

Dispatch Application

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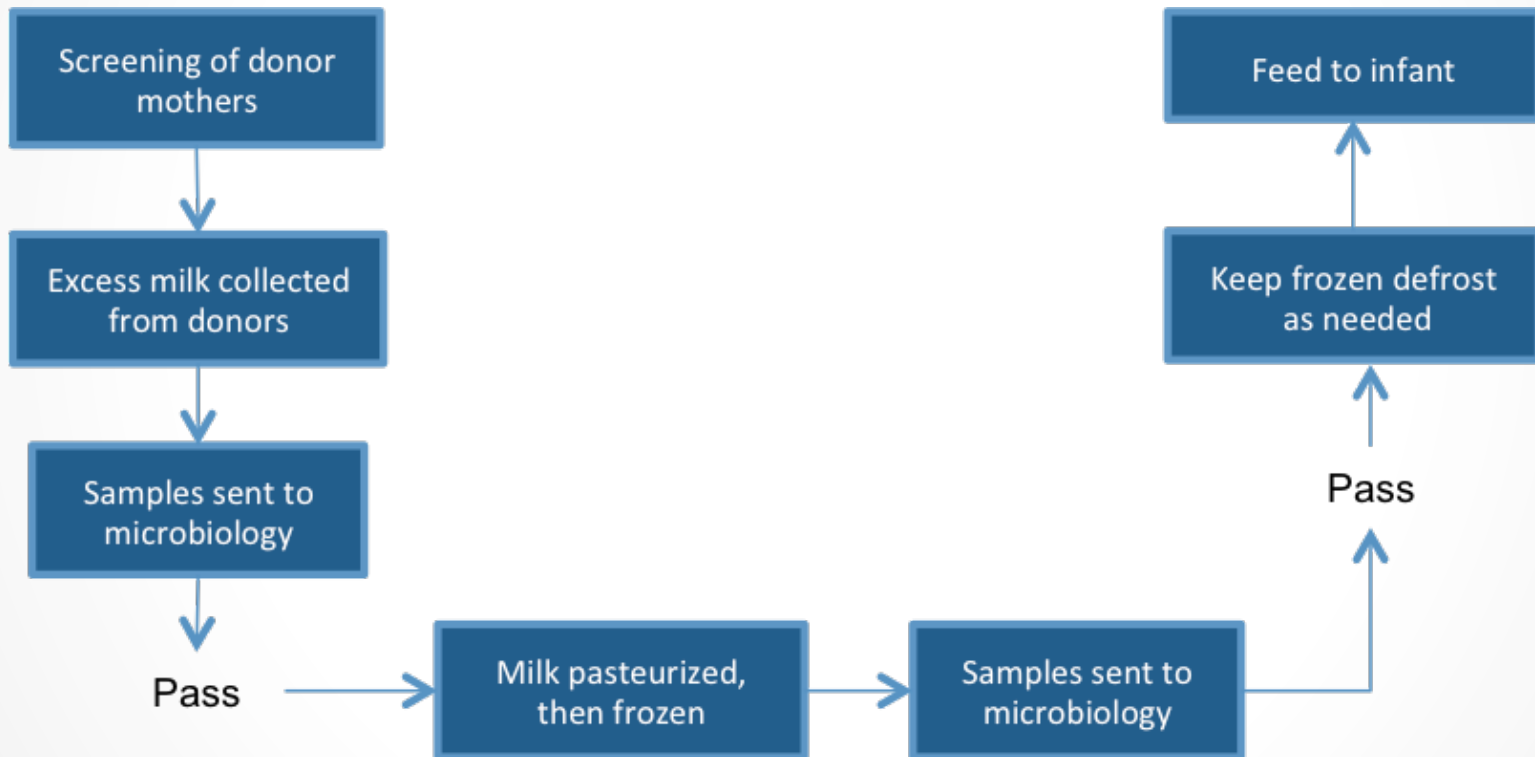
Problem Space

