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“The internet has already started leaking into the real world”

Ben Russel (1999)

Cyberspace Downloaded

Paradoxically, mobility media are localization media. It is interesting to note that locative media, which emphasize places, are furnished by mobility technologies that combine devices (laptops, smart phones, PDA and GPS) and RFID sensors, ensuring connectivity using wireless digital networks (Wi-Fi, Wi-Max, 3G and Bluetooth). Moving is “dis-locating”—but not in the sense of erasing the existing place, rather it opens a possibility for creating a new sense of place through social practices such as urban annotations, location-based games, political mobilization, mapping and geo-tags. If mobility was a problem in the “upload era” (having to leave the workplace or home, and to deal with incompatible equipment and networks in conjunction with a lack of localization services), then today, in the “download era” of locative media, mobility has

become an opportunity for appropriating public space (Dourish et al., 2007). Apart from its physical and symbolic characteristics, place gains an informational layer as an electronic database, and it should be thought of in its social, cultural and imaginary, but also informational, dimension.

The discussion on spatiality and media is not new, and the social production of space by mass (telegraph, newspapers, radio and TV) and interpersonal media (mail and telephone) are well known. Mass media shapes a perception of space and our subjectivity, showing our place in the world (in relation to others around the world), our identity (in relation to other identities), in addition to organizing the spatial arrangement of societies, cities and institutions. Seen in this way, place should be understood as flow and event (Thrift, 1999; Massey, 1997; Shields, 1991), which cross territorialities that are always open to social and communicational arrangements.

New media produces new spatiality. At its core, cyberculture brings about questions of space; many assert that it is a cyber-**space** culture. Since the Internet's appearance, discussion has circulated around ideas of virtual space, virtual communities, virtualizing institutions, web art, e-learning, e-commerce, e-government, etc. The emphasis here is on the "upload", understood as an electronic transposition of bodies, institutions and information to a "place" outside of the "real world": cyberspace. Now, with the Internet "dripping onto things", downloading shows an emphasis on "localization", on information connected to the "real world", to concrete spatial relationships, to things and objects and public and private places. A "cyberspace download" creates synergies

and constitutes new territorialities “in the real world”. The global expansion of location-based services (LBS) and location-based technologies (LBT) creates possibilities for reconfiguring experiences in public space. Place is no longer a problem of accessing and exchanging information in cyberspace “up there”, but an opportunity to see things “down here”.

Locative Media, Mobility and Senses of Localization.

We can define locative media as devices, sensors and wireless digital networks, allied to communication processes, which allow for physical and informational mobility (Kellerman, 2006)—they are “context-aware”. Moreover, “locative media” is an expression created by artists to differentiate their work from commercial projects involving location-based technologies and services (Karimi and Hammad, 2004). Artists created the term—first proposed by Karlis Kalnins in 2003 (see also Russel, 1999; Benford, 2003, 2005; Chang and Goodman, 2006; Pope, 2005)—to show the ambiguities in emerging concepts such as mobility, location, localization, public space, communicability, surveillance and privacy. With LBS and LBT, a new informational territorialization of places occurs, broadening its functions and heterotopias (Foucault, 1984) through new relationships between the “real world”, databases and electronic devices. Companies and governments use these technologies to locate users, propose location-services, track movements, etc. Artists use them for the same purposes, but they overturn the logic of control, producing aesthetic and political tensions.

I propose a typology for locative media projects comprising five categories: 1) Electronic urban annotations; 2) Mapping and geo-localization; 3) Mobile social networking; 4) Pervasive computational games; and 5) Smart mobs. In all these categories we can find location-based technologies and services creating new meanings of space, through the use of the new territories' bond to places. The informational territory can help us to create new perspectives on the dynamic between place, mobility, and community.

