Space Mapper

A Privacy-Focused Mobile Phone Application for Active Positioning Research

5th Mobile Apps and Sensors in Surveys (MASS) Workshop

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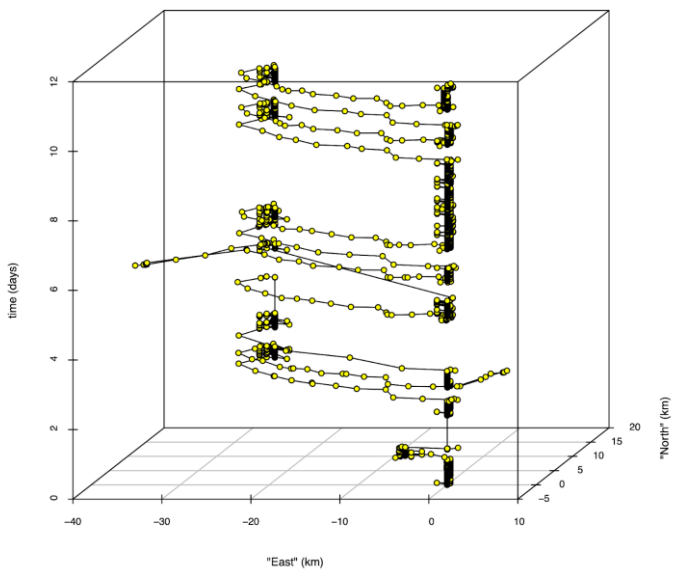
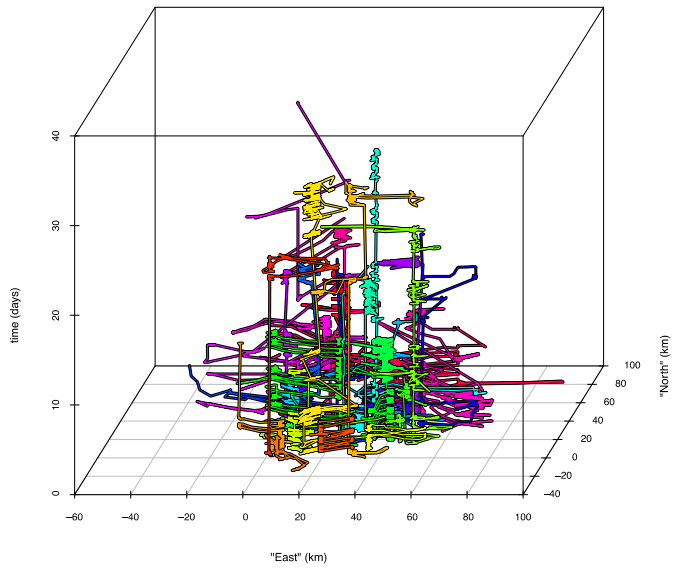
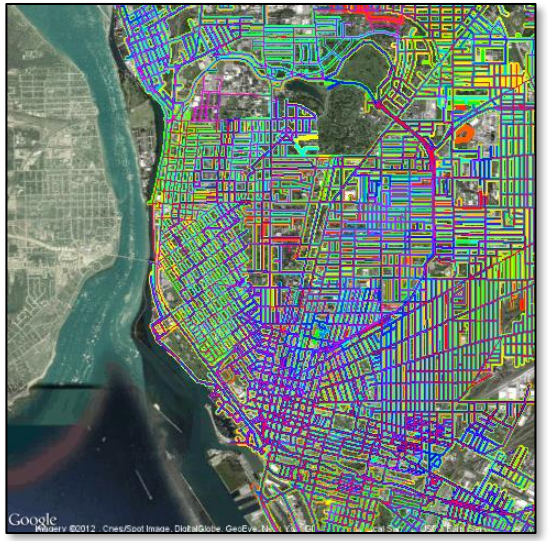
Data: Type, Spatio-Temporal Resolution, Quantity

What data are we trying to collect?



