

# SCC-PG: **StreetBit**: A Bluetooth beacon-based System for Alerting **Distracted Pedestrians** in Urban Environments

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# Problem: People are getting more **distracted** while walking in the street



Pedestrians are using the smartphone while crossing the street

**Problem: Consequences of distracted walking can be fatal** 



6,704

On average fatalities  
from 2016 -2018



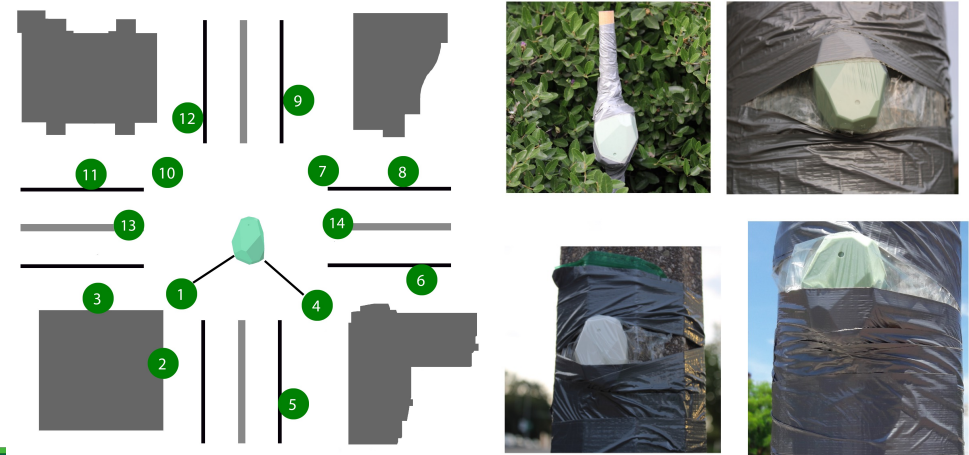
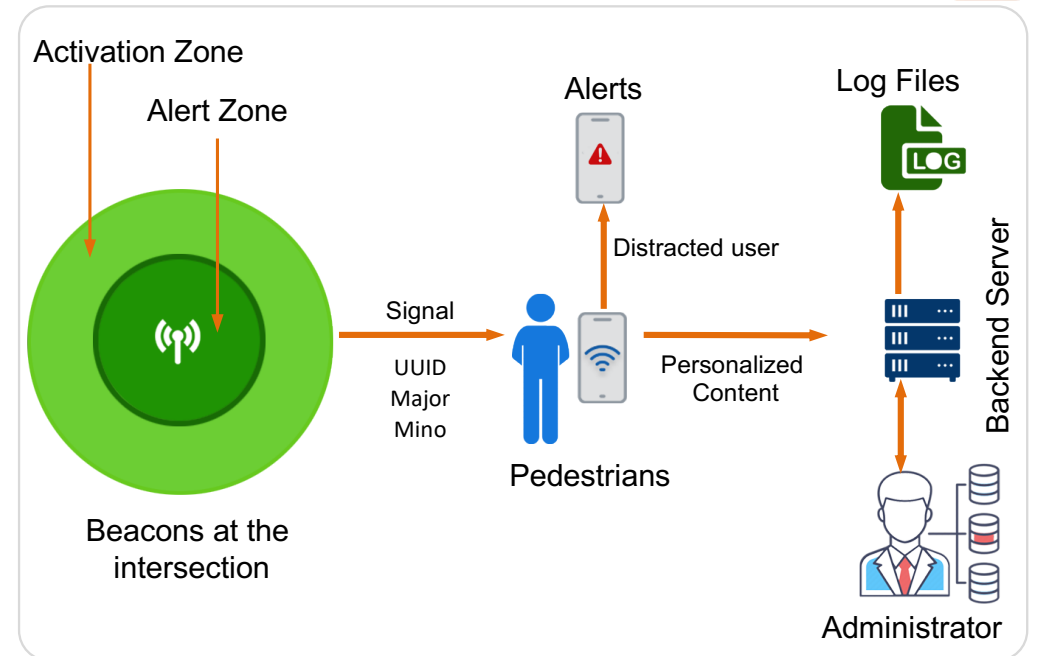
200,000

