Zombie Triage

Update/Sync UX
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WebLab Summer 2014

# Current State of Affairs
(it's ugly!)

- Death by Zombie = Death to Data!
- If we can save the data, we can save the world!

- Progress is slow
- The CDC must be utilized to further the cause!

Goal: Eradicate the zombie virus by finding Patient Ø and new mutated strains of the zombie virus

Team SSK objectives:

- Update and Sync field data with the CDC.
- Maintain a fully functional and reliable data set
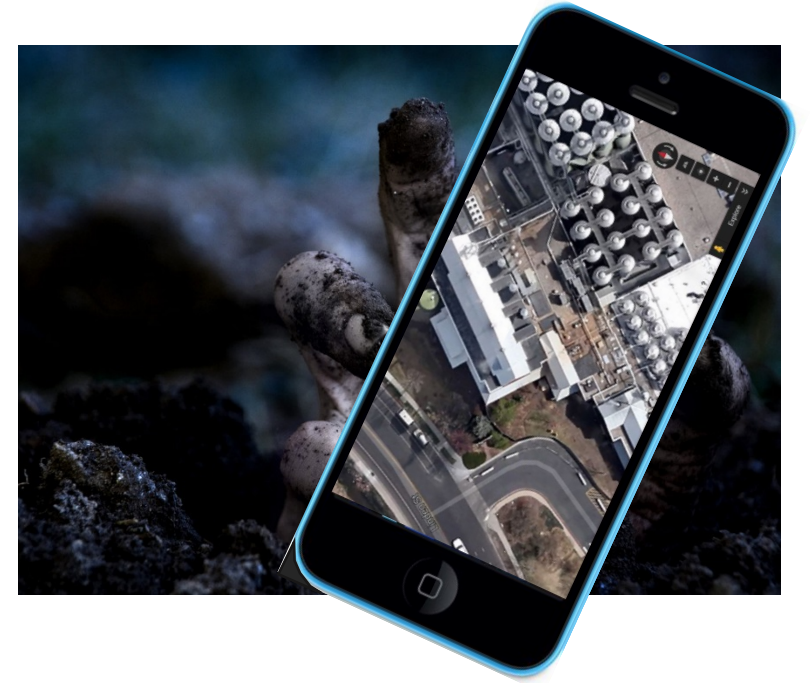- Improve data communications to keep zombie hunters informed and safe
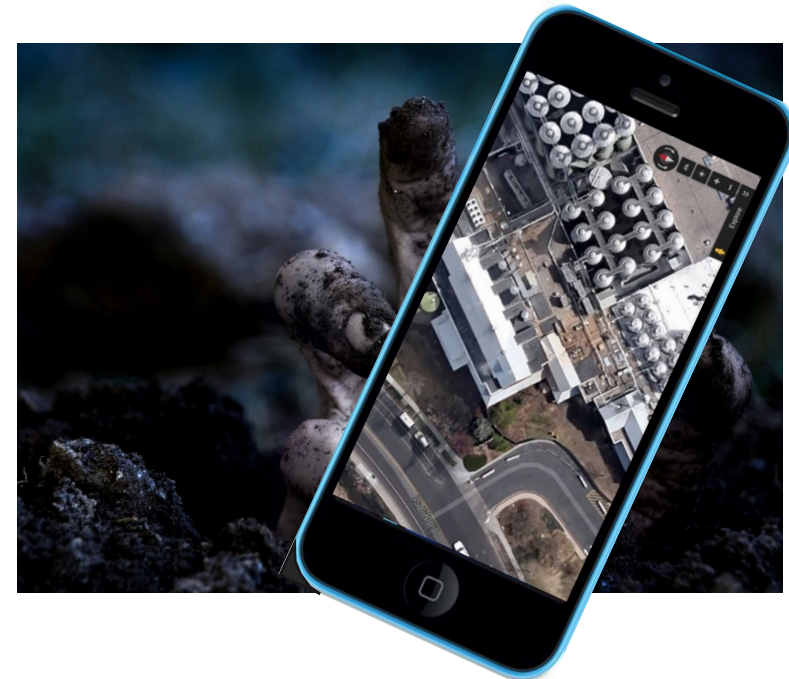
Research Methods

With 10 zombie hunters (ZH)
- 511 hours of field trips
- 43 written surveys
- 26 interviews

We observed many instances of civilian casualties, new virus strains, infected ZHs without adequate data flows

Research Results
Identified existing challenges and further needs

- Updates: signal outages cause problems with data access and management

- Error recovery: outages and lost data from ex-ZH death

- Environmental challenges: low light, need to minimize audio signals

Research Results
Identified existing challenges and further needs

- Need for alerts: new strains, fallen ZH – critical info updates

- Need for up-to-date maps: signal hotspots, zombie presence & density, ZH locations including self

