

Urban Environments as a Medium of Communication

Media Screens

introduction,
key issues,
potential problems,
further research



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Media Screens

“The Architecture is no longer the play of masses in light. It now embraces the play of digital information in space”.

E-topia : William J. Mitchell, 1999, MIT Press.

Large projection displays are becoming more and more pervasive in urban spaces. However.....

currently there is no methodology for designing display walls as an integral part of the built environment.



Introduction

- Recently information displayed on large projection walls has become more and more ubiquitous in urban spaces.
- Buildings are transformed into dynamic moving images that affect our perception and understanding of the space.
- Currently most screens serve mainly commercial purposes, and do not taking into consideration the surrounding environment.
- Do not broadcast information aimed at sharing community content nor support public social interactions.

Terminals . .

projection displays part of our daily environment.



Utrecht Centraal Station
2006



Urban Screens . .

- ❑ Various kinds of dynamic digital displays in urban space such:
 - LED boards, LCD screens, information terminals but also intelligent architectural surfaces
- ❑ Urban Screens are not just a technology or a (new) infrastructure.
- ❑ Screens as platform to reinforce the idea of public space as space for creation and exchange of culture.
- ❑ An experimental visualisation zone, a threshold of the virtual and urban public space

Applications

The building as a display screen

Entertainment :	Las Vegas
Business:	The NASDAQ headquarter
Art and entertainment:	KPN Telecom Office Tower Rotterdam

The building as a projection surface

Events	Poppy projection, London
Supporting social interactivity	Body Movies , Rotterdam

