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## Abstract

In this paper we describe the theoretical background of E-Tower, a mobile phone based interactive installation with the CN Tower for Toronto's Nuit Blanche 2010.

## Keywords

light, public space, architecture, data visualization, case study

## ACM Classification Keywords

J. Computer Applications, J.5 ARTS AND HUMANITIES, Architecture, Fine arts

## General Terms

Conference publication.

## Introduction

Large media facades, reactive architecture, geo-tagging and networked location-aware mobile devices represent a privileged confluence — a fluid, digital layer [1] that permeates the city. We argue that this mix of technology and urban space makes it possible to construct highly visible, ludic situations enacted within

an increasingly conflated real and virtual space — a new hybrid space [2].

Using the E-Tower (www.etower.ca) project as a testing ground and example, we have worked with and through these structures and technological devices in order to create a playful urban experience. The project aimed to enable highly visible, distributed participation in public space using mobile phones and reactive architecture as part of a larger experiment in imagining and augmenting new social practices and public encounters by inscribing a set of user actions [3] that encourage greater cooperation and collective play into urban subjectivity.

## Project Description

E-Tower was a large-scale urban interaction and data visualization project that was part of Nuit Blanche 2010 (October 2, 2010) in Toronto, Canada. E-Tower asked participants to interact with Toronto's CN Tower: text the work "energy" to a specific phone number and watch throughout the night as the tower's lights grew faster, brighter, and changed colours.



**figure 1.** E-Tower, between energy phases.

## New Media and Public Art: Values, Goals, Principles

The last half-century has seen social space diminish due in part to the displacement of that space to the private dwelling by broadcast television. The televisual has splintered public space, transforming a great deal of public life into heavily mediated, vicarious endeavours. As theorists such as Paul Virilio [4] argue, the public characteristic of an earlier period of modernism was displaced by a retreat to a more private culture of suburbia, entrenched and compounded by the television and the automobile, leading to a withdrawal from actual public encounters.

The development of the Internet over the last thirty years has brought with it a marked change in how we communicate and how publics are imagined and formed. We increasingly dwell in networked social spaces online that allow for greater digitally-mediated participation and interaction. Most recently, these social spaces have forged greater connections to people and things through social media sites such as Facebook, Twitter and Foursquare.

We argue that a re-envisioned public space combines the embodied subjectivity of real space with the participatory potential of ubiquitous online, mobile networks and communities leading to new cultural and social practices that may increase our connection to physical and social surroundings.

## Relational Architecture and Urban Screens

Space today is articulated through use of the Internet, connected projectors, graphic walls, computers, mobile devices, and screens that are found in increasing concentration in dense urban zones. These elements of

technoculture in the age of supermodernity [4] come together to allow for a certain kind of interaction, and a reflection on community, subjectivity, and place — potentially, the opposite of the individuating, distracting and distancing effect they may have in other less expressive and often more commercial (advertising) contexts.

The mixing of a number of these components has been recently described as relational, expressive, and/or reactive architecture [5]. This can be anything from structures with built-in media facades or LED banks that may be pre-programmed or interactive, or architecture that can accept various types of projection. The CN Tower and its large-scale LED lighting system, particularly in its specific use in the E-Tower project, is an example of this. As Timothy Druckrey [6] explains, reactive architecture is:

… an evocation of the kind of social space in which active participation is not a by-product, but the driving force in the creation of dynamic agora in which every position is established in an open system that ruptures hierarchies and dismantles the notion that the public is an undifferentiated mass, the media not the harbinger of a utopian global village, interactivity not the opiate of shoppers.

Furthermore, reactive architecture, apart form LED facades and more ambient installations, coexist with urban screens in places like Federation Square in Melbourne and Times Square in New York City. As Scott McQuire [7] points out, urban screens are:

… the inheritors of the tradition of public space constituted by street life, city squares, cafes, and public

cultural institutions. They have assumed the task of catering for those who are present at a moment when being present has assumed new dimensions.

These screens and structures have not only inherited public space, they have also inherited virtual space, or virtual public space. Along with expressive architecture and mobile devices, they have stitched these elements together to create the conditions for a reconceived public space.

## Critique of Public Space

One critique of this idealized virtual public space is that although there is a shift to include more "users" into a system of communication and to allowing them to represent themselves within the system — as opposed to passive "viewership" — there is often only a small group of "creators" creating the tools for this interaction. We suggest that the next logical step in fully articulating agency and subjectivity, as well as collective responsibility, is opening up the toolmaking process to wider publics. In the E-Tower project we made an initial step in this direction by providing users with an opportunity for self-expression via messages that were collected throughout the night and posted to Twitter.

Furthermore, we must not discount the populations that a project such as E-Tower privileges. A mobile phone with text-messaging credits is a pre-requisite for participation, eliminating a small but important slice of the urban population. In the same way that E-Tower enables a maximum possible visibility of participation through reactive architecture, it can also be interpreted

as an expression of exclusion for those who lack the tools to participate.

There are also limitations that exist in the conceptualization and realization of the project due to the approvals that must come from larger corporate structures, in this case the CN Tower, and the City of Toronto. The material reality of this project and the power dynamics inherent in such a large-scale installation serve to shape and mould the project, one that is under the direct influence of venue partners and corporate sponsors.

## Practical Outcomes

Urbanists, new media artists, governments, and other stakeholders continue to have a greater responsibility to foster dynamic, hybrid spaces that provide, collect, process, and display information. Like children spontaneously conspiring to make waves at the local pool by splashing around, or spectators at a sporting match instinctively choreographing their movements to create a wave around a stadium, projects like E-Tower hold the promise of playful connections amongst diverse populations and the potential to create new social behaviours and critical reflections on civic participation, public space, and architecture by imbuing a sense of cooperation, contemplation, and connection across a diversity of people.

## Acknowledgements

## Citations

[1]  Struppek, M. Urban Screens – The Urbane Potential of Public Screens for Interaction. *Interactive City 6*, 2 (2006).

[2]  De Souza e Silva, A. From Cyber to Hybrid. *Space and Culture 9*, 3 (2006), 261-278.

[3]  Akrich, M. The De-scription of Technical Objects. Shaping Technology/Building Society: Studies in Sociotechnical Change. W. Bijker and J. Law (eds.). Cambridge, Mass., MIT Press (1992), 205-224.

[4]  Virilio, P. *Open Sky*. Verso, London (1997).

[5]  Augé, M. *Non-spaces: Introduction to an anthropology of supermodernity*. Verso, London (1992/1995).

[6]  Dietz, S. Public Sphere_s. Media Art Net. http://www.medienkunstnetz.de/themes/public_sphere _s/public_sphere_s/ (2009)

[7]  Druckrey, T. Relational Architecture: The Work of Rafael Lozano- Hemmer. *Debates & Credits – Media / Art / Public Domain*. T. Goryucheva & E. Kluitenberg (eds.). De Balie, Version 6.0, (2004).

[8]  McQuire, S. Mobility, Cosmopolitanism and Public Space in the Media City, in *Urban Screens Reader*. S. McQuire, M. Martin & S. Niederer (eds.). Amsterdam, Institute of Network Cultures (2009).