LED SCREENS: THE DIGITAL ACCESSORIES OF ARCHITECTURE AND URBAN SPACE

ABSTRACT
A billboard has contributed to an outdoor advertising since 1830s with people's interest especially in America. In recent years, traditional paint billboards have been replaced with new digital screens which employ more reflective display components and demonstrate the embodiment of digital technology as accessories into architecture and urban space. Among advanced materials, the most prominent one is LED luminaries which are driven by intelligent software systems. LEDs have smaller size to provide more pixellation with more colour-lighting choices to create light image, and video displays. Using flexible LED curtains to dress buildings – take the form of the building - define façades as new electronic screens. In the most recent examples of Times Square and Las Vegas, these digital displays are again designed as independent elements similar to previous applications. A façade design with LED screen technology has not been considered as a part of the main construction design, it is added afterwards. The displays are defining a new interaction field, giving alternative ways to visual communication and advertising. This paper will present some current international examples with the starting samples in Turkey and highlight their characteristics in relation to media technologies as attached elements onto façades. These projects are classified in a frame of public perception, architectural coherence and spatial quality. It is observed that the building with a LED screen becomes a hanger for screens and a watching tool for public attention. To this end, designing LED screens with the light of architectural design and public interaction is suggested.
Keywords: LED screens, digital accessory, visual communication, public perception, architectural coherence, digital space quality

DIGITAL ACCESSORIES

"[...] Urban sites are lit up by ads on buildings, on high tech billboards, and in the sky, taking the spectacle to new heights (or depths, depending on how you view it)" (Best & Kellner).
As digital technologies, such as the internet, cell phones and portable computers, immigrated in our social life, computer-aided designs gained immense role in the creation of an information society and virtual spaces. The screens are beginning to form a vital part of architecture and urban space, "affecting our perception and understanding of the space around us and public realm that embraces them" (Schieck, 2008) "daylight compatible LED billboards, plasma screens exposed in shop windows, beam boards, information displays in public transport systems, electronic city information terminals, or holographic screen projections" (Struppek, 2006). Through the channels of media, world is aestheticised, employed in the cosmopolitan display and transformed into image. What we behold is a transformation of the world to sign industry by commercials, media and images (Baudrillard, 1993: 35).
Television like systems including huge letters, colourful images, and neon lights, moved from the house to the street to provide a new visual culture. Everything in social life became a "cultural sign" and an "image". Urban space is a place for culture, representation, and public communication that provides a stage for social interactions. In this role as space for discussion and exchange, urban space turned into a mass medium revealing the desires and fantasies of mass culture. In other words, urban environments are "ever more permeated with advertising and spectacle" (Best and Kellner). Busses which are covered with huge images and graphics have become mobile billboards. Buildings have been lit up by means of illuminated logos, advertising or projections to attract public attention. The influence of media also opened a new approach to architecture that is including global eclecticism and mutual influence owing to image-based communication and exchange. Signage became bigger and brighter to be more attractive than the building itself. Generally these systems were implemented on billboards as freestanding elements and were covering building's façade on a different and stand-alone level. Therefore, buildings are first and foremost carriers of these systems to represent corporate identities. In this context, a façade due to its impressive communicational character in the urban space, becomes an architectural commodity which is discovered as a huge information screen by media developers. In fact, using façade as a communication tool is not a new approach when compared to Gothic cathedrals or Renaissance civic architecture. However, from the influence of postmodern culture media signs are the spectating objects instead of façade or building itself. The impact of luminous advertising supports screen displays to form a separated layer apart from the building which has been lit up by means of illuminated logos, advertising or spotlights.

In postmodern culture, desires and fantasies controlled the corporate identity and consumer expectations. In this context, contrary to Behrens's design of AEG logo, brand developers have defined the characteristics of huge signs which have been extended in the built environment, particularly in Times Square and Las Vegas Strip, in two ways. First, billboards have been attached on building's façades to represent advertising contents while hiding all characteristics of architecture. Second, the name or the symbol of a corporate or a building is represented with huge illuminated signs. These approaches emerged as an answer to encourage new types of spectacle. In the book Learning from Las Vegas, Venturi, Scott Brown, and Izenour defined a "space" as the field of communication. Postmodernity's association with mass and popular culture in art and architecture came in the form of a reference to signs and symbols as a mean to communicate (Harvey, 1989: 284-289). Therefore, they argue for the clear communication and orientation of signs in a new age of vast space and greater pace of movement.

[...] This is not the time and ours is not the environment for heroic communication through pure architecture. Each medium has its day, and the rhetorical environmental statements of our time – civic, commercial, or residential – will come from media more purely symbolic, perhaps less static and more adaptable to the scale or our environment. The iconography and mixed media of roadside commercial architecture will point the way, if we will look (Venturi et al., 1977: 130-131).

While this relationship has been discussed in various conferences under different topics worldwide, its applications can be observed in Turkey, as well. Examples are varied: First, information boards and plasma screens have been added to public transportations and underground stations (Ankaray Station in Kızılay, Ankara). Second, large digital outdoor screens have been placed in various cities, set up in key locations for a wider audience, such as squares, parks, junctions, and underground stations (Taksim Square in Istanbul, Kızılay Square in Ankara). Third, special places have been designed to carry a stand-alone outdoor screen (Ankara Chamber of Industry). As in other countries, these approaches are commercially attractive for the market, and thus can be viewed as an inevitably growing trend.