The building as a display screen

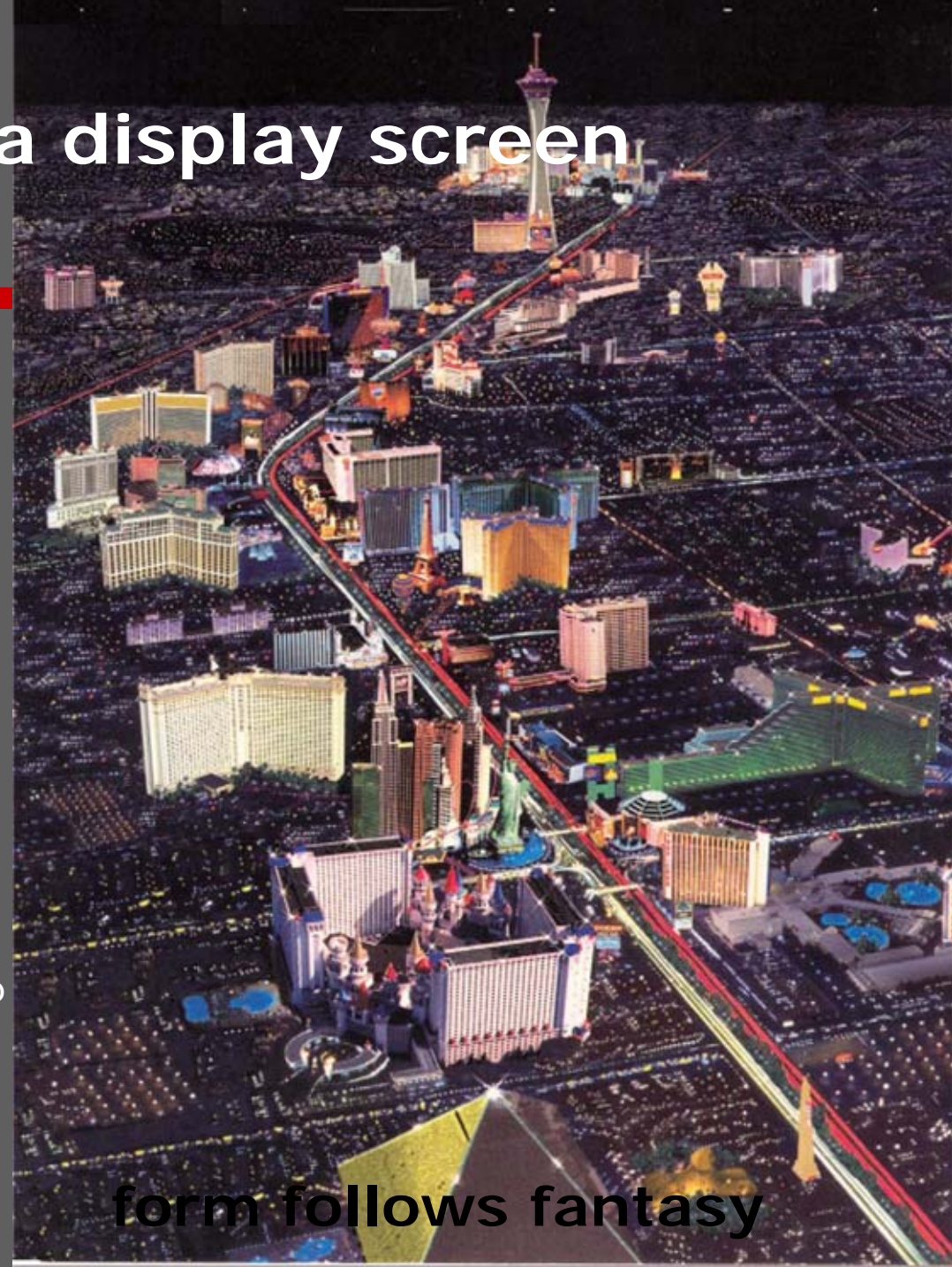
Entertainment

Las Vegas, Nevada, USA (1939-)

- The Las Vegas Strip, a five-and-a-half-mile highway.
- a scattered landscape of buildings, parking lots, and tempting advertising images defer to the car

“In Las Vegas , form follows fantasy, it is a mass medium revealing the dreams, fantasies, and desires of American mass culture. A mass medium such as television can change every few weeks to reflect craze for rap music or...or.. ”Hess, 93.

Arial view of the Las Vegas main Strip



form follows fantasy

The building as a display screen

Entertainment

Las Vegas, Nevada, USA (1939-)

- Las Vegas' Strip grew by experiment, mistakes, wild visions, pragmatic solutions, and chaotic collage.
- In the 1940's neon seemed to be driving the architectural development.
- Recently many LCD screens dominated the Strip skyline; broadcasting new dreams and fantasies.

View of the Las Vegas main Strip 2004



The building as a display screen

Business

The NASDAQ, Times Square, N Y, 2000

- NASDAQ building with LED display (36.6 m high) broadcasting up-to-the-minute financial news, market highlights, and advertising.
- The corner is emphasised by a round tower, housing the curved, 1,100 m² NASDAQ ticker and high-tech electronic display that wraps around the cylindrical.
- The LED screen is holed at intervals to let natural light into the interior behind the screen.

transformation of space perception through time,
from convex to concave to convex again