Electronic Urban Annotations are situated in urban space, and use mobile devices and wireless networks to generate invisible writing (Yellow Arrow, Sonic City, MurMur, Node Explore). Electronic annotations offer new ways to “write” the urban space with mobile devices. Physical annotations, like posters, stickers or graffiti are current practices in big cities (as forms of what I call “analogical locative media”). The introduction of “electronic” locative media allows for new ways of producing invisible annotations, using the power of mobile technologies and networks to index data to a location. Projects in “Mobile Augmented Reality Applications” (MARA) also work through a mode of annotation that explicitly interpolates informational and physical layers in the real world, thus “augmenting it”. Here, representations of the real world have been embedded and contextualized with electronic information, enabling interactions both in real and virtual spaces. These electronic annotation projects evidence new forms of producing content about places, representing the informational layer of the new informational territory. Here we can see how temporary uses of place, in the production and consumption of locative data in informational territories, creates

new senses of places, new forms of appropriation and new processes of de/re-territorialization and mobility (physical and virtual) in contemporary cyberculture.

Mapping and Geo-Localization are locative functions applied to mapping and tracking movements in urban space, attaching information (photos, text, video and sound) to maps. In the photo-sharing platform Flickr, for example, users add geo-tags to electronic maps. This system enables the sharing of tags through the location of places worldwide. These experiences promote new ways of producing maps, creating new forms of discourse about urban space. Mapping with digital devices offers new tools for reinforcing communities, involving the appropriation of places and new territorialities. Mapping, tags and localization can be seen as a new way of creating meaningful experiences in the actual cities.

Mobile Social Networking uses locative media to find people and to organize meetings and/or the exchange of information (Imity, Dodgeball, Citysense). Communities too are building bottom-up maps that represent themselves, using applications like Neighbornode and Peuplade. Mobile social networking is a form of locative media that helps people locate the position of a friend in a urban space, facilitating face-to-face meetings; it is quite the opposite of virtual community, since people find and meet each other in real life. Another example of such a project is Google Latitude, which can be used with almost any cell phone, enabling the user to control the level of his/her own visibility. Hence, the system of mobile social networking uses the

new informational territorialization and mobile devices and networking to arrange meetings and reinforce sociability.

Pervasive Computational Games—also known as Location-Based Mobile Games—are online games that use a mobile device with locative capabilities in urban space (Geocaching, Uncle Roy All Around You, Can You See Me Now, Pac-Manhattan, mScape). For example, the popular Geocaching is an outdoor treasure-hunting game in which the participants use a GPS to play hide-and-seek with containers anywhere in the world. (There are 480,000 geo-caches registered in over 100 countries.) Uncle Roy All Around You, from British group Blast Theory, uses palms, cell phones and Internet networks that enable users to play on the streets in an attempt to find “Uncle Roy” within 60 minutes. Street players can see online players exploring this same area of the city on the map on their handheld computer, similar to the game Pac-Manhattan, which is the street version of the original Pac-man game that coordinates actions through mobile phones and Wi-Fi networks. These games offer new experiences that merge game and augmented reality, as in the example of mScape from HP. Here again, by way of the ludic dimension, the city becomes a playground, reminiscent of eras past. The play dimension of locative media helps to create new forms of appropriation of the urban space, new kinds of communities and, as in the projects discussed below, new senses of place and territorialization.

Smart Mobs (Rheingold, 2003) are political and/or aesthetic (Flash Mobs) mobilizations coordinated by mobile devices that bring people together to perform an action in public space and then to disperse rapidly. These actions orchestrate people in public spaces, and use location capabilities to spread information. Artistic purposes of these mobilizations, such as a performance, can be differentiated from political-activist imperatives. Howard Rheingold (2006) calls this latter group of practices “Smart Mobs”.

The former, hedonistic type of gathering are the “Flash Mobs”—apolitical, lightning-demonstrations where people choose, via networks (blogs, mobile phones), a public place for swarming and dispersing, for the purpose of causing perplexity and astonishment in passersby. Flash Mobs began in New York and have spread throughout the world. Cities like Amsterdam, Berlin, Boston, Budapest, Chicago, London, Melbourne, Oslo, Rome, San Francisco and Zurich have already experienced this new practice. In Brazil, Flash Mobs have been organized in São Paulo, Rio de Janeiro, and Salvador, among other cities. By contrast, political Smart Mobs try to mobilize crowds for the purpose of political protest. Significant examples here include the political demonstrations in the Philippines against President Estrada, and in Madrid after the terrorist attack on the trains in 2004, which brought people together through SMS. In 2005, Smart Mobs took place during the civil riots in France. The Brazilian press has covered a variety of Smart Mobs, such as: the PCC actions in São Paulo (the criminal organization has plotted attacks all over the city); the student protests against Microsoft in Chile in 2006 and 2007; the protests against the expansion of maglev tracks in