To this end, while beginning with a purpose of digital art and entertainment installations in a public space, a digital billboard becomes a huge propaganda tool and opens new ways to commercial purposes for individual, corporate, institutional, and political. In other words, it becomes a huge advertising sign of contemporary culture, which creates the question of control and limits in the proliferation of digital billboards.

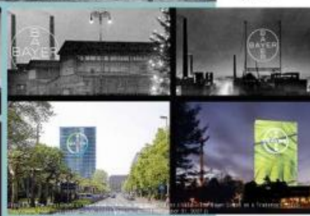
GUIDANCE TO ACCESSORIES

Media, as a different mode of communication between capitalist and consumer individual, is used as a set of all-powerful tools for circulating effective symbols on society. Media has impacts on atomized individuals or advertising society via brand image or product image (Mattelart, 1995: 26).

Contrary to the previous techniques, the most innovative ability is to carry image and video displays. This advanced technology creates digital billboards for the outdoor advertising industry.

ARCHITECTURAL COHERENCE

Huge LED screens attached on façades to reach large amounts of audiences generally after design processes. To this end they cover building without taking into consideration of architectural character, aspect or aesthetics. Therefore the place of the screen should be designed from the beginning then it can be integrated to the design of the building.



MESSAGE CONTENTS

Screens convey various types of message: branding, advertising, informing, art and entertainment, safety, graffiti, and personalized messages. A main computer system is generally the controller of these billboards; displays are driven from the information of environment (people) instead of computer itself. The messages can be sent by a computer or cell-phones through SMS or Bluetooth technology. This living and innovative advertising system provides a media information which is driven by people instead of company branding. Besides carrying a poll including people's views via voting, these billboards can give an ability to create digital graffiti.

PARTICIPATION

Creating an interaction between the society and the façade is a new form of comunicational practice, which carries the spectacles to new forms and changes the society's role from spectator to interactor. Although acting in limited forms and contents of displays, this kind of communication creates a new local culture in public space. However, these systems are legitimizing the proliferation of digital screens, and increasing their usages everywhere. Thus, in time, people will be accustomed screens with excessive advertising and strong propaganda tools.

PUBLIC INTERACTION

These billboards are driven by a computer system, updated electronically through a variety of methods. Although some of them are controlled by an independent system, some are networked together. But displayed informations can be changed rapidly. *"They are easy to view day and night, easy to create content for and messages can be quickly reprogrammed" (Brill, 2006).*

Similar to Times Square and Las Vegas Strip, cities in Turkey are increasingly lightened through a marketing language by applications of media technologies such as illuminated signs, advertising billboards, electronic screens and projectors to lit up buildings. For example, large digital outdoor screens generated by developments in LED technology have been used with the collaboration of Ströer Kentvizyon and local City Councils in various cities, set up in key locations such as squares, parks, junctions and underground stations: Taksim Square in Istanbul, Kızılay Square in Ankara.

UNDESIRED "SPAM LIGHT"

These high-tech electronic screens are new forms of television for public spectating through broadcasting commercial data as it is written on the screen at Kızılay junction "Outdoor TV". Mainly focusing on advertising, these screens also carry news and weather forecasts for information and play videos for entertainment. According to Mirjam Struppek, these large outdoor screens (both information and interaction ones) are acting as TV to the new circumstances of public viewing by broadcasting generally news and games.

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 (Struppek, 2006).

SPATIAL QUALITY

CONCLUSION

To sum up, the sculptures of a Gothic façade and pure architecture of high Modernism are replaced with buildings and spaces adorned by two-dimensional media signs of the consumer society. Hence, more visible signs produce more invisible buildings whereby a new spectacle medium is created over architecture. The section pointed out three aspects: First, architecture is no more defined with its own values and conceptions, but with images and mediatic values of consumption and popular culture. Second, this kind of building evolves into a new commodity sign. Third, although in Modern architecture logos or signs of companies were designed by architects or graphic artists in the case of AEG Factory, later they were controlled by brand developers and specialist designers to be more impressive on society. As is architectural practice, this domination of media signs increasingly pervade in urban space to attract public perception in different levels.

On the other hand, in the growing international competition among cities, tourism or the individual as a spectator gain importance. City marketing and urban management strategies create international architecture and branded shops to encourage this competition, which cause *"feeling of placelessness"*. Additionally, with their changeable contents and standard forms, digital screens are other indicators of placelessness, which also cause a *"sense of ephemerality"*. The Society of the Spectacle perceives the urban environment with the *"ephemerality of images"* instead of *"materiality of architecture"* (Ruby, 1998).

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 sitespecifity of the content in order to prevent further disconnection of the perception of our urban space from the actual locality (Ruby, 1998: 179).

The most significant observation of this study is the inadequacy in the controlling of undesired proliferation of digital screens. The projects discussed here were designed in collaboration with various experts such as designers, architects, engineers, and company developers. Although they were defined as experimental laboratories of new media and digital technologies, their results cannot be observed in the sources. The proliferation of such projects cause uncontrollable intentions toward excessive advertising, powerful branding, and strong propaganda.

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