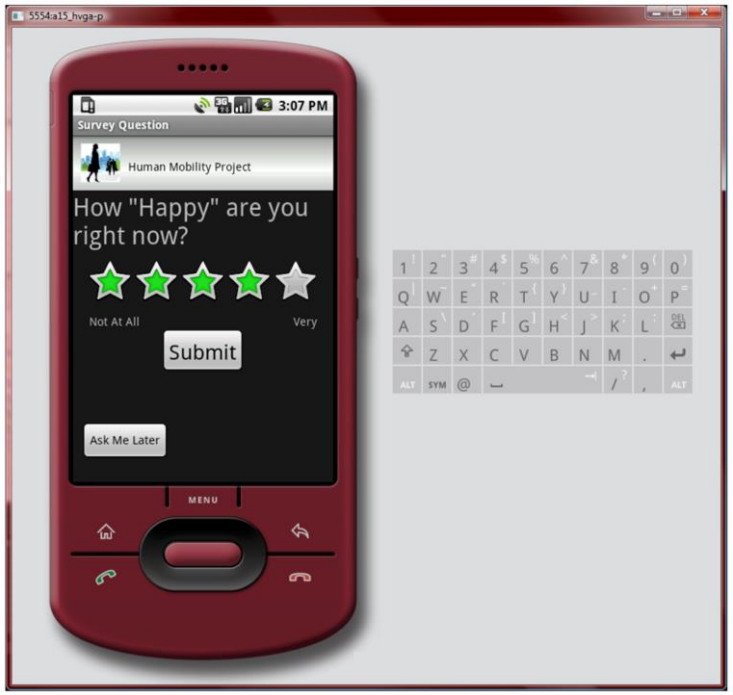


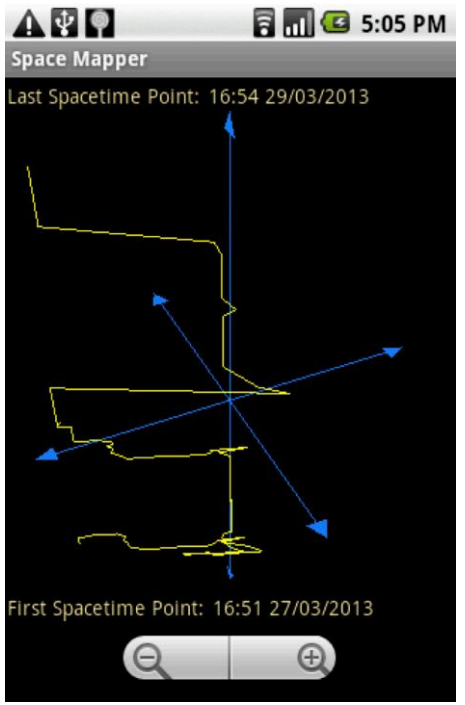


From: Palmer, J. R. (2013). Activity-space segregation: Understanding social divisions in space and time (Doctoral dissertation, Princeton University).

Design: UX, PX, HSX

Are we designing for users, participants, or human subjects?



