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I. KEYNOTE ABSTRACT

In today’s advancing ubiquitous computing age, with its ever-increasing amount of information from various applications and services available for consumption, the management of people’s attention has become very important. In particular, the high volume of notifications on mobile devices has become a major cause of interruption of users. There has been much research aimed at detecting the opportune moment to present such information to users within a way that lowers the cognitive load or frustration, however, evaluation of such systems in the real-world production environment with real users and notifications, and evaluation on user’s engagement to the presented notification beyond simple responsiveness have not been adequately studied. In this talk, I present our research on attention-aware adaptive notification system that has been deployed in the real-world environment. To the best of our knowledge, this study is the first to investigate user interruptibility and engagement using a real-world large-scale mobile application and real-world notifications consisting of actual news content. We equipped the Yahoo! JAPAN Android app, one of the most popular applications on the national market, with our mobile-sensing and machine-learning-based interruptibility estimation logic. I present some of the latest results from large-scale in-the-wild user studies with more than 680,000 users, and further key insights on the realistic attention (and emotion)-aware computing systems.

II. SPEAKER’S BIOGRAPHY

Tadashi Okoshi is a Project Assistant Professor of Graduate School of Media and Governance. He is a computer scientist especially focusing on distributed systems, mobile and ubiquitous computing, context-aware computing, and “attention-aware” computing. His current research topic is human-attention-awareness and its management in ubiquitous computing and cyber physical systems. He holds B.A. in Environmental Information (1998), Master of Media and Governance (2000) from Keio University, M.S. in Computer Science (2006) from Carnegie Mellon University, and Ph.D. in Media and Governance (2015) from Keio University, respectively. He also has over 7 year experiences of entrepreneurship, software architecting, product management, and project management in IT industries (Web2.0, blogging, social networking and social media).