Digging into Data:
Electronic publication in Archaeology

Michael Charno

Curatorial Officer, Archaeology Data Service

Prof Julian Richards

Director, Archaeology Data Service

Co-Director, *Internet Archaeology*

Beyond Books, London
22 April 2010

internet archaeology

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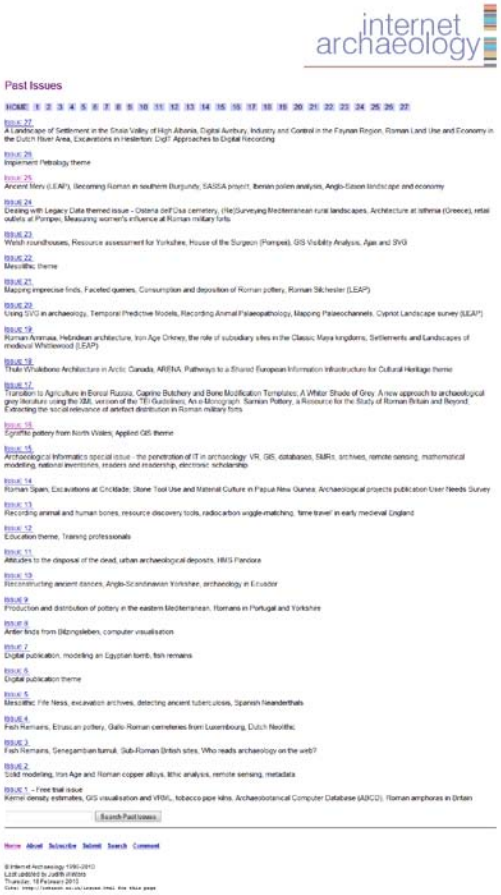
Background: Internet Archaeology

- First fully peer-reviewed ejournal in Archaeology
- Publishing online since 1996
- Hosted at the University of York
- Publisher: Council for British Archaeology
- International in scope
- Fully interactive:
  - Hypertext
  - Full colour images
  - Movies
  - Searchable databases
  - Interactive mapping

Internet Archaeology: business model

Now in Issue 27 – 2 volumes per year



Mixed revenue streams:

- JISC UK HEI site licence
- Institutional site licences – overseas
- Individual subscriptions and pay per article
- Open Access flexible policy e.g. Developing world
- Open Access on a per article basis in return for subvention

Content archived by ADS

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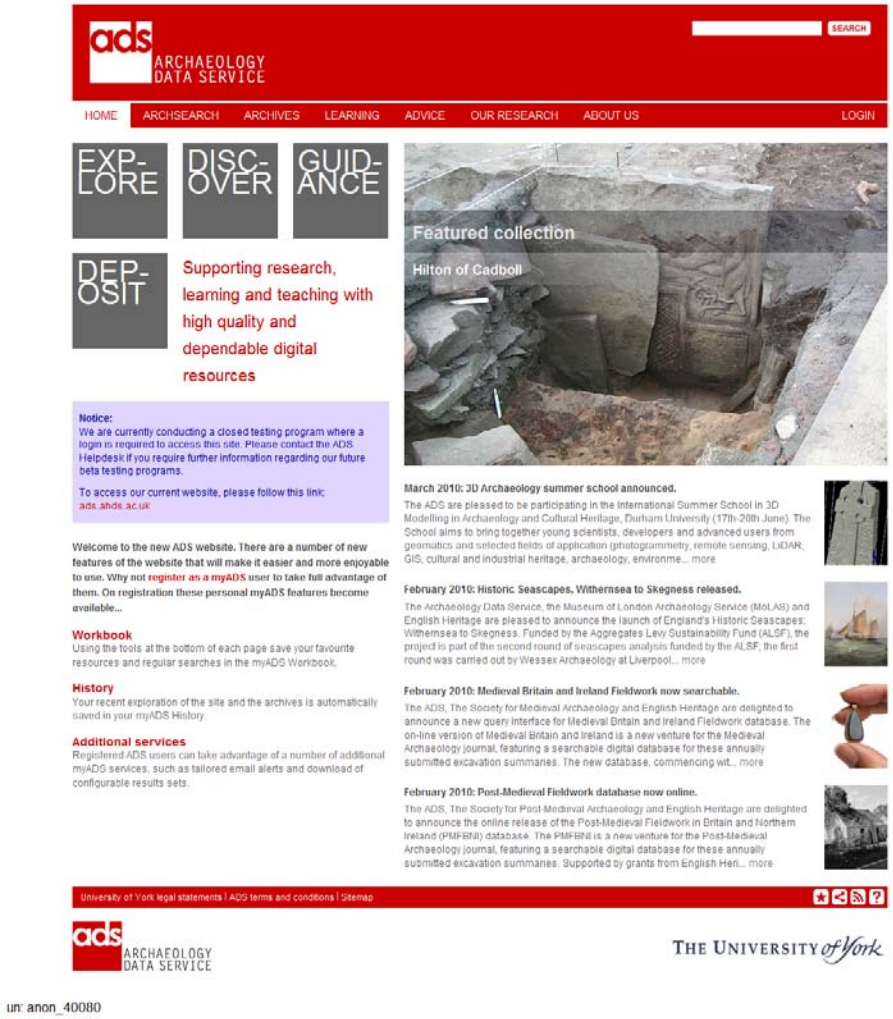
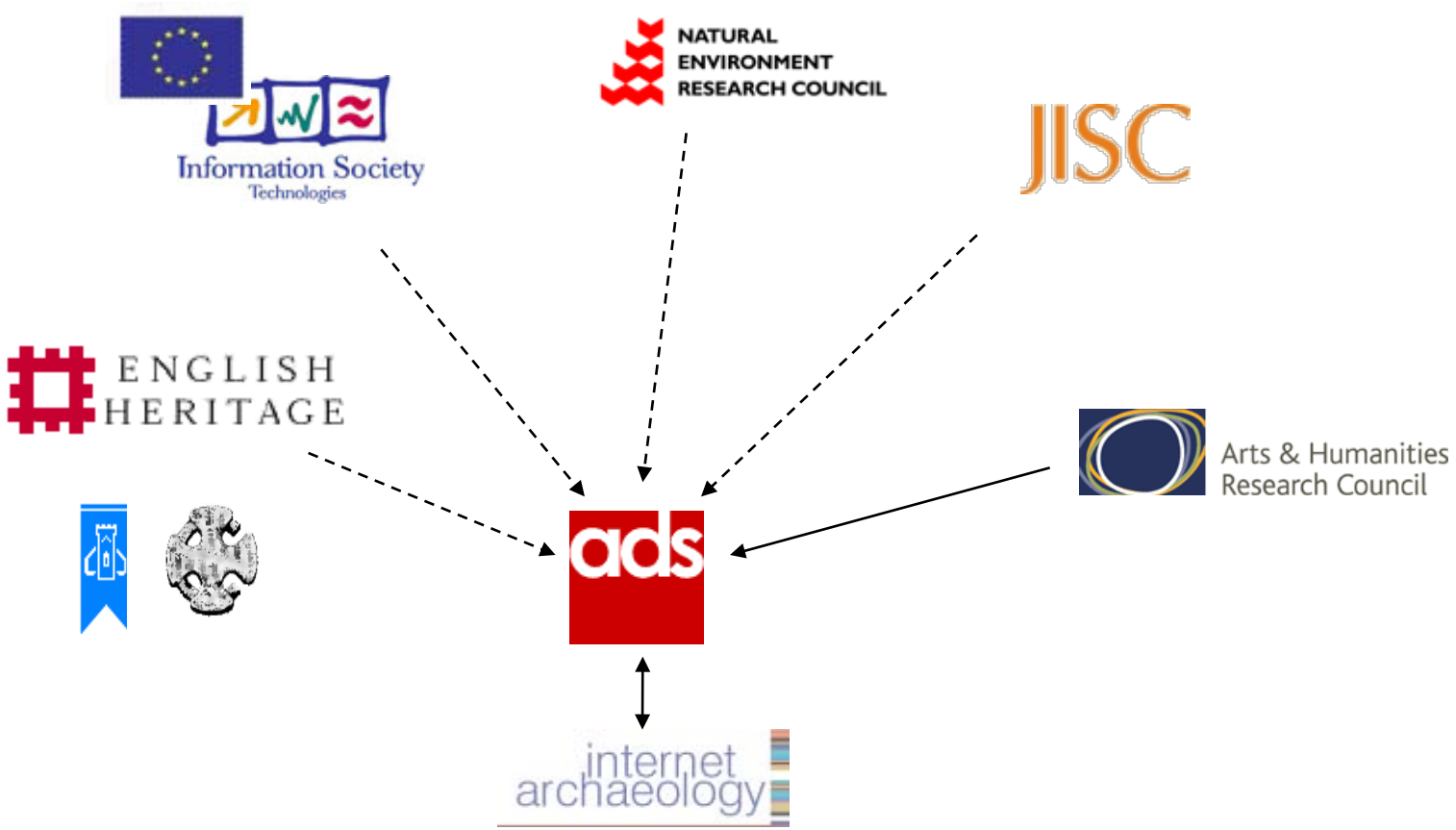
Background: The Archaeology Data Service

