CONCEPTS IN LOCATIVE MEDIA

Instrumental and Theoretical Considerations in the Design of a Framework

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Introduction

This paper is concerned with the development of a conceptual and technological framework for the realization of locative media artworks. Locative media deploy portable, networked, location-aware computing devices that involve the participants in mapping processes for artistic interventions.

City-As-Instrument

The development of our framework takes an instrumental approach, with which we seek to create an instrument out of the urban environment. Our approach focuses on the multiplicity and hybridity of this environment. It uses mobile phones to probe into the urban fabric and to then experiment with the fabric's "material qualities." The fabric becomes the conducting surface that is transformed by the participants' interactions. The mobile instruments become the lens through which to look at and modulate the fabric and its threads - it's a form of "ambient communication."
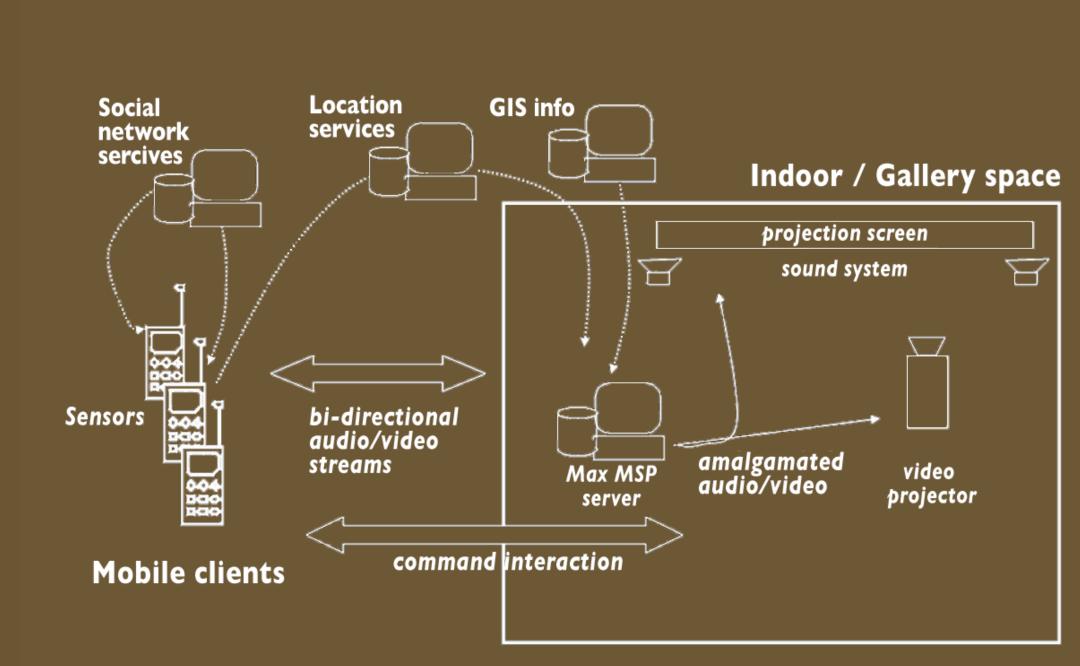
Instrumental Considerations - framework

