Lab of Environmental Communication and Audiovisual Documentation (LECAD), Department of Architecture, Polytechnic School of the University of Thessaly http://www.arch.uth.gr/en/labs



The Lab of Environmental Communication and Audiovisual Documentation (LECAD) was founded in 1999 at the Department of Planning and Regional Development (DPRD), University of Thessaly and in 2004 it was transferred to the Department of Architecture.

The aim of LECAD is the utilization of traditional as well as hi-tech and digital multimodal means of representation and communication in research, teaching and media production ranging from artifacts up to the urban scale.

The Lab is part of an expanding network together with research units as well as NGO both in Greece and abroad.



### **Objectives**

Audiovisual databases on urban, architectural and everyday life in historic as well as in contemporary environments and settings.

Development of educational and research tools aiming at enhancing communication (educational, social, physical environment at a private or public level)



Development of interactive multimedia products and installations on urban, architectural, artistic and social frameworks.

Laboratory and technical support in the fields of media, fine arts, technology, multimedia and Virtual Reality.

Investigation, analysis and process of traditional and contemporary modes of communication - utilisation in education, research and production.

### **LECAD** staff

Vassilis Bourdakis, associate professor Spyros Papadopoulos, associate professor Giorgos, Papakonstantinou, associate professor

Nicolas Remi, adjunct lecturer, member of Cresson, France

Giorgos Kalaouzis, computer scientist Ifigenia Charatsi, video editing and research programs' coordinator Eleni Pispiri, photo and graphic processing Nikos Vamvakas, sound engineer, Sound Studio



### **Research Activity**

The main research focus for the first decade of the lab's operation was the establishment of an elaborate archive of audiovisual urban life documentaries as communicated through satellite news channels and the press.

This collection was the basis for two art installations/ exhibitions by P.Lazaridis, the former LECAD director, as well as the production of two edited volumes.



### **Structure and Equipment**

LECAD is organized in two discrete units physically positioned in adjacent buildings within the Engineering School Campus. The vision unit is hosted in the first floor of the Dept of Architecture building occupying approx. 50sqm in a series of well-defined and organized rooms. The audio unit occupies a dedicated, custom made space of 200sqm at the basement of the DPRD.





Audio unit features a professional recording studio of 120msq and a secondary studio. This setup includes:

Recording (45sqm) mainly for live recording of small number bands. Includes an A-size Steinway studio piano, ddrums, series of microphones (Neumann, Schoeps, AKG), MIDIsystem (Kurtzweil Roland), lamp and transistor amplifiers, hardware filters, etc.

Main control-room, a 32 channel digital ProTools console v5.0 on Machintosh featuring ProControl AD controls and supporting production of both stereo and 5.1 surround

### INTERNATIONAL COOPERATIONS

The lab has also completed, in co-operation with various institutions and consortia, a series of research projects.

The audio studio has completed a series of recordings as standalone productions and contract based work in recording and/or sound editing.

Since 2009, LECAD expanded into buildings' sound design and city soundscapes with the co-operation of Dr. Nicola Remy, teaching staff at the Dept of Architecture and member of CRESSON, France.



# PLEIAS Supporting a Network of Excellence in Interactive Art

Laboratoire des Arts et Medias -LAM, University of Paris 1 (Anne-Marie Duguet) CITU- University of Paris 8 (Maurice Benayoun) LECAD - EPEOT, University of Thessaly (George Papakonstantinou) Interaction Design, University of the Aegean (P. Kyriakoulakos)

ISEA, Instabul 2011

http://isea2011.sabanciuniv.edu/workshop/supporting-networkexcellence-interactive-art



## **Research Activity**

### DeMuCiV, 2012-2015

Designing the Museum of the City of Volos: Historical research and development of innovative interactive content for the dissemination of knowledge

THALES RESEARCH PROJECT, financed by European Union



### Research carried out by three groups:

- LECAD, Department of Architecture, UTH
- Laboratory of Anthropology, IAKA, UTH
- Department of Architecture, AUTH

Combination of historic data and oral history.

Volos, situated in the network of Mediterranean cities and ports

Creation of digital multi-modal data bases

Creation of interactive applications

Focus on new participatory digital technologies for the display of knowledge based on very site- and people- specific research.

The Volos museum as a trans-local public space and the soundscape projects sound



# Multipurpose 3D digital city model

The vision studio of LECAD is involved in a multipurpose 3D digital city model of the historic city centre of Volos as a backbone for the development of various augmented reality and ubiquitous computing applications.

