Nuestra Vista
MAS S64 Viral Political Action

Project outline
UPDATED—20 December 2017. Nuestra Vista is an mobile app enabling the creation of sharable provocative side-by-side comparisons of before and after the destruction caused by Hurricane Maria. These images of the urban environment and critical infrastructure not only allow individuals to effectively share and comment upon the current state, but also to reflect upon the efforts being made to restore facilities that are underway.

From the data generated, the application will create detailed mappings of the current status through a bottom up approach. These mappings and images can be utilized in arenas from news reportage and first response efforts through to directing longer term local and federal government interventions.

It is planned that the first uses of this application will be in Puerto Rico, and that through this use a more generalized application can be built to assist in areas struck by future disasters.

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Introduction

Nuestra Vista is a mobile application under development that enables individuals to produce provocative, sharable, side-by-side comparisons of their daily experiences in Puerto Rico before and after the storm. People such as Isabel, a teacher in Arecibo in her mid-thirties, are able to take photos of damage to the urban environment and pull up a pre-existing image from Google StreetView or their camera roll from prior to the disaster. Nuestra Vista combines these images to provide a compelling shareable comparison of the before and after states.

At the same time, the collected metadata can be used to create a mapping of the damage types and location across the country to assist journalists, aid organizations, and policy makers better understand and address the issues alongside determining where further relief and attention is needed.

Background

Nuestra Vista was born out of the Viral Politics class held between the MIT Media Lab and the MIT Sloan School of Management and convened by faculty members Andrew Lipmann and Simon Johnson. The project initially was focused around members of a community laying claim to their street on and online map, and being able to determine what their street stood for.

This idea developed into a way for individuals to map issues in their community, then onto community members marking out hotspots and mapping the effects of disasters directly.

However, after many discussions it was determined that although maps are a compelling way of presenting data for analysis - they have so far only been compelling in the creation of data within transportation with applications such as Waze[1].

Thus, it was determined that the mapping and analysis tool should be separated from the creation tool, and that the process of creating data for use by journalists, policy makers, and community leaders should be separated from the tool for its analysis.

Nuestra Vista

On the 20th of September 2017 Hurricane Maria hit Puerto Rico, and has been determined to be the strongest storm to make landfall on the U.S. territory in 85 years[2]. Three months on from landfall and the initial damage that was inflicted on the island there appears to be an increasing disconnect between official assessment and headline statistics and the anecdotal state of affairs[3] from those living in Puerto Rico.

The mobile application the group have been building, Nuestra Vista, attempts to enable those living in areas where headline statistics appear to show life is returning to normality, to present a provocative alternative narrative through sharable side-by-side imagery of before, after, and now (see Figure 1).

Challenges

One of the main practical challenges faced is that many people will be using the app when mobile data is either unavailable or prohibitively expensive. Although cellular service is reportedly now available to over 90 per cent of the population in Puerto Rico[4] mobile data use is often offloaded onto fixed networks[5] via wifi

[1] Waze LiveMap of Puerto Rico https://goo.gl/4qMYMv
[2] CNN, In pictures: Hurricane Maria pummels Puerto Rico https://goo.gl/zrgkwi
[3] FEMA, Statistics: Progress in Puerto Rico https://goo.gl/xQ4n1A
[4] *id.*
[5] Cisco Visual Networking Index https://goo.gl/2qn31o

connections, with mobile data through mobile networks utilized sparingly. Given also that the application is being built for a generalized use, that would include earlier on during disaster recovery, the ability to cache posts and data in the app for the existence of only occasional data connections is of great importance.

Secondly, as plans are made for the team to be in Puerto Rico there is a significant challenge to encourage use of the app and market it sufficiently. Part of this is the testing of the hypothesis that provocative shareable images that the app creates are a valuable addition to how people communicate within their social networks with regards to their environment, frustration with the disconnect of their day-to-day experience vis-a-vis official and impersonal status updates and, as time progresses, the excitement and optimism spread by effective rebuilding and disaster mitigation improvements being put in place.

Connecting with La Universidad de Puerto Rico, and speaking to students in the university campuses across Puerto Rico is marked out as a first step where open and honest feedback can be gained within a community where word of mouth and direct personal experience is especially strong.

Figure 1: Screen grabs on iOS of the different pages of Nuestra Vista. Left: Home screen with most recent and most viewed comparisons; Top Middle: Camera; Bottom Middle: Using Google StreetView to acquire an image from before Hurricane Maria; Right: The sharable, provocative, side-by-side comparison with sharing links

A final challenge is building an app that is performant on older android phones. In 2014, 60.5 per cent of smartphones in Puerto Rico were Android[6] and there has been no indication that there has been a significant shift in this statistic since.

Technical Specifications

Nuestra Vista is classified as a hybrid application - in that it is essentially a web application that can be ported to multiple mobile operating systems as if a native application. Utilizing the Ionic framework[7] the application should be relatively easily maintainable although there may be some issues with performance on older android phones.

Next Steps

After a sufficient volume of content is generated through the Nuestra Vista application, a tool to map out the metadata and collated images will be built for use by policy makers, journalists, and interested community members. This tool will be built utilizing currently available open source mapping software, Ushahidi[8], and is currently scheduled to release in the second quarter of 2018, with the application itself being released toward the end of January 2018.

For further enquiries please email anderton@mit.edu

[6] ENDI https://goo.gl/xht2J6
[7] See more details here: https://ionicframework.com/
[8] See more details here: https://www.ushahidi.com