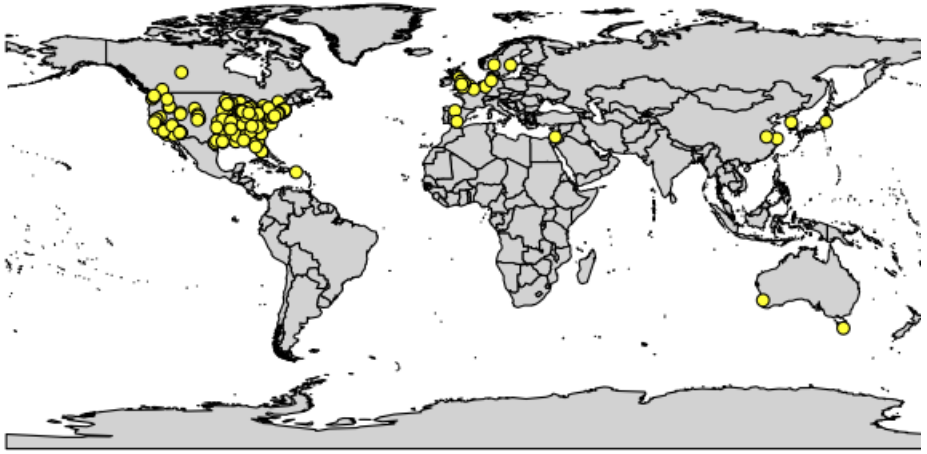


Sampling People: Size, Criteria, Recruitment

Who do we want and how will we motivate them to use the app?