- Historical data view: data cache for use when signal disappears

Prototyping Plan

- Updates
- Error recovery
- Push alerts
- Historical data view

Ease of use
- Low light situations – light display
- Speed - Minimize clicks and large buttons
- Automatic functions – updates and defaults
- Discretion - Haptic signals (vibration)

Prototyping Plan: Update

- Data collected must be uploaded to CDC DB and map layers with time/date/location stamp
    - signal hotspots, ZH, zombie population density, safe locations, human survivors
    - Tricorder detection of new strain encrypted and flagged for priority upload to CDC
        - Option to select full upload/sync when ZH is in signal hotspot <u>and</u> safe
        - Communicate data status to ZH through display
   - Make signal status more obvious
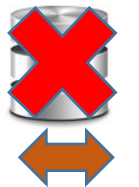
Prototyping Plan: Error recovery

- Data sync'ed to ZHs/uploaded to CDC, recommend distributed mirrored servers for faster signal

- Data packaged in smaller units with start/stop bytes and time/date/location stamp

- If package update unfinished -> error: maintain in Black Box

Data storage

- Store data for this field trip in Black Box that can be resent or recovered if phone is retrieved without ZH
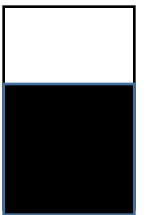
Prototyping Plan: Push Alerts

Haptic Alert system (to inform the ZHs in the field)
- 1 long vibration: a new civilian casualty was found
- 2 short vibrations: a new strain of Zombie Virus detected
- 3 long vibrations indicate a ZH was infected by the virus
- 4 short vibes: new map alert - so the ZH would check maps
- 5 short vibes: emergency, return to base

Create alert display on UI
- Automatically sync the data from CDC
- Visual cues of data status to inform the ZH if data needs to be sync'ed
- Automatically store data in local black box storage

