

SMS Immunization Manager

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Problem

Timely reporting of vaccine stock inventories from dispersed health centers is difficult in the developing world. More accurate and accessible reports on stock levels and timely notifications of critical equipment failures are needed to help health workers effectively distribute vaccines across health centers.

Solution

A system that provides fast, reliable and accurate reporting by leveraging ubiquitous SMS technology.



1 SMS messages are sent to report cold chain status.

2 Messages are parsed, and responses are generated.

3 Authorized managers can moderate report activity.

Approach

Easy to deploy:

A couple programmers can implement and deploy a new set of custom, user-friendly SMS operations in just several weeks.

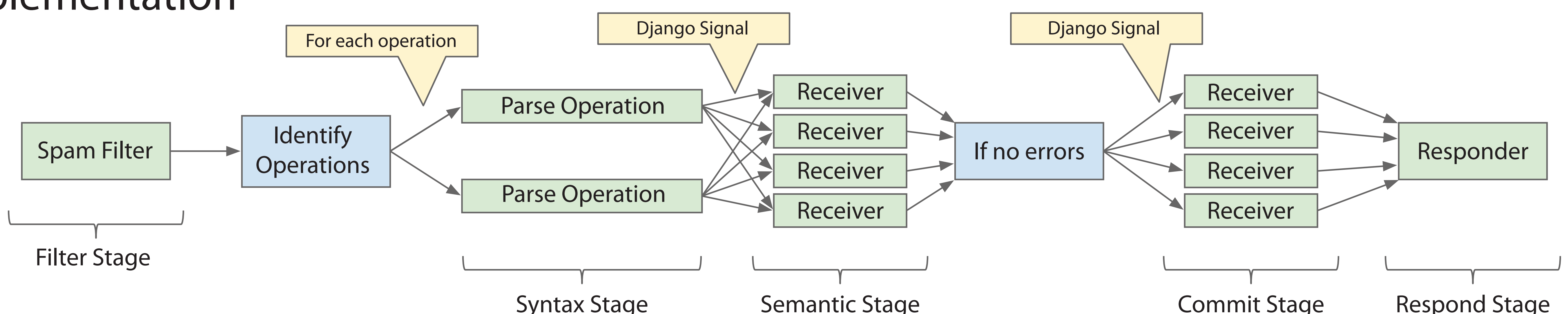
Easy to use:

SMS operations with forgiving syntax handle common mistakes correctly and provide informative error messages otherwise.

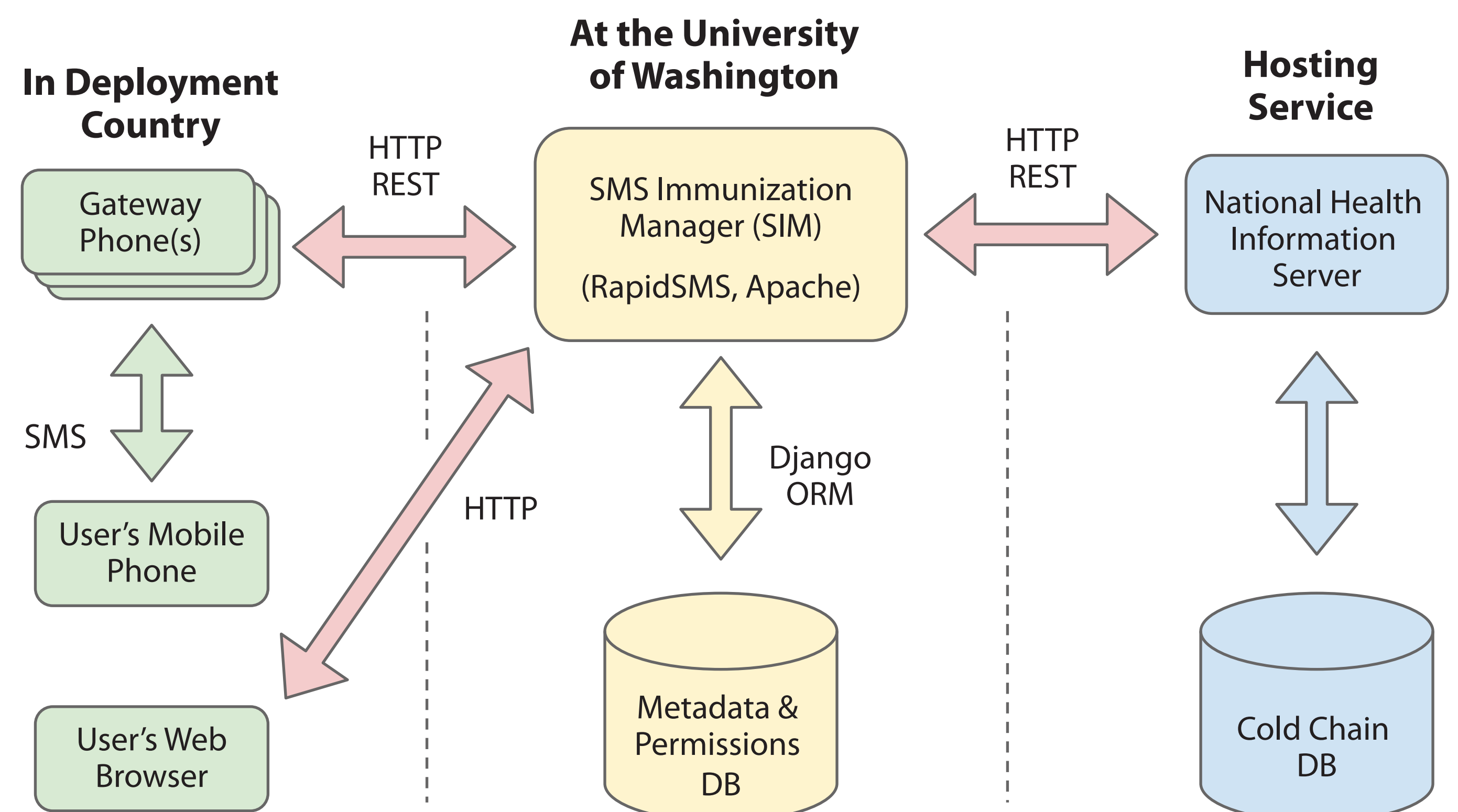
Administrator-moderated:

A web application for administrators to review and manage all SMS interactions with the system.

Implementation



Architecture



SIM's message processing scheme groups code into modules by their behavior instead of by their operation. There also exist modules that define the syntax, but not behavior, of operations.

Modules in SIM can register interest in an operation, making it easy to reconfigure how operations are acted upon. Our hope is this modular design will minimize the effort needed to use SIM in another country, or even for a purpose other than vaccine management.

Future Work

- Connect the existing framework to the DHIS2 database for the Laos deployment.
- Send SMS reminders to health workers on a regular basis to ensure timely reporting of data.
- Use location information to allow health workers in the field or patients to request information about the stock levels at nearby facilities.

