

EDITORIAL PREFACE

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Welcome to the latest issue of the *International Journal of Mobile Human Computer Interaction* (IJMHCI). As always, it's my pleasure to introduce to you an eclectic selection of articles covering varied and timely issues for the mobile HCI community.

The first article, entitled "*It's Time There Was an App for That Too: A Usability Study of Mobile TimeBanking*", is by Kyungsik Han, Patrick C. Shih, Victoria Bellotti, and John M. Carroll. In this, the authors introduce us to the concept of timebanking – that is, the concept of community-focused volunteering centred around the provision and receipt of services supported by a time credit-based currency. The authors explain that central to the concept of timebanking is encouragement for people to utilize their individual, unique and valuable skills to help others, in so doing developing increased self-efficacy and an enhanced sense of self-achievement, regardless of their socio-economic status. The authors argue that, despite its use of web-based technologies, challenges to successful timebanking exist in the form of lack of flexibility in managing transactions (largely arising because users are not always connected to their timebanking webpage (a) at the point when they need to engage the services of others, (b) when they are in a position to offer help, or (c) when they want to record their time credits) and, especially, in terms of attracting the engagement of younger adults who could contribute

significantly and valuably to the community. Han *et al.* report on work they have conducted that takes advantage of the affordances and attractiveness of smartphones to young adults; they introduce a timebanking smartphone app and outline the results of a longitudinal user study of this app with a group of young adults. Their results highlight the benefits of the app in terms of communication and transaction management in this cohort, as well as its capacity to strengthen social connections and establish an enhanced sense of community spirit. The authors suggest, based on their findings, that supporting timebanking on smartphones has the capacity to create increased opportunities for delivery/receipt of services simply by allowing users to be in the right place at the right time. Discussing the advantages of smartphone technology for timebanking, they outline not only the opportunities such technology affords this activity, but also the design challenges faced when creating apps to support the concept of timebanking.

In "*The Intention to Use Mobile Library Technology: A Focus Group Study in the United Arab Emirates*", Kate Hone and Sumayyah Hassan Alfaresi present a qualitative study of student adoption of mobile library technology within the context of a developing world (in this case, UAE which has a very high smartphone penetration rate). They argue that mobile library technology offers significant scope to positively

enhance student and researcher access to academic resources and to meet the needs of target users who increasingly interact with services via mobile devices. The authors assert that there is a paucity of previous research exploring the relevance of existing technology adoption models specifically within the mobile library context, noting that the few such studies that have been reported have focused on outdated SMS-based services. On this basis, the goal of Hone and Alfaresi was to discover which technology acceptance factors are most relevant to adoption of modern mobile library technology. Although their findings lend further evidence to support the credibility of known technology acceptance factors (e.g., perceived ease of use, social influence, and trust), the authors argue that there is a need to adapt some of the generally-accepted adoption factors to accommodate the specifics of mobile library adoption. The authors identified that value perception rather than the traditional concept of perceived usefulness is more appropriate as an overarching adoption factor in this specific domain. Hone and Alfaresi identified important facilitators to adoption, but stress that these differ from accepted factors within existing technology acceptance literature, with the significance of trialability highlighted as significant for mobile library technology. The authors present their findings as a basis on which to improve established theory relating to mobile library technology adoption, and present practical design recommendations to support designers in ensuring the successful adoption of such technologies in the future.

In the final paper—“*Biomechanics of Front- and Back-of-Tablet Pointing with Grasping Hands*” by Katrin Wolf, Markus Schneider, John Mercouris, and Christopher-Eyk Hrabia — we are encouraged to consider the kinematic model of the hand as it relates to the ergonomics of target selection on the front and on the

back of tablets. The authors assert that common design guidelines for touch-based smartphone interaction cannot simply be transferred directly to tablet devices due to differences in size and weight between smartphones and tablets; these differences dictate fundamental changes to the requirements for ergonomic interaction design of the latter. Wolf *et al.* engaged in an empirical study to consider hand posture and articulation in target acquisition tasks using the thumb for touchscreen pointing and the index finger for back-of-device pointing with tablets, finding (perhaps unsurprisingly) that the position where the thumb and fingers are naturally hovering when the tablet device is being held returns the shortest target selection times. Broadening their understanding of that ergonomic optimum by analyzing both touch data and 3D data, the authors were able to model the entire hand pose including finger angles, thumb angles, and orientation. In so doing, they have been able to demonstrate that target acquisition with grasping hands is achieved by bending the joints of fingers. Where targets are located very close to palm of the grasping hand, finger joints typically have to be bent to their physical limit: ergonomically less than ideal, this movement demands longer selection times than pointing at targets with relaxed fingers that are further away. The authors identify ergonomic optional points for touch locations for both hands and for each side of tablet devices.

I trust that you will find the articles in this issue of the IJMHCI interesting, thought provoking, and potentially even a useful practical guide to future endeavors.

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