# **Urban Soundscape Pilote Data Base**

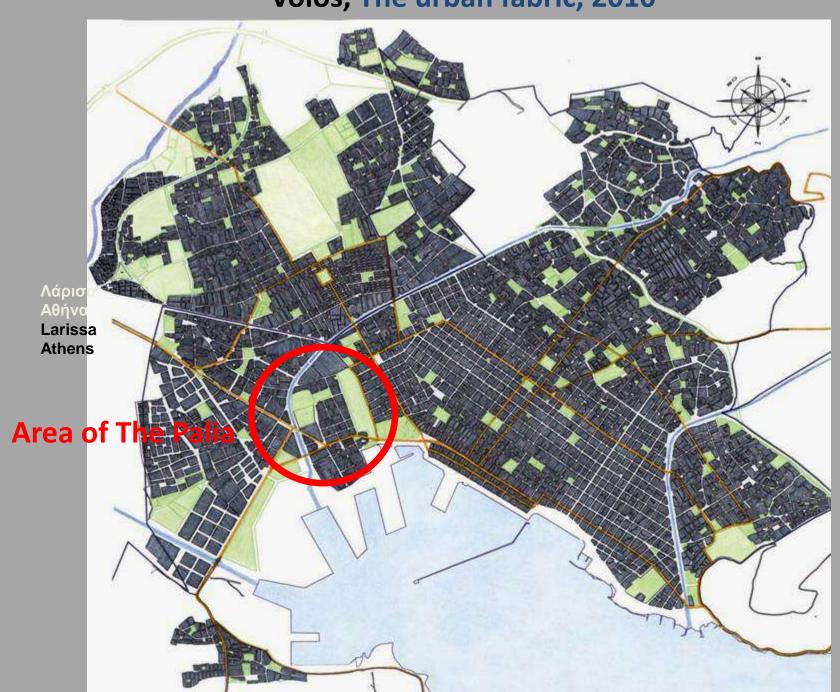




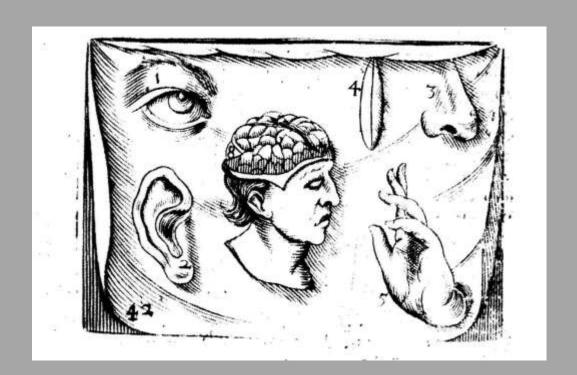




# Volos, The urban fabric, 2010

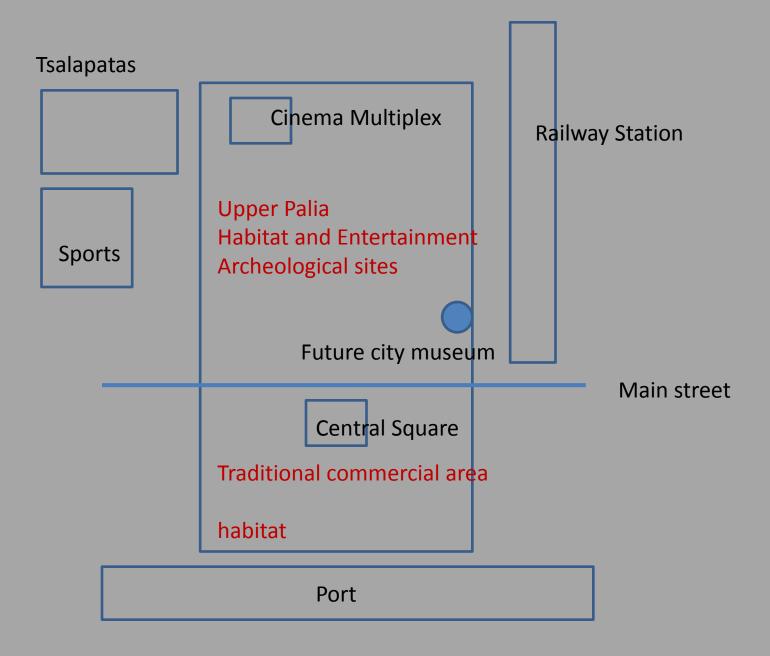






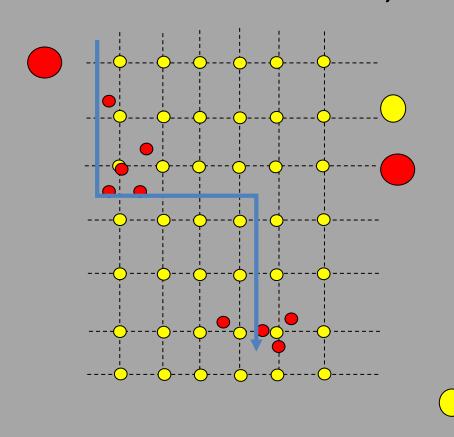
In the last three decades and with an increasing rhythm, architectural thought focus on a global sensuous experience *in situ*, adding to the prevailing visual experience the other neglected senses

