Bridging the Digital Gap and Identifying Cross-Cultural Pathways for Adoption of IoT Technologies to Support Super-Aging Societies in the U.S. and Japan

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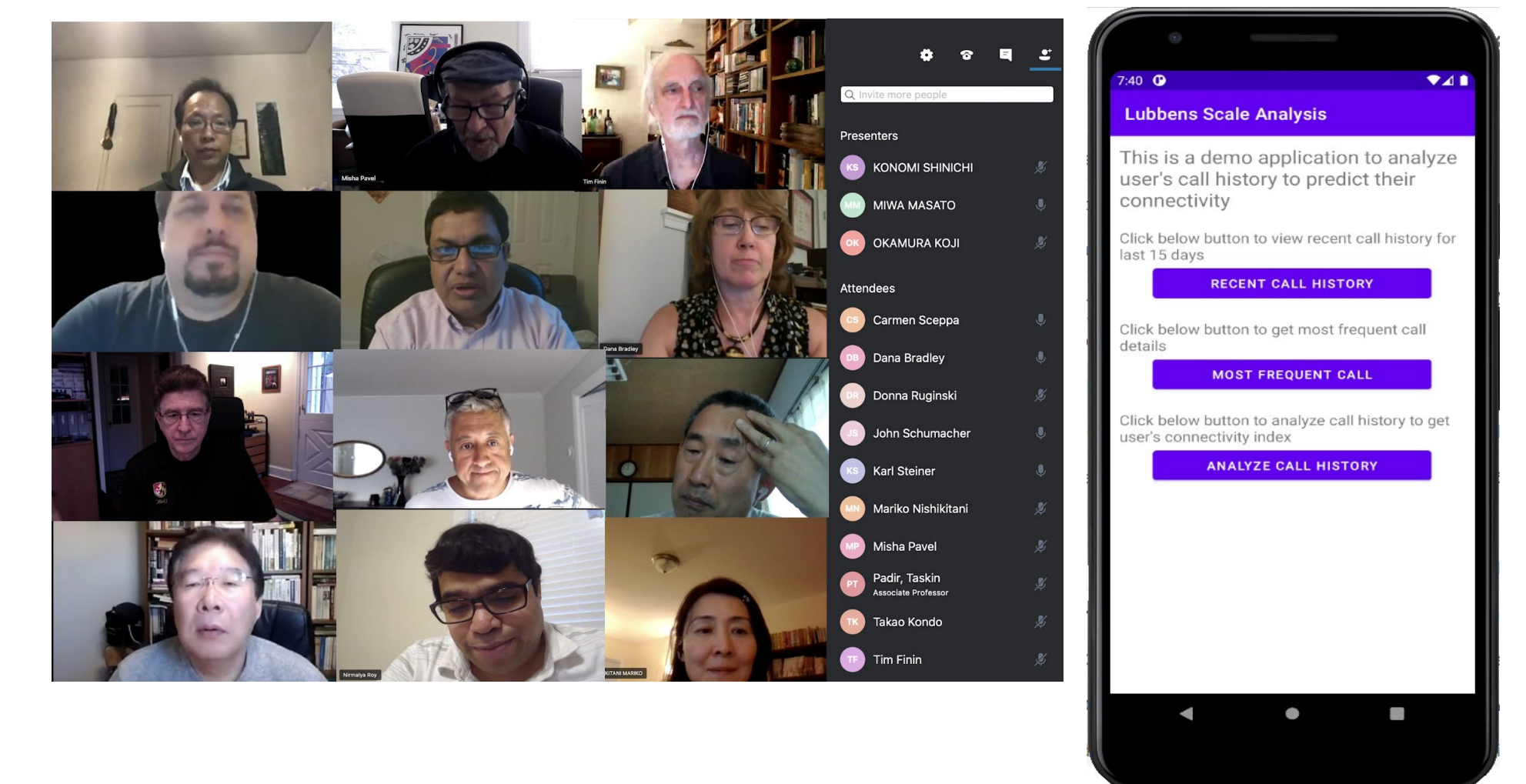
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Aging is a recognized global societal issue. The U.S. and Japan are experiencing dramatic population aging and share similarities. This planning grant brings together experts bridging disciplines and countries to realize trustworthy and effective smart systems to empower older adults. We focus on team-building, user-centered design ideation, and community participation activities to develop a tight and sustainable collaboration among U.S. and Japanese researchers to identify key challenges that we will address in our IRG proposal

Intellectual Merit As our societies grow older, they are being fundamentally transformed. As we "age out" of work and the community it creates, isolation increases, which in turn has sequelae (mortality, all-cause hospitalization, comorbidities - including mental issues such as depression). Our effort is to work with community partners to address this key societal challenge

Activities We are working with community partners to survey older adults to identify attitudes and comfort with ICT and issues around isolation. We are exploring how sensors and AI based smart systems intersect with this problem. We are devising techniques to measure isolation on a continuous basis using the Lubbens scale validated in the US and Japan. We are using ideas from assistive robotics to reduce physical and task-based isolation, and community-based connections to reduce social isolation and loneliness

Broader Impact

- Identifying key challenges related to aging societies.

- Creating communities in US and Japan that understands how ICT can help support older adults

- Creating a transnational research team with diverse expertise

Sustainability We have set up collaborations with community organizations in Baltimore, Boston, and Fukuoka Prefecture . They are helping us not just to refine problems for a full proposal, but also create mechanisms for our future research to translate into practice.

Next Steps

- Submission of Full grants to SCC Call in 2021 (done)

- Surveys to understand issues around loneliness and use of technology for seniors in US and Japan

- Development of systems to use sensed data to detect isolation