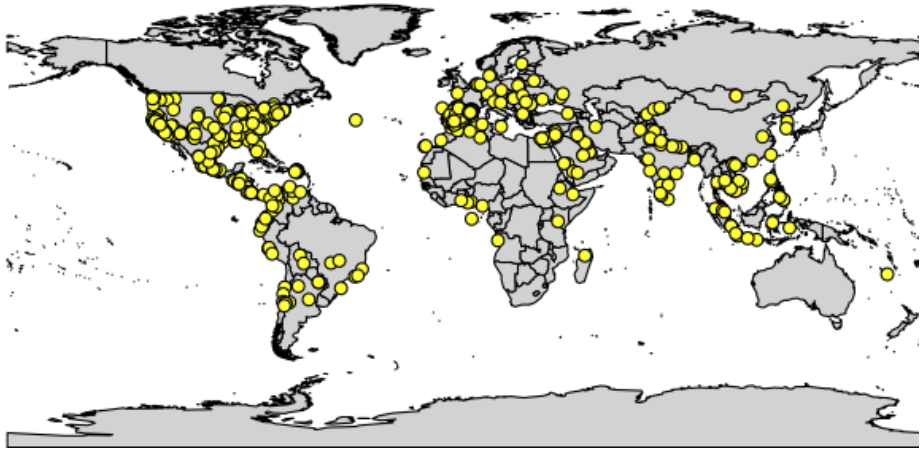
Human Mobility Project

270 participants; 68,198 location estimates



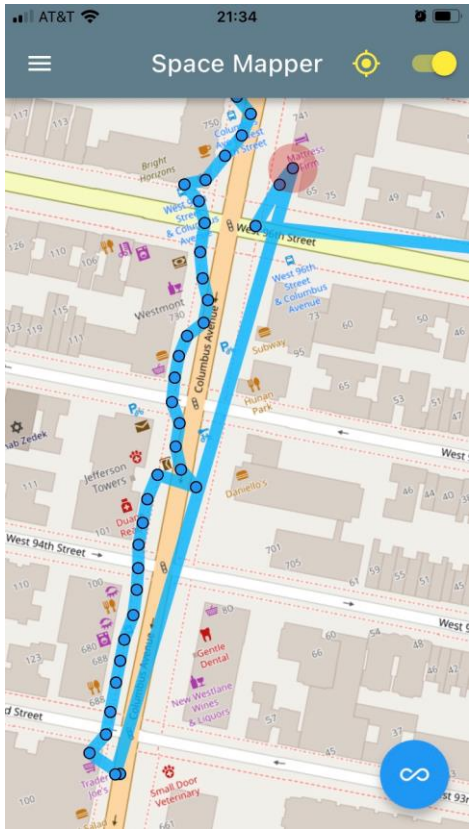
Space Mapper v1

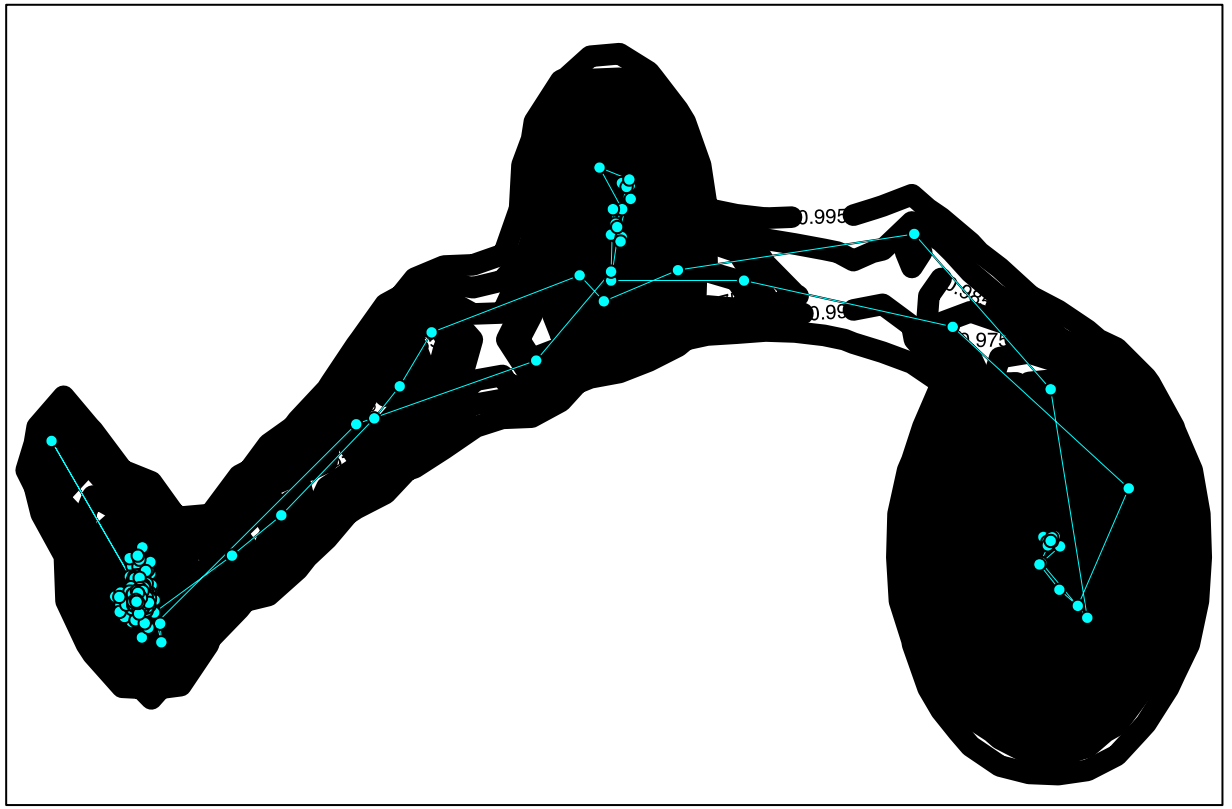
900 participants; 739,224 location estimates