Shanghai in 2007; the attempts to build a network as a help line for activism in the Philippines; the demonstrations against President Pervez Musharraf in Pakistan; and the promotion of women's rights in Uganda. Smart (and Flash) Mobs create forms of mobilization through mobile technologies, attesting to the way that temporary uses of spaces, physical and informational mobilities and swarming actions can determine new uses of places and territories. In addition, they can reinforce both old and new communities and their attendant aesthetic and political uses of the city.

New Informational Territories.

The idea of the cyberspace download coincides with similar concepts that address the new dimensions of place made possible with LBS and LBT: some authors speak of a hybrid space, personal digital territory (Beslay & Hakala, 2005), virtual wall and digital footprints (Kapadia, et al., 2007), interstitial space (Santaella, 2008), hybrid reality or cellspace (Manovich, 2005). All of these images point to a fusion between electronic and physical space. However, to understand the new ontology of places in the era of the Internet of things, I propose the concept of informational territory—understood as the synergistic interactions between the informational layer and the other dimensions of a place. The hypothesis is that information society creates new zones of informational control, new territorializations (Deleuze & Guattari, 1980) and new functions of places in the “real world”.

Territoriality is a cultural artefact that shapes social relations and our relationship with the material and symbolic world (Lyman, 1967; Gottmann, 1973; Sack, 1986; Delaney, 2005). We are always immersed in territorial layers (subjectivity, physicality, culture, politics, economics, etc.), and these layers constitute places. Every place is composed of lines of escape, movements, flows and tensions between territories (Thrift, 1999; Cresswell, 2004). To these territorializations (of control), a contemporary informational layer is added. For example, the well-known beach in Copacabana, Rio de Janeiro now has a Wi-Fi zone. Locals and tourists can access the network while laying on the sand. Another informational layer, a digital one, is now superimposed onto this place. Yet the “paradise” of a wireless connection gets circumscribed by the intrinsic characteristics of the place, and users are forced to deal with them (e.g. rules, codes and insecurity). By accessing the Internet through that network, users occupy an area of informational control within other territorialities. The informational territory, bonded to a physical territory, adds a new function to this place. Space is constituted by such places that exist inside territories in an endless process of mutual determination, which is horizontal and vertical (inside each category and among them). Today we have to take into account a new form of territory in contemporary societies: the digital, informational one. Indeed, every territory is a place of social control and borders, of informational exercises in surveillance and violence.

For informational territories (Lemos, 2008, 2008a), the exercise of control (and the act of being controlled) relies upon **digital information flow** in a physical area. It is a new territory within existing places, created by the intersection between urban space

and cyberspace. We must understand that in general, places result from negotiations among territories; today, new senses of places emerge from these new informational layers of territories. By informational, I mean digital, electronic informational flow. And although all territory is made by information, informational territory serves to isolate digital information layers from other forms of “information”. Digital information layers are the key components that create informational territories within places. I would like to emphasize how new forms of access and control—furnished by mobile devices and wireless networks—proliferate in the physical places of informational territories. As such, these developments do not mark the end of places, the no sense of places, or a no place (Virilio, 1984; Meyrowitz, 1985; Augé, 1995), but they offer new senses of places, territories, mobility and community.

The informational territory is not cyberspace, but the territory in a place formed by the relationship between its physical dimensions and electronic flows. For example, a Wi-Fi network in a public park creates an informational territory—people that have informational power can log onto the Internet to receive, produce and **distribute** information—that must be taken into account in thinking about that place. This layer is in relationship with others (laws, regulations, subjectivities, etc.) that constitute a “new sense” of the place “park”. It is not the end of the park, but a new signification. By accessing the Internet through these networks and devices, the user is in an area of informational control within other territorialities. This means that he/she can control what to receive and what to produce, but must also negotiate other forms of power and control (other territories). The informational territory is bound to a physical

territory (political, legal, cultural, imaginary, etc.), but it transforms, by the means of electronic data (through rules, codes of access and speed), the function of this place. It creates a new heterotopy (Foucault, 1984), as we'll see later. The informational territory changes the place, since all places are dependent on the synergy between imaginary, subjective, corporeal, technological and legal territories.