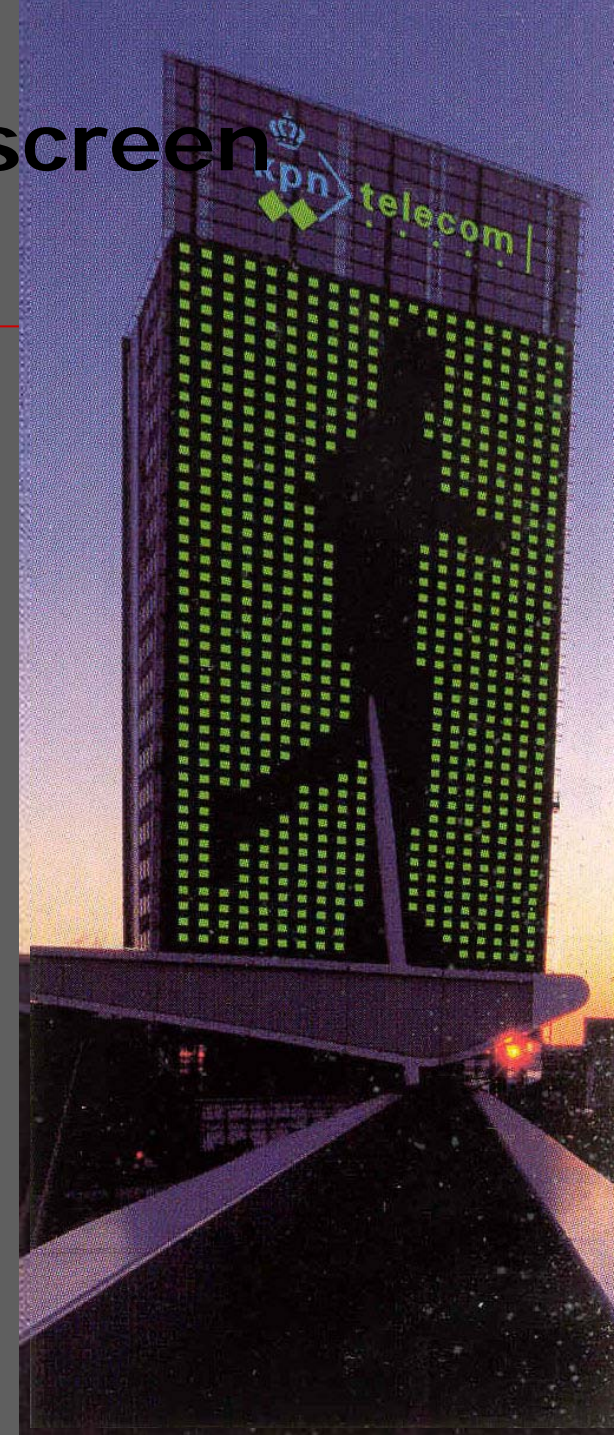
The building as a display screen

Art and entertainment

KPN the Rotterdam, NL, 2000

- Unlike the setting in Times Square, the building is a free standing structure , seen from a 2-km distance.
- Billboard screen consisting of square green lamps in a 22*41 grid creating a w37.8m * h72m image or animations.
- A ticker that shows information related to the company, and Rotterdam events.
- Trade off: the billboard screen faces the residential areas , which raises “light pollution” issues.

moving symbols on the KPN screen viewed from the platform





BIX : a permanent light- and media installation for the Kunsthaus in Austria.

A matrix of 930 fluorescent lamps is integrated into the eastern acrylic glass facade of the biomorphic building structure



Kunsthhaus, Graz 2006

The building as a display screen

Recreation and Entertainment
Crown Fountain: Chicago, USA, 2004

- two 16-m high glass block towers at each end of a shallow pool
- The projected video does not broadcast a pre-programmed commercial advertising.
- Display of community related images.
- Observers engage with the display



Facial elevations among the skyscrapers

The building as a projection surface

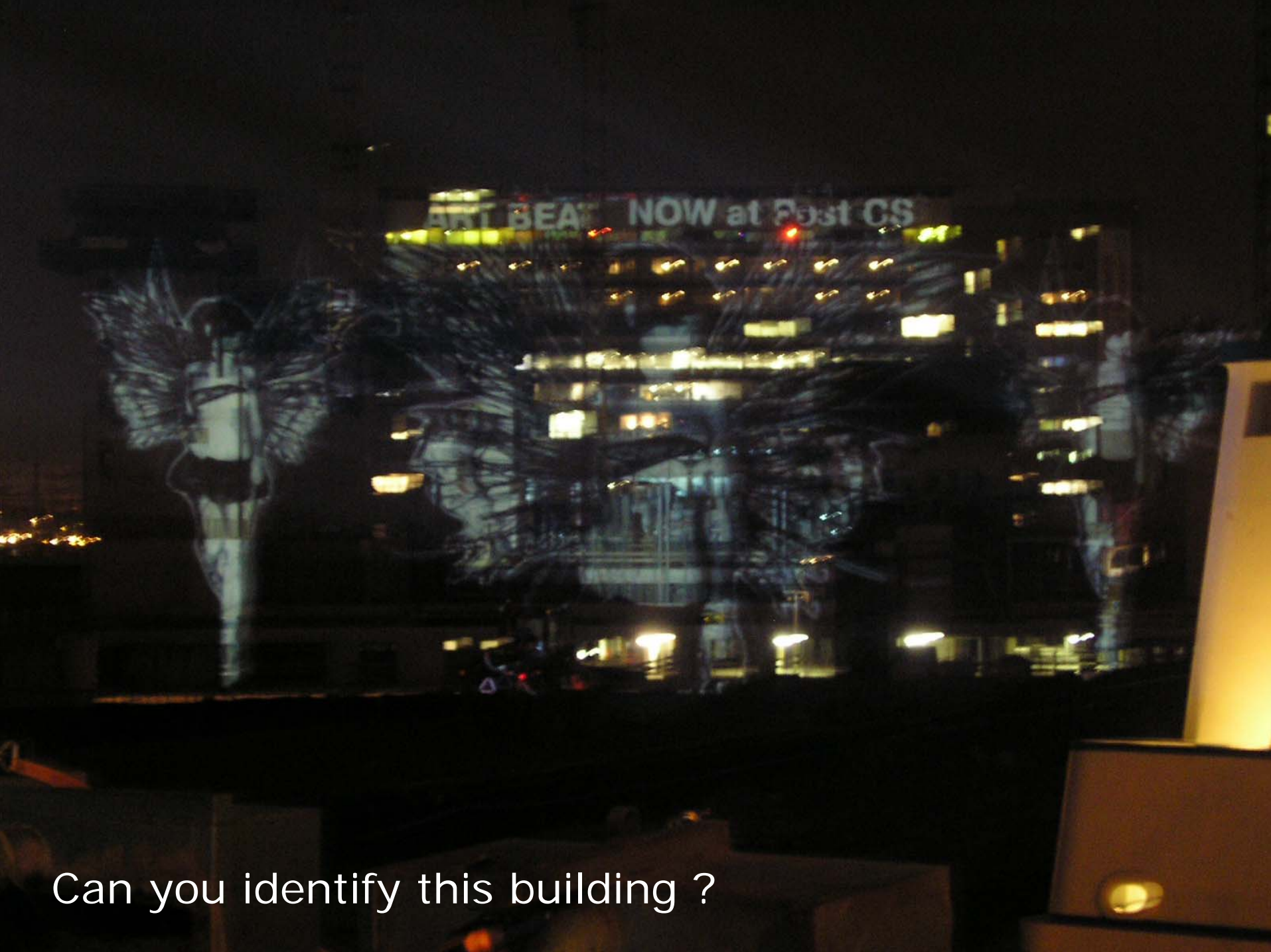
Events

Shell site, Riverbank, London 2004.

