

## Touch Survey: Comparison with paper and web questionnaires for community mapping

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**Abstract.** Community mapping requires the function to capture data along with location information. Although mobile tools, such as smartphones and tablets, are increasingly used for field investigation to collect information about physical spaces, they are not optimally designed for data collection from community members (e.g, by asking citizens questions on-site.) To promote the effective use of mobile tools for community mapping, we focus on touch-based interfaces, which smart mobile devices generally have, and investigate the design of user interfaces that best suit the need to collect community members' comments with different levels of complexity. To this end, we have developed a prototype of a questionnaire-based survey tool using tablets, and conducted an experiment for uncovering the strengths and weaknesses of touch interactions by comparing it with PC-based, and paper-based questionnaires. We have found that touch-based ranking interfaces allow for quicker inputs than conventional interfaces, and identified characteristics that can be considered in the design of a touch-based interface for manually inputting location information using an explorable digital map.

**Keywords.** Community mapping, touch devices, mobile data collection, explorability