Interesting artistic experiences can help us to “see” these informational territories.

Think about the work of Hasan Elahi, an academic and artist who developed a system of self-surveillance. Elahi tracks his every move with GPS data and posts this on his [website](#). He began the experience after being questioned by the FBI in 2002 (accused of storing explosives in Florida). After the investigation, it was proved that he was innocent. Now, he controls all information about himself. Here we can see, by self-surveillance, an attempt to control his informational personal territory. Another example comes from the work of artist Susan Härtig, “[Disconnected](#)”, where she tries to show how wireless networks (the electromagnetic spectrum) are creating and expanding informational territories. We are always, whether we are aware of it or not, immersed in that spectrum—her artwork demonstrates this through its opposite, by blocking access and disconnecting people. The artist builds a tent that insulates the user, preventing access to the electromagnetic cloud. Here, the “territory-tent” blocks the “informational territory”. The tent is also seen as a nomadic architecture, but in reality, though it is mobile, it creates a striate space, an area of territory in the midst of the

deterritorialized flow (Deleuze, 1980). These examples from art installations show the complexities in issues of place and territory. With a better understanding of locative media and informational territories, we can now look at the Brazilian situation in more detail.

The Mobility Culture in Brazil

LBS, LBT and informational territories are expanding in Brazil. However, the debate about locative media remains ongoing and the country suffers from serious social challenges (including the digital divide). As indicated from data published by Anatel (the National Telecommunications Agency) in August 2008, we currently have 138.4 million mobile phones in a density of 72.09 mobiles per 100 inhabitants, with 80% of these being pre-paid, showing little capacity for personal investment in new services. 3G networks are growing in the country and studies show that mobile Internet already exceeds developed standards. Access via mobile devices has already arrived at 9% of the 8.1 million broadband users (versus 6% in the US). Aceenture research shows that Brazil is in second place among countries with the most interest in mobility, faring better than countries such as France, the US, Italy, Great Britain, Spain and Germany, and losing out only to Mexico. There are 950,000 Internet connections via a 3G network with mini-modems, representing 10% of all connection types. This has all been established in a very short space of time.¹ Wireless networks, such as Wi-Fi and Wi-Max, are also expanding. According to the Ministry of Communications, 30 Brazilian cities have introduced or are in the process of implementing network projects. The National Digital

Cities Plan wants to take broadband to the whole country and to consolidate digital inclusion actions (including technologies and wireless networks). The objective is to establish 160 Digital Cities around the country.

Corporate uses of LBS and LBT in Brazil include: Wi-Fi and Bluetooth areas; Wi-Fi marketing (shows, fairs, exhibitions and hotels); pervasive games allied with marketing (such as “Petrobrás Mobile Racing”); and localization services such as “Vivo Localiza” (which offers approximate localization of friends and families), “Vivo Co-piloto” (which outlines routes like a car’s GPS navigation system) and “Mapas & Rotas” from Nextel. There is vigorous development of GPS for localization (on board cars) and in 3G mobile phones (which today count 500,000 users in Brazil²), as well as GIS and QR Code (at São Paulo car show in 2008, for example). RFID use at tollbooths and on car number plates is growing, alongside an increased number of public and private security cameras (CCTV). With regards to RFID labels, the Brazilian government has been implementing a chip in car number plates since 2007 (starting in São Paulo) and has coverage of the whole country as its goal.³ As such, LBS should grow significantly in Brazil in 2009.

However, beyond commercial and corporate uses, there are few examples that show how these technologies have been deployed in the consideration of political and aesthetic questions. The role of artists and activists is fundamental for drawing attention to the potentialities and dangers of locative media. It should be emphasized that some festivals do encourage debate and understanding regarding the challenges of mobility culture in

Brazil. The two most important are MobileFest and Arte.Mov; two others are Motomix and Nokia Trends.