The media instrument consists of a communication framework (hard- and software), software based buildings blocks and a growing database of audio-visual data. The communication framework presents an open platform to incorporate a wide array of incoming data sources, sensor data, and output devices. The software building blocks produce the individual fragmentary audio-visual "narratives" and feedback loops of each project. They produce constantly updated audio-visual threads, designed to interweave into the city fabric and to open up spaces in-between.
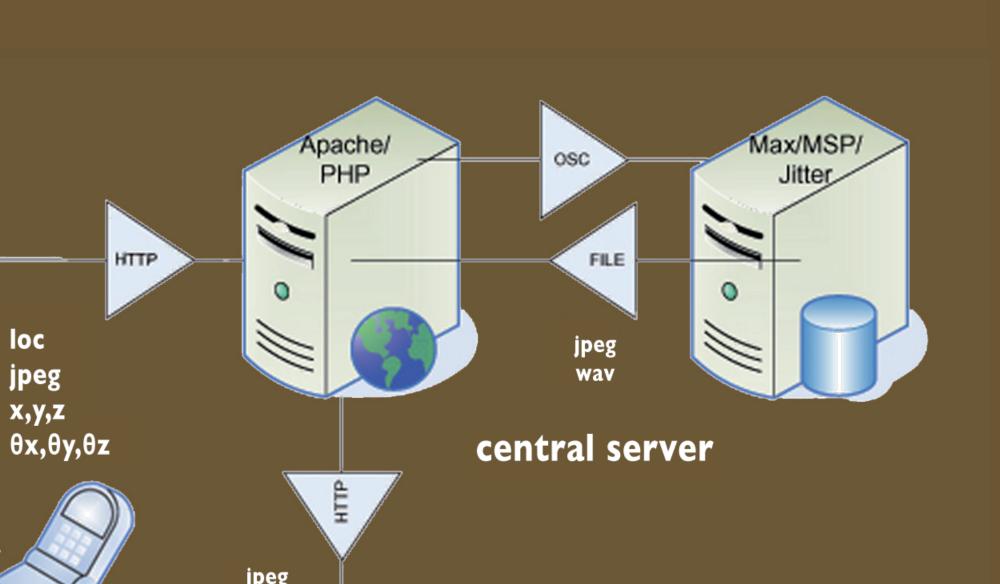
Common to all concepts or "narratives" created with this framework is that they generate a mediated space free from the rigidity of Cartesian constraints. They contrast the dominant practices of traditional cartographic forms and many commercial and otherwise conventional views of location-based services.

Theoretical Considerations - motivations

The artistic research investigates the opacity of the "contact surface" between multiple urban geographies. The core theoretical themes that motivate the concept of the artworks and the development of the framework, draw from a critique of surveillance practices, Postcolonial concepts of hybridity, and Feminist concepts of partial knowledge and the constitution of belonging.

Motivated to dwell in the spaces between binary opposites, without mapping one onto the other, we call upon Homi Bhaba's concept of a "third space," from which other positions can emerge (Bhaba, The Location of Culture). Looking for such "thirds spaces," we find counter-spaces that are foreign to the traditional cartographic space. Fluid and transversal, they are of a temporality that is always intrinsically connected to other temporalities elsewhere.
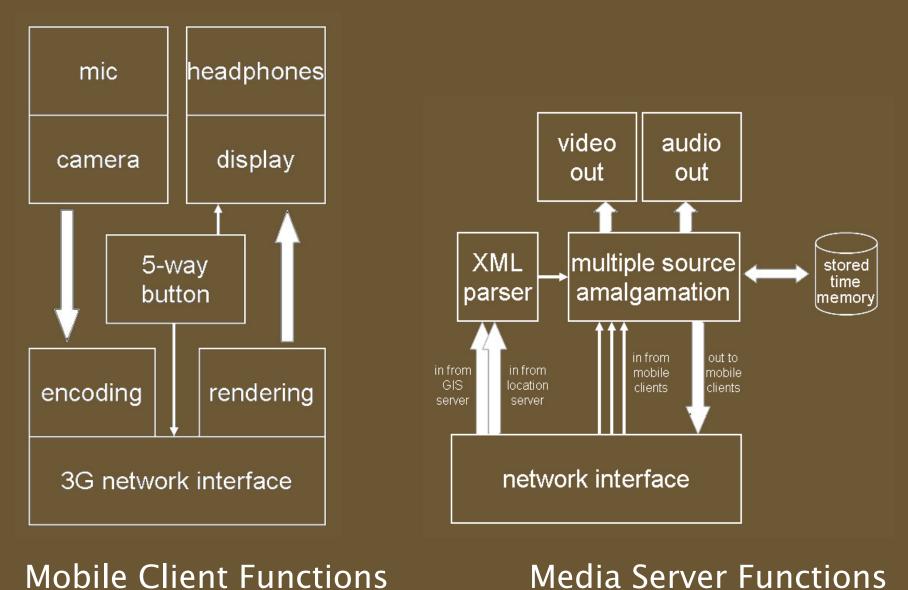
Feminist discourses on spatialization provide the critical ground for our cartographic engagement with dislocating, unmapping and juxtaposing spatial and temporal geographic territories. The evolving urban cartographies unfold through drifts, ruptures, and hybrid connections that emerge from the situated, partial and interpreted knowledge of the "terrain." (Haraway, Simians, Cyborgs and Women).

