved in the EPSRC-funded project *Family Rituals 2.0* [28] developed a series of ritual machines to connect distant family members. One of these proof-of-concepts sees two people enjoying a glass of their preferred drink together, even whilst apart (similar to the idea of *Drinky Robot* [25]). When one person opens a bottle with a special bottle opener, the wine dispenser at home automatically pours out a glass (Figure 9)

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