Seeking a Meaning for Locative Media in Brazil – Locative Art

I recently visited the street market on Ave. Afonso Pena in Belo Horizonte, Brazil during the Arte.Mov festival in November 2008. The avenue was transformed by the market, which created a temporary heterotopia. Here, place became flow, built into trans-historical memory and social sense. A locative *media avant la lettre* caught my attention while I was walking around the market; it produced spatialization that served to mediate relationships, order space, produce mass communication, and give information about services and problems within the place. This non-digital locative media was local radio (called “*radio-poste*” in Brazil, meaning radio that broadcasts only at that place, with speakers attached to street poles), which spread news about urban equipment, lost documents, security problems, etc., in real time.

In another paper (Lemos, 2008, 2008a), I have shown the characteristics of non-digital locative media; here I would like to reinforce their difference from those of digital locative media. The radio spreads mass information, but does not react with visitors in a direct form and does not produce, spread or store information in a digital database. There is no informational territorialization to speak of. With proximal mobile phones, sensors, wireless networks and their databases, however, information would be

disseminated in an “intelligent” form, in accordance with the citizen’s localization. For example, a transmission via Bluetooth would welcome visitors, showing the market’s history using video/photos (“Bluetooth broadcast”). A map would show the user’s exact position and what options he/she has in the market’s different sections (“mapping and geo-localization”), as well as stall and urban equipment localization. Information regarding lost documents could be sent via Bluetooth or SMS. Visitors could find acquaintances or exchange information with a “mobile social networking” system. They could also write electronically on certain locations in the market, sharing their impressions (“electronic urban annotations”).



Street Market in Ave. Afonso Pena, Belo Horizonte

This example shows some of the projects in a hypothetical use of this place in Brazil. The market is a real place, with territorialities and an established temporary use of space. By

being a place ingrained with the city's memory, it could be an interesting exercise to use it as a backdrop for art and locative media experiences.

With reference to **Mapping and Geo-localization**, we can cite five pieces of work: two artistic and three more concerned with content production. The first two are the Motoboy and Sticker Maps and the other three are Wikicrimes, Citix and Wi-Fi Salvador. Zexe's Motoboy project in 2007 could very well be adapted to a central neighborhood around the market. In São Paulo, Motoboys go through the city's public spaces with mobile phones and take photographs, make videos and divulge their impressions in real time. Combining physical and informational mobility, they use their locative power to make sense of their journeys and to register visual commentaries of their daily lives. We can imagine street sellers circulating through the place, registering happenings and creating their own stories about the market.



Picture from Motoboy in São Paulo

Sticker Map is a project by Catholic University students in São Paulo (PUC-SP), that uses wireless networks, mapping and QR Codes to highlight stickers in the city's streets, making visible things that only watchful eyes would catch in the streets of Brazil's largest metropolis. Photographic mapping was carried out on Ave. Paulista during the months of August, September and October 2008 with Nokia N95 phones and using Wi-Fi or 3G networks to upload in real time with GPS coordinates. QR codes were then placed that led to the map. This type of action could also be done in the market region, registering urban graffiti and stickers, adding another element to the production of a sense of the place.

Sticker Maps

WikiCrimes and Citix map crimes in Brazilian regions. Citix has the city of Recife as a base, allowing users to also add comments on places in the city. The project works in partnership with the Federal Public Prosecution Service and was developed at the Studies and Advanced Systems Centre (C.E.S.A.R). WikiCrimes has the same objective but it covers the whole national territory. A similar mapping project, Wi-Fi Salvador, is a map of Wi-Fi hotspots in Salvador, the third largest city in Brazil, carried out by the Cybercity Research Group (GPC) at the Federal University of Bahia. Anyone can access the map to add new hotspots, give comments, and post links, photos or videos.

