

Locast Platform, a system to understand geolocalized information

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Since the beginning of the connected cities (MITCHELL, 2003), it is difficult to understand the complexity relations between places and their intrinsic informations with a proper methodological point of view. Citizens fused information and urban spaces with their electronic devices, using technology to perpetuate stories and data that could be lost without register. As many technologies converges – GPS, smartphones and wireless networks (RHEINGOLD, 2003) –, the possibilities to understand physical spaces interpolated with information were potentialized. Acting in this scenario, MIT's Mobile Experience Lab MIT (MIT MEL) developed Locast platform to study this topic on 2009.

Locast is mobile but Web software too, so users can capture video messages, photos or texts (called casts) and upload with the GPS data attached to be viewed in a map online. The different use of this platform shows new ways to capture and visualize data and geositions interpolations, creating a living localized memory. In this text we will explore four uses of this system though four layers of data: a urban legends mapping, a tracking of routes and points important to local culture, a street-style fashion maps and a audiovisual map of productions held in the city of Porto Alegre, Brazil.

All this subjects don't have a clear connection between them, but studied together on the same system shows us a different perceptive of places. More than this, they reveal how information that used to perish as private can be useful when become public again.

1 - Locast and the idea of a living city

From this perspective, places start to change as they are more connected to information (MITTCELL, 2003). Such a specific geolocation

system is new to media history, which was based on clusters of areas instead of particular places. This happened because mass media could, in its best efforts, produce a particular kind of newspaper for a specific region or a radio show for a community. The kind of ubiquity that mobile Internet has achieved is actually a new challenge for media producers to deal with because at the same time it is an opportunity to expand possibilities, it also is very difficult to produce content related to every block or street in the city.

One main effect of the growing popularity of mobile phones equipped with Internet access is not just an ever online individual receiving information at all times, but also a personal broadcasting tool that has the potential to distribute and self-generate news among the general public. Convergence devices also feature powerful cameras with video recording and GPS systems for geolocation. This results in a proliferation of user generated content (UGC) that is a treat and opportunity for traditional media. The 'citizen journalist' (GILLMOR, 2004) has captured many great stories such as the terrorist attacks in London and Madrid, and they have also helped to spread information related to the 2009 election in Iran, where professional cameras are restricted by the government. These mobile cameras have broadcast facts that reporters could not. Something that, in principle, could be a reversion of roles becomes, from another perspective, an opportunity for newsrooms.

It was under this scenario involving mobile communications and its related uses that the Mobile Experience Lab at the Massachusetts Institute of Technology (MIT MEL), coordinated by Prof. Federico Casalegno, decided to use the Locast platform to study Civic Media. Locast is partly mobile and in part a Web software program with which users can capture a video message (cast) and then upload it into the system with the GPS data attached. On an Internet website, users can view a map with clickable casts. This project was originally developed in conjunction with the Italian TV network RAI for use in tourism application programs in Venice.

In a partnership with the Media Communications Department of the Pontifical Catholic University of Rio Grande do Sul, located in Porto Alegre

(PUCRS), Brazil, a new test of the platform was conducted in September 2009. At that time, the purpose of the project was to understand how a geolocated mobile media system could help communications in communities and the urban area. A media company, RBS, and a telecom company, TIM, also supported the project. The former involved its reporters in a project and the latter helped to provide Android cell phones and the network. During the initial 10 days of the project, 25 PUCRS students and 11 reporters were involved. Their initial objective was to collect different subjects from very specific topics like traffic reports or road conditions to more flexible time stories like interviews about neighborhood identities.

The research aimed to explore citizen media applied in the context of physical local as a tool to disseminate and encourage the social dynamics in different districts. Another purpose was to understand how social mobile networks impact in the city and the representation of urban space. Also, in this sense, to see how this tool helps people to keep informed, socially engaged and active participation in creation processes of the media, especially in connection with their communities. After the experiment, which lasted ten days, a series of individual interviews and group discussion with participants was made.

After the test, many participants were individually interviewed and also participated in-group discussions. The results were wide-ranging, from detecting that this platform could generate public topics that otherwise would not have much space in the traditional media to understanding that unedited mobile phone video footage could be perceived as more reliable in terms of credibility.

Locast System

The platform consists of a website that contains the news that were updated by the phone or on the page itself. In the latter case, the update of the position is done manually. Linked with every news is a point on the map

where these facts can be viewed in a graphical way. The individual can situate the events around them, which represents an alternative view of events, since usually the sites and blogs show the news in order to highlight the relevance of the fact or chronologically. The site also had the task of registering and managing users of the system.

Besides the site, the center of the platform is based on the mobile application, which in this case, was developed in the Android operating system. The software has enabled the project participants to capture videos and upload them to the site with a text description and geographic location information captured by the GPS unit in the form of metadata. This story could be commented on and also be shared on the Facebook network. A Twitter profile has also been separately created and maintained by fellows of the project.