- Physical and virtual architecture define the space to accommodate different scenarios.
- The 26-storey building was covered. Eight projectors were sited 100m away.
- Flexibility; but might lead to less integrated solutions (less relation to the original building).
- Could be implemented in conversion of listed buildings.

Shell centre in London as a projection surface





Can you identify this building ?



The building as a projection surface

Supporting social interactivity

Body Movies-Rotterdam, 2001



The building as a projection surface

Supporting social interactivity

Body Movies-Rotterdam, 2001

- Flexibility,
- The pieces are usually temporary interventions designed to establish architectural and social relationships where unpredicted behaviour may emerge
- Exploring different representations of narratives instead of having a loop of advertisement that will create a boring backdrop after a while,
- The visitors can make a change; they are engaged in the solution,
- There is no inherent connection between the site and the installation,
- People who are participating are reflecting,
- Perception in this case reflects the act of seeing is the fact of inventing. Spectators play an active role and not a passive one,
- Using the shadow metaphor: people adopted the shadow interface very quickly.
- the buildings pretend to be something other than themselves

Discussion

Towards an integrated architectural media scape

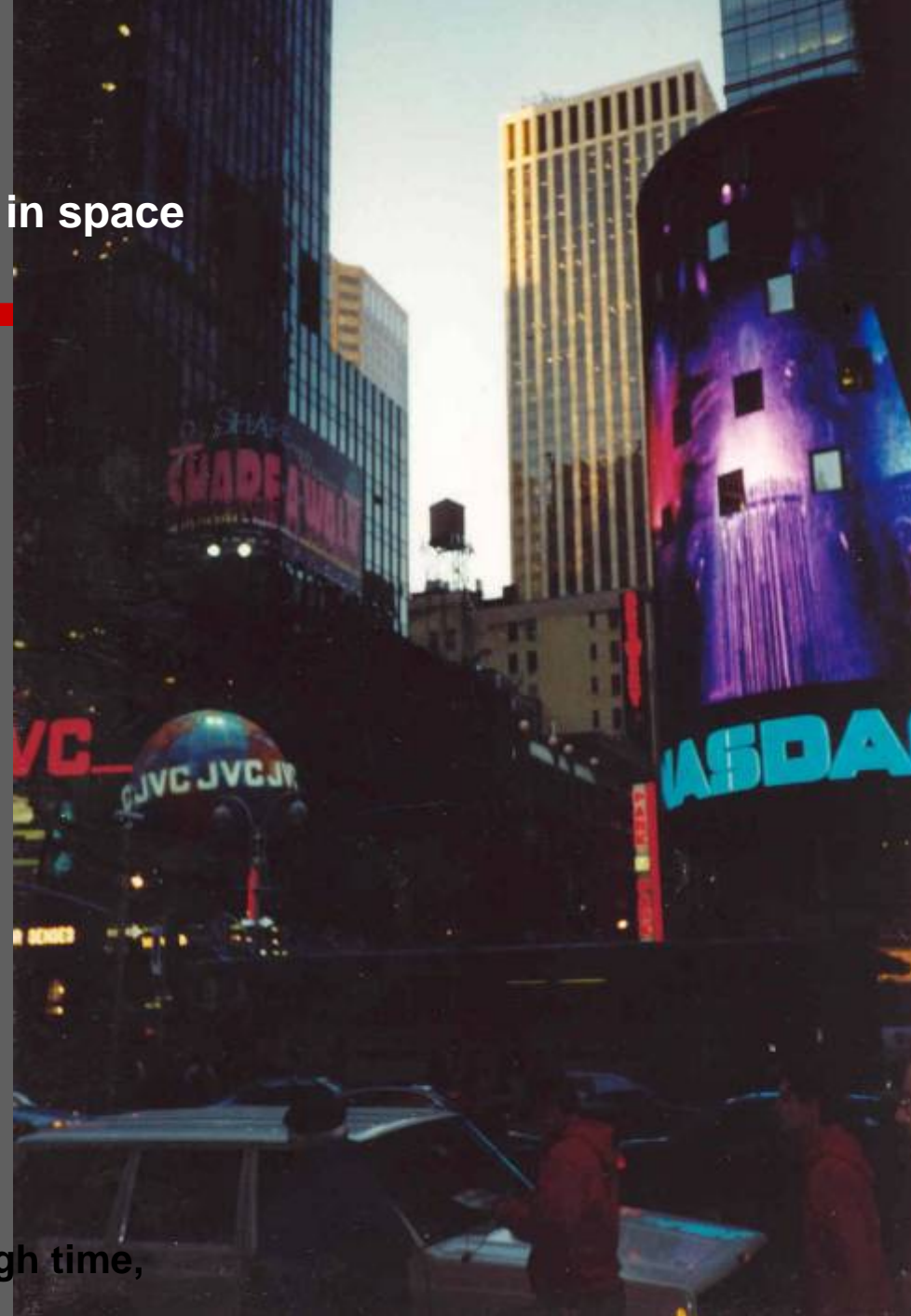
- discuss key relevant issues
- highlight potential problems

