Staged Façades:
Peripheral Displays in the Public

Bernhard Wally, Research Studio Pervasive Computing Applications, Austria

Alois Ferscha, Research Studio Pervasive Computing Applications, Austria

ABSTRACT

Media façades, realized through projection systems, could be a promising technology for scalable public displays in urban spaces. With low requirements regarding the infrastructure and virtually no influence on the buildings' fabric, projected façades offer exceptional flexibility and extensibility as well as easy maintenance. As cities are increasingly confronted with digital signage products besides other public display systems, a projector-based system offers the possibility to be switched off and restore the screen to its previous state in the blink of an eye. We present the prototypical implementation of a "Staged Façades Framework" leveraging a façade's structure and ornamentation for dynamically adapting pieces of multimedia content. [Article copies are available for purchase from InfoSci-on-Demand.com]

Keywords: Content Adaption; Out-of-Home Media; Public Displays; Urban Development

INTRODUCTION

At times in which computers appear to be everywhere while at the same time – due to miniaturization and rigorous embedding – physically appear nowhere, where tiny computing devices are continuing to pervade into everyday objects, users presumably do, and increasingly will not notice them anymore as separate entities. Appliances, tools, clothing, accessories, furniture, rooms, machinery, cars, buildings, roads, cities, even whole agricultural landscapes increasingly embody miniaturized and wireless, thus invisible information and communication systems. Information technology rich systems and spaces are being created, radically changing the style of how we perceive, create, think, interact, behave and socialize as human beings, but also how we learn, work, cultivate, live, cure, age as individuals or in societal settings. A major issue in such technology rich settings is how we perceive information, how we interact with digital media, how we manage to sustain attentive to informa-

tion of interest, how we stay aware of the dynamics and changes of information, or how we manage perceptual complexity and information overload.

In an attempt of relating the understanding of science and the understanding of art, (Vogel and Balakrishnan, 2004) postulates scientists to see only the "observed in the material world", while the artist sees the "spiritual": "While the scientist describes and predicts, the artist distils and presents. Interpreting science [...] means balancing the desire of scientists to spew data with the artistic urge to create a transcendent experience." In quintessence, "Informative Art" (Holmquist and Skog, 2003) is art with electronics, with content and presentation being primary, while technology, form and function is fused and secondary. Following Buckminster Fuller's belief, that as technology advances, art begins to resemble science, we here addresses the process of "creating an (urban) experience" from "data spews" by means of artful display installations, often referred to as informative art or ambient displays, or ambient information systems. Here, in this work, we refer to such systems as "Peripheral Interfaces" or "Peripheral Displays", stressing the fact that these interfaces aim at not overloading human attention, but rather deliver information to the periphery of perception, mostly in an aesthetically pleasing way.

Of particular interest in this work are peripheral displays in cities. According to the most recent U.N. estimates, by the end of 2008, half the world's population will live in urban areas and about 70 percent will be city dwellers by 2050. Thus, cities are becoming increasingly the most relevant places bringing together people from many areas of culture and life, acting as important opinion leaders, initiators of change, or providers of new opportunities. Expressions of communication among citizens in urban settings are public displays, addressing and delivering information to crowds, rather than individuals. Contemporary public displays, designed to raise attention (for e.g. commercial purposes like advertisement), have started to aggressively pollute the visual appearance of a city, and paradoxically, by that continuously distracting attention. Aggressive public display installations and settings hence fail to achieve their purpose, encouraging a new style of city displays, seamlessly and unobtrusively embedded into the architectural appearance of city.

PERIPHERAL DISPLAY CONCEPTS

Peripheral interfaces were proposed to provide users with information considered relevant at arbitrary points of work or living engagement, originating from many different – mostly geographically dislocated – sources and presented at the periphery of human perception. Particularly, and most importantly, if visual perception is concerned, and if the flow of information is unidirectional from the display to the user, we thus use the term "Peripheral Displays". Having the displays operate in the periphery of a user's awareness allows other user tasks to sustain primacy. Much like the information presented by clocks, posters, paintings or windows, peripheral displays move to the centre of attention only when appropriate and desirable. Computational counterparts of such displays have been designed to support group awareness in work groups in virtual space settings, for knowledge dissemination in enterprises, for users of instant messaging systems, for deaf users, to keep in touch with family members, or to display a cities health

9 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/article/staged-façades-peripheral-displays-public/3875

Related Content

An Ontology-Based Context-Aware Infrastructure for Smart Homes
Bin Guo, Daqing Zhangand Michita Imai (2011). *Handbook of Research on Ambient Intelligence and Smart Environments: Trends and Perspectives (pp. 272-299).*
www.irma-international.org/chapter/ontology-based-context-aware-infrastructure/54663

Fuzzy Sematic Segmentation and Efficient Classification of Lung Cancer Multi-Dimensional Datasets
Patil Prabhu Dev, Shantala Devi Patil, Vishwanath R. Hulipalledand Kiran Patil (2022). *International Journal of Fuzzy System Applications (pp. 1-12).*
www.irma-international.org/article/fuzzy-sematic-segmentation-and-efficient-classification-of-lung-cancer-multi-dimensional-datasets/306276

Evaluation of Machine Learning Techniques for Crop Yield Prediction
Divya Goel, Payal Gulati, Suman Kumar Jha, Dr Nitendra Kumar, Ayoub Khanand Priti Kumari (2022). *Artificial Intelligence Applications in Agriculture and Food Quality Improvement (pp. 112-128).*
www.irma-international.org/chapter/evaluation-of-machine-learning-techniques-for-crop-yield-prediction/307422

On Being a Peer: What Persuasive Technology for Teaching Can Gain from Social Robotics in Education
Lykke Brogaard Berteland Dorte Malig Rasmussen (2013). *International Journal of Conceptual Structures and Smart Applications (pp. 58-68).*
www.irma-international.org/article/on-being-a-peer/100454

Learning Words from Experience: An Integrated Framework
Annette M. E. Hendersonand Mark A. Sabbagh (2013). *Theoretical and Computational Models of Word Learning: Trends in Psychology and Artificial Intelligence (pp. 109-131).*
www.irma-international.org/chapter/learning-words-experience/74891