- Donor mothers (DMs) request pickups at odd times & often with minimal notice
- Sometimes, more than one courier at a time goes for a specific pickup
- Couriers sometimes don't know which milk bank (MB) to bring the breast milk (BM)
- Two Goals:
 - Make the couriers' job easier during pickup
 - Standardize process DMs contact MB

Project Description

- Organizes dispatching of couriers who collect BM
- Used by DMs and couriers for deliveries
- Preconditions:
 - DMs have a phone with SMS capabilities
 - Couriers have a smartphone with internet access
- Hospitals gather information

Current Workflow



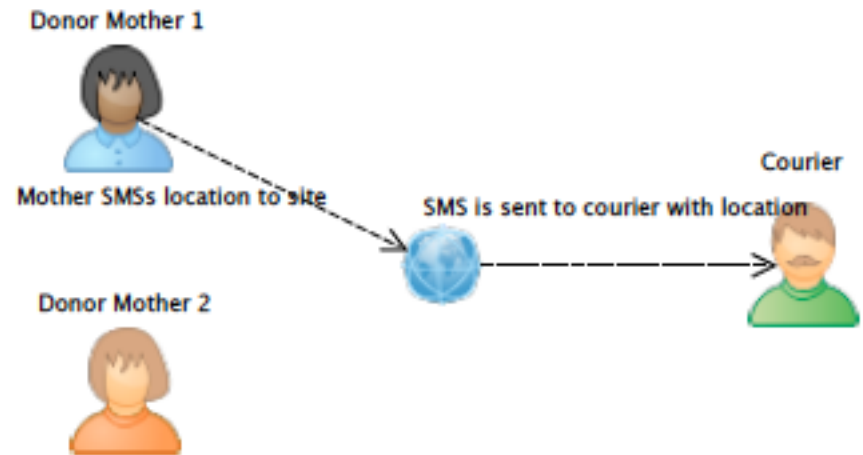
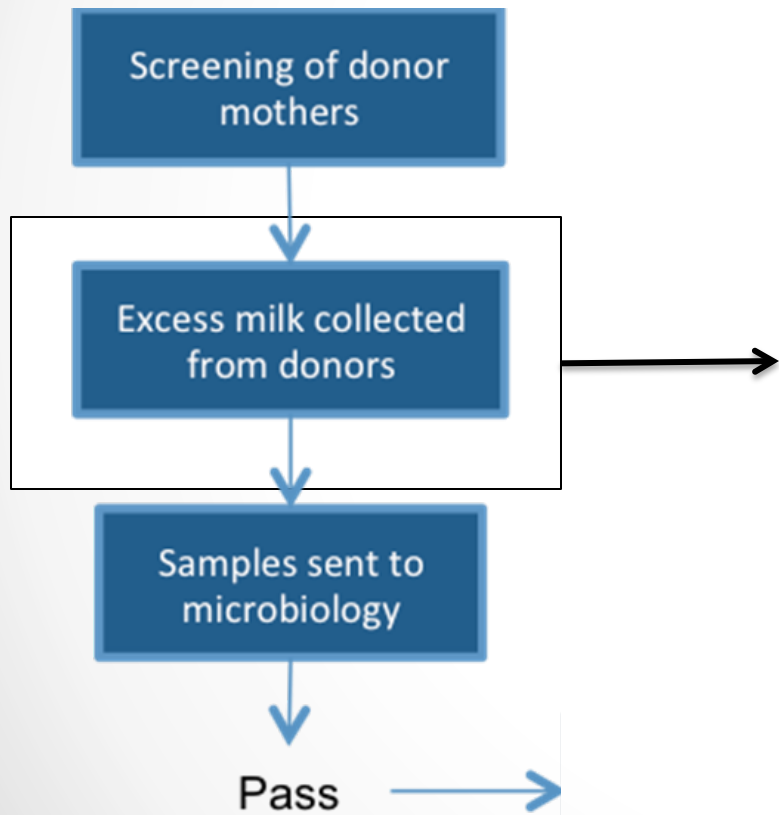
Related Work