Discussion

Spatiality: signs in space vs. forms in space

spatial elements rather than
object elements:

Times Square



Times Square: Building transformation through time,



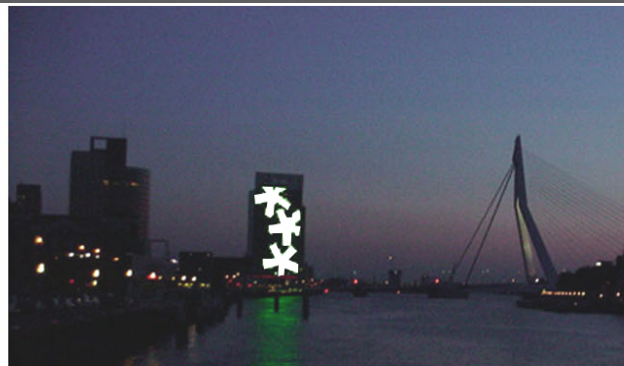
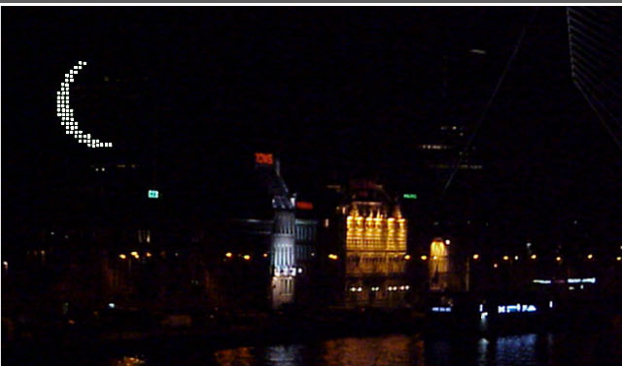
Times Square: Building transformation through time, from static mass to a dynamic space

Discussion

Spatiality: signs in space vs. forms in space

architecture of communication over space;
communication dominates space as an element in architecture:

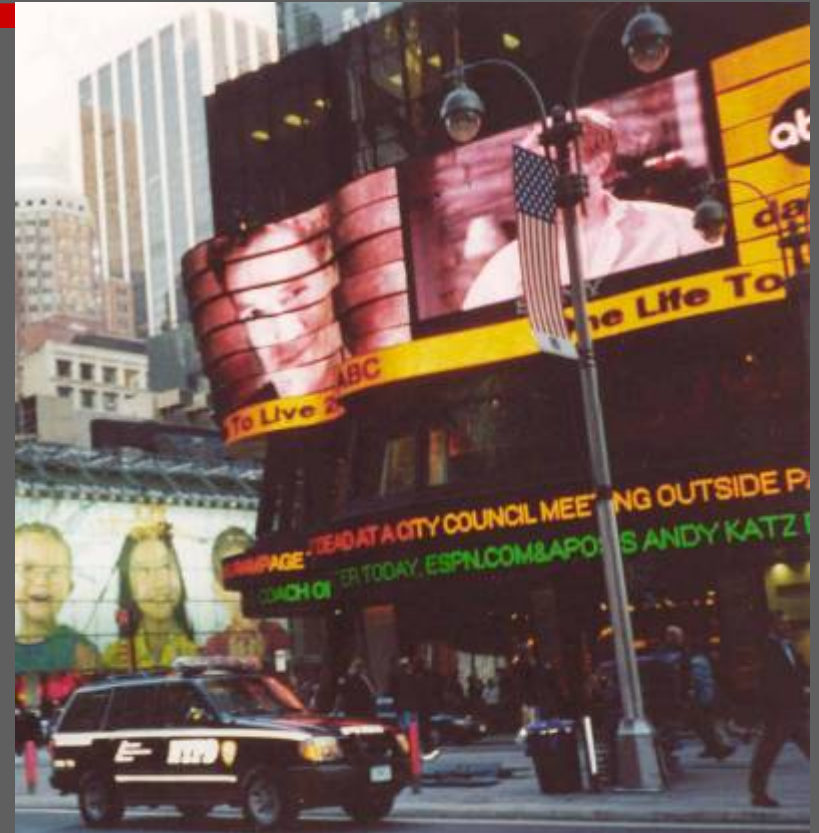
KPN building



symbol in space changes throughout one day- the building as a communication media

