

MOBILE VISUALISATION TECHNIQUES FOR LARGE DATASETS

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Project Overview

⦿ Research goals

- Review visualisations for mobile phones
- Develop visualisations based on the findings from Related Work
- Evaluate visualisations

⦿ Approach

- Dev a viz app, using example data from an existing project (MobiSAM)
- Conduct user study (e.g. for effectiveness, intuitiveness, etc.)

Progress to-date

- ⦿ Literature review [X]
- ⦿ Design & Implementation [...]
- ⦿ User test and results analysis []
- ⦿ Thesis write-up []

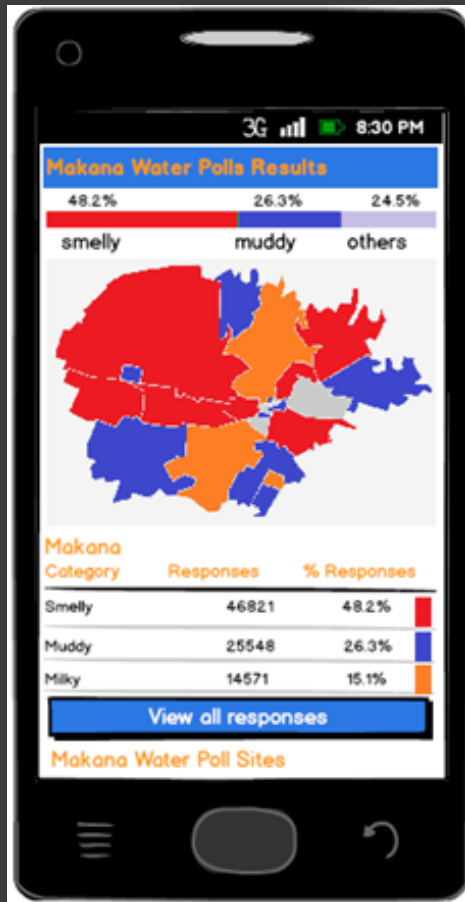
Literature Review Highlights

- ◎ Why viz?
 - explain, decide, discover
- ◎ Viz User Tasks
 - Overview, Zoom, Filter, Details-on-demand, Relate, History & Extract
- ◎ Mobile platform is *improving*, but **limited** (e.g. screen size & resolution, processing power, connectivity, storage)
- ◎ **Mobility** provides an opportunity (e.g. location-aware apps) and a challenge (e.g. multitasking, short attention spans, changing lighting device conditions, etc.)

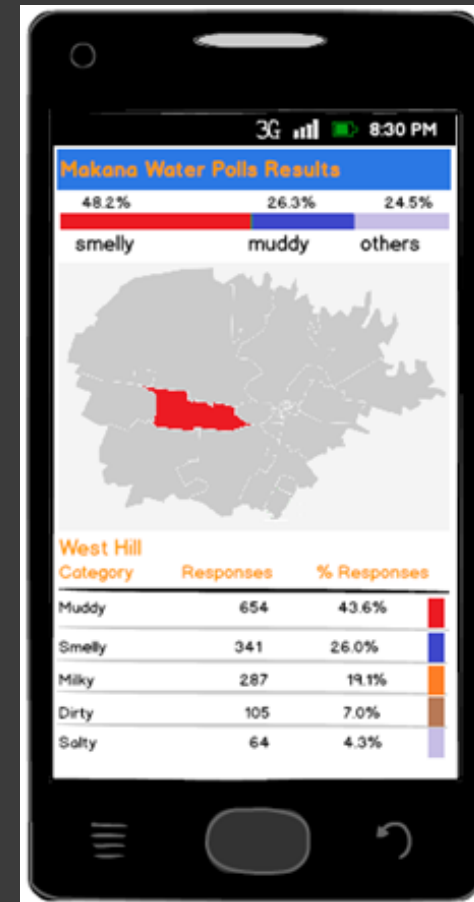
Design & Implementation (1)

- ◎ Free tools
 - Android Development Toolkit (ADT) Plugin for development, with Google Maps API
 - Microsoft Azure as an online database
- ◎ Target audience/market
 - Android dominates iOS, Windows and others
- ◎ Technical support
 - Plenty of online support

Design & Implementation (2)



Overall details for all suburbs



Details for one suburb

Design & Implementation (3)

Challenges

- ⦿ Learning curve (Android, Java, ADT)
- ⦿ Aggregating *temporal* data

Next steps

- ⦿ Complete design & implementation
- ⦿ Conduct user study & analyse results
- ⦿ Thesis write-up
- ⦿ Update website

Q & A