



Macrographia

Overview

Macrographia is a system that presents very **large images**, which visitors can **explore by walking** around in a room. The images are projected on a screen which takes up one wall of the room and are analysed part-by-part depending on the location of each visitor in the room. Visitors enter the room and the system follows the movement of each one separately. When someone stands in front of a section of the image, depending on the distance from the screen, the section of the image she/he views and the caption underneath changes. There are several layers of information, depending on the size of the room. Visitors can select the language of the accompanying text by entering the room from the left or right side.



Macrographia



Each visitor creates an itinerary for himself



The section of the image in front of the visitor changes according to distance

Target Domains

The system is suitable for any cultural heritage or commercial organization.

Description

The system is installed in a room in which a **computer vision** system tracks the position of visitors. Macrographia can present large scale images of artifacts, with which one or more visitors can concurrently interact by walking around. Visitors enter the room from an entrance opposite the display. The vision system assigns a unique id number to each person entering the room. As help signs illustrate, visitors entering the room from the right-hand side are considered to be speakers of one language, for example English, while those from the left-hand side of another, for example Greek. When at least one person is in the room, a piece of music starts to play. The room is conceptually split in several zones of interest, delimited by different themes

presented on the projected image. These zones divide the room in vertical slices. The room is also split in several horizontal zones that run parallel to projected image, which are delimited by their distance from it. Thus, a grid is created, comprising many interaction slots. When a visitor is located over a slot, the respective projected image part changes and, depending on the slot's distance from the wall, visitors can see enriched images, accompanied by related information.

All information is presented in the user's preferred language. Since users are associated with a unique id, the system keeps track of the information they have accessed, as well as of the time they have spent on each slot.

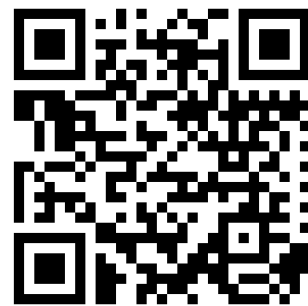
Apart from location-sensing, Macrographia also supports two more types of interaction: (a) a kiosk and (b) mobile phones. The **kiosk** offers an overview of the projected image, an introductory text and two buttons for changing the user's language. All information is automatically presented in the visitor's preferred language. Furthermore, the wall piece in front of which the visitor has spent most of the time is highlighted. **Mobile phones** are used as multimedia guides, automatically presenting images and text (that can also be read aloud) related to the visitor's current position.

Additional Information

Macrographia is part of "Macedonia: From fragments to pixels" exhibition, currently installed and available to the general public at the Archaeological Museum of Thessaloniki, Greece, as part of a permanent exhibition of interactive systems (www.makedonopixels.org).

Permanent public installations: Archaeological Museum of Thessaloniki

Related video: <http://youtu.be/x9KTfZafZBA>



Macrographia web page

www.ics.forth.gr/ami/project/macrographia/

Contact details: Constantine Stephanidis

cs@ics.forth.gr

www.ics.forth.gr/ami