Discussion

Spatiality: signs in space vs. forms in space



dominance of sign over space at a pedestrian level: news and events are displayed in real time: **Time Square ticker**

Discussion

Spatiality: signs in space vs. forms in space

Las Vegas:
functional, symbolic, and
persuasive messages are
closely interrelated

on the Strip- a casino
becomes one big sign.
Or the shape of the
building reflects its name

And more recently, using
LCD screens with the
animated images that
dominate the Strip
skyline.



Discussion

Social interactivity vs. commercial monologue

Most screens serve mainly commercial purposes, without taking into consideration the surrounding environment.

They broadcast advertising information related to big advertising brands that bombard the inhabitants of the city.

Typical use of new technologies: perform a pre-programmed commercial monologue



Discussion

Social interactivity vs. commercial monologue

Artists across the world are experimenting with the new technology to augment the urban public domain through the support of social interactions,

new media :
reinforce existing social structures, space and chance encounters,
and hold out a prospect for promoting new social forms.

Chicago
Rotterdam



Crown Fountain: Chicago, USA, 2004

Content...

- ❑ broadcast information aimed at sharing community content



- ❑ TV broadcast station: BBC in collaboration with Philips and the local council

D-TOWER NOX, 2003



Doetinchem, NL, 2005

D-TOWER NOX, 2003



Doetinchem by night, NL, 2005



Discussion

Location and mobility

Location

The location of the animated screens or signs plays a critical role in the perception of the animated images and the reception of the communicated messages.

The parameters include:

- the location of surfaces,
- orientation of surfaces,
- size, resolution and image refresh rate .

KPN: the animated screen is facing a residential area.

Levels

Designing for the highway is different than for the pedestrian.

Discussion

Location and mobility

Las Vegas:
signs were designed
to attract on different
level:

- on an eye level,
- on a car level and,
- to be seen from the highway.



Discussion

Location and mobility

Mobility

of the observer (people) and the observed (the screens) through High-speed mobility changes the perception of static and dynamic; transforming images from two-dimensional to three-dimensional.

Las Vegas:

big LCD screens are designed to attract from different directions by arranging them spatially on a curved rail.

- Change of levels and,
- Change of orientation dynamically.