"To support research, learning and teaching with high quality and dependable digital resources."



un: anon_40080

The Archaeology Data Service: funding



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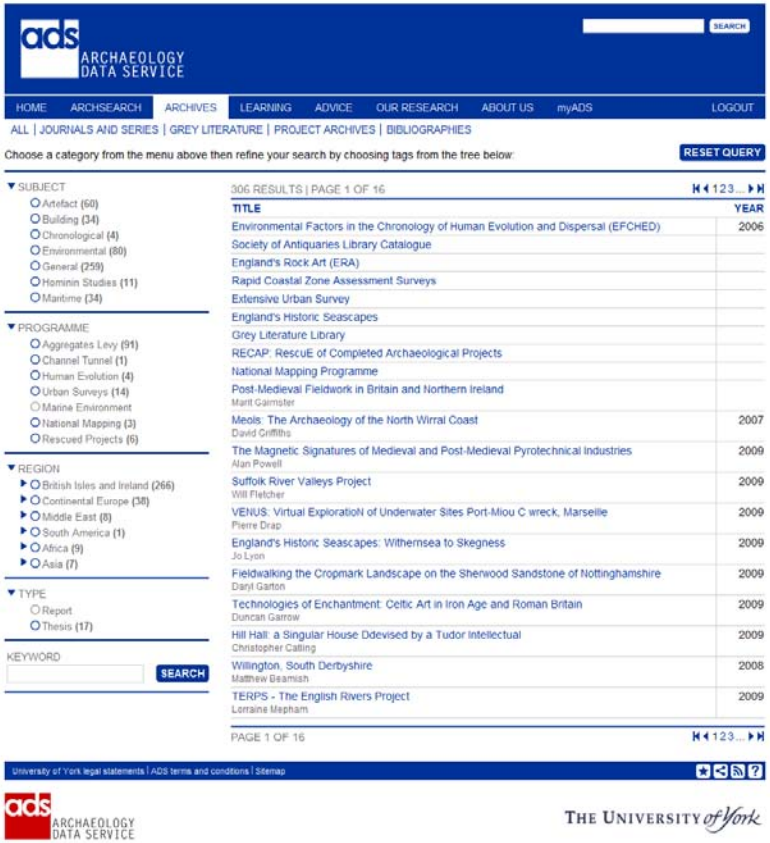
The ADS: What we do

What ADS does:

1. Digital Preservation
2. Standards and Guides to Good Practice
3. Digital Dissemination



Digital Preservation

Consultative Committee for Space Data Systems

RECOMMENDATION FOR SPACE DATA SYSTEM STANDARDS

Reference Model for an Open Archival Information System (OAIS)

CCSDS 650.0-B-1

BLUE BOOK

January 2002

CCSDS

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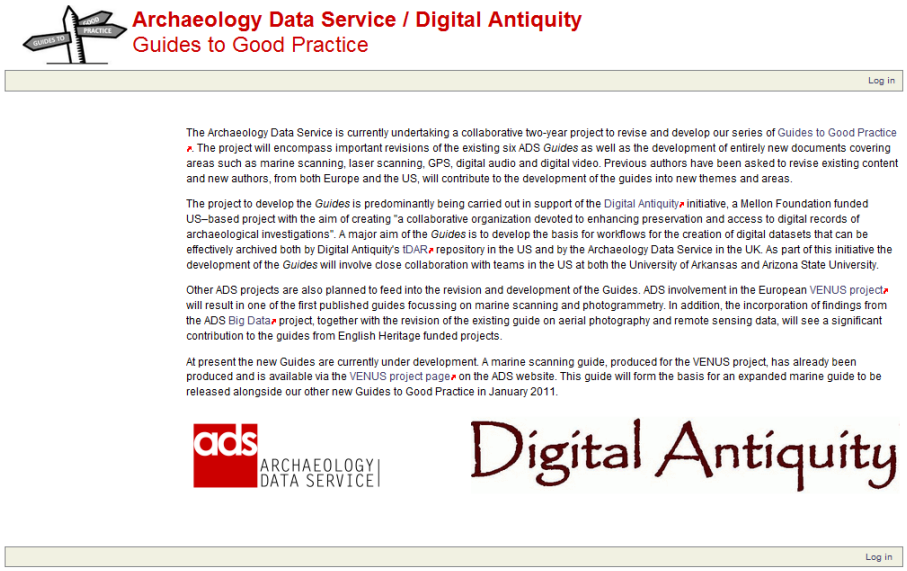
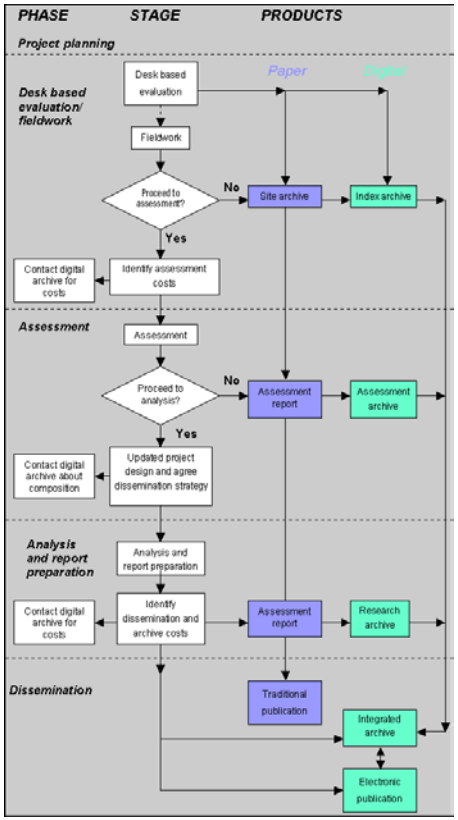
Standards and Good Practice





- What to preserve
- What metadata to record
- Project planning
- Rights management

