Know Your Area
Influencing Mobility Through Transition-Based Services

Christian D. Vazquez, Luis R. Escobar, Joel Corporan, Christian O. Montes, Dr. Nayda Santiago, Dr. Fernando Vega, Tal Achituv, Harshit Agarwal, Dr. Pattie Maes
Department of Computer Engineering
Sponsor: MIT Media Lab

INTRODUCTION

Project KYA is developing a reactive mechanism that retrieves criminal incident reports from remote sources and assigns risk levels to geographical locations. Using Geo-fencing, tourists can be notified on their Android wearable devices when the condition of increasing risk is met.
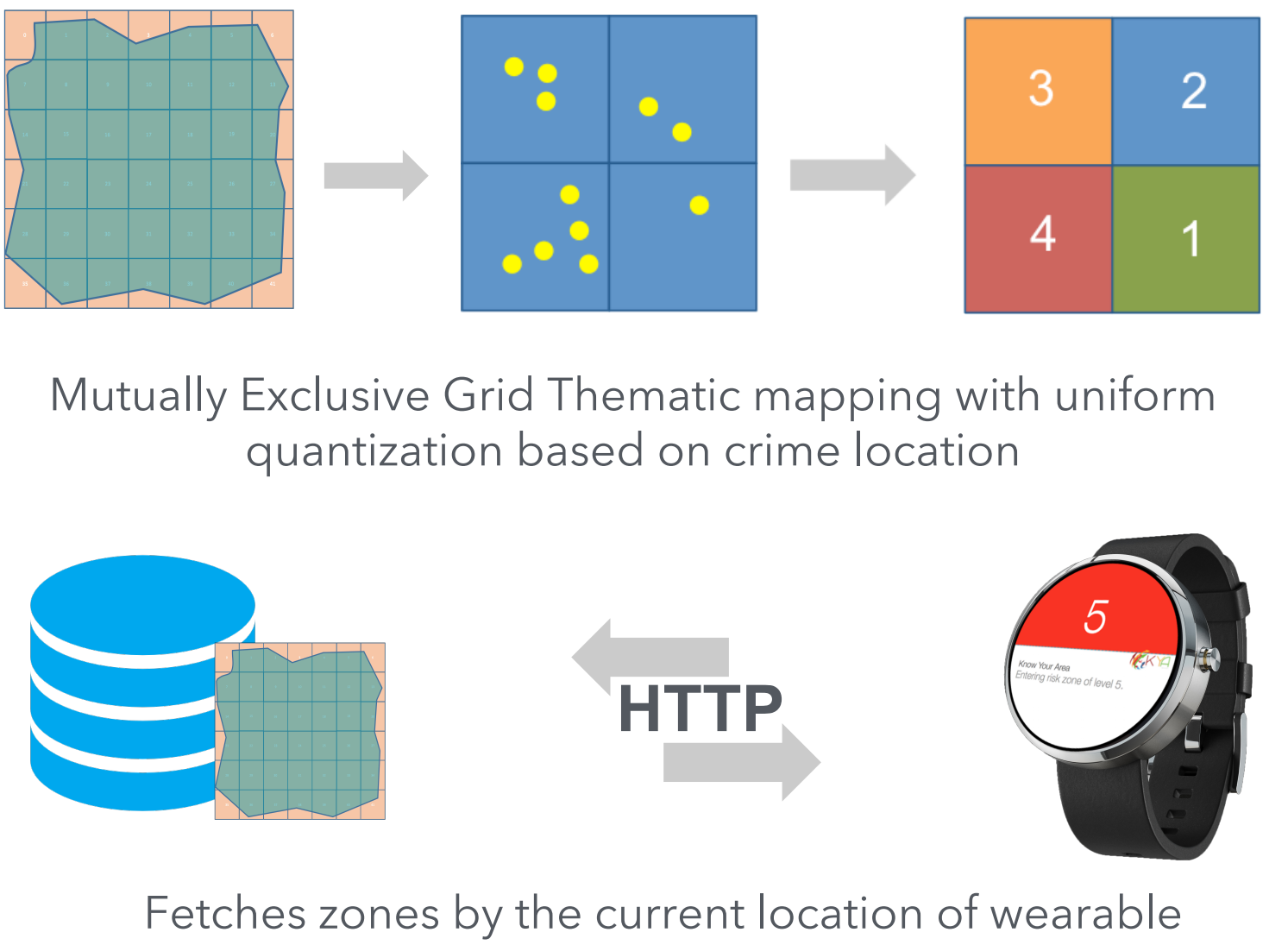
PROBLEM

"Wrong-Place/Wrong-Time" incidents like the murder of Stephanie Kuhen[1], where a family unconsciously wandered into "the wrong neighborhood", show how a wrong turn can have tragic consequences. Tourists represent a specific subset of the population that is particularly vulnerable to "crimes of place" given the lack of location-based insight that is usually acquired by being a local. Hot Spot theory suggests that knowledgeable tourists can avoid certain locations likely to be stalked by criminals[2], however, no mechanism exists to acquire the necessary knowledge to do so without proactively researching an area.

OBJECTIVES

- To define a meaningful metric to classify generated geozones
- To develop a web client that allows visualization of areas of interest on a map
- To develop an Android Wear client that notifies users when they transition to higher risk zones

METHODOLOGY

Mutually Exclusive Grid Thematic mapping with uniform quantization based on crime location

Fetches zones by the current location of wearable

RESULTS

Provides information about your zone

Collects Telemetry data for user studies

Provides directions to safety

REFERENCES

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[3] Sandro Rodriguez Garzon and Bersant Deva. (2014). Geofencing 2.0: taking location-based notifications to the next level. In Proceedings of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp '14). ACM, New York, NY, USA, 921-932. DOI=10.1145/2632048.2636093 http://doi.acm.org/10.1145/2632048.2636093

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