

# Mixed-Initiative for Situated Interaction with Public Displays

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# Summary

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# Motivation

**Public digital displays** have become ubiquitous but have not yet attained their full potential as

cultural **reference objects** of a place,

objects with an **active role** in a place,

a source of **meaningful situated interaction**,

a **mirror of the social environment**, and something that helps define that environment.

# Challenges

How to automatically infer and **characterise the social environment** of a public display

How to provide **interactive features** that users recognize and can **use in a shared manner**

How to **entice and react to users'** interactions with the display

# Approach

**Interaction** is fundamental to achieve this view

not only to support public **situated interaction**  
with and between people,

but also to enable the display to **characterise** and  
adapt to the place.

# Approach

Build on the concept of **digital footprints** that result from **interactions** with public displays.

Just as a footprint can tell us something **about the person** that made it,

so can a **display learn about a user** by looking at his digital footprints.



# Approach

Develop **mixed-initiative approaches** that

allow the display **to entice people to interact** and

**guide people's interaction** in a way that allows the display **to**

**collect traces of activity and interests**

# Objectives

Develop a **mixed-initiative interaction** model that builds on the digital footprints by

studying interaction mechanisms that produce **relevant** footprints,

studying how to provide those interactive features in an understandable and familiar way,

studying ways to generate them **efficiently**, and

studying system-initiative approaches to **entice** users into producing more digital footprints

# Objectives

Understand if this approach is effective at  
generating an **evolving display that adapts** to the  
place

generating a display that is **perceived as a  
shared** object

fostering **new kinds of social interaction**

# Methodology

Study **interactive features** and the **digital footprints** that result from them and that the display can use to characterise the place

Study **interface conventions** used in standard GUI desktop or Web interfaces and how they may be **adapted to public display interaction**

Perform **real settings experiments** with different situated display solutions

# Current work

Cardoso, J. C. S. & José, R. Meersman, R.;  
Herrero, P. & Dillon, T. (ed.) **A framework for  
context-aware adaptation in public displays**  
*OTM 2009 Workshops, Springer-Verlag Berlin  
Heidelberg, 2009, 118-127*

Study interaction conventions used on standard  
systems like desktop or web interfaces that can be  
adapted to public displays

The End

Thank you!