System Architecture (Net_Dérive)

Mobile Client Functions
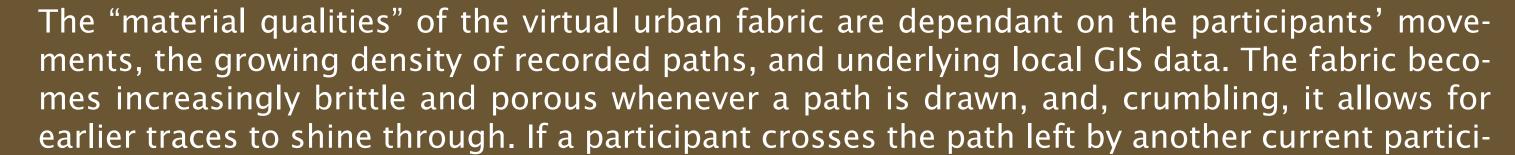
Media Server Functions

Archdiagram (Urban Fiction)

The communication framework defines a platform on which the mobile devices run embedded Java applications to exchange media data and to communicate with the location network server via XML. The information exchange is supported by a client-server architecture.

The mobile devices integrate GPRS, 3G services and WIFI with multimedia capabilities including a digital video camera, a microphone and polyphonic sound.
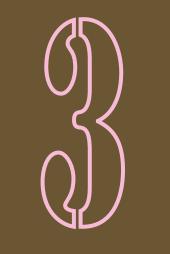
Data aggregation
The data that enacts the virtual cartographies consists of (1) live environmental recordings from the mobile devices, (2) archival material and pre-composed musical tracks, (3) control information coming from the different participants, and (4) geo-referenced data (GIS).

The fabric as a vector field
The "material qualities" of the virtual urban fabric are dependant on the participants' movements, the growing density of recorded paths, and underlying local GIS data. The fabric becomes increasingly brittle and porous whenever a path is drawn, and, crumbling, it allows for earlier traces to shine through. If a participant crosses the path 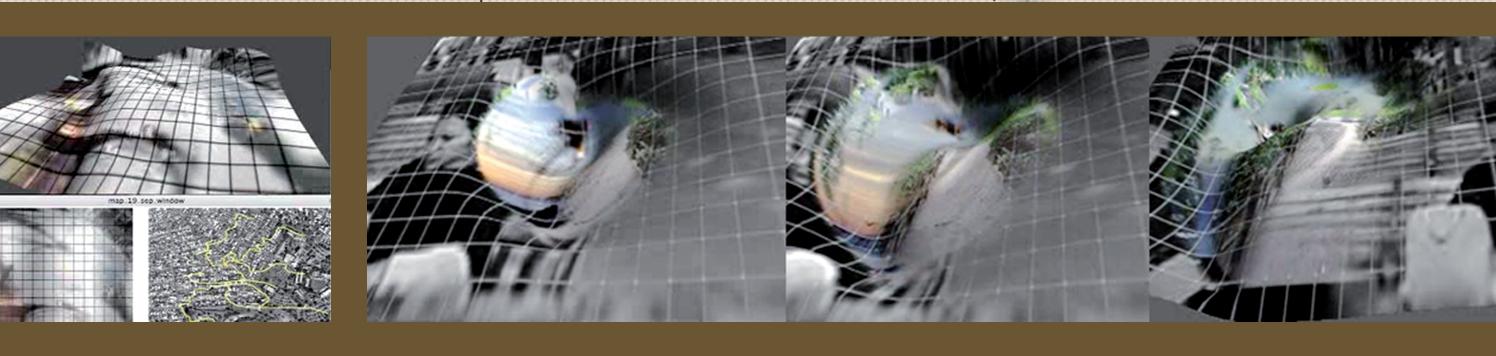left by another current participant, the fabric responds elastically and pulls threads of their current remote location, interweaving the two sites. It is the mobility and motion of the devices that sets up the performative tension between varying degrees of resistance, transparency and intricateness to enact this virtual topography.