Other key aspect of Locast is its free nature, something that became useful later when it completely turned into an open-source system. Instead of using Google Maps and its policies, works with Open Street Maps, a free tool that allows users to extract the maps and use it out of the original context. Working out of Facebook, as example, trades being more user friendly to achieve total control.

This way, steps out of external APIs and unknown data gathering systems and offer full control. This becomes very useful not only to submit and extract data as a coder, but to send it and later analyze, in both quantitative or qualitative methods.

2 - Contents contextualized by places

On the first day of the experiment, was conducted a workshop to demonstrate the platform and create teams of two to work together. These teams received no instruction about what kind of information capture. This issue was planned and deliberate in order to understand what kind of

subjects the project's members understand that is relevant to be shared on the platform.

After ten days of work, was observed several types of guidelines registered by the participants, from the most everyday like potholes in the streets and stories of traffic jams up to coverage of events through others who sought more timeless tales of everyday life. In the case of the everyday information, it was interesting to note that even small incidents of the routine of a city such as Porto Alegre won a new environment with the location factor, for event such as closed roads or accidents are relevant to people who are geographically close. On the other hand, who is distant perhaps does not need to be aware of this fact. In the current context of a traditional website news article this type of classification is not feasible.

During this period, there was also one of the most severe storms the city of Porto Alegre, including taking classes at PUC University suspended due to blockade of urban roads. This was an unplanned agenda and just being targeted by several different kinds of visions for project members who were at different points of town. The mapping of this information resulted in a broad view of reports of various problems caused by this natural incident.

Another type of evidence was captured by a team that was interested in understanding the views of residents on a particular neighborhood. With the question: "This neighborhood is the heart of Porto Alegre?", The two members of the project accounts recorded on different perceptions of workplaces and housing of those citizens. This idea resulted in unedited short documentaries about different perceptions that many times had a clear line of thought among people of a particular region.

The company's professional journalists in RBS had Locast as an extension of current publishing platforms. The system was eventually used in the ten days of the experiment in two different ways. At first it was done to complement the traditional material, in some cases as a "making of" of the cover. In a second moment was used to capture some facts that would

not have spaces in traditional channels. One goal of this integration with the company was testing how in one environment could cope content made by professionals and reports generated from the streets. This dual existence in a future open use of the system, and with a higher density of contributions, may be potentially rich for a distinctive design of the facts in the city.

3 - Same scenario, new experiences

In 2012, Locast was deployed again in Porto Alegre. Due to a grant from CnPQ (Conselho Nacional de Desenvolvimento Científico e Tecnológico, National Counsel of Technological and Scientific Development in Portuguese) and MIT, the tool become available for post-graduation students. After a series of presentations and debates, a joint force of PUCRS and MIT professors elected four “layers” of information.

All of them are culturally connected to cultural aspects of the city. Porto Alegre was founded by Portuguese immigrants from Azores Island in 1772. As the southern part of Brazil developed since XVIII century, the city became a hub, with immigrants from Italy and Germany, along with a huge population of African people that worked as slaves in countryside. In XX century some political leaders became president, and even during the “lead years” (when military joint forces rules South America) refugee from Argentina, Uruguay and Chile came to the city. Actually, is known too as the capitol city of Mercosur, South America´s common market, due to its geographic position.

As a consequence of a living history that disappears with progress, the first layer is Urban Legends, a map to place history. According to Marcelo Fontoura, MsC alumnus and member of the group that is publishing content, its purpose is “create a geolocalised memory about the legends of the city to better understand local culture”.

They started picking facts, such as the case of the butcher who sold human meat, and placed information about it. Due to the nature of this content, some publications were another versions of the same story.

But urban legends have many versions and some times the amount of points of information doesn't mean more stories, but more versions of the same tale. As a consequence, invite historians to help became part of the process of publishing, when gathering info to create reports and use the map correctly.

The second layer is CulTracks, collection of cultural points connected by a subject. As an example, there's a route about the life of a singer, Elis Regina, who made her first steps into a musical career in Porto Alegre. This idea has as an objective "project and resignificate urban tracks in Porto Alegre with dynamics used in games, changing and amplifying sensorial experiences of tourists and citizens about the city and local culture", according to Gustavo Buss, PhD alumnus.

Also, the layer is useful for tourists who arrive in the city and want to run out of the traditional tourist spots. Instead of publishing one point in the map, a collection is uploaded, with a starting and an ending point. This creates a discovery process, when city, facts and geographic positions guide this journey.

The third layer is Street Style. The city has various urban tribes and places with different dress codes. Some squares has one kind of activity during the day, with normal workers during the day, and other at night, with punks walking in the streets. In other areas, both live together, as in university.

According to Maria Teresa Weidlich, a MsC alumnus who studies street style and communication, "street style fashion maps the identity of Porto Alegre, from a collection of photos geolocalized and inspired by the prevailing trends of the fashion world, as well as habits and eccentricities. Targeting a cross between a local context x global fashion group foresees a dress code from the city locals according to each urban locality."