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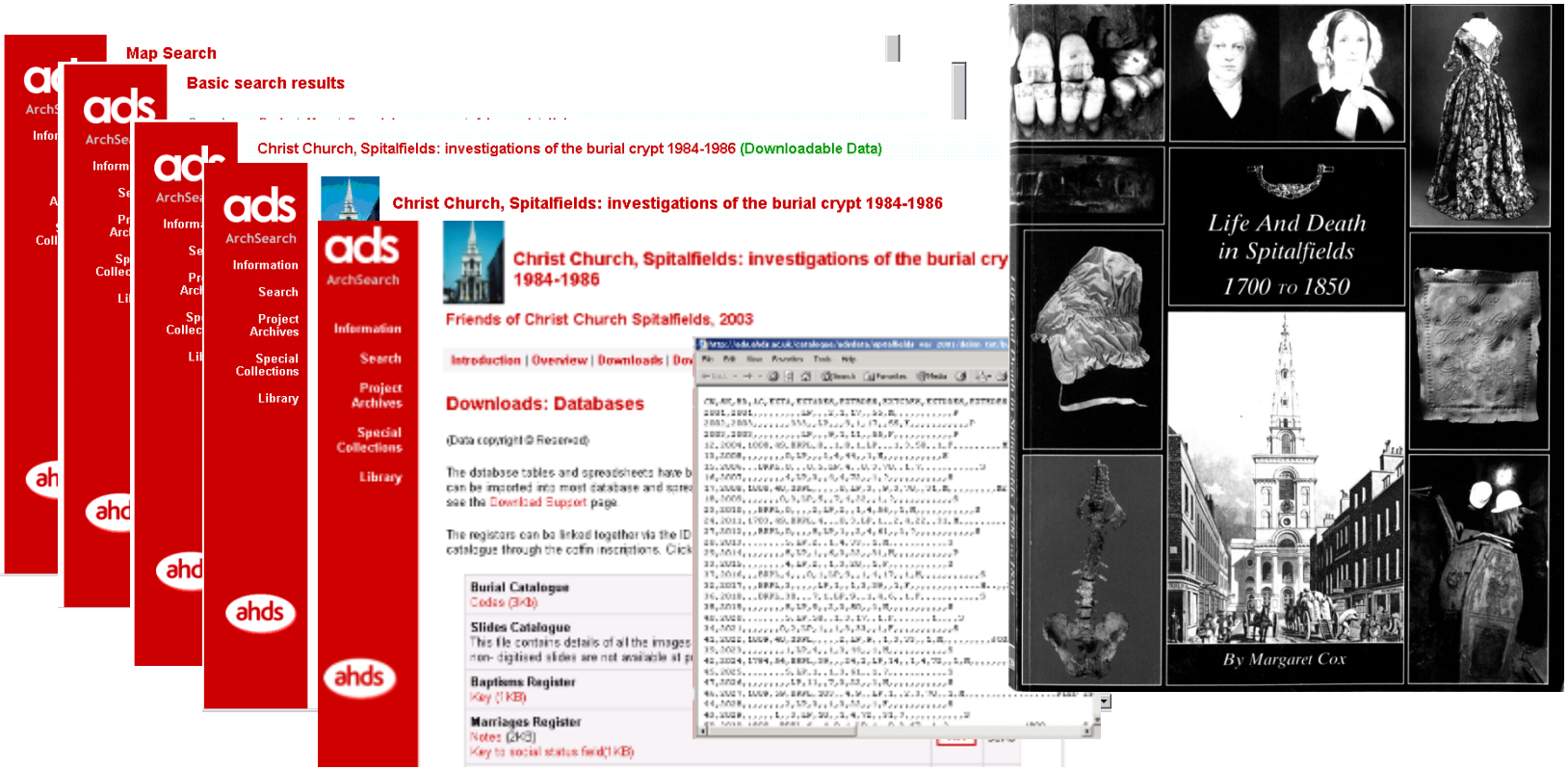
Dissemination: Standard Digital Archives

"The residues left over from the publication process..."



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Overview: the LEAP Project

- A project to investigate novel ways to combine the interpretive analysis of publications with the underlying archival data
- Internet Archaeology provides the electronic publishing; ADS the online archive

Winner of the British Archaeological Awards - Best Archaeological Innovation 2008.

HIGHLY COMMENDED
2009 ALPSP Award for Publishing Innovation
sponsored by EBSCO

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LEAP project: The Opportunity

- Joined up e-publication and archives
- Slow adoption of e-publication from the Arts & Humanities sector
- Traditional paradigm can be improved upon
- Potential for researchers & consumers unrealised

LEAP: Primary Aims

Investigate potential using 4 exemplars of multi-layered e-publications & e-archives

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LEAP: Secondary Aims

- Provide novel and imaginative forms of dissemination
- Investigate how e-publications can be interactive, multi-layered and underpinned by supporting data
- Look at how multiple forms of dissemination can be used for different audiences
- Explore questions of linking between distributed archives and e-publications

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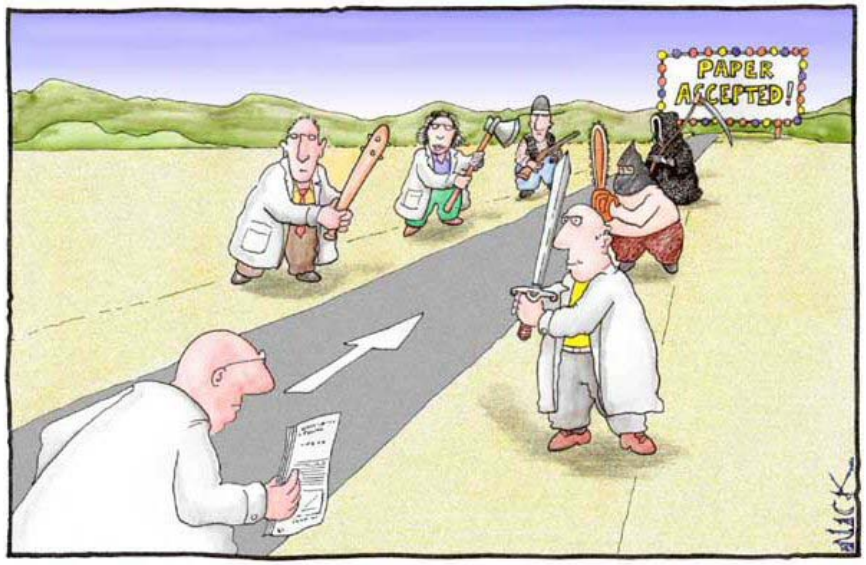
Editorial Questions

How far do e-archives need the level of quality control required for an e-publication?

How is peer review to be deployed?

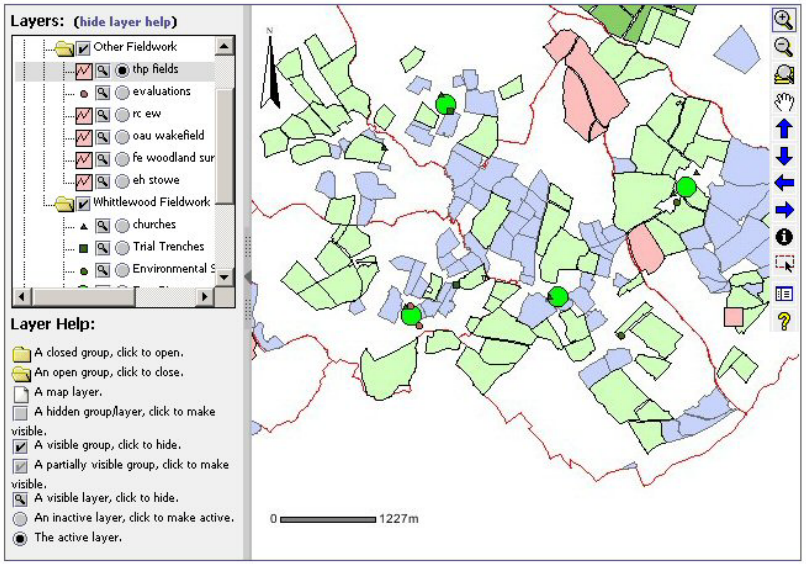
How is intellectual credit given?



