

# Urban Screens – The Urbane Potential of Public Screens for Interaction

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## Abstract

Within a time frame of about ten years, experimental (interactive) media installations and performances have gained recognition as new art forms in public space. Artworks explore the interconnectedness of public space, interaction, and new media. Urban Screens investigates how the growing infrastructure of dynamic digital displays in urban space, currently dominated by commercial forces, can be utilized in this context and broadened with cultural content. The research project wants to network and sensitize engaged parties for possibilities of using the digital infrastructure for contributing to a lively urban society. The integration of current information technologies supports the development of a new digital layer of the city in a fusion of material and immaterial space, redefining the function of this growing infrastructure. Interactivity and participation will bind the screens to the communal context of the space and thereby create local identity and engagement.

## The Redefinition of a Growing Infrastructure

*Public space is the city's medium for communication with itself, with the new and unknown, with the history and with the contradictions and conflicts that arise from all those. Public space is urban planning's moderator in a city of free players. [1]*

Prof. Wolfgang Christ, 2000

How can the growing digital display infrastructure appearing in the modern urban landscape contribute to this idea of a public space as moderator and as communication medium?

The mobilization of digital technology and a growing digital culture have changed the urban communication environment. In the context of the rapidly evolving commercial information sphere of our cities, various new digital display technologies are being introduced into the urban landscape: daylight compatible LED billboards, plasma screens exposed in shop windows, beamboards, information displays in public transport systems, electronic city information terminals, holographic screen projections, or dynamic and intelligent surfaces, integrated into architectural facade structures. [Fig. 1]

As McQuire has put it, "The migration of electronic screens into the external cityscape has become one of

the most visible tendencies of contemporary urbanism." [2] Considering this already existing digital infrastructure, it is a great challenge to broaden the use of these "moving billboards," as Lev Manovich calls them in his vision of an Augmented Space [3], instead of flooding urban space with new techno-objects.



Figure 1: New York Times Square: accumulation of LED boards. Photo: Louis Brill.

So far one of the main targets of this infrastructure is to manage and control consumer behavior. We are not far away from the implementation of technology that makes it possible to cover buildings with large flexible planes of moving images, networked and controlled from one central location but making use of site-specifically collected consumer data. Display systems already start to detect our behavior and adjust to our consumer preferences.

Paul Virillio sees the new, developing "pervasive architecture-style" of screens covering high-rise-facades as "Electronic Gothic." [4] He refers to the narratives of Gothic church windows, which were aimed at effecting people's moral behavior. Immersion and its effects on the audience will also be increased by the "perfect" incorporation of screens in the architecture of the urban landscape.

How can the use of these screens controlled by market forces be broadened and culturally curated? Initiatives such as Locomotion, Going Underground, Strictly Public, Outvideo, the 59th Minute and Transmedia :29:59 [5] are pioneering in their use of commercial outdoor displays for screenings of video art. New balanced alliances are needed that challenge city authorities and regulators, architects, advertisers and broadcasters, as well as cultural curators, artists, and the citizen as producer – joint cooperations to shape the future development of the "screen world" in a sustainable manner, considering the danger of visual and technological pollution of urban space. [Fig. 2]

been much discussed in urban sociology over the last century. Sennett, Häussermann, and Bott, in particular, have pointed out how, since modernization, individualization and a growing independence from place and time seem to have destroyed the old rhythms of the city and therefore its social systems. We currently face a transitional period of the restructuring of social networks and discover new relations among people and places in a globalized world that is threatened by diffuse and complex fears of instability and lack of strong local roots. This situation has resulted in various experiments with new types of relations, supported by developing new media tools.



Figure 2. The range of screens in urban public space.

Urban Screens are defined as various kinds of dynamic digital displays in urban space that are used in consideration of a well balanced, sustainable urban society – screens that support the idea of public space as space for creation and exchange of culture, or the formation of a public sphere through criticism and reflection. Their digital and networked nature makes these screening platforms an experimental visualization zone on the threshold of virtual and urban public space.

## The Broader Context of Urban Screens

Urban public space – understood as open, civic space – is a key element in the development of European urbanism. In this role as space for representation, culture, and encounter through trade, exchange and discussion, urban areas have always been a place that is rendered alive through various interactions. Referring back to the old concept of the Greek Agora, urban public space is a unique arena for exchange of rituals and communication. A constant process of renewal and negotiation challenges the development of urban society. The architectural dimension of urban space has played an important role in providing a stage for these interactions. Moreover, the architecture itself functions as a medium, telling narratives about the city, its people, and the represented structure of society. Its inhabitants can read the reoccurring social interactions and the way the space is populated in a participatory process. The whole urban structure is becoming the crystallization of the city's memory over time.

