*Poll*aroid: Polling
for the People!

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Luke Shadler

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Even in Modern times, Being Polled Sucks

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- ▶ Untimely or unwanted calls
- ▶ Voicing an opinion to a representative is lost in cyberspace
- ▶ Politicians are notorious from hiding viewpoints

Introducing...*Poll*aroid!

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- ▶ Voters and representatives vote on representative-generated polls
- ▶ Gives voters a "snapshot" of their representatives views
- ▶ Representatives can connect directly with people based on their polling information
- ▶ Users can have direct messaging contact with their district's representative

How *Poll*aroidworks

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- ▶ Users sign up with limited personal information and are assigned a House and Senate district
- ▶ Users vote on polls created on a district-to-district basis by the representatives within that district
- ▶ Users maintain direct contact through messaging to the representatives of their district
    - ▶ Can be public or anonymous

Implementation Overview

- ▶ Backend
    - ▶ A Java server application
    - ▶ Uses SQL API with H2
    - ▶ Dropwizard[1] allows communication with front end
- ▶ Frontend
    - ▶ A React[2] web application
    - ▶ Uses Webpack[3]
    - ▶ Communicates with backend via JSON

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[1] http://www.dropwizard.io/1.1.0/docs/
[2] https://facebook.github.io/react/
[3] https://webpack.github.io/

Entity-Relationship Diagram for *Poll*aroid

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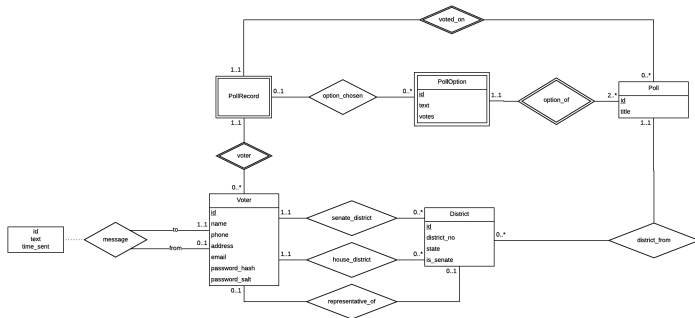
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The Whole Picture

- ▶ **Voters** can possibly be a representative of a district
- ▶ **Districts** with voters all have a representative
- ▶ **Polls**, created by representatives, have at least two options
- ▶ **Poll Records** store a user's choice and ensure a single vote from each user
- ▶ **Messages** are between two Voters, and can be optionally anonymous

A Relational Algebra Translation

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- ▶ Voter(<u>id</u>, name, house_district, senate_distict, phone, address, email, password_hash, password_salt, district_representing)
- ▶ District(<u>id</u>, district_no, state, is_senate)
- ▶ Poll(<u>id</u>, district, title)
- ▶ PollOption(<u>id</u>, poll, text, votes)
- ▶ PollRecord(<u>voter, poll</u>, chosen)
- ▶ Message(<u>id</u>, from, to, text, time_sent)

Underline denotes primary key

Functional Dependencies

- ► Is it 3NF?
  - ► Yes, since each relation has only functional dependencies contained within it's primary key, and therefor a superkey of the relation
- ► Is it BCNF?
  - ► The above statement is also a requirement for BCNF, so yes!

Sample SQL Queries on *Poll*aroid

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(PLACE QUERIES WHEN THEY EXIST)

Let's Try it Out!

https://pollaroid.club/

In Summary...

- *Poll*aroidremoves the disconnection between a representative and the voters of their district
- Seeing this project develop from a diagram into a functional database was a very rewarding experience
- Please go to our site and respond to some of our polls!

Questions?

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The *Poll*aroidTeam:

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- ▶ Design Engineer: Joshua Robbins
- ▶ UI Engineer: Stuart Olivera
- ▶ Test Engineer: Lucas Shadler