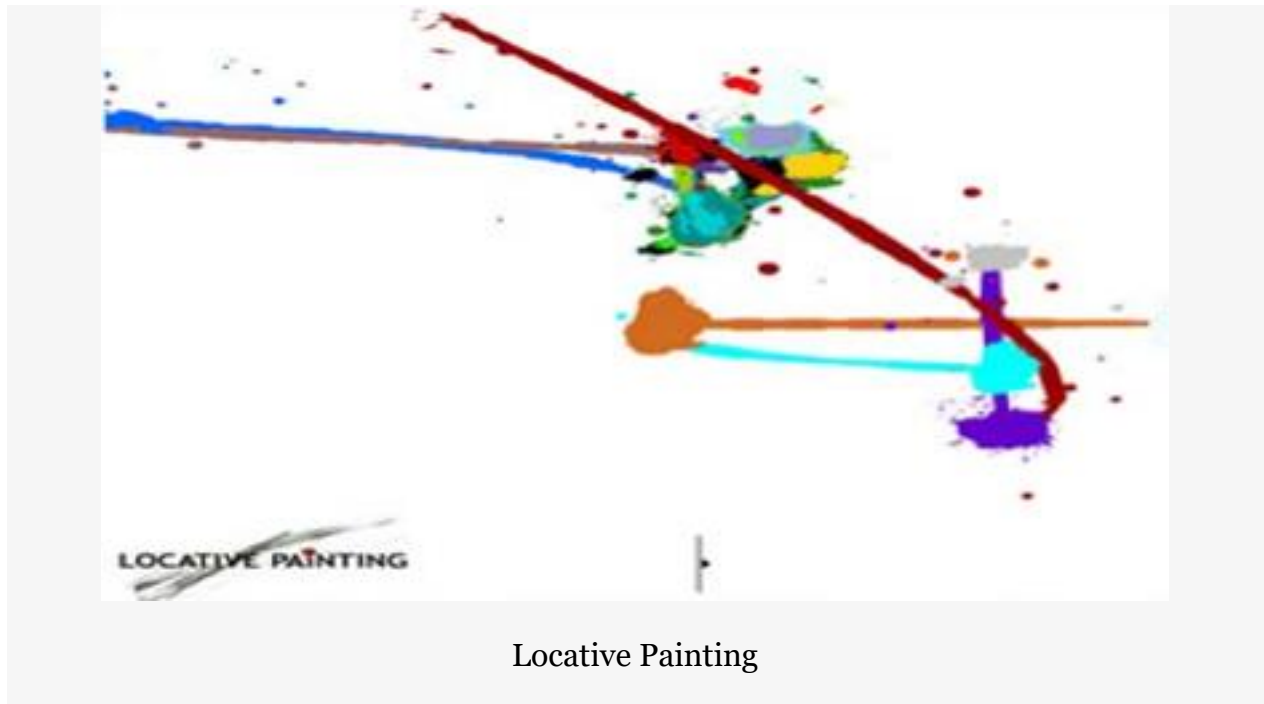
These projects could be carried out in the market, offering a mapping of violence, Wi-Fi hotspots, and also interesting points, with visitors' comments contributing to open and participative content about local territorialities (safety, services and local infrastructure). Mapping and geo-location projects show how new mobile technologies, using informational territorialization (Wi-Fi, Wi-Max and 3G networks) in public space, can produce discourse about urban space. This discursive production has the potential to emphasize aspects that might otherwise remain invisible without collaborative public mapping.



Citix

Electronic Urban Annotations projects allow invisible electronic writing on a specific physical space. Here we can see work with GPS (**Sur-viv-all**, **Identité** and **Locative Painting**), augmented reality (**Invisíveis**), sound performances (**Hapax**) and interventions (**Poétrica**, **Egoscópio** and **Leste o Leste?**). GPS projects (writing and drawing) like **Locative Painting**, **Sur-viv-all** and **Identité** could serve as an example of mapping journeys, showing the use of space by visitors to the market, emphasizing regions (used and discarded) and historical aspects of the place—all through an electronic form of writing. Sur-viv-all (2008), by André Lemos, Mari Fiorelli and Rob Shields, was carried out in Edmonton, Canada, writing the word across 40 km of the city. The idea came from Margaret Atwood's novel *Survival*,

where the writer argues that relationships with survival mark a pattern in the Canadian literary imagination. The electronic writing sought to emphasize the Canadian imaginary and the city. André Lemos's Identité (2008), was "written" by bicycle through 14 km of Montréal, pointing to one of Québec and Canada's central questions: identity. Martha Gabriel's Locative Painting (2008) is GPS painting in accordance with users' geographical positions, where, based on the interactors' data (skin color, name, city, country, gender, etc.), visual kaleidoscopes are created that reflect upon interactors' similarities and differences.