Prototyping plan: Historical Data View

Black Box on UI and as embedded storage

- 1 Terabyte of data
- Kevlar & Graphite = indestructible
- Beacon Signal that gives both visual and haptic signals to ZH within range
    - 3 short vibes indicate device from fallen ZH in range
    - Fallen ZH will be ID'd by virus infection or flat-lined heart rate/ body temperature
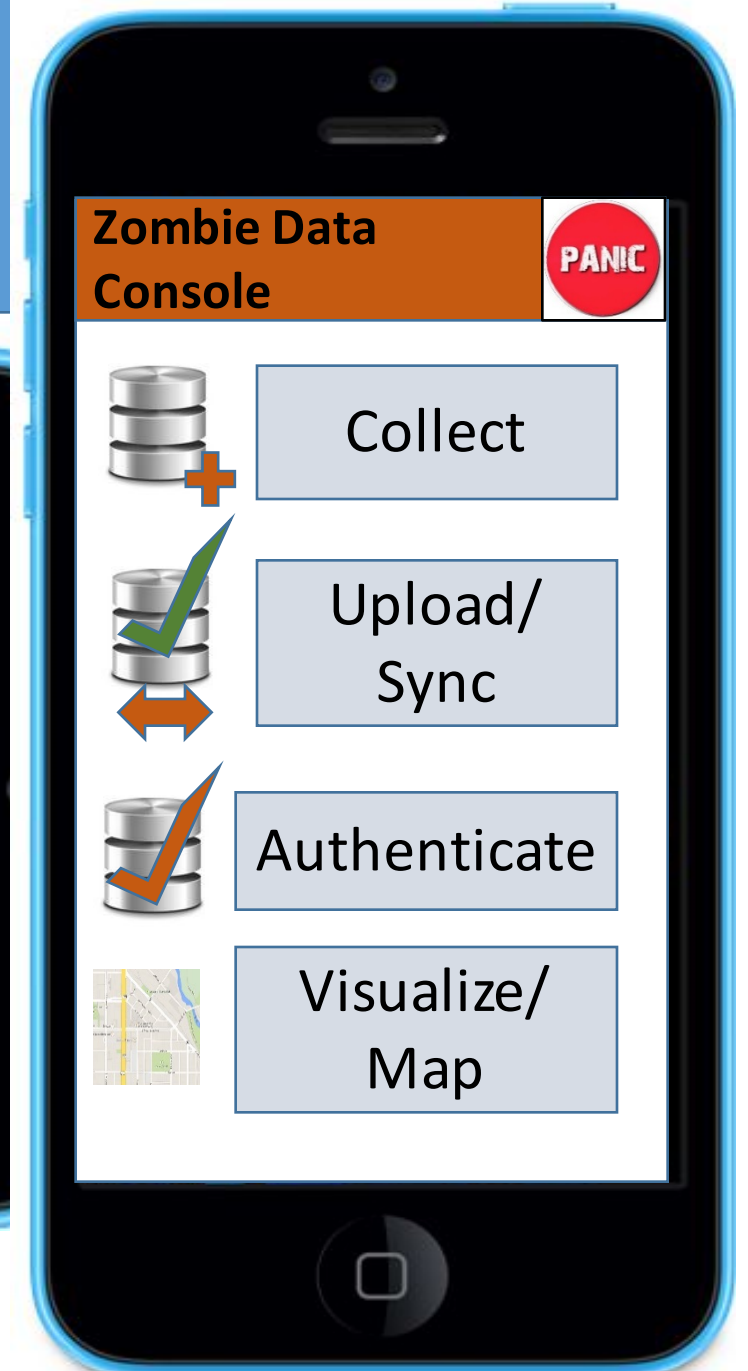- All data has time/date/location stamp
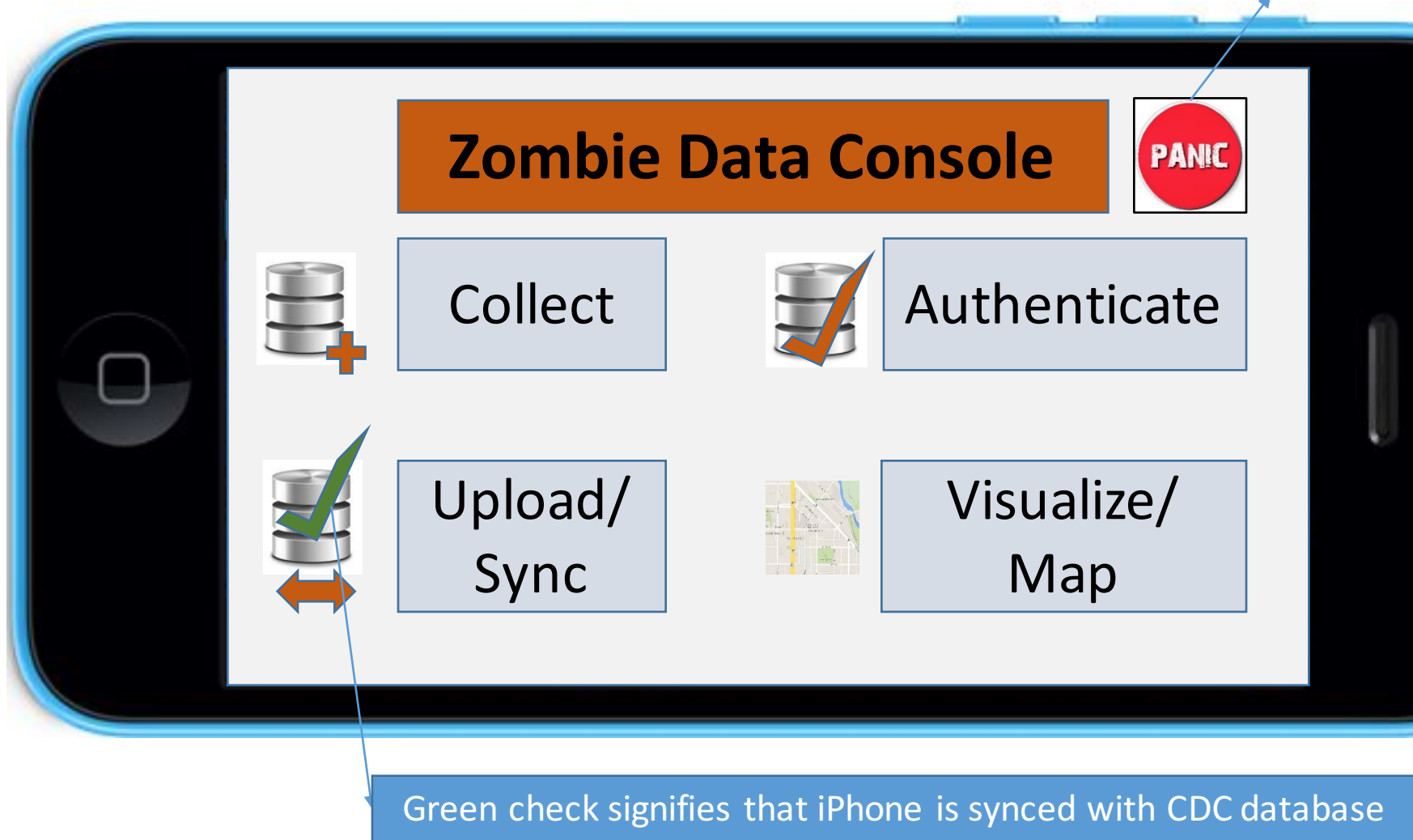
User Testing

- Phase 1
  - Tested by 10 ZH
  - A/B Split testing the "infection queue."

- Phase 2 Alterations
  - Positive results confirmed need for Black Box
  - Map 12 showed out dated information, leading some ZH's to unsafe zones. A dynamically changing map overlay is required.