Citation Questions

nucleated villages correlates closely with that of open fields, the latter might on occasion also be worked from management of open fields might have many variants (Baker and Butlin 1973).

Please select a map: Map 6 - Fieldwork submit



Switch Off the Interactive Map for Whittlewood

How should e-archives & e-publications be referenced?

Copyright Questions

Do the copyright issues of published material translate to archived material?

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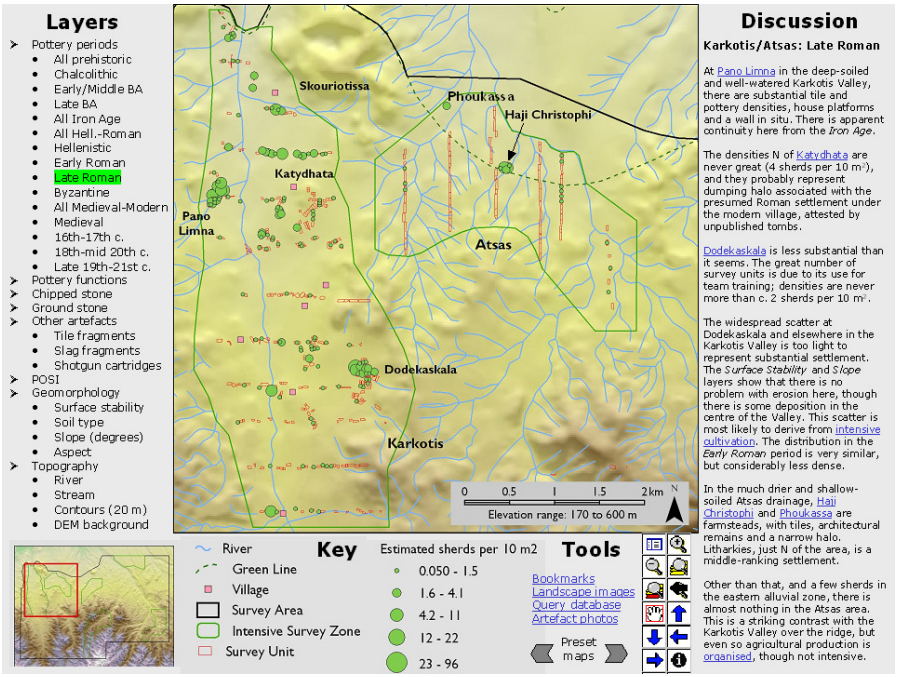
Sustainability Questions

How far are tailored interfaces capable of long-term preservation?



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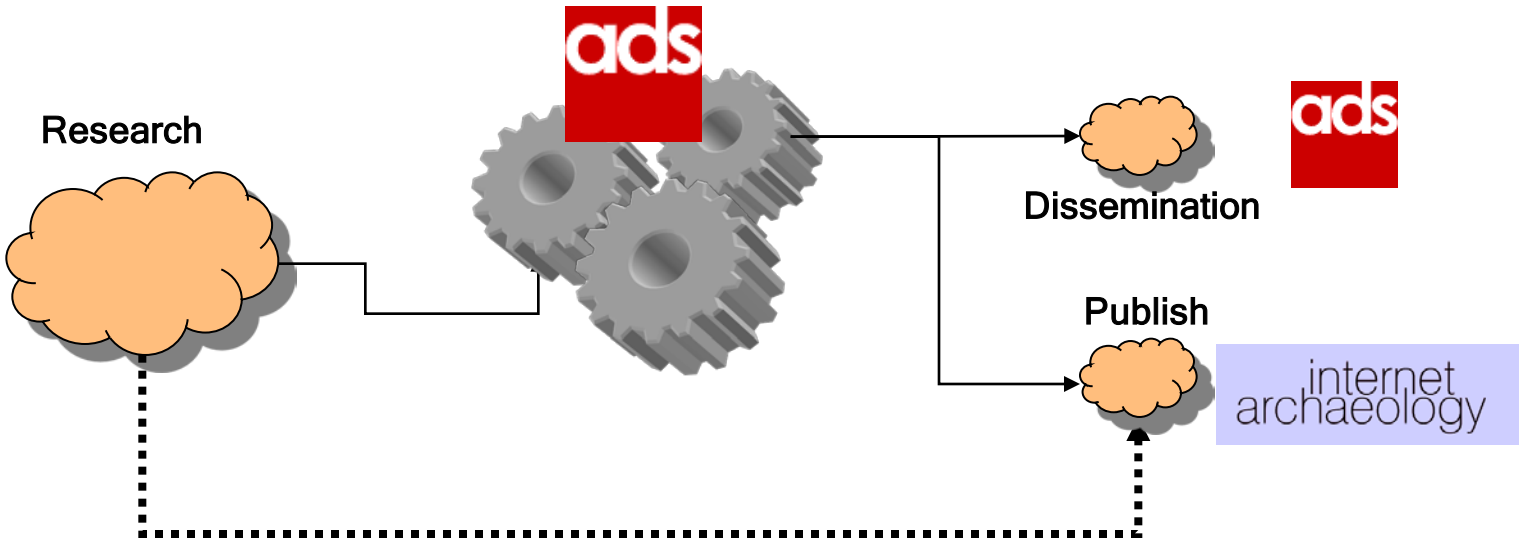
Culture Change

What changes will need to be made to the preparation process?

Will the community accept it?



Exemplars

Exemplars selected based on:

(i) academic significance,

(ii) potential of value-added by the ability to drill down from synthesis to primary data,

(iii) ability to deliver within the project timescale, and

(iv) inter-disciplinarity.

Whittlewood

Changing Settlements and Landscapes: Medieval Whittlewood, its Predecessors and Successors

Richard Jones, Christopher Dyer and Mark Page

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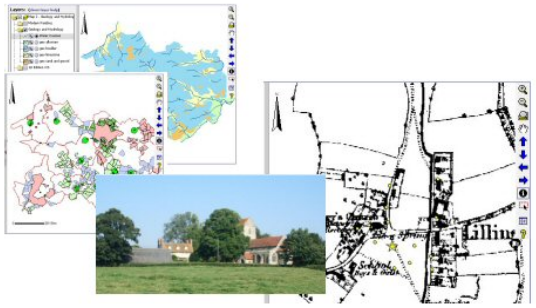
Richard Jones rlcj1@le.ac.uk, Christopher Dyer cd50@le.ac.uk, Mark Page mrp15@le.ac.uk

Summary

Table of Contents | Subscribe to this article, or to the whole volume (issues 18-19).

This article presents an interpretative synthesis of the development of a medieval landscape in the English Midlands. It explores its administrative organisation and divisions; the exploitation of its woodland, pasture, and arable resources; and the creation, growth, and decline of its villages, hamlets and farmsteads. It takes as its central theme two inter-related oppositions: continuity and change, moments and processes. In particular it examines the role these played in the development of varying settlement morphologies (the area under investigation contains both nucleated and dispersed settlement forms) and in the introduction and demise of the open field system.