The process will use photos to map fashion, paying attention to accessories too. To avoid trouble with classification and wrong info placed

along the casts, the group will work with data submitted without external aid.

The last layer is Audiovisual Locations. The work of the group tries to map places used as scenario in movies, soap operas, TV spots, and videos that are relatively famous. The city has some famous studios and citizens are fond of movies like *The Man who Copied*, a comedy released in 2003 that has a different meaning for the ones who knows the places where it was filmed.

The objective of the layer is “create a map on audiovisual productions held in the city in order to awaken the affective memory of people in relation to urban spaces.” According to Erika Okinawa, a PhD alumna from the group who manages the layer, it is a work made with clips and videos instead of images and texts. It also needs to pay attention to copyright issues, using snippets to indicate the position in the city and the movie.

4 - Transformed Languages

The Locast platform was audiovisual based language with videos generated by participants. The texts were a basically brief descriptions of events. Specifically on this point we made several observations in the individual interviews and groups. The videos were all captured and published without cuts in the plan sequence, and without editing. Participants noticed this feature as a positive aspect in order to report facts. The impression was realism, an image closer to the scene than the traditional TV does. The usually edited story was compared in interviews as "suppression of reality." This is perhaps a question showing the wear of the television aesthetic that has no significant change in the transition to digital media (PASE, 2008).

The theme of the low quality of the image generated by mobile phones was not considered a problem in the same line of thought. One of the points discussed by the group during the interviews was the "invisibility" of a cell phone camera, which allowed the subject to be much less intimidated compared with professional TV equipment.

Some videos have transcended the issue of reporting facts and concentrated on the aesthetics showing images that were not necessarily journalistic helpful, but had artistic motivations. Were unusual scenes in the city, street art demonstrations and some experience of video art.

The characteristic of these hyper mobile media personnel, both in consumption and production of content, has the potential for the emergence of other forms of language as perceived in the production of the project. The moving image that he has a strong connection to the TV gets as a mutation point (Levinson, 2004, p. 151): "... television as individual content of VCRs, reverses the process, and moves around the screen films for the public individual kinescope, that movies can be viewed by one person at a time. " These contents are a conversation in video form and it represents a new perspective of expression mediated by ubiquitous networks.

5 - Geolocated information

The main point of the experiment was to link the facts, images and conversations to the places where they occurred. The entire structure of geographical reconnaissance mobile devices that this moment provides allows us to connect to their places of historic events, thus making it a conducive environment for a daily memory (Casalegno, 2006). The same author supports his thesis in this expansion of citizenship with storage networks and urban conversation.

The map of events on the site allows a new view of events so that the individual himself can make their own connections between facts that are relevant to their daily life around him. In a future release of the Locast platform it should be deployed filter by issues, places and people.

This connected city (MITCHELL, 2003) is composed of an informational layer with concomitant physical pathways. This link has the potential to strengthen the dialogue of citizenship as happened in the storm disaster story in which the display of images of different regions allowed an

understanding of the whole situation. In scenes like these facts relating to the map can create a conversation that would be important hole on topics such as violence, traffic and large events. The map represents the mirror of the polis, but without the context of the data layer is only one node without connection.

The possibility of perception of what is happening around the individual is also something of extreme complexity in this context of joint virtual environment with the physical one. Even facts that could be considered less relevance to public and geographically close to the subject can have a high important to this individual. The proximity of a closed street by an incident is more relevant in that space of time than an earthquake in another country. The shared collective information point of view for people in a given region can mean a conversation enhancement of citizenship in collective memory.

6 - Conclusions

This range of possibilities showed that the context of a connected camera, the base of smartphones, can be an interface between the physical places, or atoms, and the flow of information based on bits, which form the basis of the Internet. If "... places cannot be separated from its context of experience" (SANTAELLA, 2007, p. 161) now the location has more potential to form connections and exchange information with contextual social networking communities.

By aggregating the information to these spaces, a system such as Locast changes the meaning for the individual as notes (CASTELLS, FERNÁNDEZ-Ardevol, QIU, & SEY, 2007, p. 171) "An area which information flows is not an empty space, it has relationships built in the net and wrapped it ...". Along with this, rises a new perception of the information around (Meyrowitz, 2003, p. 97) "As a result, we are experiencing a radical change in our senses of place, identity, time, values, ethics, etiquette and culture"

Although this was an experiment, and it is not a large-scale research, it was found indications of potentials, which is the most valuable results. In ten days and a limited number of participants is not possible to measure the social impact that a system like Locast can cause. But the main goal was to begin a process of research on the topic that you will see if these potentials are confirmed. This bond of physical spaces with cyberspace is in its infancy with manifestations such as the Foursquare network and the beginning of the use of geographic tags on Twitter.

Applying the concepts in an experiment like Locast gives insight into the validation of theories, and a second time, write them again with the contribution from the empirical. All the data collected from interviews and field observations have demonstrated a natural ability for the connection of physical points to its factual and historical contexts, made possible by a convergence of technologies that enables a unique potential for citizenship.

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