Supporting Tourism with Public Interactive Displays

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ABSTRACT
Interactive displays are common in public and semi-public areas, such as museums, shopping malls, train stations, and even on streets. Especially with the emergence of new ways of interaction, interactive displays could be introduced to popular tourist attractions to support tourism. The aim of this tutorial is to prepare its participants for designing such interactive public displays. The tutorial will first introduce participants to state of the art in interactive public displays. This will be followed by a city tour where a number of local attractions are visited. Finally, the participants will brainstorm and create concepts for novel interactive public displays that aim to improve the experience of visiting tourist attractions.

CSCS CONCEPTS
• Human-centered computing → Human computer interaction (HCI); Interaction techniques; Interaction design.

KEYWORDS
public displays, interaction techniques, tourism, attractions, user experience, landmarks, in-the-wild deployments

ACM Reference Format:

1 INTRODUCTION
Interactive displays are a common sight in various public and semi-public locations. These displays are sometimes encountered in tourist attractions such as museums; however, they are much more scarce in certain types of attractions such as architectural marvels. Still, interactive installations have the potential to greatly improve the experience of visiting tourist attractions, for instance, by offering visitors relevant information and services, or educational or recreational content [5].

Recently, new technologies have brought forth more novel ways of interaction, such as mid-air gestures [9], eye gaze [6], and multimodal approaches [2, 8, 11]. Some creative solutions also combine location tracking with novel interactions [10, 11]. Moreover, augmented reality can also be combined with interactive displays, for example, through the user’s mobile device [1, 3].

These developments create opportunities for designing new and creative interactive experiences to support tourism. Such systems can serve as anything from convenient information sources to playful, leisure-oriented activities. Especially from a tourist standpoint, a particularly successful interactive installation may even become an attraction in itself.

The aims of this tutorial are two-layered. First, we aim to give the participants a comprehensive overview of interaction with public displays using various modalities, and provide them with a rich domain in which they can apply the acquired knowledge to design interactive public display applications. Second, we have communal long-term goals: through the observations, brainstorming, and discussions conducted throughout this tutorial, we aim to 1) understand the unique challenges and opportunities that the context of tourism brings to the design and deployment of interactive displays, and 2) produce novel concepts for interactive displays that support tourism. Attending this tutorial does not require prior experience with interactive displays, and because the brainstorming focuses on ideas and concepts, no technical expertise is required.

2 TUTORIAL STRUCTURE
The tutorial is split into three parts: an introduction to interactive displays, a city tour to nearby attractions in Palermo, and a hands-on activity. The detailed program is presented in Table 1.

2.1 Introduction to Interactive Public Displays
The tutorial will start with an introduction to public displays, with a focus on novel concepts and the challenges with deploying public displays in the wild. The aim of the introduction is to offer participants sufficient background knowledge to carry out a brainstorming task later on. The primary covered topics are as follows:
- Design space of interactive public displays. This topic will cover the seminal research on public displays and audience behavior, such as how people behave around public displays [4], what

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### 3 OBJECTIVES AND EXPECTED OUTCOMES

During this tutorial, our communal objectives are as follows:

- **Objective 1:** Dissemination of knowledge: through this tutorial, participants should have a general understanding of the possibilities and challenges in the context of interactive displays.
- **Objective 2:** Identification of the unique challenges and opportunities in the design and deployment of interactive displays that support tourism.
- **Objective 3:** Production of novel concepts for interactive systems that aim to support tourism.

The concepts produced through this tutorial have the potential to lead to fully realized research projects in the future.

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### REFERENCES