- Decentralized Human Milk Banking with ODK Sensors
 - Rohit Chaudri, Gaetano Borriello, et al
- Related areas of interest:
 - Taxi dispatch apps: Dispatch! (Android)
 - AceRoute, Amerilert First Responder (SMS), Comtekk, Digital-Dispatch, RapidSMS, TaskRabbit (Web & iOS), TaxiCentral

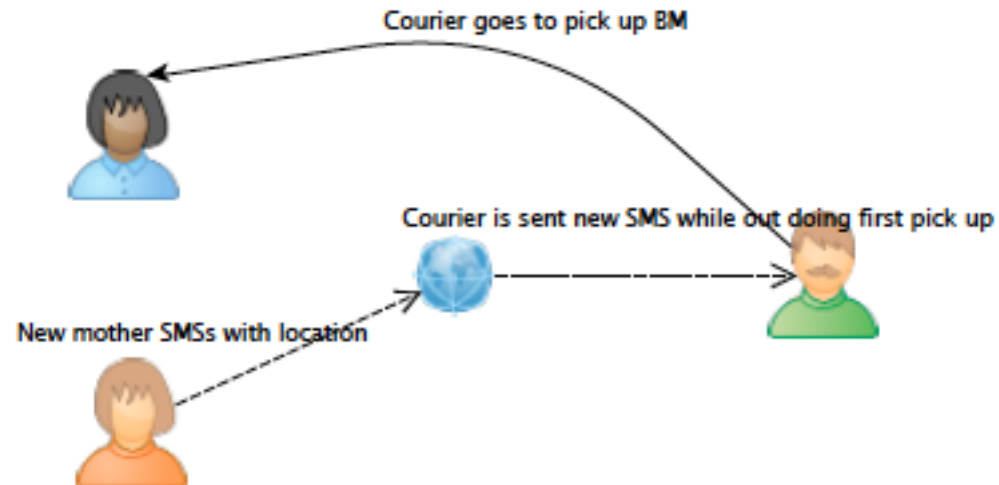
Current Findings

- Communication
 - Rohit: CSE grad student
 - PATH: Seattle based non-governmental organization
 - Human Milk Banking Association of South Africa in Durban
- Central roadblock: Lack of infrastructure
- Currently...
 - Investigating possibilities in Cape Town
 - Designing for a general scenario