- Phase 3 Alterations
  - Dynamic Map saved 3 lives
  - Infection queue will not be included
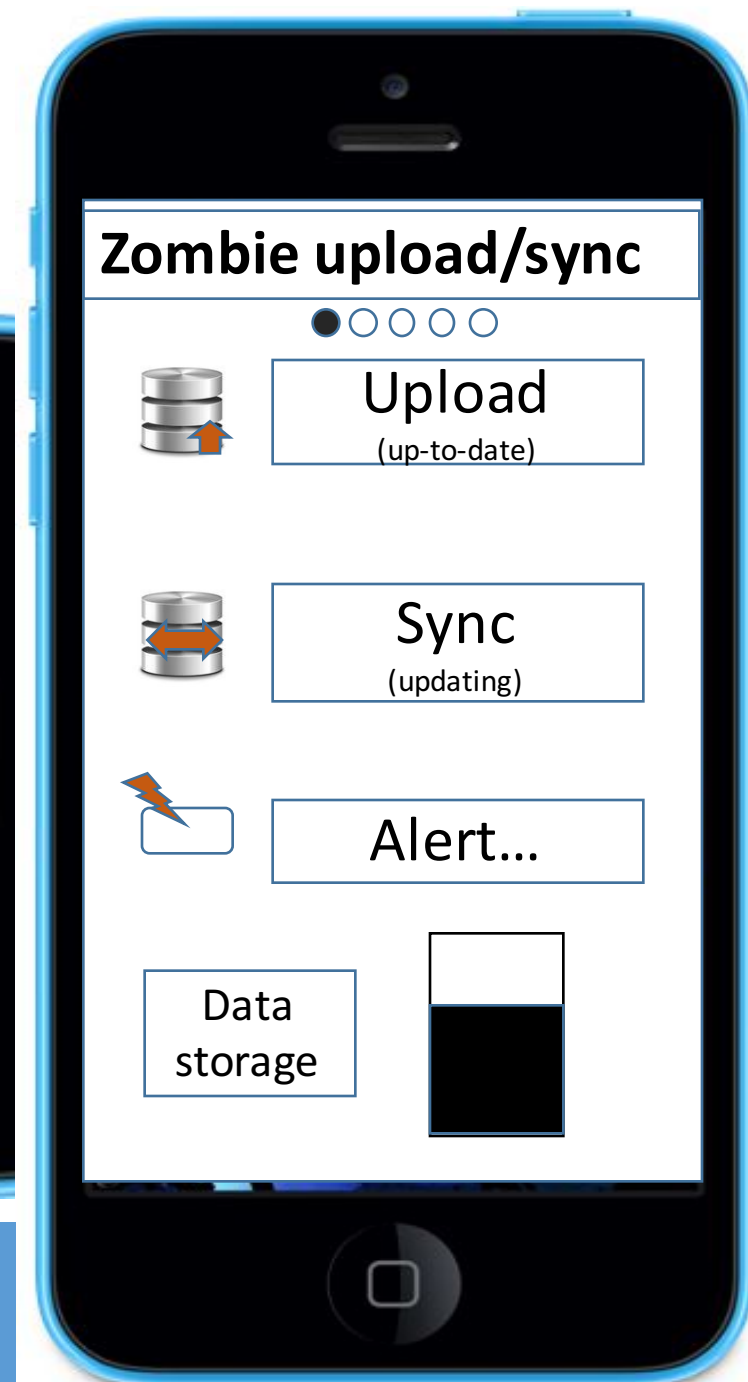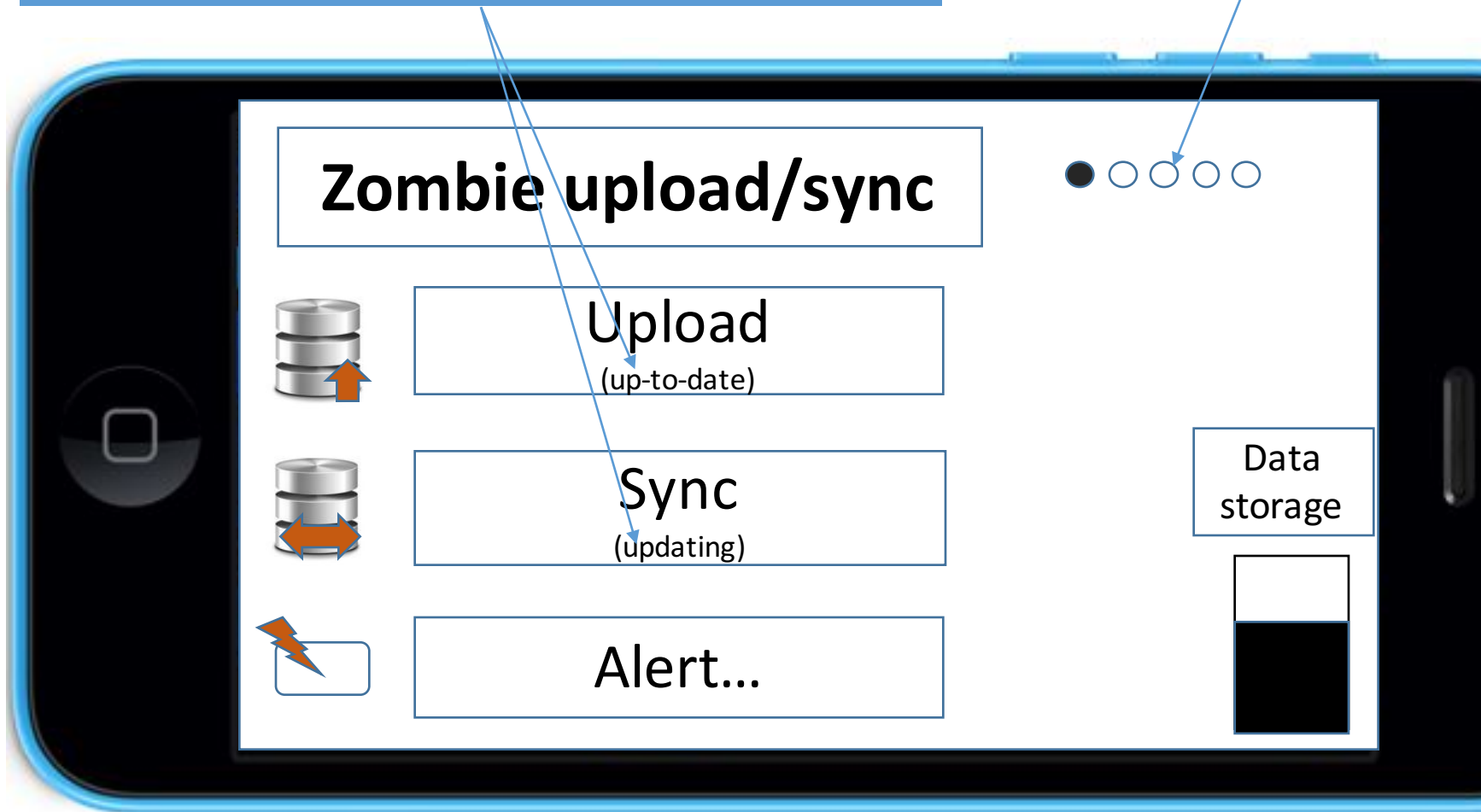
Zombie Data Application

