# A DAY OF SPATIAL SEMANTICS, DIGITAL EXCAVATION DATA AND OTHER THINGS

July 30, 2013 Paul Day of Archaeology 2013,Digital Archaeology, Excavation, Finds Archaeology Data Service, Geographic information system, geosemantic, GSTAR,Hypermedia Research Unit, Linked Data, semantic web, Silbury Hill, University of South Wales

Following on from my previous posts in 2011 (here and here) and 2012 (here), this year it's a bit different. I've left the world of commercial archaeology to return to academia, starting a PhD in geosemantic technologies for archaeological research (GSTAR) based in the Hypermedia Research Unit at the University of South Wales with input from the Geographical Information Systems Research Unit. I also now undertake freelance digital heritage consultancy work for various clients in the public, commercial and charitable sectors through my business Archaeogeomancy.

*Archaeologists tools: The laptop is now very much part of this armoury.*

Last Friday, the Day of Archaeology, was a fairly typical day involving some research and a bit of commercial work. I have a number of ongoing projects, a number of which required some input last Friday. And spending a bit of time with my latest daughter, three week old Florence (who has yet to show any interest in archaeology, unlike her big sister Amelia who loves ruins). One thing I rarely get to do these days is dig, my time being almost entirely filled with research, writing and other desk/computer based activities. But I still very much consider myself an archaeologist, it's just that my tools are different. The photos I've used all come from my Flickr stream and are of archaeological sites, hopefully just a bit more interesting than photos of my computers…

# RESEARCH

I am currently wrapping up the literature review section of my PhD and heard last Thursday that my three month review has been accepted so full steam ahead. I've been looking at the range of Semantic Web and Linked Data technologies out there with particular reference to archaeological and heritage applications. Within this subject area, the GSTAR project is focussing on spatial data and geosemantic techniques and builds on the preceding STAR and STELLAR projects, collaborations between the University of South Wales, English Heritage and the Archaeology Data Service.

*Finds bags containing instances of the class Physical Object, discovered through a Finding Event*

I've also been working on some refinements of an ontological model, the CRM-EH, further clarifying aspects relating to the formation of archaeological features, deposits and the deposition of artefacts. Preliminary results are posted here on my blog, which I use to talk about my work in digital heritage and interesting things I come across.

# CONSULTANCY

In addition to my research, I am currently working on a number of exciting projects for clients. I have just deployed an archaeological information system to facilitate the interpretation of marine geophysics data based around Microsoft Access and Esri ArcGIS; this is currently in beta testing which gives me an opportunity to complete other projects including some tools, again built using Esri ArcGIS, to support data collation, synthesis and reporting/cartography for Desk Based Assessments (DBAs) including Environmental Impact Assessments (EIAs).

Another interesting project I was working on last Friday involves the creation of a Linked Data resource relating to the recent excavations at Silbury Hill, near Avebury, Wiltshire. This site is very dear to me, having featured in my undergraduate and masters dissertations which investigated the formation of landscapes in prehistory and the spatial patterning of archaeological remains by means of movement and perception of human scale actors. This Linked Data resource relates to the later Roman activity at the site and currently comprises c.40K assertions about contexts, stratigraphy, finds and samples all held in a triple store which will be published in due course to further add to the growing number of Linked Data resources online.

*Digging, the activity which reveals archaeological features, deposits and the stratigraphic relationships between them.*