Sampling Presence, Movement Activities

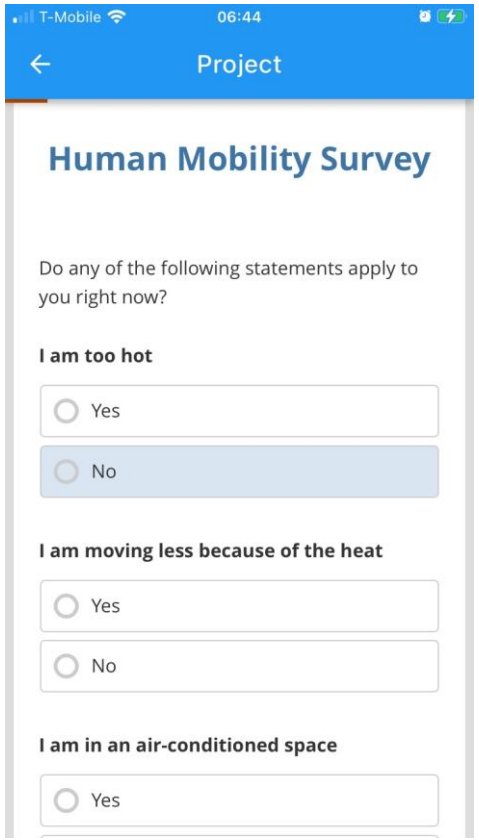
Inference, Uncertainty, Bias

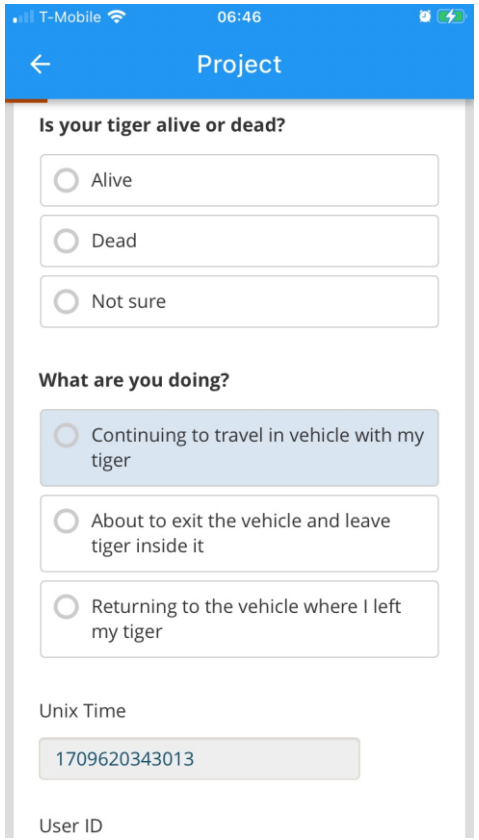




Adding Surveys

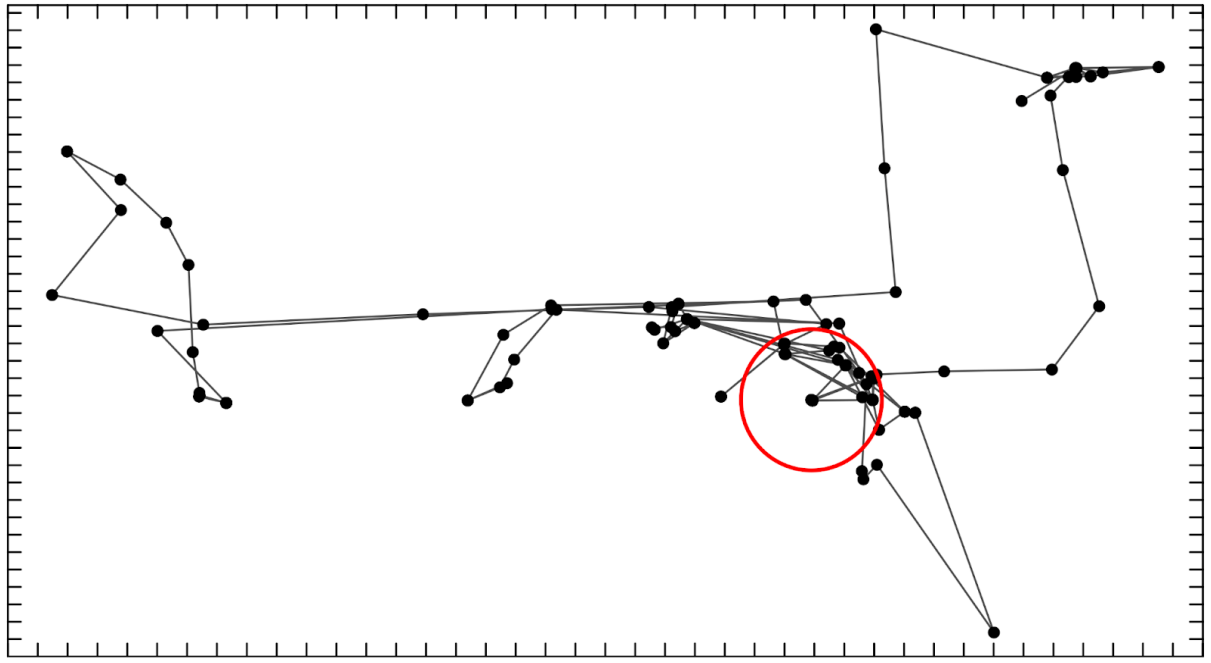
Triggers, Notifications, Data

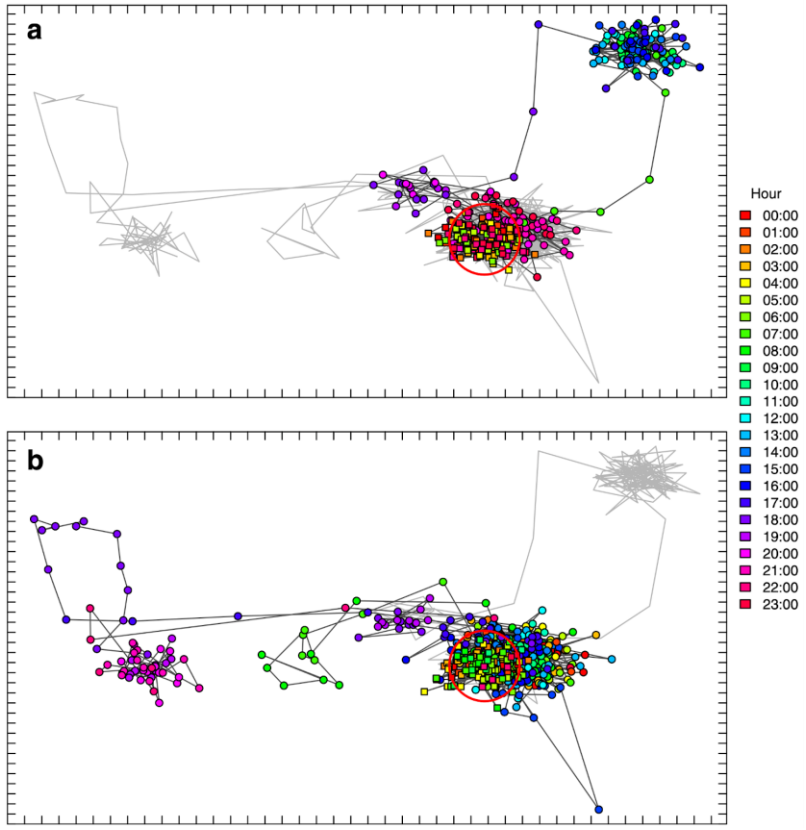




Ethics