Yet, the vanishing role of public space as place for social and symbolic confrontation and discourse has

In its early stages, the Internet was discovered as new, alternative public sphere. The rediscovery of a civic society is tied to the inherent structure of the Internet, which is strongly based on cooperative exchange and shared engagement through the openness of systems. The population of virtual spaces – virtual cities with their chat rooms, MUDs, and experimental spaces for creating alternative identities – has been continuously growing. Now we are looking at various experiments with community in the growing field of social computing – peer-to-peer networks, friend-of-a-friend communities such as Orkut or Friendster, and, more recently, mobile communities connecting mobile phone users. We also find participatory experiments in content creation within the mailinglist culture and wiki and blogging systems, serving an increased need for self-expression. Now these explorations of virtual worlds have merged with the rediscovery of urban public space, the recent popularity of locative media being one indicator of this development.

In parallel, an "event culture" has evolved in the real urban space. Guy Debord already foresaw "the society of the spectacle" in 1967, and his critique of a society "in which the individuals consume a world fabricated by others rather than producing one of their own, organized around the consumption of images, commodities, and staged events" [6] should be taken seriously. In the growing international competition among cities, the focus often is on tourism or the citizen as consumer. City marketing and urban management strategies are applied to create a vision of "creative cities" that are in fact not necessarily supporting the inhabitants' creative use of the city or their creative contribution to a lively urban culture. Cities are engaged in a struggle with a "feeling of placelessness" caused by the spread of international architecture and branded shops. In fact, screens also tend to look the same everywhere, so

there is a need to consider the locality as well as site-specificity of the content in order to prevent further disconnection of the perception of our urban space from the actual locality.

In order to maintain the social sustainability of our cities, it is important to take a closer look at the livability and use of urban public space and the rediscovery of a civic society. The information platform [www.interactionfield.de](http://www.interactionfield.de) gives an overview of numerous interactive media projects, assessing their potential for urban society in terms of:

- Promoting interaction, fearless confrontation and contact with strangers
- Promoting formation of public sphere by criticism, reflection on society
- Promoting social interaction and integration in the local neighborhood
- Supporting understanding of the current development of our high-tech society
- Supporting conscious participation in the creation of public space [7]

Urban Screens can be understood in the context of a reinvention of the public sphere and the urban character of cities, based on a well-balanced mix of functions and the idea of the inhabitant as active citizen instead of properly behaving consumer. Virtual spaces alone cannot function as spaces for exchange and production of identity.

## The Character of Urban Screens

In connection with the ephemeral yet open character of the digital information world, Urban Screens asks for a new urban language with its own dynamic signs and symbols, formed through active participation from various players. New interactive technologies and networked media offer more possibilities for the visual programming of these digital surfaces through the interplay of new display technologies, broadcasting tools, database and content management systems, and sensor technology. Linda Wallace sees "the internet as a delivery mechanism to inhabit and or change actual urban spaces." [8]

Through the the Internet and other digital networks, digital content has become more fluid, being, at least in theory, available anytime, anywhere, produced for the audience of the new global village. Could large outdoor displays function as experimental "visualization zones" of a fusion of virtual public spaces and our real world? Can we localize the huge flows of information through these screens, and can these zones in fact play a more active role, more active than just providing the canvas on which the digital world is rendered? What characterizes Urban Screens is a connection to the locality of the static nature of the new screening infrastructure.

In contrast to the mobile screens integrated in phones, PDAs, laptops etc., which display content for an individual, Urban Screens focuses on the public urban audience, on joint and widespread reception of media content. The growing embeddedness in screen systems, accessibility of information via Internet, mobile devices, etc. augments the respective urban space's "situatedness." Levels of locality and globality vary, ranging from the local neighborhood screens with symbols and signs on a city level to trans-urban networks of screens enabling new "glocal" interconnectivity.

## Visions of New Content and Use

The first steps in broadening the commercial advertisement content of large digital outdoor screens focused on the transfer and slight adjustment of TV features to the new circumstances of public viewing. Soon we might have TV broadcast stations specialized in urban public space and its local community. The experiments done by BBC in collaboration with Philips and local City Councils in various cities in the UK could be considered a forerunner to these TV broadcast stations. They coordinated outdoor movie-screenings, the collective watching of soccer-games, and special City-TV news channels. [Fig. 3] Preferably set up in key locations, in a setting for a wider audience, these screenings in memorable places could support identification with local culture through joint experiences. A local memory could indeed develop, if the screens were used as a means for maintaining and supporting a rich and complex local culture.



Figure 3. Soccer game on the BBC Big Screen in Manchester; celebration of victory.

There has been a growing interest in connecting screening infrastructure with cultural institutions that preserve and produce digital content or video art. Cultural centers and institutions such as the Schaulager in Basel and Austria's Kunsthaus Graz have started, in a more experimental style, to officially integrate screens in their architectural facades, so that they function as an extension of their archives into public space. The Australian

Centre for the Moving Image uses the nearby public screen in Federation Square, Melbourne. The Creative Industries Precinct (Australia's first site dedicated to creative experimentation and commercial development in the creative industries, located on the western fringe of Brisbane's Central Business District) integrated three screens in its complex of buildings to address different audiences. [Fig. 4] One of the screens will be used to support the development of a new local community in the vicinity. The above mentioned BBC project of Public Space Broadcasting on community screens collaborates extensively with local art institutions.



