

The Quartier des Spectacles: developing the interactive potential of dynamic digital displays in actual public space

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ABSTRACT

Produced by a non-profit organization, this 7-minute video presents the LUMINOUS PATHWAY, one of several urban planning projects intended to develop the potential of a public space located in the downtown core of Montréal, Québec. This environment of one square-kilometer comprises an infrastructure of eight permanent digital media façades used at night to showcase interactive public art pieces and explore various strategies to enhance public interaction. It is run by the Quartier des Spectacles Partnership (PQDS), an organization that brings together borough stakeholders such as local residents, non-profit organizations, elected representatives, academic researchers, artists, cultural producers, venues and media companies. In the years to come, the PQDS will collaborate with SIAT's *Making Culture Lab* to conduct empirical studies around these media façades. Using design ethnography and collaborative methodologies, our goal is to generate theory and design principles to harvest the interactive potential of dynamic digital displays in actual public space.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous ; J.5 Arts and humanities: fine arts.

General Terms

Design; Human Factors; Theory.

Keywords

Dynamic digital displays; design ethnography; collaborative methodologies; urban screens, public space technology design.

1. Program of Research

Whether they are used to publicize contextual ads or broadcast news on subway platforms, the majority of dynamic digital displays (DDD)s situated in actual public space currently remain non-interactive; They are mostly used to deliver information. Yet the past decade has seen HCI research labs design a number of interactive digital displays. Often deployed in controlled private or semi-public settings, their designs are rarely grounded in a thorough analysis of how they might be used “in the wild”.

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Our lab is concerned with studying and developing the interactive potential of DDDs in their natural settings. Architectural scale dynamic digital displays constitute our object of study because, on the one hand, we are interested in screens large enough to attract and retain people's attention in the built environment, and on the other hand, we are concerned with creating new forms of co-located interaction in publicly accessible urban spaces.

The increasing ubiquitous presence of DDDs in the very fabric of the city is changing the way we experience urban space. With the rise of pervasive computing and mobile HCI, we believe that it is just a matter of time before personal computing devices are routinely networked to DDDs to enhance the blending of physical and virtual worlds as we are currently seeing in the field of augmented reality. Accordingly, in collaboration with PQDS stakeholders, the *Making Culture Lab*'s program of research for the next three years will investigate the different forms that interactivity can take in the space under study shown in Figure 1.

Our research is presently still in the exploratory stages. In 2012-13, we are presenting a number of published theoretical papers proposing analytical frameworks and operational concepts to prepare for our future empirical studies [1][2][3][4].

In the fall of 2013, we will be conducting an evaluation of a crossmodal interactive dynamic digital display to be projected on the media façade identified by a white box at the upper right-hand corner of the blue square border line in Figure 1. The spoken word captured on site with microphones constitutes the input material for an interactive artifact in which sound, vision and proprioception are the senses that come into play. This PQDS and NFB interactive public art project called MEGAPHONE seeks to revive the historical concept of the “Speakers’ Corner”, a designated area in the city where all citizens could exercise free speech in an open forum.



Figure 1 - Bird's eye view of architectural scale digital displays located within a perimeter of 1 square-kilometer. The white rectangular shapes are some of the permanent media façades.
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