Today, it is largely accepted that sound identity of a space in the city, formed by multiple sound qualities, tensions and multiple layer depth, represent its historic, social and functional characteristics.

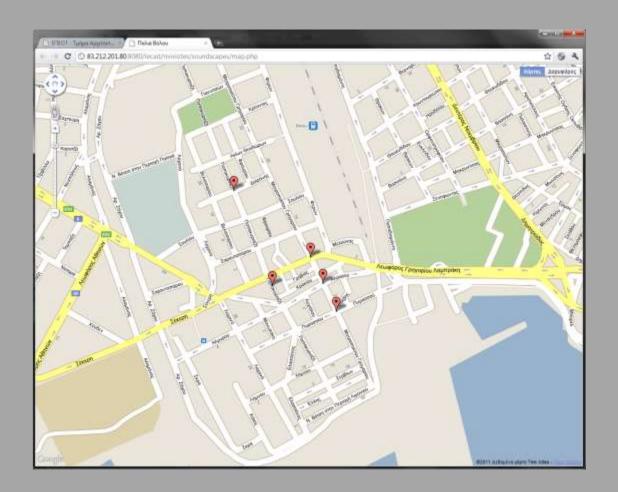


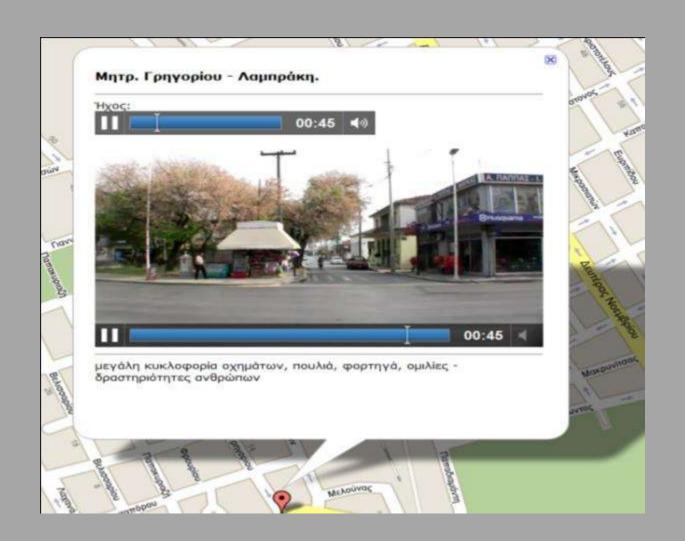
THE AREA OF "PALIA"

### SOUNDSCAPE OF PALIA, VOLOS



- Atmosphere recorded on every crossroad
- General urban atmosphere recorded from high-level landmarks
- Specific sounds recordedSoundwalks