The article is based on the investigation of twenty-one medieval villages and hamlets and their surrounding landscapes, straddling the Northamptonshire-Buckinghamshire boundary and previously falling within the royal forest of Whittlewood. This work was undertaken between 2000 and 2005 as part of an AHRC (formerly ARHB)-funded research project. This enquiry, and the use it has made of the comparative method, has pinpointed moments of village and hamlet 'creation' and the alternative forms that these could take

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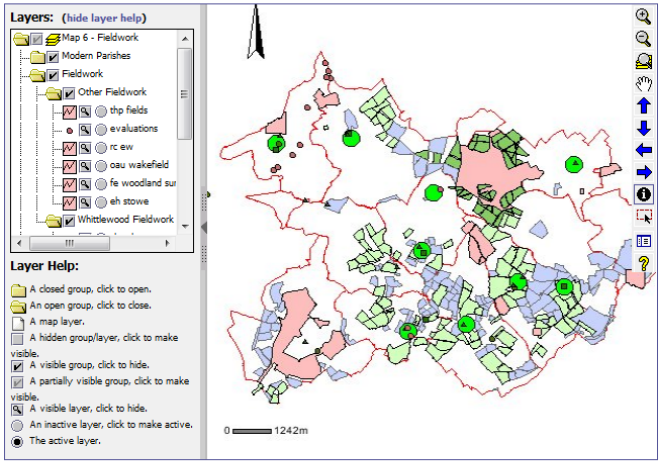
Whittlewood

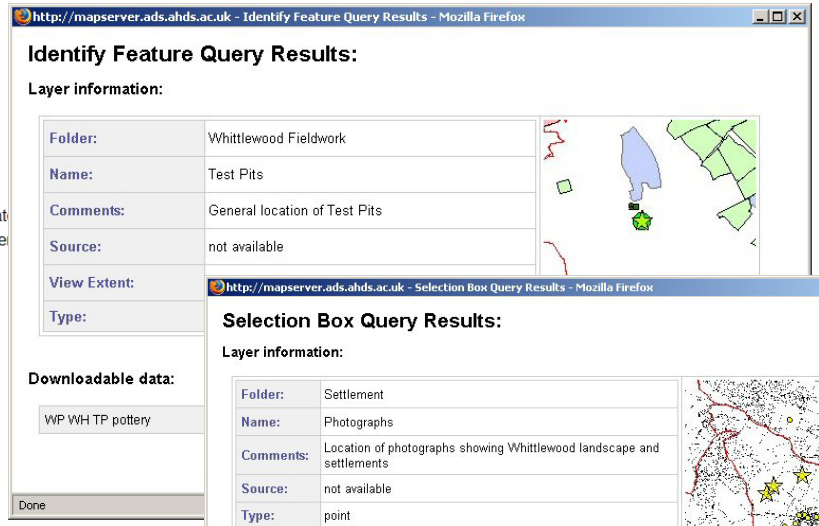
was adopted by some medieval communities and not others; if the distribution of nucleated villages correlat
the latter might on occasion also be worked from more dispersed settlement patterns; and how the manage
many variants (Baker and Butlin 1973).

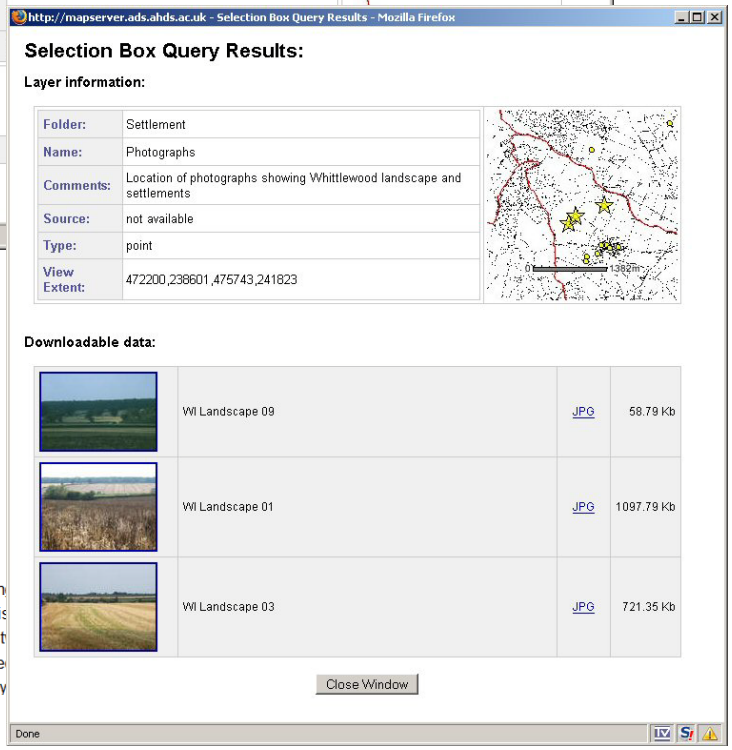
Please select a map: Map 6 - Fieldwork submit



Switch Off the Interactive Map for Whittlewood

The test bed [VIEW INTERACTIVE MAP] for the ideas which are presented here is a block of countryside, 100km square in extent, straddlin
county boundary between Northamptonshire and Buckinghamshire, lying deep within 'village country' (Lewis and Mitchell-Fox 1993). This
an area in the middle ages of both nucleated and dispersed **settlement**, open field **farming** and **royal forest**. Now encompassed within t
civil parishes, this area has been used to examine the relationship that existed between individual settlements, or groups of confederate
settlements, and their arable fields, pasture, meadow and woodland [VIEW INTERACTIVE MAP]. What is offered here is not the total history





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TAESP

Joining the Dots: Continuous Survey, Routine Practice and the Interpretation of a Cypriot Landscape (with interactive GIS and integrated data archive)

Michael Given, Hugh Corley and Luke Sollars

All: Department of Archaeology, University of Glasgow, G12 8QQ Scotland.

Email: m.given@archaeology.arts.gla.ac.uk, h.corley@inbox.com, luke-62@bigfoot.com

Summary

Table of Contents | Subscribe to this article, or to the whole volume (issues 20-21).

One of the major challenges facing intensive surface survey, even after some 30 years of development, is how to interpret surface artefact scatters in terms of past human activities and relationships. How can we combine the wealth of systematically collected survey data with the interpretative sophistication of contemporary landscape theory? This study uses web-based GIS and database technologies to provide a complete landscape data set and a fully integrated interpretative text carefully grounded in current landscape theory.

The material comes from the Troodos Archaeological and Environmental Survey Project, which carried out intensive survey in the northern foothills of the Troodos Mountains in central Cyprus between 2000 and 2004. This survey covered all periods from the Neolithic to the present day, a wide range of topographical and environmental contexts, and a broad spectrum of disciplinary and interdisciplinary expertise. In this study we focus on some core themes, particularly the relationship between farming and mining, the control of production, and the spatial differentiation of human activity across the landscape. By interpreting the material traces of routine practices such as labour and subsistence, we attempt to reconstruct social landscapes of the past.

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Preparation of this electronic publication and associated archive was assisted by a grant from the AHRC under the ICT Strategy programme.

