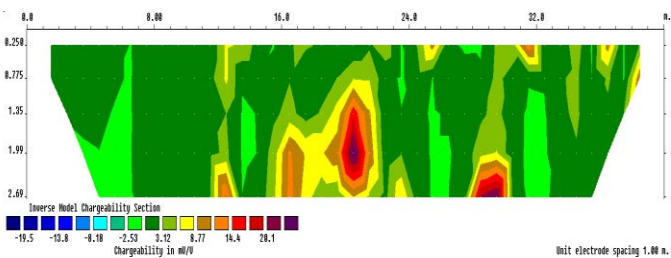
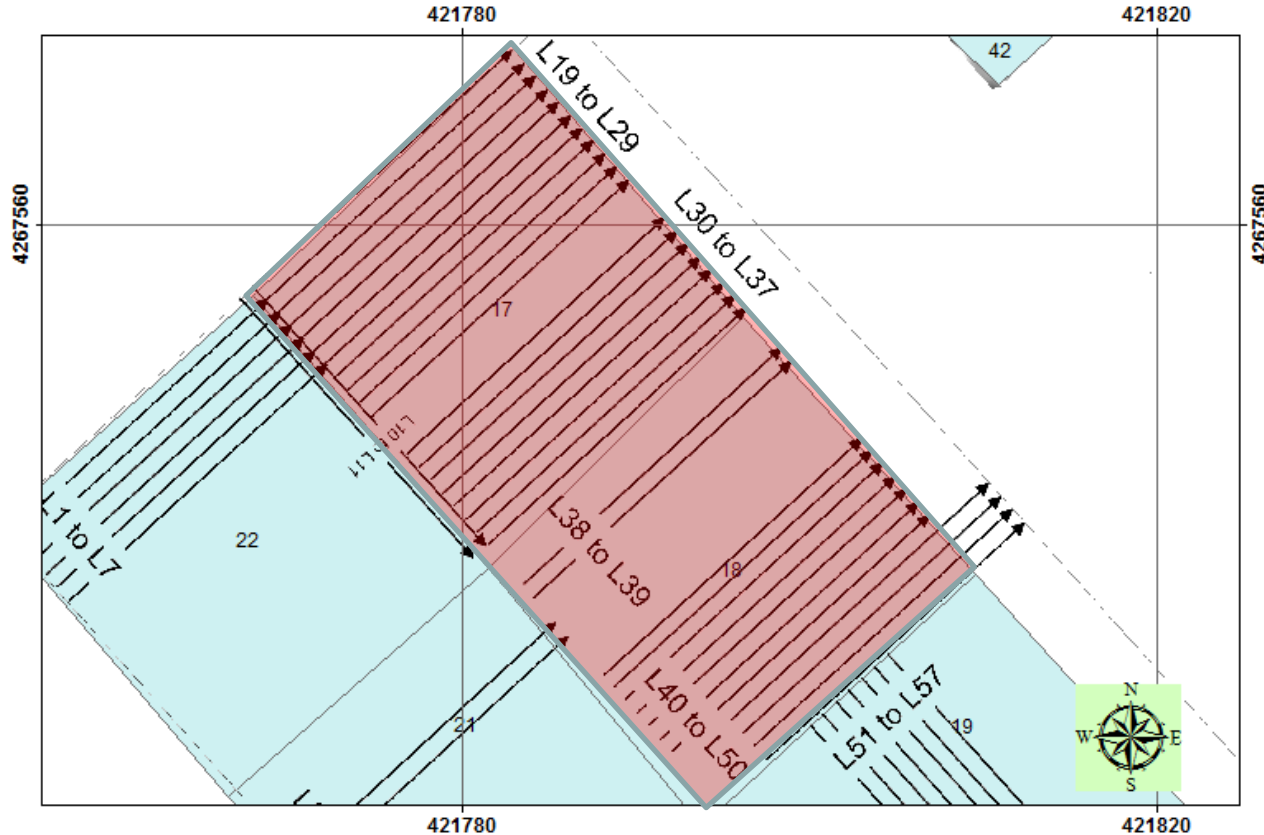
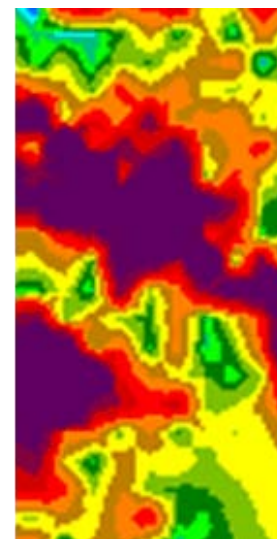
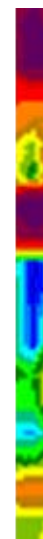
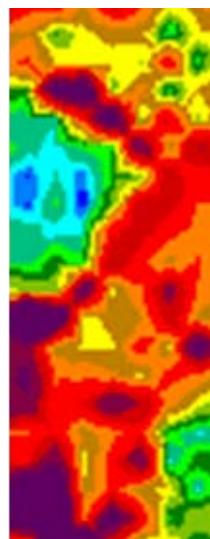
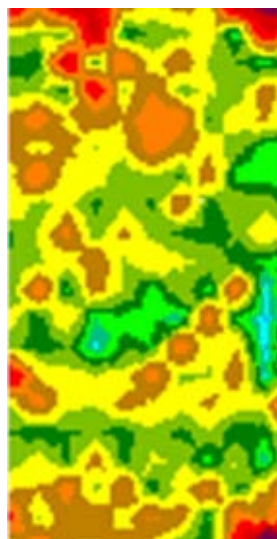