- Click on Upload/Sync

Informs ZHs of emergency situation: sends ZH location to update alert map,

Zombie Data Console

PANIC

Collect

Authenticate

Upload/
Sync

Visualize/
Map

Green check signifies that iPhone is synced with CDC database

Zombie Data Console

PANIC

Collect

Upload/
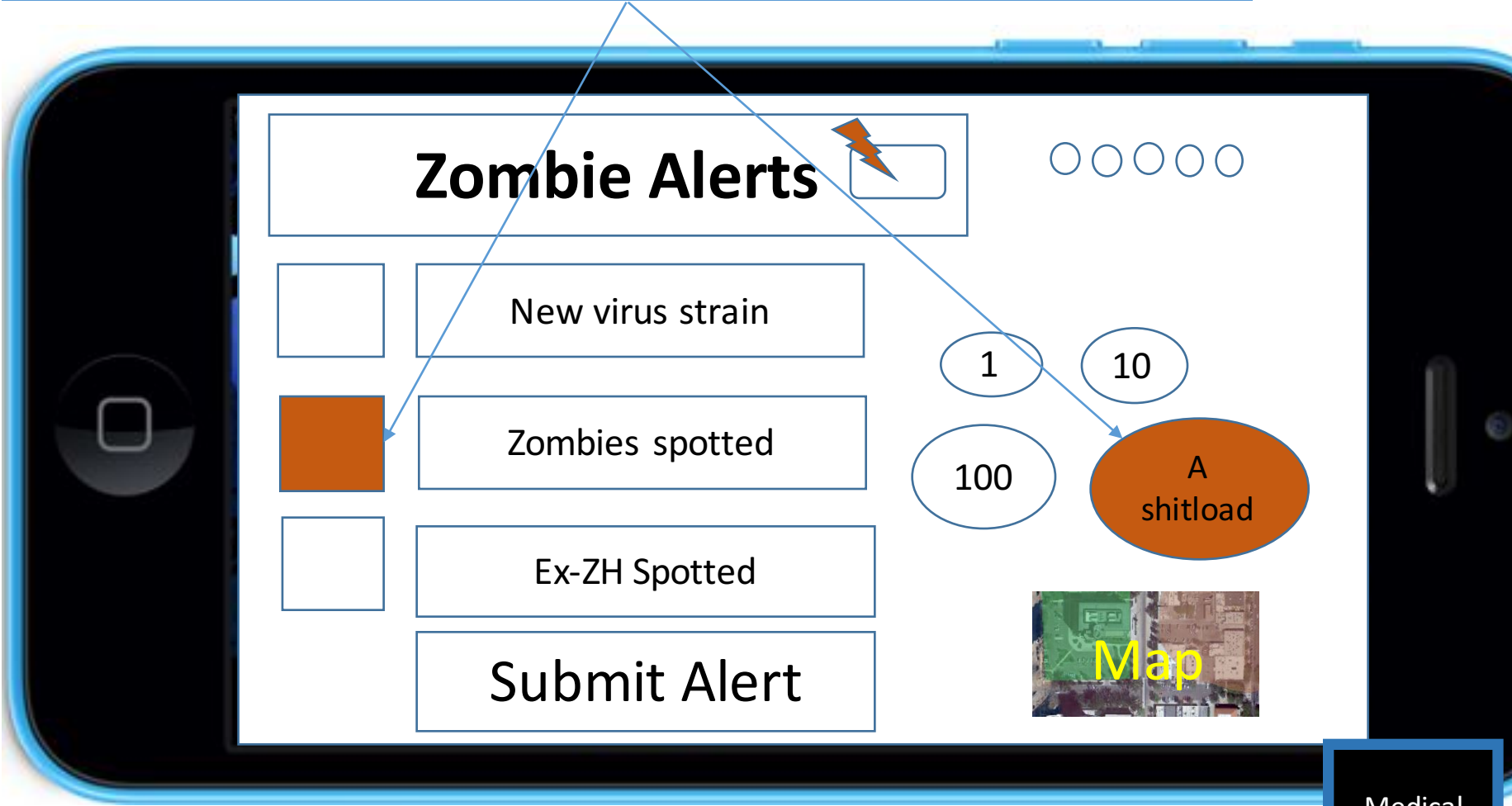Sync

Authenticate

Visualize/
Map

The message in parentheses has 3 options: updating, need to update, up-to-date. Vibration signals tell the user that connections are established (long short) and device synced (short long).

Dots, larger than the typical iPhone interface, show signal strength

Zombie upload/sync

● ○ ○ ○ ○

Upload
(up-to-date)

Sync
(updating)

Alert...

Data storage

Zombie upload/sync

● ○ ○ ○ ○

Upload
(up-to-date)
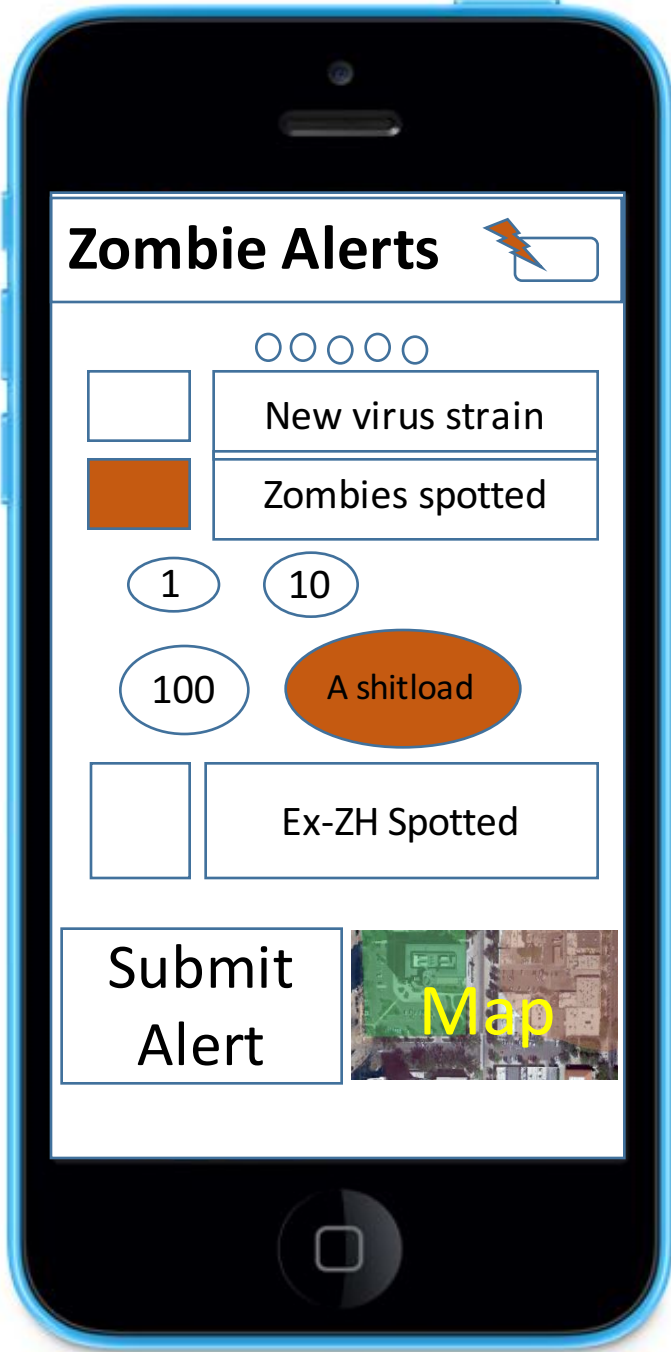
Sync
(updating)

Alert...