Discussion

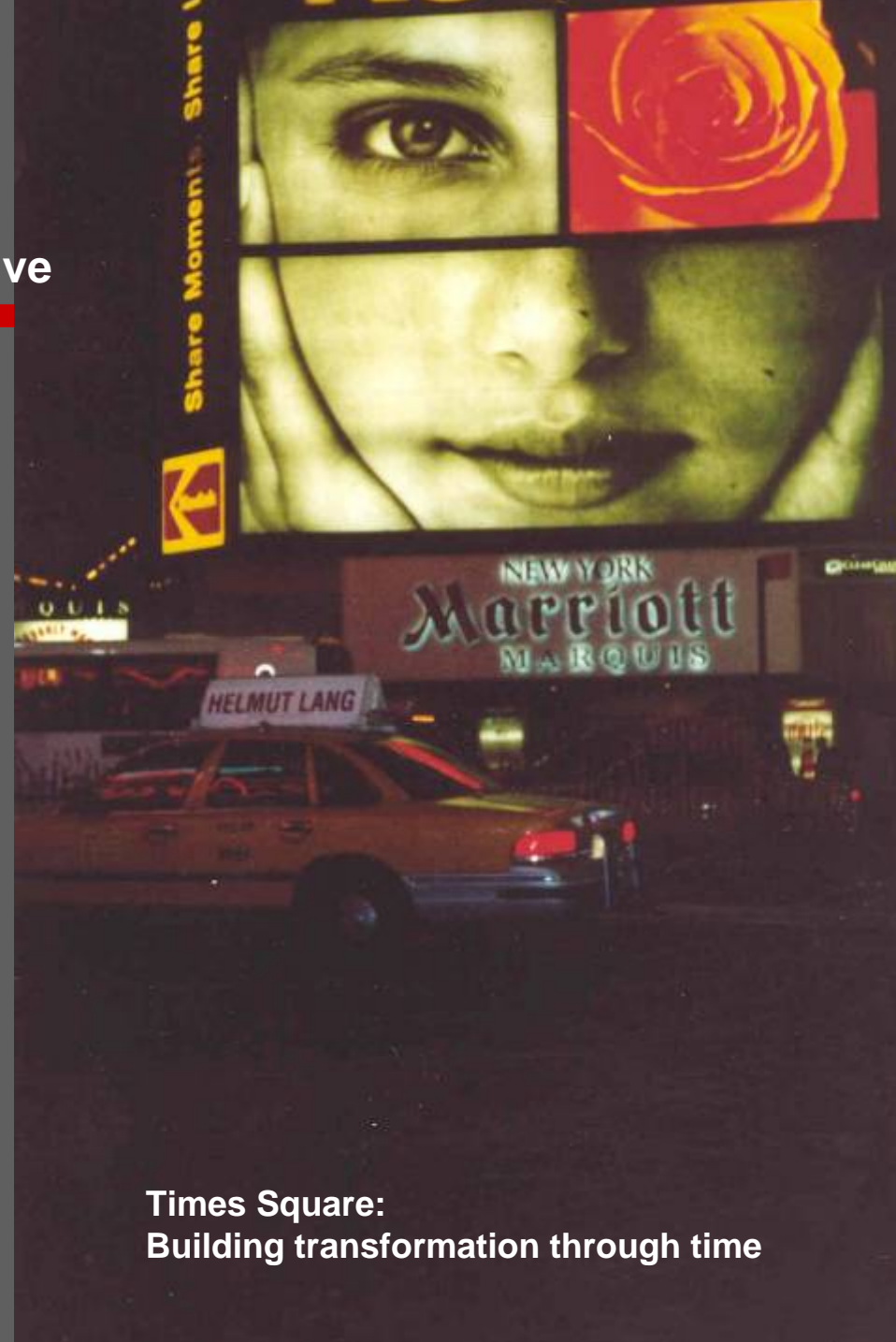
Relationship of elements and narrative

Challenge:

to develop strategies of articulating the new public domains that connect physical urban spaces and the potential space created by the new technologies.

Using narrative (?)

Make sense of the visual dynamic information and the interaction space through integrating them into a meaningful whole.



Times Square:
Building transformation through time

Discussion

Engagement with commercials using games & narrative





ALL NEW MINI.
READY?





Surveillance..

CCTV in buses...



Direct messages...



Awareness...





Entertainment...

Importance of space, place and context in experience Design:

- ❑ What kinds of digital media experiences have people valued?
- ❑ What constitutes a compelling digital media experience?
 - Magic moments
 - Design for immersive flow
 - Design for emergence
- ❑ How can the underlying technology (or framework) be shaped to best deliver those values?