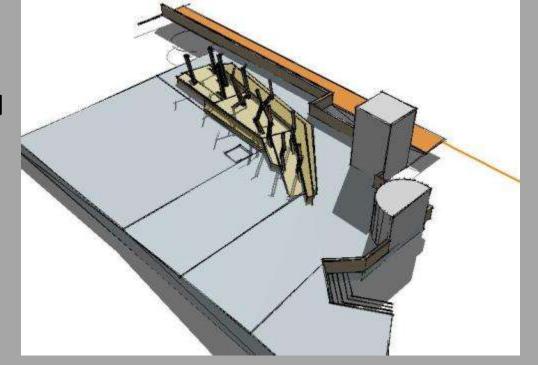


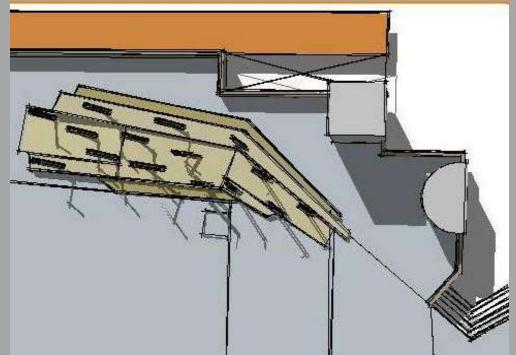


# **DÉTOUR INSTALLATION 2004**

Dimitris Charitos
Vassilis Bourdakis
Evelyn Gavrilou
Coti K.
Aris Tsangrassoulis
Aris Andreou
Dimitris Skoufis

ATHENS BY ART SUMMER 2004











### Βόδος: εξερευνώντας thy nóth kai thy iatopia ths

Η πολυμεσική εφαρμογή επιδιώκει να αναδείξει την πολιτισμική κληρονομιά του Βόιλου μέσα από ένα διαδραστικό παιχνίδι περιπθάντιστε στο χρόνο και στο χώρο. Με αφετηρία το σύγκρονο κάρτη της πόιλης, ο χρήστης ταξιδεύει στο παρόν και το παρεήθου, ενημερώνεται για την αρχίτεκτονική, την κοινωνική και οικονομική ictopola tris nóitris. Os angosals tris vitas πότης, η βιομηκανική και πολιτισμική ανάπωξη του Βόλου, ο αστικός βίος, η ιστοpla tou nepignyou 'Mout(púpn' siva opiσμένα από τα θέματα που αναπτύσσονται στον ποιλυμεσικό δίσκο μέσα από τρισδιάστατα μοντέλα, πλούσιο φωτογραφικόπρωτιάτωπες μουσικές συνθέσεις.

### Volos: exploring the city and its history

The cultural heritage of the city of Volos is the theme of this multimedia production; a modern interactive map functions as the vehicle that transfers the user to the past and present of the city informing about architecture, social and economic history of Volcs. The construction of Volos as an urban centre, its industrial and cultural development, education, work and entertainment in Volos are some of the topics that are presented in this CD-Rom; 3D models, modern and old photos, videos and original music constitute the multimedia environment uñisō, σύγκρονο και αρκειακό, βίναιο και in which the user is called to interact.







Eñásicros umiRoyerosós afaníscipas Microsoft Windows: Pontium II 500 Mftr / Windows 98, Ma. 100, XP 128 MB RAM / DVD-ROM /Sound Card Resolution: 1024x768, 2









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**Βόλος** διαδρομές στην πόλη και την ιστορία

Volos a travelogue in the city and its history

# BOΛΟΣ: ΔΙΑΔΡΟΜΕΣ ΣΤΗΝ ΠΟΛΗ ΚΑΙ ΤΗΝ ΙΣΤΟΡΙΑ ΤΗΣ IDAMPIRMATA IDAMPIRM

### H OIKONOMIA



### **NAVIGATION MAP** INTRODUCTION **CITY AREAS HISTORY EDUCATION INDUSTRY ENTERTAINMENT VOLOS EDUCATION** INTRODUCTION INTRODUCTION THE PALEA NEIGHBORHOOD THE BEGINNING **EDUCATION** IN THE INTER-WAR YEARS THE HATZINIKOLAOS ROOM THE FIELDS OF MARS OF VOLOS IN VOLOS THE NEW CITY THE NIKOLAIDIS IN THE POST-WAR YEARS THE SCALA OF MILAN RAILROAD STATION OF VOLOS SCHOOL THE COMMERCIAL RE-USE OF STUDENT PERFORMANCES **NEA IONIA** SCHOOL OF VOLOS INDUSTRIAL BUILDINGS GREEK - FRENCH SCHOOL LIST OF INDUSTRIES THE VOLOS' TOWN-HALL THE HIGHER GIRL'S SCHOOL **VOLOS CENTRAL AREA** UNIVERSITY OF THESSALY THE HARBOUR OF VOLOS THE AREA OF AGHIOS KONSTANTINOS ANAVROS AREA **APENDICES DEMEKAV CITY MAPS** RE-USE OF **HERMES BUILDINGS BIBLIOGRAPHY**

**INDUSTRIAL BUILDINGS**