Data storage

Default values are selected in orange.
The hunter can select the color box or text box make a selection.

The alert dialog defaults to a boatload of zombie sightings, allowing the hunter to click Submit instantly in a potentially sensitive situation

Zombie Alerts

New virus strain

Zombies spotted

1   10
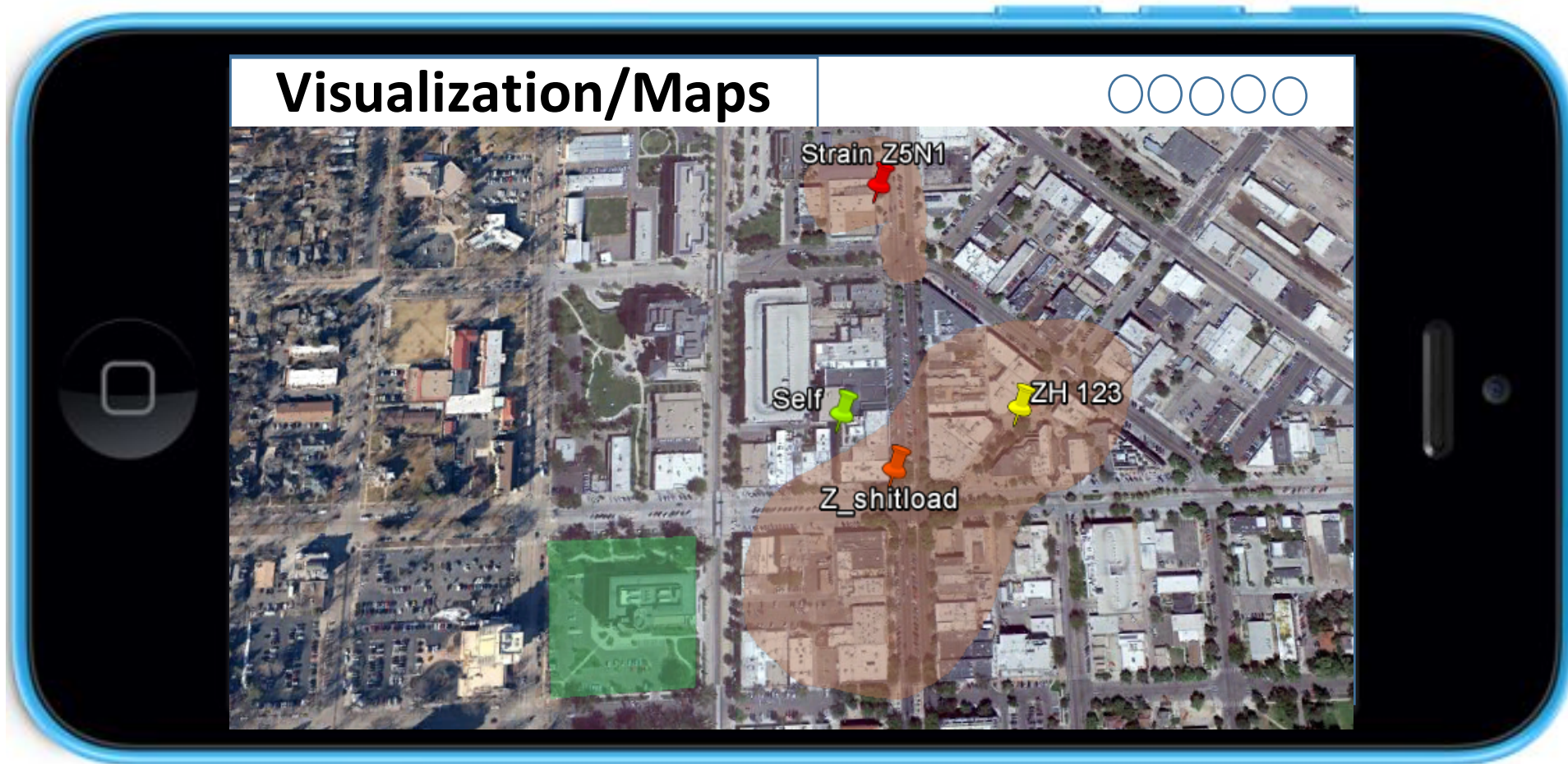
100   A shitload

Ex-ZH Spotted

Submit Alert

Map

Medical tricorder determines virus status in subject. Result uploaded to CDC.