Ηλεκτρική Τομογραφία



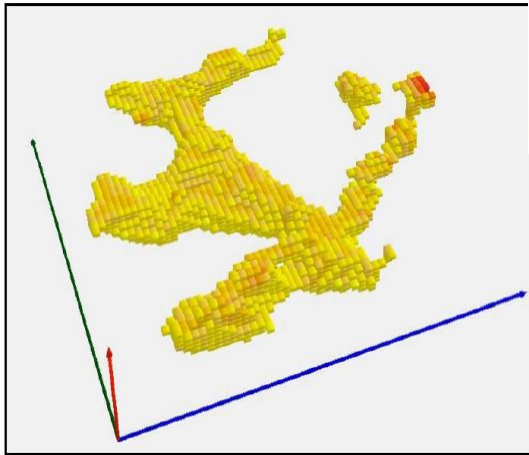
Unit electrode spacing 1.00 m.



Ανάπτυξη Ελεύθερου Λογισμικού

3DINV version 1 (64Bit)

3-D Inversion of surface ERT Data



3DINV is a program for the three-dimensional (3-D) inversion of surface Electrical Resistivity Tomography (ERT) data in order to automatically determine a 3-D resistivity subsurface model. The program performs smoothness constrained (Occam's) inversion in order to address the non-uniqueness of the inverse problem and stabilize the procedure. The subsurface is divided in homogeneous and isotropic hexahedral elements and a 3-D Finite Element Modeling (FEM) routine is employed to calculate the resistivity response of 3-D bodies. The adjoint equation technique has been incorporated into the FEM scheme to calculate the Jacobian matrix. An iterative method (LSMR) is used to update the resistivity model through the inversion iterations.