Autonomy, Privacy, Data Protection

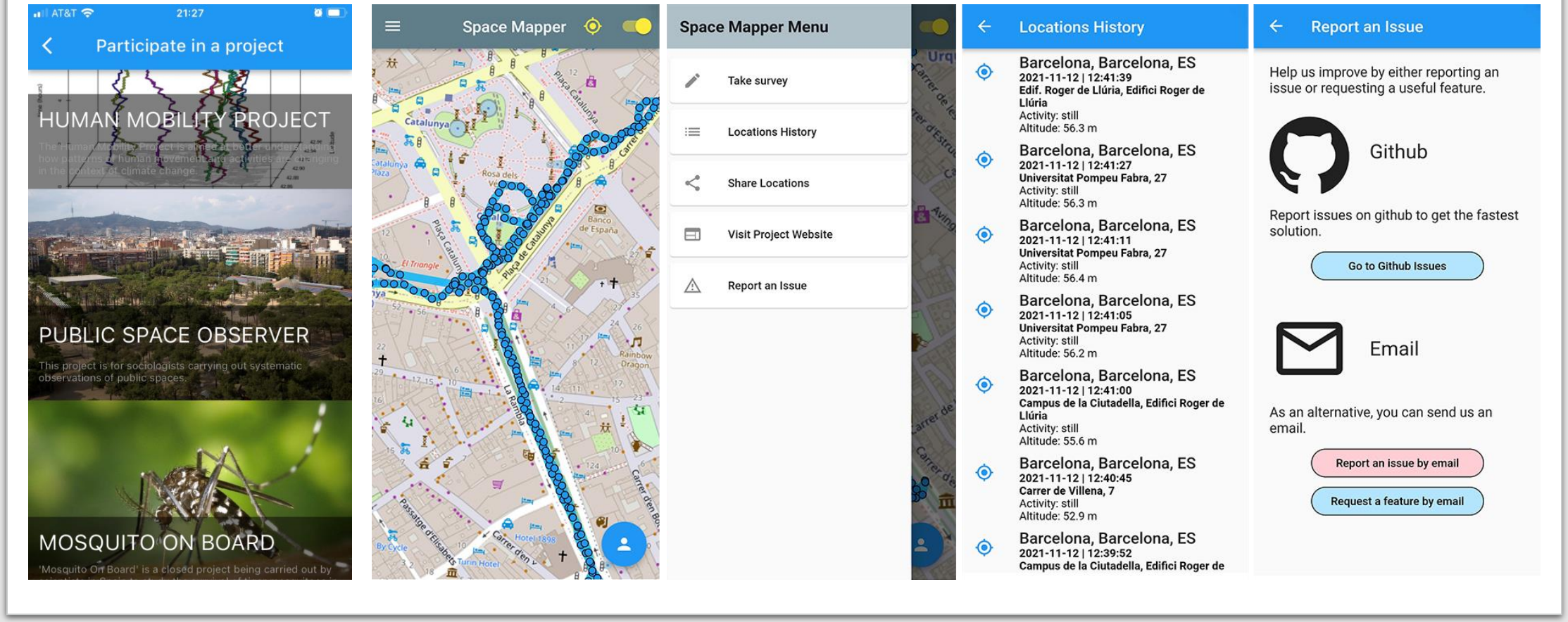




From: Palmer, J. R., Espenshade, T. J., Bartumeus, F., Chung, C. Y., Ozgencil, N. E., & Li, K. (2013). New approaches to human mobility: Using mobile phones for demographic research. Demography, 50(3), 1105-1128.