Medical Tricorder peripheral

Type of geographic data that our plan would upload/sync with CDC database

- Self (green marker)
- Other ZH (yellow marker)
- New strain found (red marker)
- Zombie density (orange polygons)
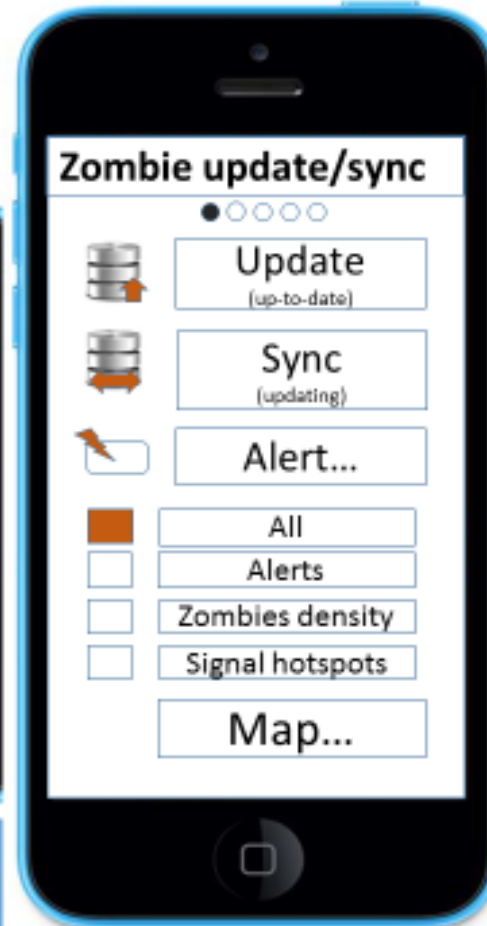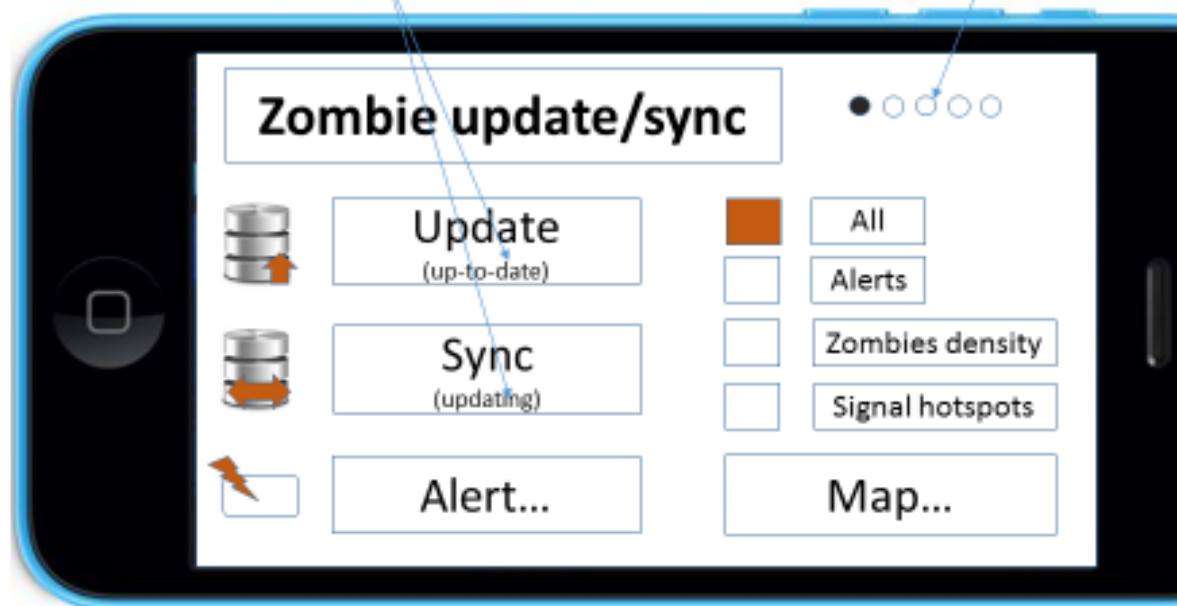- Signal hotspot (green polygon)

- By solving the problem of data recovery, consolidation, and communication, deliverance from Zombies is within reach. Otherwise, it is not.

- Coupled with good engineering, the Update/Sync UX/UI both solves these problems, and gives us hope for the future.

Questions?

The message in parentheses has 3 options: updating, need to update, up-to-date. Vibration signals tell the user that connections are established (long short) and device synced (short long).

Dots, larger than the typical iPhone interface, show signal strength

Zombie update/sync

Update
(up-to-date)

Sync
(updating)

Alert...

All

Alerts

Zombies density

Signal hotspots

Map...

Default values are selected in orange.
The hunter can select the color box or text box make a selection.

Zombie update/sync

Update
(up-to-date)

Sync
(updating)

Alert...

All

Alerts

Zombies density

Signal hotspots

Map...

Wireframe needs (edit)

- Update database with new data – Sam research, 2, 3
  - Connect and update automatically or chose to connect and update, larger dots for signal
  - Updating, unable to update -
- Error recovery from dodgey signal: - Steve
  - compress data into small packages with start and end bytes
  - Check for server response before and after sending data, ensure that end byte is received
  - If end byte is not received, keep data on phone for retry
- Push alerts – Kristi
  -
- Historic data view – black box, ex tech stuff
  - Blah blah
- Map: show hotspots, z density, other techs, alerts, human survivors, safe zones - sam