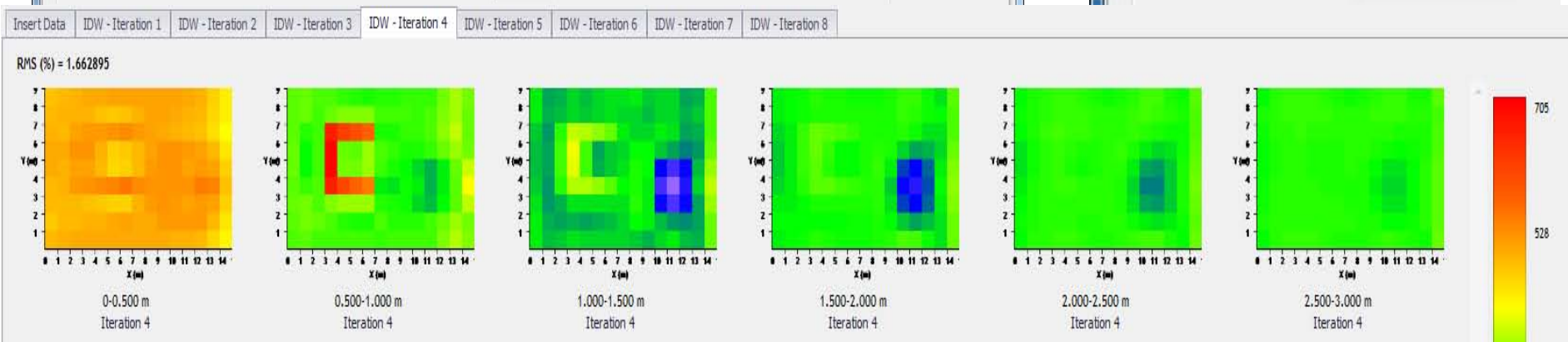
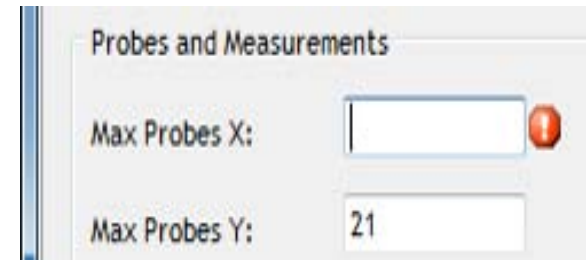
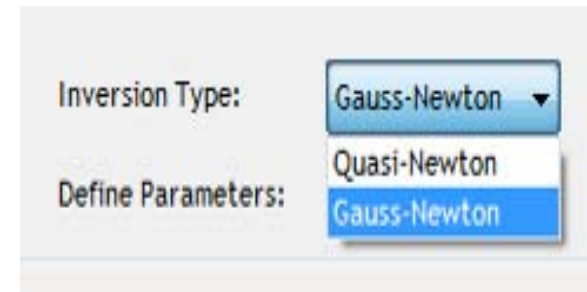
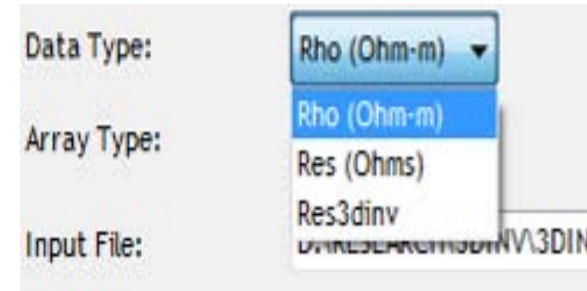
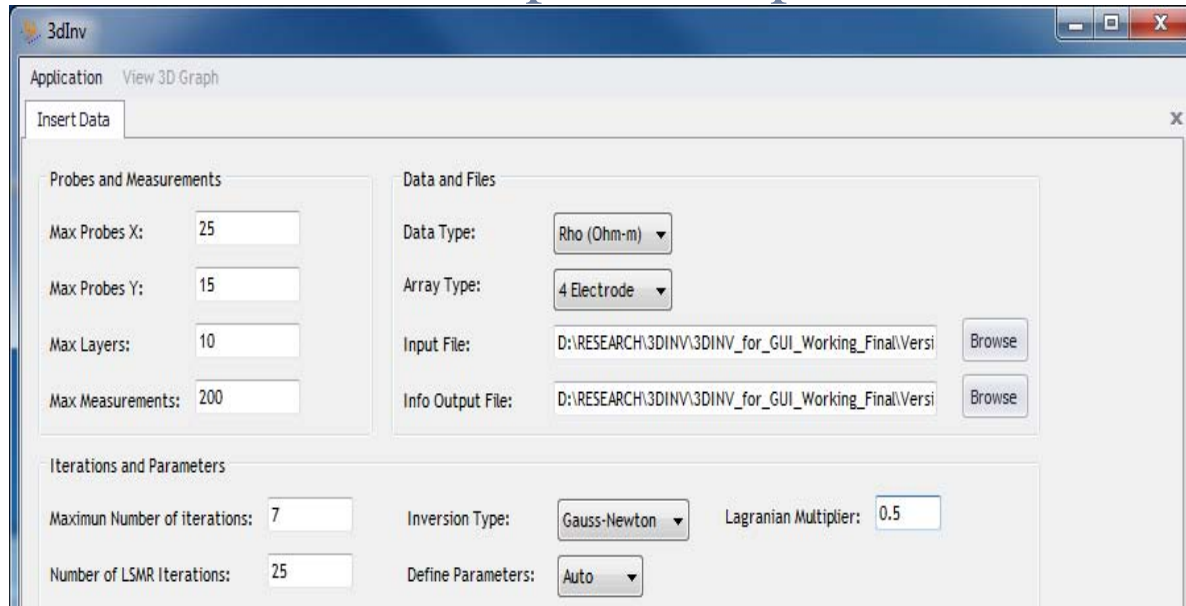
This work was supported by **ArchaeoLandscapes-ArcLand**: Europe European multiannual project (2010-2015) - European Commission - Directorate General Education and Culture, Programme « Culture » (2007-2013). 2010-2015