The fabric as a fluid particle grid - the city's 'memory' is materialized as a contact zone in which present and past, present and absent, virtual and real meet and interlace. Always flowing and neither clearly one nor the other, this 'memory space' manifests itself as a leakage between time and space.
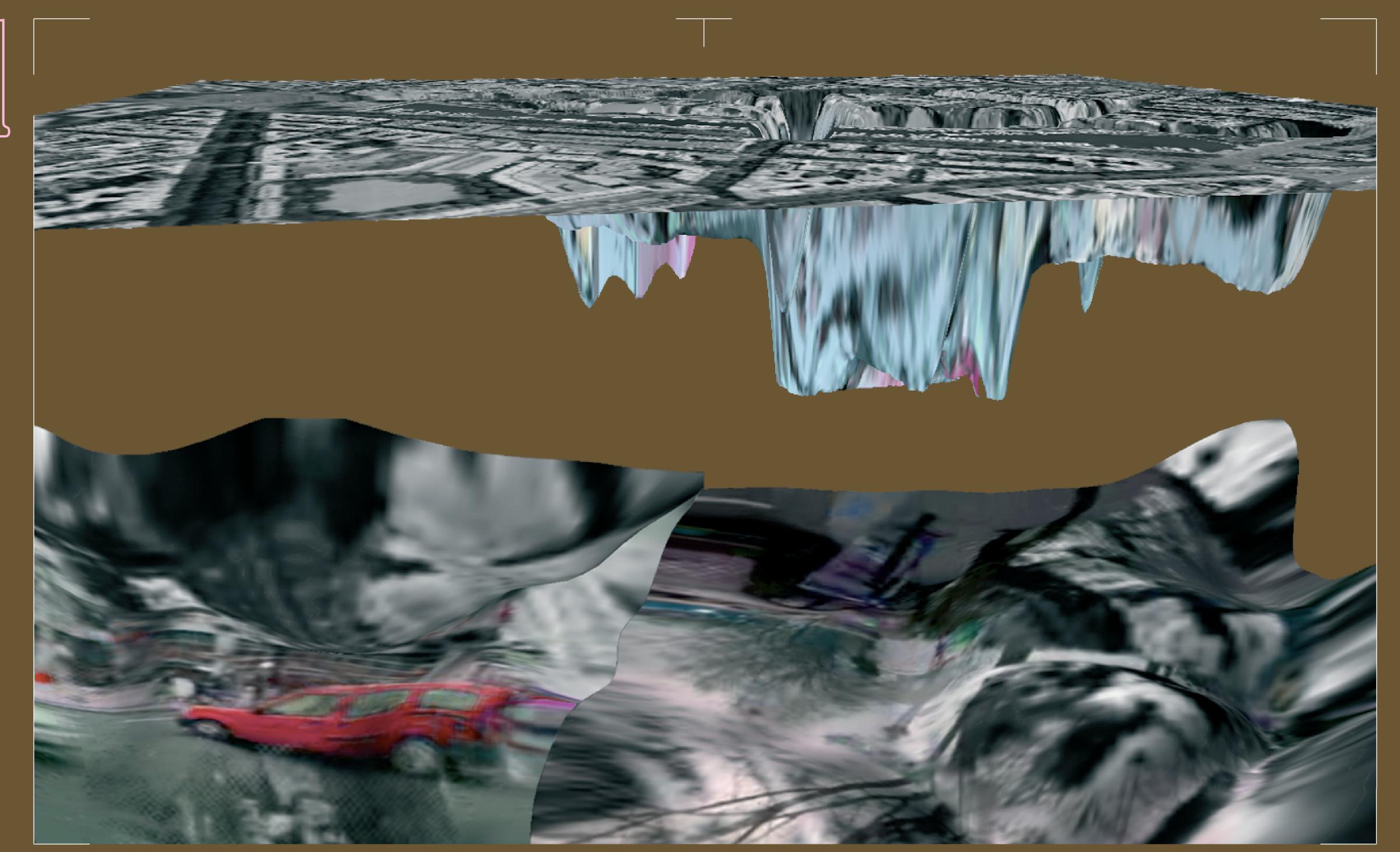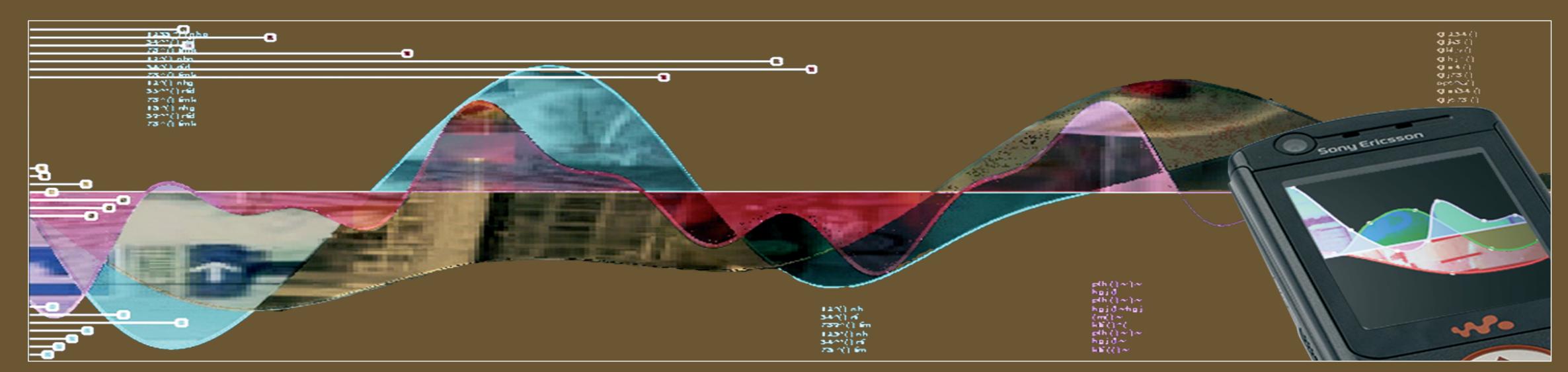
URLs
http://www.impossiblegeographies.com
http://www.arch.usyd.edu.au/~petra/
http://www.csl.sony.fr/~atau/