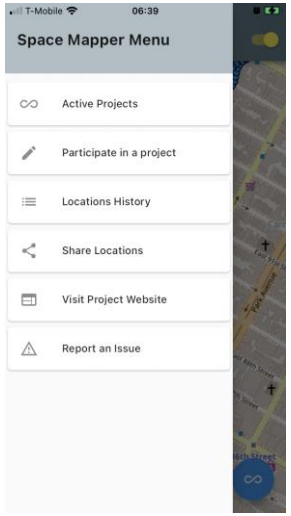
Tool Development and Maintenance

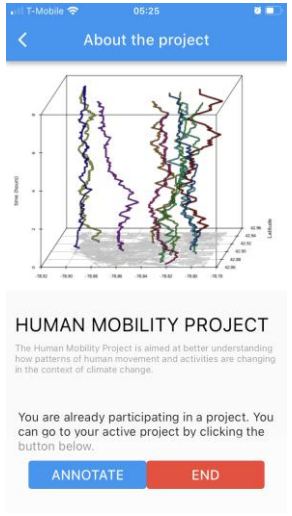
Logistical and organizational strategies

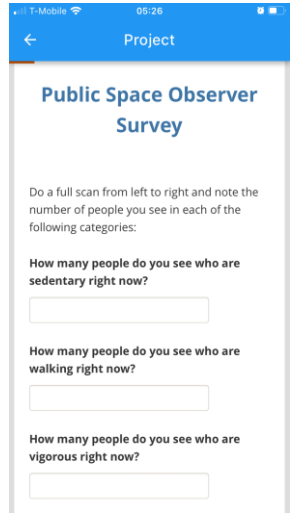


Space Mapper v3

Current and Future Directions







Acknowledgements

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