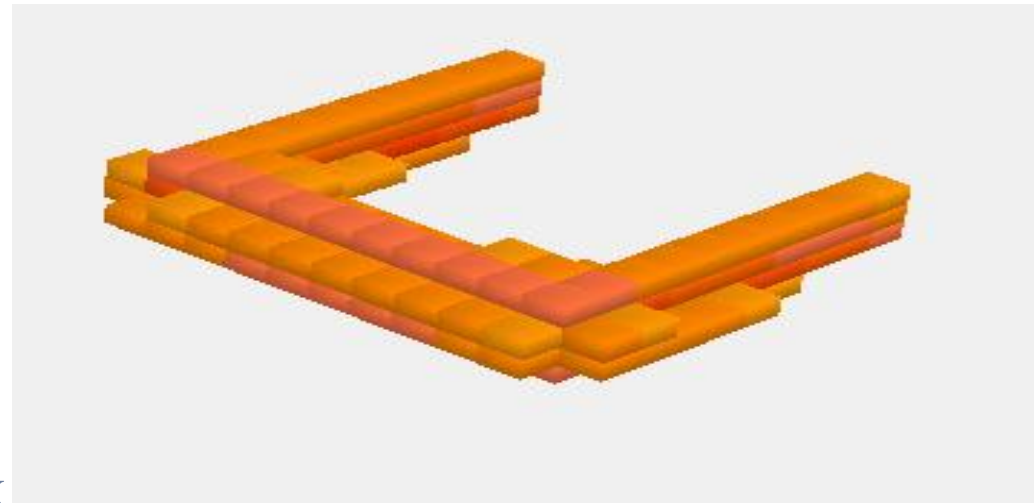
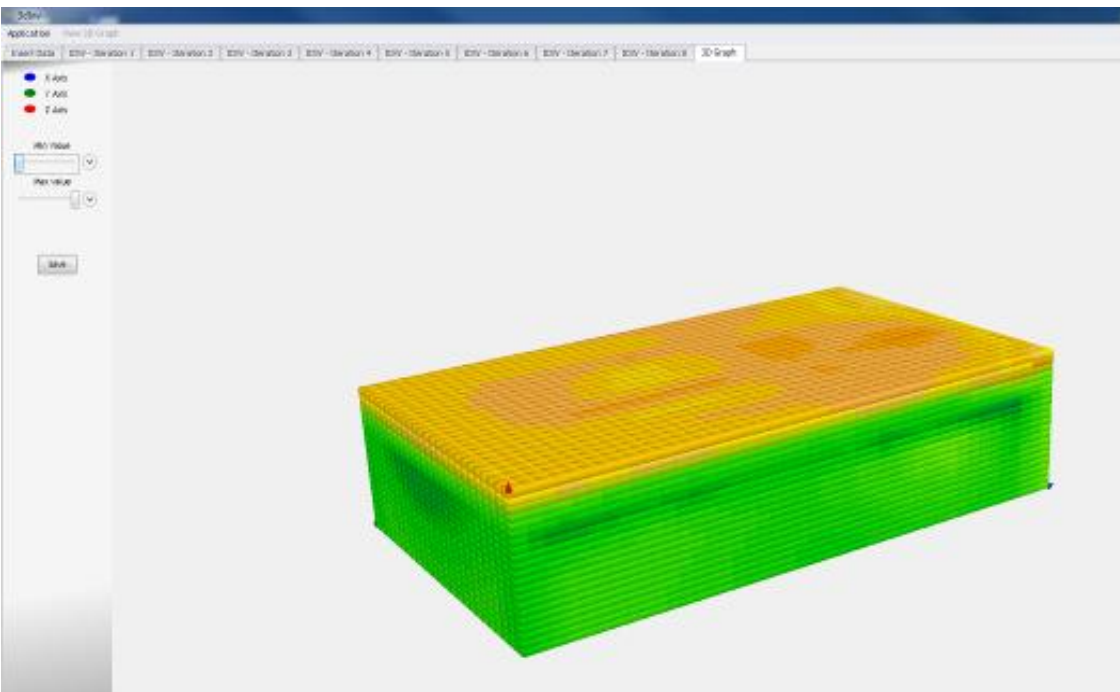
http://www.ims.forth.gr/index_main.php?c=90&l=g&d=7

Ανάπτυξη Ελεύθερου Λογισμικού

Ο χρήστης έχει ελευθερία ως προς την παραμετροποίηση του λογισμικού (num electrodes, array type, inversion method, input & output file etc



Ανάπτυξη Ελεύθερου Λογισμικού



http://www.ims.forth.gr/index_main.php?c=90&l=g&d=7

Primitive reconstruction of the ancient city of Hyettos

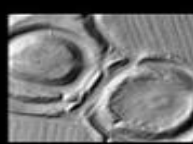


to be

Continued...