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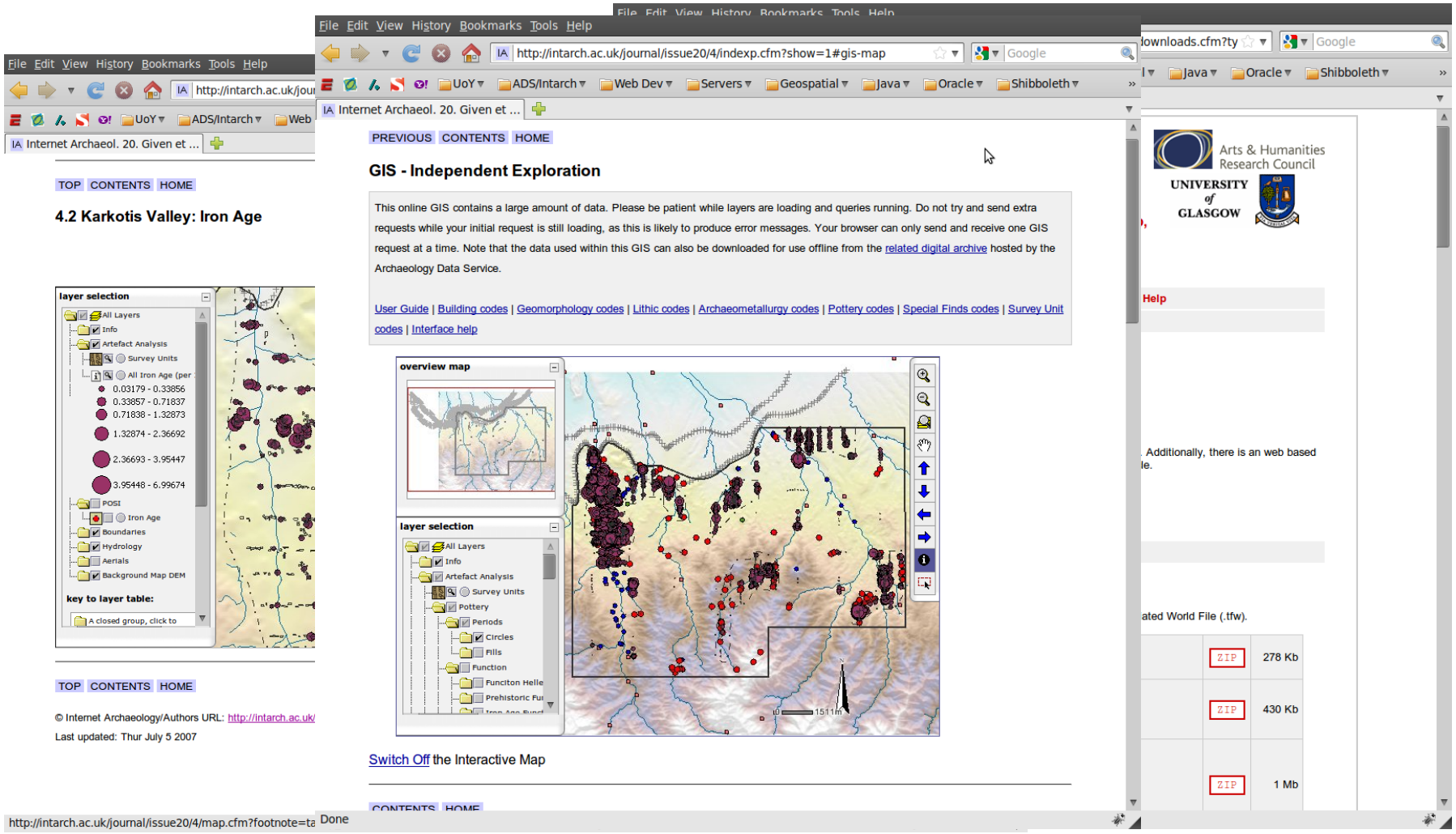

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Silchester

Silchester Roman Town Insula IX: The Development of an Urban Property c. AD 40-50 - c. AD 250

A. Clarke, M.G. Fulford, M. Rains and K. Tootell

With contributions by D. Allen, E. Besly, N. Crummy, K. Hayward, C. Ingrem, M. Lewis, M. Robinson, J. Timby, P. Tyers, P. Warry and S. Williams

Department of Archaeology, School of Human and Environmental Sciences, University of Reading, Whiteknights, PO Box 227, RG6 6AB. Email: a.s.clarke@reading.ac.uk

Summary

Table of Contents | Subscribe to this article, or to the whole volume (issues 20-21).

Abstract

The development of an urban property in the Roman town of Calleva Atrebatum (Silchester, Hampshire, England) is traced from the late 1st to the mid-3rd century AD. Three successive periods of building with their associated finds of artefacts and biological remains are described and interpreted with provisional reconstructions of the buildings. Links are provided to a copy of the Integrated Archaeological Database (IADB), archived by the Archaeology Data Service, which holds the primary excavation and finds records.

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Preparation of this electronic publication and associated archive was assisted by a grant from the AHRC under the ICT Strategy programme.

Go to article Table of Contents

Features

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Silchester

Period 2: Early Roman Timber Building 1

Room 1 | Room 2 | Function of the Building | Finds | Chronology

Left: Reconstruction of Timber Buildings 1, 2 and 3 (by Margaret Matthews).
Right: All Timber Buildings

Room 1

Plan | Matrix 290 (SVG viewer required. SVG Help)

Occupying what became the angle between the main north-south street and the subsidiary east-west street, ou (ERTB1) consisted of two rooms. The larger, Room 1 (Object 50043), measured *c.*10 by 7m, giving an interna metres, and was bounded by shallow slots (5393, 5304, 5375, 5357, 5356, 5346, 5396, 5371, 5323) filled wit be material associated with the infilling of the wall-structure, which, over time, replaced the voids created by the At the centre of the room was a rectangular, tiled hearth (1433), built up of horizontally laid, broken tile fragmen charcoal-rich soils (6038, 5919). At least three separate phases of use of the hearth can be identified, each as re-patching of the floor. The associated floor surfaces of the room were composed of a gravel base overlain by 5823, 5825, 5824, 5837, 5926, 6014, 6024, 5921, 5956, 5996) and *opus signinum* (5831). These floor surfac

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The Silchester Project:
Roman Town Insula IX
The Development of an Urban Property
c. AD 40-50 - c. AD 250

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The University of Reading

Amanda Clarke, Professor Michael Fulford and Mike Rains, 2007

Introduction | Overview | Downloads | Query | Download Support | Viewers | Help
Finds Query | Objects Query | Contexts Query

Full Record for Context Number 5393

Context Number:	5393
Description:	Beam slot cut containing (5339)
Notes:	Beam slot cut at the SE limit of the timber building containing (5339). [5393] meets with beam slot [5375] to form a right angled corner - the division of these two contexts was arbitrary. Also linked to beam slot [5396].Plan no: 28.216, 28.219Accuracy rating - 4 {18/04/2005 KTOOTELL}
Composition:	Linear in plan, measuring 6m in length x 0.22m wide at the SW end and 0.62m at the NE end with a variable depth of 0.14-0.24mBreak of slope (top & base): sharp on the southern edge / gradual on the northern edgeStepped sides with a flat, slightly convex baseOrientation: SW-NEContains (5339) {18/04/2005 KTOOTELL}

Run another context query.

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Cite only : http://ads.ahds.ac.uk/catalogue/resources.html?silchester_ahrc_2007 for this page

Merv

THE LANDSCAPES OF ISLAMIC MERV, TURKMENISTAN: WHERE TO DRAW THE LINE?

TIM WILLIAMS

Institute of Archaeology, University College London, 31-34 Gordon Square, LondonWC1H 0PY. Email: tim.d.williams@ucl.ac.uk

SUMMARY

Table of Contents | Subscribe to this article, or to the whole volume (issues 24-25).

This article outlines approaches for interpreting the Islamic city of Sultan Kala (Merv), *c.* 8th-13th centuries AD, based upon aerial photographic and satellite imagery. Hierarchies of assumptions (identification of individual wall lines; which frame spaces, rooms and courtyards; which are grouped as parts of specific buildings; which are part of urban blocks) and ontologies (information about these assumptions and the variable confidence of interpretation, from the position of lines to spatial function) provide a dynamic structure for the presentation of data, interpretation and theory.