Figure 4. The orientation of the three screens at the Creative Industries Precinct, sketch by Peter Lavery.

A new audience can be reached on their daily routes by bringing content into outdoor public space. Connecting Urban Screens amongst each other could enable new mechanisms for creating and maintaining relationships between cross-cultural organizations and their audiences.

Connected screens could also serve as exchange platform between the inhabitants of various cities. A repeatedly suggested idea for using these screens is to enhance the connectivity of remote communities through shared visual displays that utilize videoconferencing. These connections between remote spaces reflect the relativity of the terms "close" and "remote" in a globalized world and an increasingly transnational lifestyle. *Hole In Space* (1980), one of the early projects of this kind connected the people walking past the Lincoln Center for the Performing Arts in New York City with people in the Broadway department store in Century City (LA) through life-sized television images. The project *Hole in the Earth* (2003-2004) linked the audience in Rotterdam with people in Indonesia on the other side of the world through screens, camera, and microphones in an installation resembling a well. [Fig. 5]

In Russia, China, USA, and South America large networks are currently developing on a city as well as national level. Screens become a key element in the government, regional, and urban informational infra



Figure 5. Opening of the installation *Hole in the Earth* by Maki Ueda, Rotterdam, December 2003.

structure due to their ability to easily convey and spread content in local spaces.

The appeal of a local environment obviously is a highly subjective matter, but a sophisticated social interaction and information network in a local neighborhood could play an important role in the perception of locality, supporting a feeling of security. By connecting large outdoor screens with experiments in online worlds, the culture of collaborative content production and networking could be brought to a wider audience and serve as an inspiration.

Interactive screens integrated into urban furniture similar to a blackboard for comments, stories, conversations, could also help to circulate and access data, serving and strengthening the local community and its small-scale economy.

In 1997, Philips already was involved in a large research project called *LIME* (Living Memory), which integrated a local exchange platform into café tables and other urban furniture. Following this early example, various projects aimed at further developing the idea of interactive community boards and supporting the information exchange in a local community are currently being produced. [9]

In an attempt to address issues of fear in urban spaces, Rude Architecture implemented a network of Chat Stops equipped with interactive video technology, enabling communication between people waiting at different bus stops. If they desired, people could start a "video conference" with others waiting somewhere else. By means of communication with other inhabitants, the boredom of waiting could be alleviated through conversations, and subjective feelings of safety could potentially be increased. The project applies video communication instead of video surveillance – voluntarily and transparent, but at the same time entertaining.

The mobile phone can also be utilized as information transmitter. Various artists have rediscovered the idea of the urban dialogue in the form of speaker's corners and intelligent agent 06.02

have been experimenting with the use of SMS for public expression. The project Storyboard by Stephan Caddick used a mobile Variable Message Sign situated in public space to display submitted SMS text. Will the next step be to connect the "blogosphere" to Urban Screens? What strategies will prevent misuse and encourage high-quality submissions?

Involving an urban audience in experiments requiring participatory planning and making use of the participatory tools of new media is a great challenge. Screens in public spaces could function as mediation board between the community and the local planning department and serve as a public display for the exchange of ideas.

Jeanne van Heeswijk's project *Face Your World* – which took place in Columbus, Ohio, in 2002 – gave children on a bus access to a multi-user computer game allowing them to redesigning their communities as they envisioned them. [Fig. 6] At three bus stops, the creations were displayed on special screen sculptures presenting the results of the game to the urban community. As van Heeswijk put it, "It's about the way people look at the space around them. With everything being privatized now, people don't view the community as their own any more." [10] In this case, digital media were utilized as interaction catalysts for the participation and engagement of young people in a local community.



Figure 6. *Face Your World*: involving young kids in community planning.

## Conclusion

Content needs to be coordinated with new visions of how, when, and in what specific locations screens can be integrated in the urban landscape and its architecture. The balance between content, location, and type of screen determines the success of the interaction with the audience and prevents noise and visual pollution. Furthermore, we need to understand how the growing infrastructure of digital displays influences the perception of our public spaces' visual sphere.

Whenever we integrate a medium into the city's public space, we need to assume responsibilities regarding the sustainability of our urban society. Public space is the glue that holds urban society together. It is time to

shape future directions of the developing "screen world" in a sustainable manner. It is time to develop more creative visions for alternative, socially oriented content for various types of Urban Screens and to avoid a focus on technology. Other forces than merely commercial interests should drive the attempt to shape the future development of the emergent "screen world." [11]

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