Conceptual Considerations - in practice

We are currently developing three different approaches to put the instrumental and theoretical framework into practice. Each project follows a core motif that expresses relations and interferences with the urban fabric.

1 Net_Dérive - Grooving the City

The first artwork plays with the idea of a horizontal and vertical dérive, transforming the urban fabric through the grooves left by each participant. It turns the tension field between a gallery space and the urban environment into a playground on which the excavation of urban spaces is negotiated.

2 Impossible Geographies 02: Urban Fiction

The second work is a new work in the series of "Impossible Geographies" in which mobile phones become lenses that render the everyday fabric porous to its multiple layers. This 'living' digital cartography is moulded of a digital fabric that interprets the urban fabric as a fluid mesh of interrelated temporal and spatial events.

3 Impossible Geographies 03: Archaelogy of an Instant

The third work negotiates layers of the past with the present everyday. It explores issues of a collective remembrance and processes of archiving and representation. Participants excavate relocated historical and/or cultural events and mix them with present recordings.

The fabric whose multiple layers are interconnected by grooves - the hybrid playground of this work emerges between the grooves inscribed and the spaces excavated by the mobile participants (equipped with mobile phones) and the movements of the participants that are surveyed in the gallery space.

Conclusion

Our conceptual approach in Locative Media is concerned with the representation of territories and the constitution of contact surfaces. Locative Media render geographical spaces to a canvas to be inscribed with personal narratives, desires, and memories. They offer communities to co-author their environment, map their own space and to share subjective experiences. There is, however, a double-edge to this notion of public authoring. The technology critically links these collective location-based activities to the issues arising from surveillance. Artists are challenged to develop alternative ways that question traditional forms of tracing and mapping, able to serve as a force of diversification rather than homogenization.

Our instrumental framework views the city as a medium. We make use of notions of surveillance and instantaneous archaeology to create collective, subjective cartographies. They shape "a migrational or metaphorical city [that] slips into the clear text of the planned and readable city" (de Certeau, The Practice of Everyday Life). Our motivation does not lie in simply making the invisible visible, but rather in developing alternative modes of reading and forms of representation that produce spaces in-between, hybrid spaces, from which other relations, yet unknown, can emerge.