The article establishes procedures and protocols within two sample areas (selected to represent the diverse features of the urban and suburban landscapes) to:

- Explore the theory and methodology of documenting interpretation (and uncertainty) in the transcription of aerial photographic and satellite imagery
- Develop ontological approaches to structuring interpretations and assumptions, within a hermeneutic model.
- Provide a textual and graphic narrative of the development of the areas.
- Establish an online forum (weblog) to contribute to the long-term project.
- Explore the use of other forms of electronic archive material, in particular, how imagery and audio files can be used to develop the discussion of landscapes and buildings.

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Preparation of this electronic publication and associated archive was assisted by a grant from the AHRC under the ICT Strategy programme.

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FEATURES

- This article will appeal to: those interested in the presentation of data, interpretation and theory
- Keywords: Merv; Silk Route; Turkmenistan; interpretation; uncertainty; aerial photographs; satellite

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Last updated: Wed Apr 02 2008

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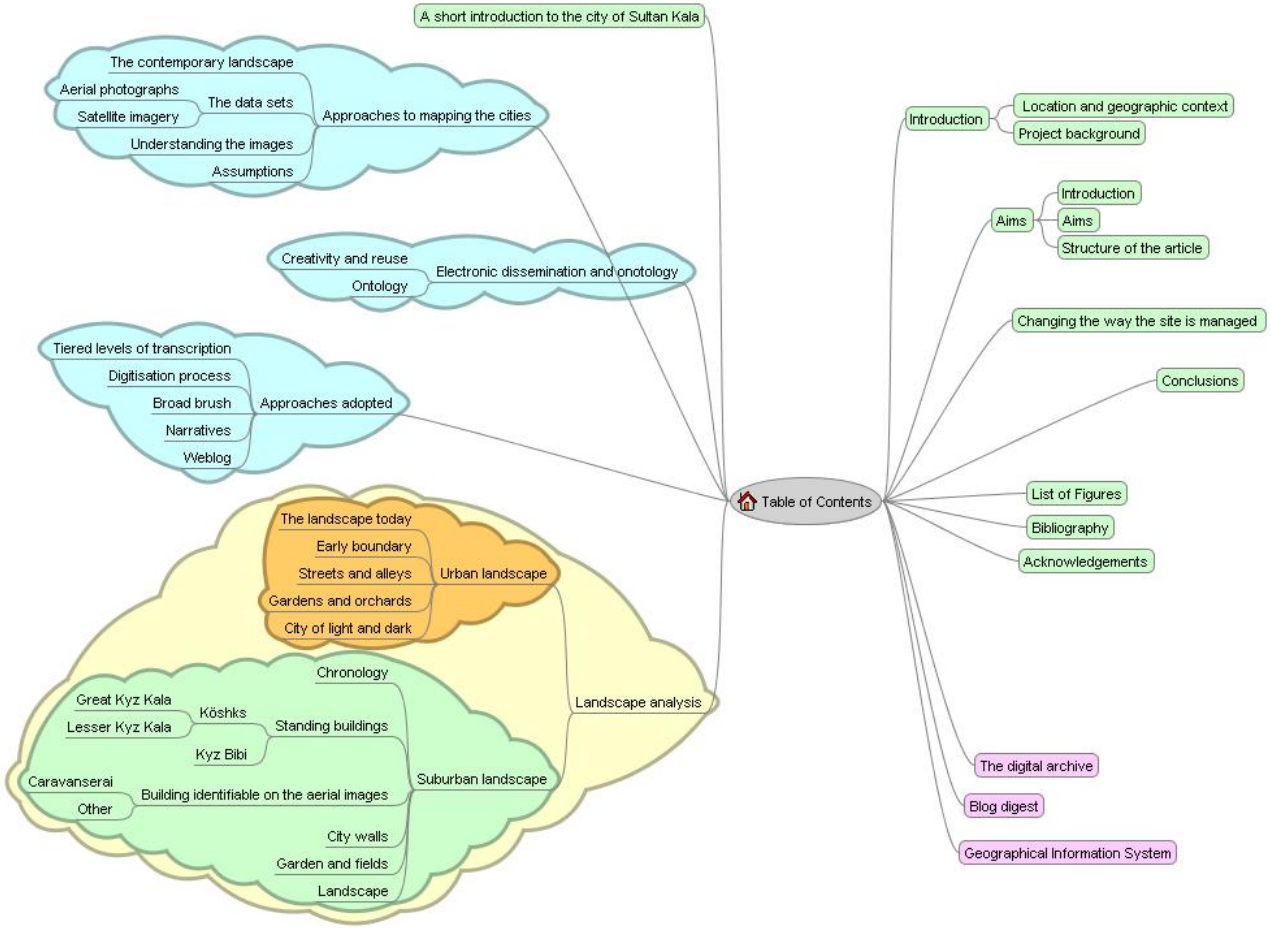
Merv



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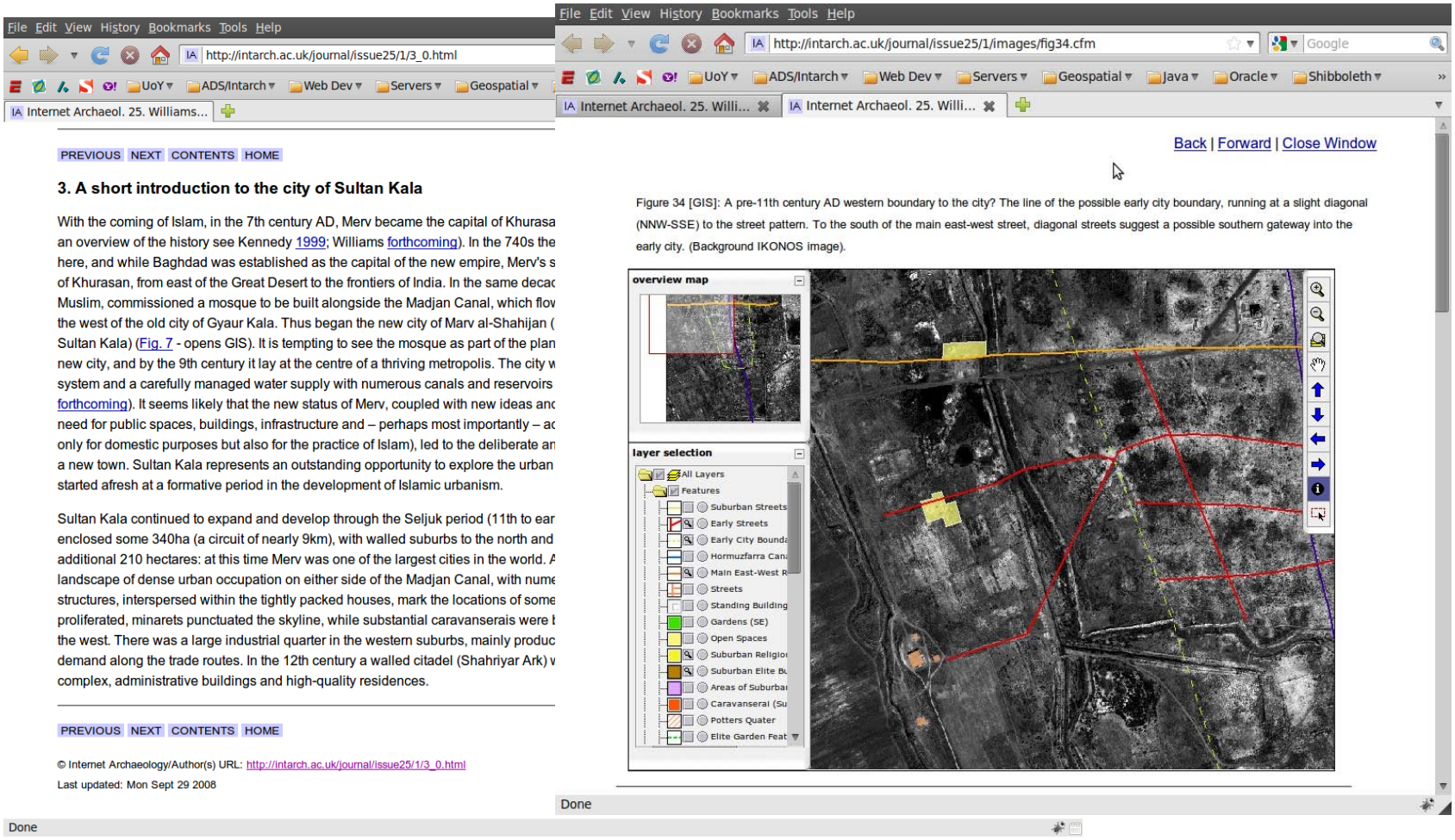
Merv



