

# Mapping the Underworld

## Workshop on

# Buried Assets: Data integration and visualization

University of Leeds

17th April 2007

For more details of this event, and future workshops, please visit [www.mappingtheunderworld.ac.uk](http://www.mappingtheunderworld.ac.uk) or [www.comp.leeds.ac.uk/mtu/workshop3](http://www.comp.leeds.ac.uk/mtu/workshop3)



## Introduction

How can we integrate data from different utility companies and ensure it is always up-to-date? Can uncertainties in data, such as spatial error, be appropriately communicated to field teams? How can we convert paper plans into "intelligent" GIS data? What are the best ways to present utility data to different potential users? The answer to these questions and more will be explored at the workshop on acquisition, integration and presentation of buried asset information. This event is the third in a series of meetings organized by the EPSRC project entitled "Mapping the Underworld" (MTU) which is researching into buried asset mapping technologies. The Leeds workshop, in collaboration with the VISTA project, will cover industry and academic perspectives of the problems relating to heterogeneous data integration, representing uncertainties in data, raster to vector conversion (RVC) and data access.

Delegates will have the opportunity to learn about the current "state of the art" from experts within both academic and industrial sectors. In turn, participants will be able to share their own views and expertise when participating in the group and panel-lead discussions.

## Provisional Workshop Programme

The day will be organized into four sessions. The first three sessions focus on each of the three workshop themes: acquisition, integration, and presentation. Academic speakers will set out the principles underlying recent advances; speakers from the utility and industrial sectors will introduce and review current problems as seen from the field. In the fourth session, panel and group activities will be used to narrow the gap between theory and practice, with comments feeding directly into the ongoing research effort.

- 09:30 Registration and Coffee
- 10:00 Introduction
- 10:10 Session 1: Data Acquisition
- 11:10 Break
- 11:30 Session 2: Data Integration
- 12:45 Lunch
- 13:45 Session 3: Data Presentation
- 15:00 Panel: mind the gap!
- 15:30 Break
- 15:50 Group Discussion
- 16:30 Plenary discussion and final remarks
- 17:00 Close

## Some of the topics to be presented:

### The National Underground Assets Group

NUAG plans to develop a standard framework for more effective recording, storing, sharing and displaying of buried asset information. First steps towards achieving its vision.

### Knowledge-based Raster to Vector Conversion

Will it ever be possible for a paper map to be automatically converted to a full GIS representation without human intervention? What are the key obstacles, and how can they be overcome? An exploration of research being carried out at the University of Leeds to answer this question.

### Data Integration and Quality Control

Can buried asset data be integrated without loss of quality? The experiences of Yorkshire Water are presented.

### A Framework for Utility Data Integration

MTU and VISTA projects are examining ways of integrating utility data held by independent companies. The differences (heterogeneities) in data storage, semantics and representation make this a challenge. A framework for the integration and a summary of progress to date will be presented.

### Implications of the TMA for Buried Asset Management

The Traffic Management Act is soon to be applied to regulations for buried assets. How should the utilities respond?

### 3D: Modelling, Augmented Reality and Applications

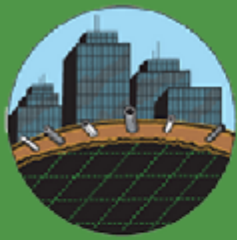
Augmented Reality (AR) describes the superimposing of computer generated content onto real world views. 3D modelling environments and AR, while being distinct disciplines, are both potentially suitable for a wide range of applications including telecommunications and utilities.

### Real-time Visualization of a Shared Geo-Spatial Model

How can regional organisations share an interactive real-time digital model of their region within a web-services environment? The NERVE project is building a model of the North-East of England using the Digital National Framework (DNF).

### Uncertainty Visualization: A View from the Trenches

Uncertainty visualization refers to the problem of acquiring, modelling and representing data while accounting for the uncertainties that encompass it. In this talk, we delineate the concept of uncertainty in the context of geospatial data, review existing approaches and report on the VISTA project.



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### Pre-Registration Form

Please complete and return this form to:  
Ms Sarah Miller  
Pipeline Industries Guild  
14/15 Belgrave Square  
London  
SW1X 8PS  
Tel: 020 7235 7938  
Fax: 020 7235 0074  
e-mail: [hqsec@pipeguild.co.uk](mailto:hqsec@pipeguild.co.uk)

Surname: .....

Initials/first name: .....

Title (Prof/Dr/Mr/Ms): .....

Position: .....

Organisation: .....

Address: .....

Postcode: .....

Country: .....

Tel: .....

Fax: .....

e-mail: .....

WWW: .....

Suggestions: .....

Yes, I would like to receive further information about this workshop

### Pricing and Booking Details

The cost of attending this event is £120 + VAT. However, for early bookings (placed before 1st March 2007) a reduced rate of £95 + VAT is available. To register for this workshop or for more information, please e-mail: [hqsec@pipeguild.co.uk](mailto:hqsec@pipeguild.co.uk) or telephone 020 7235 7938

If you require any further information on the programme please contact [mtu-seminar@comp.leeds.ac.uk](mailto:mtu-seminar@comp.leeds.ac.uk)

### Workshop Exhibitions

An exhibition session will be held during the workshop. This is an opportunity for companies to exhibit or demonstrate their equipment or solutions. Exhibitors could include software vendors, surveying equipment providers and utility mapping companies. This will provide a forum for experts from different communities to demonstrate their state-of-the-art equipment and provide advice about solutions for your particular queries.

If you would like to exhibit please contact:

[mtu-seminar@comp.leeds.ac.uk](mailto:mtu-seminar@comp.leeds.ac.uk)