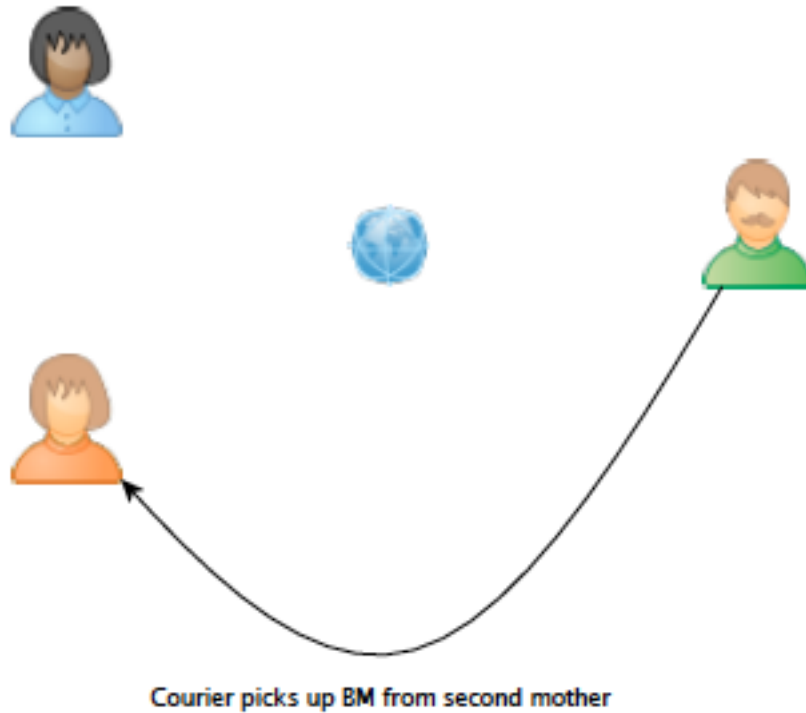
Basic Scenario



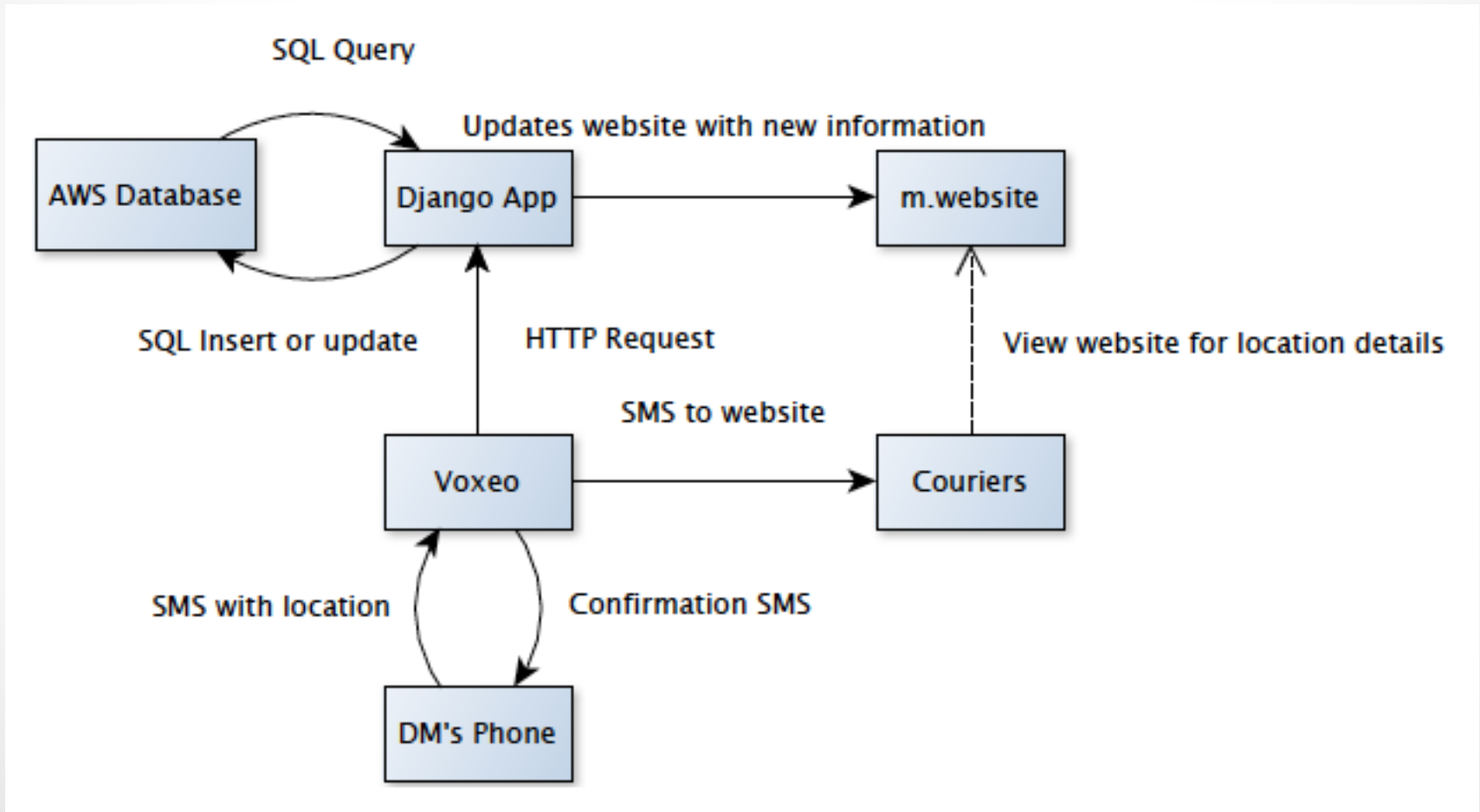
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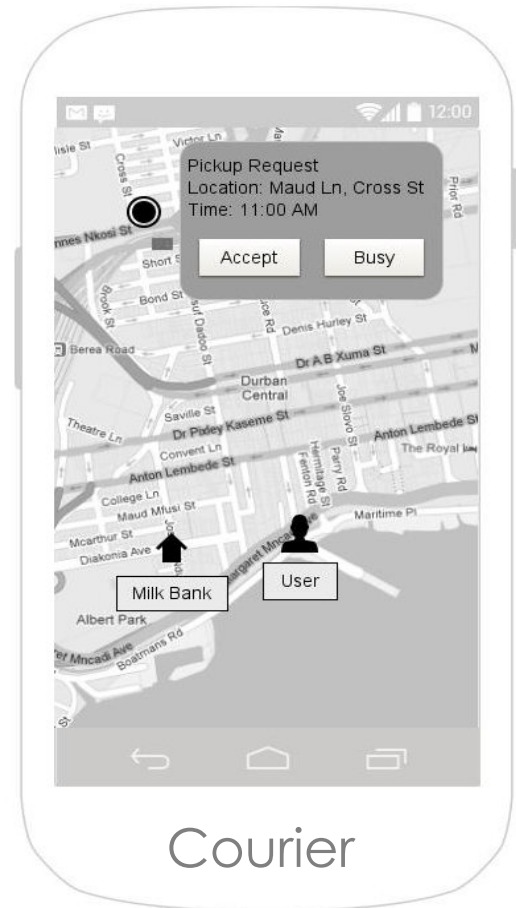
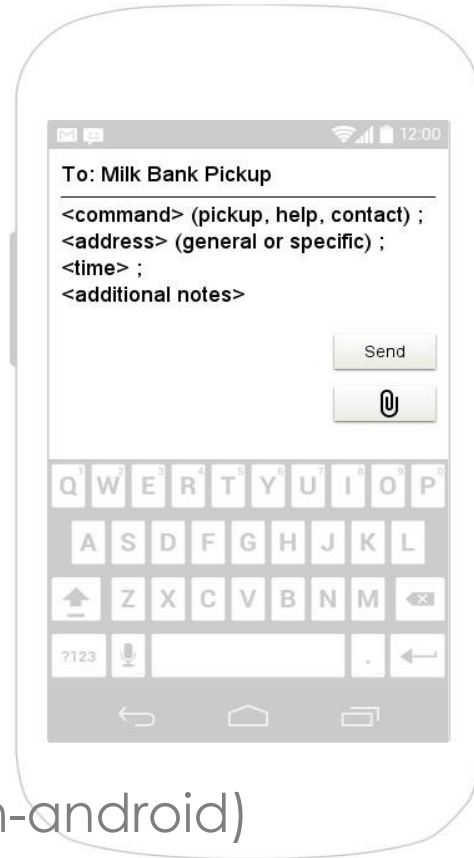
Architectural Diagram



Mockups



Donator (non-android)



Courier

Design and Evaluation

- Database
 - Personal information, courier information, key locations, transactions
 - Central; no client should be hosting it
 - Privacy
- Automation
- Cross Platform
 - Website
 - Android

Next Steps and Project Plan

- Further Research
 - Explore Voxeo more with Nathan (as needed)
 - Gather more information about the South African situation (ongoing)
 - Find a free database
- Coding
 - Voxeo (20%)
 - Django (70%)
 - Database data entry (10%)
- Interface Design
 - Web app interface
 - Native app interface