can we learn from existing successful urban installations ?
Anish Kapoor, 2004



Chicago, 2007





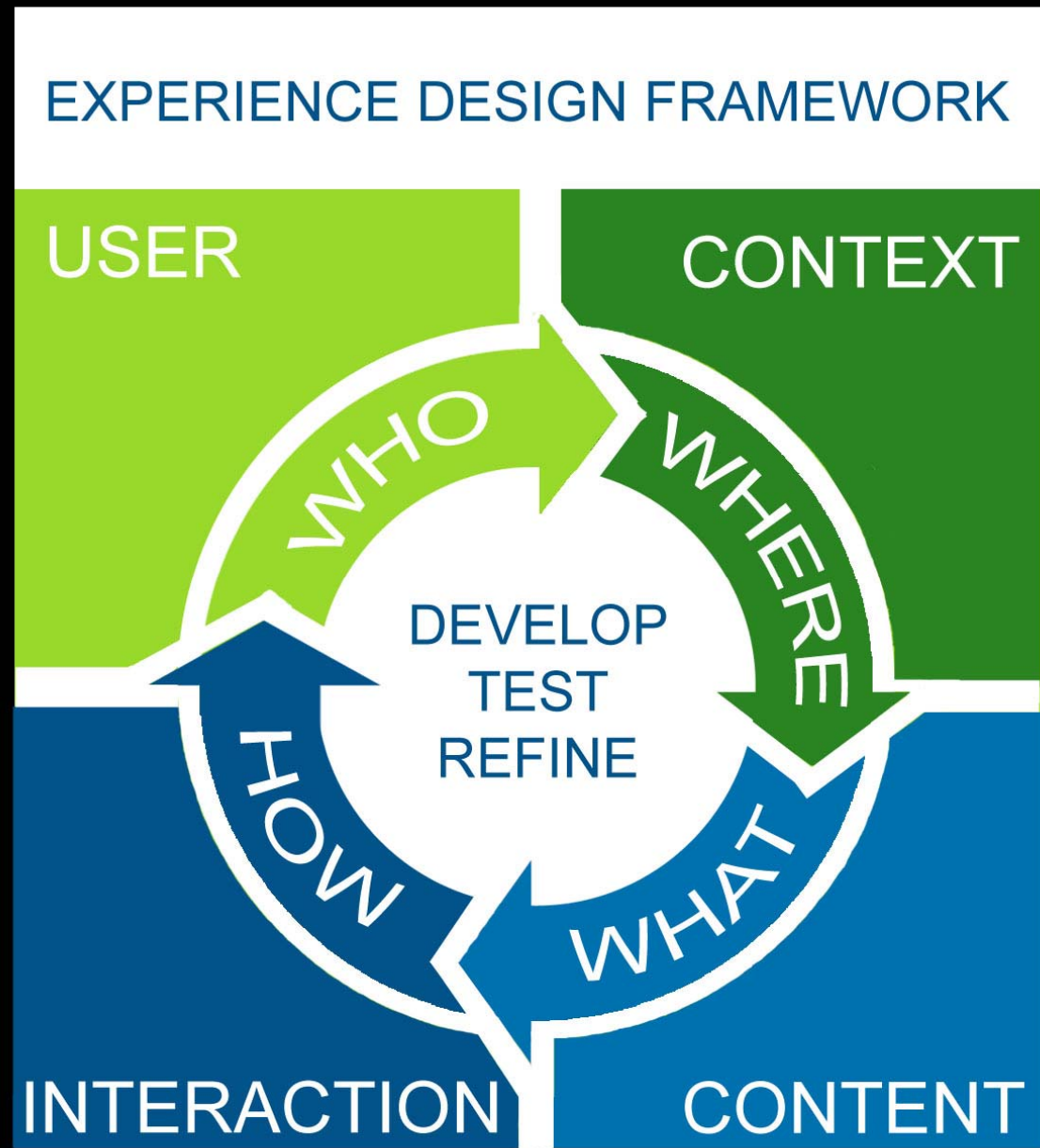
□ can we learn from existing successful urban installations?



Millennium park, Chicago, 2007

Importance of:
Space,
Place & Context in
Experience Design

- o Who
- o Where & When
- o What
- o How and



The LED urban carpet

the digital platform as a physical stage for social encounters

Exploring digital encounters in the city



Carolina Briones, MSc AAC, UCL, 2006

Initial findings...

1. Curiosity



2. Different levels of awareness



3. Immersion



4. A socializing platform



Conclusion

- the architectural landscape in many cities has been undergoing a major transformation.
- Large LCD screens and LED billboards are appearing as part of the city architecture, affecting our perception and understanding of the space around us.
- a new form of urban space is emerging that is fundamentally different from what we have known and hence we are ill-equipped to deal with and analyse.
- We argue the need for developing a theoretical framework on which to found design principles for the new emergent urban forms that synthesise between the virtual dynamic (information) and the physical environment (public space).
- In order to achieve real integration on an urban level we need to consider the design of space as a whole, bringing together the physical space, the dynamic visual information and the interaction space.

Emergent Issues . .

Obsolescence vs. flexibility

What happens to the display wall in three to five years, when the technology has fundamentally changed?

Privacy concerns

especially in the case of capturing participants' input, using projections, cameras, sensors, and projections.

Light pollution (KPN Rotterdam)

might require the implementation of regulations to regulate the amount of light-intensive signage and the massive light displays and its effect.

Conclusion

Of particular concern is:

- How to design interaction spaces to support the private information sphere in public (physical) spaces, and
- Understand people's relationships with the interaction space and the information wall and how this will change or re-inform people's perception of different spaces.
- What about the activities that take place behind the buildings' walls? To which degree can they influence or help inform the content of the broadcasted information or shape the moving images.

These issues . . . require further research

Light Criticism (short movie)

Graffiti Lab

Questions ?

www.urbanscreens.org

http://firstmonday.org/issues/special11_2

<http://www.lozano-hemmer.com/eprlh.html>

Kunsthhaus, Graz: <http://www.bix.at/>

Sources:

- Ava Fatah gen. Schieck, Feb. 2006, Towards an integrated architectural media space . *First Monday*, 11(2)
- William J. Mitchell, *E-topia : "urban life, Jim - but not as we know it"* , 1999, MIT Press.
- Mirjam Struppek, 2006, "Urban Screens - The Urbane Potential of Public Screens for Interaction" in: *intelligent agent Vol. 6 No. 2, Special Issue: Papers presented at the ISEA2006 Symposium.*