Another interesting form of electronic writing is the use of augmented reality (Wellner et al., 1993), in order to merge virtual characters in real spaces. Bruno Viana's work, Invisíveis (2007), could very well place historic characters in a market environment, thus creating a sense of history and belonging. Invisíveis was presented at Arte.Mov 2007 at the Américo Renné Giannetti Park, where people went for a walk

while looking at a mobile phone camera and visualizing various “characters”. These characters were meant to represent historic regular visitors and people from the park, merging the past and future, physical and electronic reality.

Invisíveis

The Rio de Janeiro group HAPAX could carry out a sound performance at the market. The group has done musical performances and trips through urban space with mobile phones, computers and GPS. Their “Burro sem Rabo” (“Donkey without a Tail”) (2006) performance mixes “high-” and “low-tech”, producing a sound wave in urban space in accordance with the idea of dislocation; where GPS controlled positioning is converted into sounds. The act of the journey is what produces both music and electronic writing in space, as in the writing of the word “pode” (from the verb “to be able to”) in nearby Rio de Janeiro neighborhoods.

Hapax

Giselle Beiguelman’s urban intervention work using mobile devices could create tension between advertising space and market visitors’ content production. Poétrica (2002) is a SMS intervention, available on electronic panels located on Paulista, Consolação and Rebouças Avenues in São Paulo, intermittently occupying advertising space. In Leste o leste? (2002), web interfaces and mobile phones allow the public to interfere in urban electronic panels. Tele-intervention dialogs with its immediate surroundings: the busy

Radial Leste, a São Paulo avenue surrounded by walls with graffiti and tags. Egoscópio (2002) explores information flow from the Internet and invites the public to dis/organize a collective autobiography of the title character. The site addresses sent were projected on an electronic panel in Ave. Brigadeiro Faria Lima, also in São Paulo. Something similar could be thought up for the market, where public interventions could occupy advertising panels, creating tension between the market and the “world of life”.



Poétrica

Electronic annotation is a kind of electronic graffiti that allows people to say something about their urban environment. All these projects show us how informational territories

can be used to write and read the city in a new way. They show how locative media can be a tool that gives people the possibility of creating a new sense of place.

Locative media also allow people who know each other and who share the same place (whether they are aware of this proximity or not) to interact, exchange information and meet in person. These projects are known as **Mobile Social Networking**; for instance, people circulate and can meet friends at the market through Cícero Silva's GPSface (2007), reinforcing meetings and social ties. GPSface is an online social network that connects people around the world, showing the interactors' positions on Google Maps.

New projects, like Google Latitude, are trying to provide everyone with this capacity. Here we can see how an informational territory can help people find each other and engage social relationships by meeting face to face. Mobile social networking projects use smart phones in the context of new informational territorialization of places (3G networks, mainly) to locate friends.

GPSFace

Flash and Smart Mobs are social mobilizations that use mobile devices to organize group actions in an urban public space. The Alô Cidadão (2008) project, a partnership between the NGO Instituto Hartmann Regueira and Instituto Telemar, is not a Smart Mob but would have the potential to offer useful information through SMS. Use of a similar system in the market could very well serve as a citizenship and visitor

information tool. The project seeks to help people with low incomes to find employment, and to obtain general local information, such as information about culture, education, job openings and courses, community activities and vaccination campaigns, etc.

Developed for residents in the Pedreira Prado Lopes community in Belo Horizonte, the system has proven popular, answering messages received between families and friends.

Here we can say that informational territories and locative media create uses of urban space with the goal of gathering and dispersing as quickly as possible—this gathering can be political or aesthetic.