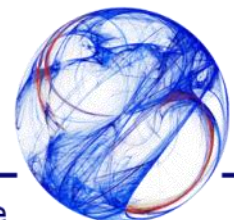
Hyettos

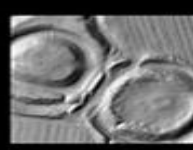




Άλλες Δραστηριότητες σε σχέση με το Archaeolandscapes Europe

Workshops – Conferences – Training Schools





INTERNATIONAL WORKSHOP

Remote Sensing Techniques in Archaeological Research

RESTAR

40+ αιτήσεις από όλο τον κόσμο για 14 θέσεις

- Home
- Programme
- Registration Form
- Downloads
- Brief History of Crete
- Brief History of Rathymno
- Brief History of the IMS
- Transport & Accommodation
- ArchaeoLandscapes grant rules
- ArchaeoLandscapes workshops

Workshop Calendar

◀ September ▶

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30



HERITAGE · DATA · KNOWLEDGE



European Commission
Culture



Institute for Mediterranean Studies

Welcome to the International Technical Workshop

REMoTe Sensing Techniques in Archaeological Research (RESTAR)

The main aim of this workshop is to introduce young students, researchers and professionals to the capabilities of ground based and satellite Remote Sensing techniques, in the context of an archaeological survey. The seminars will be dedicated to the theoretical and practical issues of remote sensing and they will be focused on the use of geophysical techniques (mainly magnetic, soil resistance, resistivity tomography, GPR and seismic) and the employment of aerial and satellite imagery in archaeological applications.

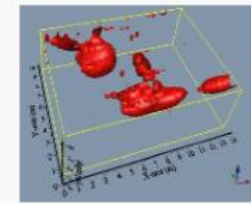


The theoretical lectures will provide a historical background of the use of the particular techniques in archaeological research, the fundamental concepts of each of the technique involved and the basic processing methods that are applied in each method. A number of examples from actual archaeological fieldwork surveys will be demonstrated in order to familiarize the audience with the results and the interpretation of them.

The practical module of the workshop will aim to familiarize the participants with some basic operations of processing. SURFER will be used as the main platform for processing of the magnetic and soil resistance measurements. GPR-SLICE v7.0 Ground Penetrating Radar Imaging Software will be used for the processing of GPR data. 3DINV software will be employed for the processing of direct current electrical resistivity data. Satellite image processing will be carried out using ERDAS IMAGINE image analysis software. Aerial image processing and Photogrammetry issues will be approached through a use of open source software (e.g. QGIS, Sketch-up, Meshlab, a.o.). The seminars will include some basic image and signal analysis procedures.

The workshop is organized by the Laboratory of Geophysical-Satellite Remote Sensing and Archaeo-environment of the Institute for Mediterranean Studies / Foundation for Research and Technology, Hellas (F.O.R.T.H.). The Lab of IMSFORTH has been the first in the area of E. Mediterranean offering an integrated and specialized suite of tools dealing at the same time with the ground based-satellite remote sensing

prospectation and GIS management of cultural heritage monuments and sites. The research agenda of the Lab is dedicated towards the advances and applications of these technologies (GIS & Satellite Remote Sensing, Geophysical Exploration, 3D Reconstructions & Virtual Reality and Archaeo-environmental analysis) within the cultural and environmental domain. The workshop is organized under the auspices of ArcLand (ArchaeoLandscapes Europe), funded by "Culture 2007-2013" program of the European Union.



The project intends among others to publicize the value of aerial survey, remote sensing and landscape studies amongst the general public, students, teachers and all those who explore, enjoy or care for cultural landscapes and heritage sites across Europe. It also aims to promote the employment of the above methods in the domain of culture and provide support for a better exploitation of the particular techniques. Based on this, a number of workshops, seminars, conferences and training schools have been organized to introduce the fundamentals of the methods and their application in archaeological landscape studies.

