

# INSECURE TERRITORIES - INTERVENTIONS IN CITY INTERFACES

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## Abstract

The paper reflects on artistic interventions in urban public space. By using digital-media and -devices new forms of hidden and invisible territories has been created. Mediatechnological networks such as wireless-lan or mobile phone infrastructures extend the city with complex layers of interaction and create new spaces of communication. The presentation emphasises artistic projects based on the CODED CULTURES Festival in Vienna, that are creating protocols and interaction scenarios to enter and display insecure and hidden territories in the city based on communication technologies and media-cultural structures in urban life. Public space does not end at the borders of visible, perceptible reality but extends into the invisible. The increased population of communication devices in public life results in a dense layering of electromagnetic content passing through both air and bodies, on route to its target. As such we are not just senders and recipients but carriers of signal. We unwittingly move through numerous digital and analog networks, leaving traces of our electronic passing with the devices and gadgets we carry. More so, we inadvertently leak information about ourselves that can be analyzed to a disturbing level of accuracy with publicly available forensic tools. The city in this sense stands for an interface mixing diverse layers of individual representation, orientation, presence and participation, which can be observed and traced by unknown invaders.

## Background

Based on theories of Mark Weiser (1), a pioneer in the field of pervasive computing, the connection of humans and computers will be ubiquitous. Relating this understanding to the dominant living environment of humankind, the city itself becomes a core interaction hub and by this means a complex communication interface. Data is stored, up- and down- loaded onto context, embodied devices and multi-sensory environments, as Malcolm McCullough stated (2). Physical-digital Interfaces just as MEMS (Micro-Electro-Mechanical-Systems) have changed our whole relation to the surrounding devices and our interaction methods with them. Combining this media- and communication-technologies and media-architectonical developments with a global perspective of city development, how Joel Kotkin analysis, 5 billion people are living in urban environments by 2030 (3). City policies worrying about expanded landscapes, no-go areas and blind spots of transportation and maintenance have been accomplished by believing in problem solvers like new technologies and communication infrastructures. Like the Anthropologist Robert Mc C. Adams puts it: "We have accomplished an awesome technological destruction of distance" (4). Meanwhile those communication technologies intervene into urban structures; there are no municipal strategies to handle the massive individual data interference within public spaces. The security and observation paradigm, which can be seen in cities like London or Tokyo, promotes the development of hyper-networked, panoptic and multi-sensory urban mediascapes, but most of the people are unable to understand what is going on behind the interface. While in 2005 the market penetration of mobile phones in Austria added up to 106% (8.6 mil. Sim-Cards registered by 8.1 mil. inhabitants) it still grew and totals up to 146% end of 2010 ([www.rtr.at](http://www.rtr.at)) because of the additional usage of mobile internet. Moreover in 2011 a typical urban resident carries around multiple communication devices, capable of

various protocols like Wi-Fi, GSM/UMTS, Bluetooth and others, rather than having “only” a mobile telephone. Moving through public urban spaces, those devices leave invisible tracks and leak private information of their carriers without their knowledge and furthermore are used for commercial, user focused Data-mining as in case of Apple’s hunger for location based Information. Besides the issue of being used as an unwilling part of Crowd-Sourcing campaigns of multinational companies there is a serious intimidation in leaking private and personal information that can be used for controlling and manipulation. In addition to that a typical user does not only send out digital information and leave his traces but also consumes, and trusts the information which is consumed on the devices. Especially on “not secured” Wi-Fi Networks, the risk of receiving manipulated Information is very high, as shown by Julian Oliver and Danja Vaillev with their Project “Newstweek” (5). There is a crucial need to raise the awareness of those invisible fields of electromagnetic communication and accept their meaningfulness as extended parts of the public sphere.

### **Workshop and Artistic Practice**

To create a practical basis for these observations several workshops during “transmediale 2011” (6) have been organized by the CODED CULTURES Festival in cooperation with the artist running the hack-space “Weise 7” in Berlin. Within the workshop practical exercises, talks and presentations related to technologies and techniques of how to read the plethora of signals in the air, manipulate them and pass them on were covered from different viewpoints on the topic of how territories in the city can be or can be made insecure. Several strategies based on the practice of hacking and modding of devices have been applied within the workshop. Under the title Network Insecurity Experience wireless hackers Julian Oliver and Bengt Sjolen presented the WiFi spectrum (2.4-2.5GHz) as a rich material for activist intervention, study and play. In tandem with Gordo Savicic and Michal Wlodkowski, from a temporary outpost in Sao Paulo, they lifted network packet analysis and manipulation into a transcontinental domain. Under the title “Invisible Territories” Brendan Howell and Martin Howse have taken investigations and interventions into other bands of the spectrum, introducing custom hardware and rigorous techniques for a psycho-geophysical reading of the area around the former “Tempelhof” airport in Berlin.

### **Conclusion**

This is the time when artistic projects using the city as a laboratory, exhibition space, communication platform or hack-spaces, have good chances to try things out and develop test drives for future applications. It is as well the time when open design thinking meets city development on the level of wilderness. Interface cultures can be developed in a prototypical sense, since only minor rules have been made and the borders and gates have not been set by profit-oriented organizations and thin innovation. It opens the fields of free development within a mainly cacophonous media-composition, lacking of structural preciseness and offering opportunities for new forms to overcome limitations. Nothing the less it is a short window of opportunity to add crazy and valuable ideas on the intersection of materialized architecture and its connectedness via waves, data, sensors, protocols, scripts and everything which is pervasive without a suitable interface or device. This can be seen as a kind of vireal (real – virtual) testlabs to experiment with existing infrastructures, standards and norms of interaction. The so called »real« stands for the materialized and not for reality. The »virtual« stands for digitally and media-integrated forms of information, including digital environments and all code-based action and interaction interfaces. This

blended realm is the cognitive environment where we try things out, learn, organize, create, design and establish knowledge. The combination of architecture and media architecture in the city such as wireless networks, sensors, RFID systems, 3G mobile-phone networks included in existing materialization of classical architecture is a basic requirement in urban development today.

### **References and Notes:**

- (1) Cf.: [www.ubiq.com/hypertext/weiser/SciAmDraft3.html](http://www.ubiq.com/hypertext/weiser/SciAmDraft3.html) (last access: 20th July 2011)
- (2) *Digital Ground*; Malcolm McCullough; The MIT Press; Cambridge, Massachusetts 2004
- (3) *The City*; Joel Kotkin, Phenix Paperback, London 2004
- (4) *Contexts of Civilizational Collapse*; Robert Adams; In: *The Collapse of Ancient States and Civilizations*, University of Arizona Press, 1988
- (5) <http://newstweek.com> (last access: 20th July 2011)
- (6) <http://www.transmediale.de/content/insecure-territories?page=1> (last access: 20th July 2011)