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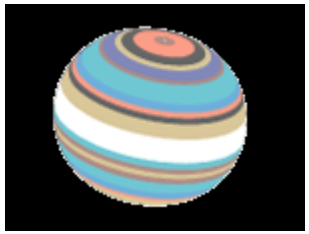
The Future…



Making the LEAP II:
a Transatlantic LEAP

- **Exemplar 1**: The Shala Valley Project, Northern Albania - Michael L. Galaty (Millsaps College, Jackson, MS), Wayne E. Lee (University of North Carolina) and Charles Watkinson (American School of Classical Studies at Athens, Princeton)
- **Exemplar 2**: Placing immateriality: situating the material of highland Chiriquí, Panamá - Karen Holmberg (Columbia University)
- **Exemplar 3**: The BTC Pipeline Archaeological Excavations in Azerbaijan - Paul Taylor (Smithsonian Museum) and David Maynard (Landsker Archaeology)
- **Exemplar 4**: Strategies for developing a next-generation virtual museum using close range scanning - Fred Limp (University of Arkansas)

Shala Valley Project

FORT, TOWER, OR HOUSE? BUILDING A LANDSCAPE OF SETTLEMENT IN THE SHALA VA

MICHAEL L. GALATY[1], WAYNE E. LEE[2], CHARLES WATKINSON[3], ZAMIR TAFILICA[4] AND OLS LA[5]

1. Department of Sociology and Anthropology, Millsaps College, 1701 North State Street, Jackson MS 39210 USA. Em
2. Department of History, University of North Carolina, Chapel Hill, North Carolina, USA
3. Purdue University, West Lafayette, Indiana, USA
4. Shkodra Historical Museum, Shkodra, Albania
5. Albanian Ministry of Tourism, Culture, Youth, and Sports, Tirana, Albania

SUMMARY

Table of Contents | Subscribe to this article, or to the whole volume (issues 26-27).

This article presents the results of archaeological, (ethno-)historic, and ethnographic research in the S
argue that through time and in different periods of occupation - Middle Palaeolithic, Iron Age, Late M
have met similar challenges of extreme geography and a harsh environment differently, in particular b
levels of intensity with the outside world. These shifts caused changes in population, settlement, and
strongly in the local landscape and built environment. Population, settlement, and socio-political orga
influenced by external forces, despite the seeming isolation of the valley and its occupants.

This article demonstrates how thin material and documentary records can be greatly enhanced throu
of settlement, home construction, and neighbourhood expansion and abandonment. We present sele
GIS, along with photos, drawings, and audio recordings of transcribed interviews. An interactive syst
to additional sources of data, and readers to tell authors and other readers how they have accessed
results.

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Go to article Table of Contents

FEATURES

- Keywords: Albania; mountains; landscape archaeology; ethnohistory; archaeological survey; re
  customary law codes

NEXT CONTENTS HOME COMMENTS

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PREVIOUS NEXT CONTENTS HOME

3. The Natural and Social Settings

View Slideshow of photographs by Ann Christine Eek (SVP 2005-2007)

Life in the high mountains of Albania is difficult. While the peaks of Shala approach 3000 masl, most houses are at valley bottom, between 800 and 1000 masl. The climate is sub-Alpine and the winters are long and hard, with large amounts of snow (Fig. 9; in January of 2008, SVP members Michael Galaty, Wayne Lee, and Zamir Tafilica traveled to Theth by snowshoe. An account of this trip is available at http://millsaps.edu/news_events/blog/galaty.shtml). The economy is currently built around full-time sedentary agro-pastoralism - sometimes called 'mixed' village farming - and functions at or just below subsistence levels; government aid or remittances from relatives overseas bridge the gap. Settled a tribal socio-political organisation together have had a profound effect on Shala's landscape and built environment. Large, ston them semi-fortified, called *kulla*, dot elaborately terraced foothills. Property boundaries are marked by stone walls and fences entrenched, clearly very old paths, called *shtegu*, link fields and homes.

Figure 9: Photo of Shala in winter, from west looking northeast into Theth (Galaty).
Figure 10: Map of northern Albanian tribal structure (Galaty).

The tribal socio-political system can be described as follows (Fig. 10): Large extended households (*shpia*) organised into nei (*mehalla*) share patrilineal descent from a common apical ancestor, thereby forming exogamous segmented clans or 'tribes' (Comments] (see Parkinson 2002 for a thorough discussion of the term 'tribe' and its meaning). Individual *fisi* may be further di 'brotherhoods' (*vllazni*). Several neighbourhoods and *fisi* together compose a single village (*katund*). Political power is vestec family patriarch, the *zot i shpi*. Family heads are appointed or elected to a village council, a *kuvend*, that makes decisions of i whole community. A single council member is elected 'headman' or *kryeplak*. In Ottoman times, several villages and *fisi* might a *bajrak*, a 'banner', led by a *bajraktar*, a 'banner chief'. Oral, customary laws regarding kinship relations and political organisa a 15th-century chief named Leke Dukagjini. The *Kanuni i Lekë Dukagjinit* was not transcribed in full until the early 20th centur priest, Father Shtjefën Gjeçov (Gjeçov 1989; audio clip #2). The *kanun* is based on the concept of honour (*nder*). Any breach might precipitate a blood feud (*gjakmarrje*).

Reader Comments

Author's Comment:
In this article, we define 'tribe' in the traditional anthropological sense of a lineage-based egalitarian or trans-egalitarian, segmentary socio-political formation. The term is, however, not without its detractors. We would welcome discussion from readers regarding its utility.

Michael Galaty
11-JAN-2010 at 12:30

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The Shala Valley Project

Michael L. Galaty, Ols Lafe, Zamir Tafilica, Charles Watkinson, Wayne E. Lee, Mentor Mustafa, Robert Schon & Antonia Young, 2009

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Introduction

The Shala Valley Project (SVP) is an Albanian-American collaboration, led by Michael Galaty of Millsaps College in Jackson, MS and Albanian archaeologists Ols Lafe of the Albanian Ministry of Tourism, Culture, Youth and Sports and Zamir Tafilica of the Shkodra Historical Museum. The project was launched in 2004 and conducted fieldwork during the summers of 2005-2008. The SVP integrates interdisciplinary programs of intensive and extensive archaeological survey and excavation with geo-scientific, ethnographic, and (ethno) historical surveys, including archival historical research, in order to study the Shala *fis* ("tribe"), one of many northern Albanian *fisi* that survived intact into the 20th century and, to some extent, down to the present day. The goals of the project are twofold:

- to produce a diachronic record of the valley's cultural resources, including both prehistoric and historic resources, that might help local administrators create a viable management plan
- to study the effects of "isolation" on people who have always lived in a frontier zone at the edge of larger polities such as the Ottoman Empire and Albanian nation state

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