Annually injuries of non-fatal  
medically-attended pedestrian

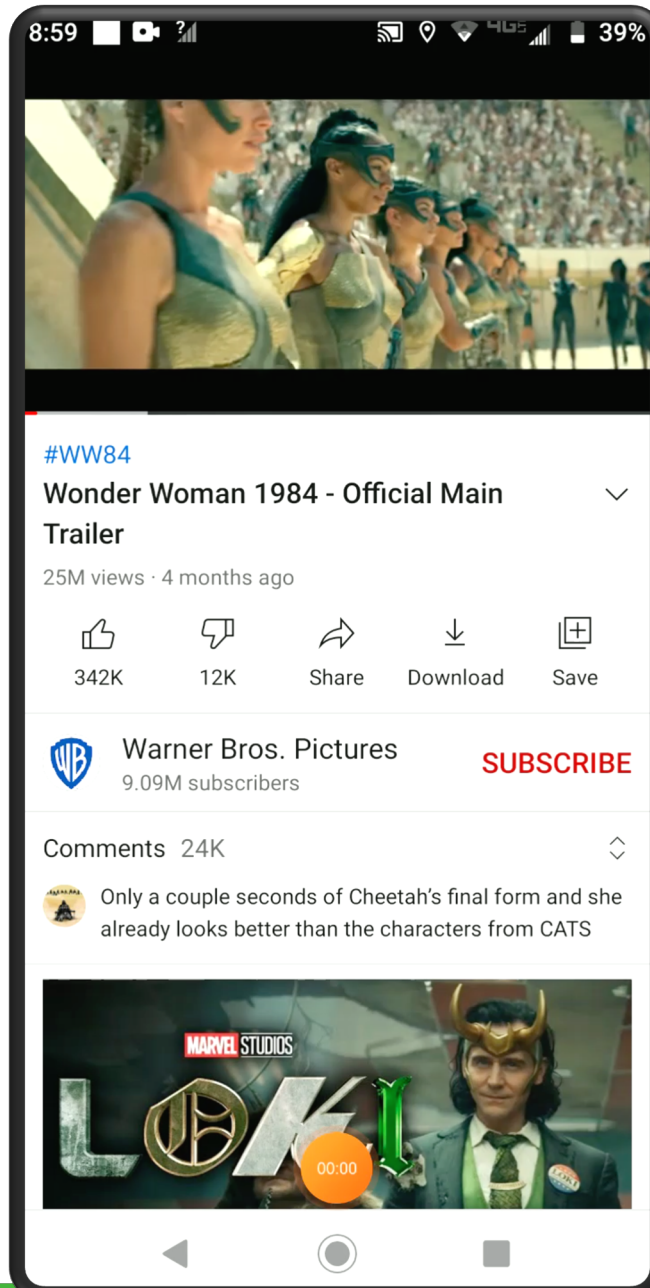
Governors Highway Safety Association (GHSA) (2019 preliminary data)

# StreetBit: An App that Alerts Distracted Pedestrians

- We mark **intersections** by placing multiple inexpensive **Bluetooth beacons** around street corners and road divider islands.
- The **StreetBit app** on the user's phone triangulates the precise location using signal from the beacons
- If StreetBit detects **distraction** when the user is about to enter an intersection, it **interrupts the activity** and **alerts the user**



# StreetBit Demo



# Planning Activities



## Partnered with the **City of Birmingham Department of Transportation**

- We conducted a 400-user study based on a prior NIH Grant – the results show feasibility of StreetBit in university campus settings
- Current Planning grant extends the concept to 3 different areas in the City of Birmingham;
- Currently performing observation studies to determine nature of distraction in non-campus settings
- Planning a **full deployment** around the city of **Birmingham, Alabama** in future.



# Thank You

For any further questions please contact:

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