Some experiences with **Pervasive Computational Games** have already been developed in Brazil, the most successful being Alien Revolt (2005) and Senhor da Guerra (2003). In the Belo Horizonte market case, these games could transform the place into a playful sphere with localization or mystery resolution games connected to market questions. Senhor da Guerra—the first such game in Brazil—uses SMS potential to play in the city; in an adaptation of the classic War, the player must conquer tactical regions according to degrees of coverage and player locations. In Alien Revolt, the city becomes the backdrop for battles between aliens. This game enables the identification of players by radar, in a range of up to 3 kilometers.

With these street games, information territories are used to reclaim the streets with ludic imperatives. It's interesting to see that here, the game uses the physical space as a board, with informational technologies, networks and territories providing the tools to

build new meaning for urban spaces—recalling traditional games long played in the streets.

Conclusion

These hypothetical examples show how locative media could potentially be used in the market, with emphasis on artistic and collaborative projects. In this vein, we might see paintings with GPS (like the Locative painting, Sur-viv-all or Identité projects), interventions like those of the Hapax group, meetings with historic famous people like the Invisíveis project, images projected on billboards via mobile phones such as Poétrica, photos and videos made with street vendors, shared news of local interest with Alô Cidadão, street games like Senhor da Guerra or Alien Revolt, maps of ideas and social issues like Stickers Maps, Wikicrimes and Citix, or connections between people with GPSface.

In attempting to provide a comprehensive picture of locative art in Brazil, I have shown how creating a new territoriality could generate forms of social appropriation, citizenship, and sociability through locative media. The current era of “cyberspace download” links mobility and localization, paradoxically reinforcing the meaning of places. This goes against the idea—prevalent in the “upload era” and related to mass media—that new technologies would only serve to de-territorialize and create failures in the sense of place, community and public space (Meyrowitz, 1985).

The Brazilian situation is in a moment of expansion, but there is still much to be done. The dearth of artistic projects could result in a balance skewed toward merely commercial interventions, which would not take into account the potential of participative content creation and collaboration. Operations of control, such as tracking and surveillance, are also key considerations here; a tactical appropriation (De Certeau, 1984) that is political, social and aesthetic will be crucial for avoiding the use of these devices solely as instruments of information distribution, keeping the user in the position of “mass receiver”.

The Afonso Pena street market was used as an example to show that a real place, conferred with informational territorialization, could be the site for locative media experimentation that creates new meanings of places, reinforcing sociability and historic connections. The example is hypothetical and the market experience today places the visitor in a position of searching and conducting casual meetings with people and products. Even without any form of localization and monitoring, the market facilitates random meetings—and this is a very good place from which to start. On the other hand, having the place located, monitored and controlled could also offer forms of escape to the unusual and rich space of random possibilities. The danger with expanding LBS and LBT is that we might effectively lose ourselves with so much locating.

The street market in Ave. Afonso Pena demonstrates that a real place can serve as the backdrop for experimentation with locative media, and for a social production of the space that strengthens communitarian sociability. However, we must point out that the desire to find and locate everything is a way to rationalize space and to shut down the possibility of surprises. It is a technical way to fight the fear of the stranger and the imponderable. Even in light of glimpsing the potentialities of locative media for the market, it's nice to live the market as it is: to get lost between its tents, and to find strangers or friends without knowing their location. These kinds of non-predictable action are also an excellent way of appropriating of the space and creating of new meanings of places. Drifting without orientation is a compelling form of meeting the space. As such, it seems that we do not need a tool of localization or "intelligent" information to feel the market. Without a smart phone or GPS, I left myself to walk between the colors, aromas and sounds of the street market. As a flâneur, without any device, I made the market, temporarily, my place (Lemos, 2009).

Notes

1. <http://idgnow.uol.com.br/telecom/2008/08/14/brasil-tem-950-mil-conexoes-a-internet-via-redes-3g-estima-accenture/>

2. http://www.mundogeo.com.br/noticias-diarias.php?id_noticia=4246

3. <http://alertatotal.blogspot.com/2008/07/lula-insiste-no-inconstitucional-chip.html>

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