The International Journal of Digital Curation
Issue 2, Volume 3 | 2008

Editorial

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November 2008

I am very pleased to introduce this second issue of Volume 3 of the *International Journal of Digital Curation*. It may be an appropriate time to note that interest in our journal is growing. While we know that web statistics are often misleading, we had just less than 11,000 unique visitors in calendar 2007, and had already passed 15,000 unique visitors by the end of October, 2008. Likewise pages down-loaded had almost doubled, and volume in GBytes had more than doubled.

This issue contains 5 peer-reviewed papers, of which four originated at the third International Digital Curation Conference, held in Washington DC in December, 2007. The authors of these contributions were given the opportunity to extend their papers from the conference format, and most chose to do so. The fifth paper was a separate submission; we are very pleased to see this, and welcome the further submissions of this variety subsequently received. We encourage potential authors to submit directly to the Journal. In addition, there are seven articles of general interest.

It is our intention to include papers from the 5th International Digital Curation Conference (which is being held in Edinburgh in early December, 2008) in future issues of this journal. Due to improvements in the workflow, we hope to publish those papers much more rapidly. We are also keen to publish papers from other conferences relevant to Digital Curation, as well as individual submissions, subject of course to peer review (see Information for Authors).

As always, papers and articles are published in alphabetical order of first author's surname. However, it makes sense to introduce them to you in a different sequence. The first two are covering problematic aspects of curation of science and engineering data. In a thought-provoking paper, Karasti and Baker report on aspects of curation in long-term ecological research, specifically the LTER program. It takes very little thought to realise how challenging this is: the very words "long term" in the title are challenge enough! LTER has been going since the 1980s, which means their efforts have gone through some of the most turbulent periods of computing history. Their data, partly as a result and partly by nature of the territory, are highly heterogeneous, and include both observational and experimental data (and presumably highly derived datasets as well).

The *International Journal of Digital Curation* is an international journal committed to scholarly excellence and dedicated to the advancement of digital curation across a wide range of sectors. ISSN: 1746-8256 The IJDC is produced by UKOLN at the University of Bath and is a publication of the Digital Curation Centre.

Lubell et al report on experiences curating engineering information. This field clearly has a mixture of good and bad news. There is general understanding that much engineering information must be kept for very long timescales. There has been extensive effort towards standardisation, which should mean encoded data can be understood. There has been intense concentration on archiving, including the role of OAIS . Meanwhile, there is a plethora of highly proprietary, highly competitive design and analysis tools at very different levels. Engineering data are necessarily extremely complex, so tools continue to evolve rapidly to try to provide new features; backwards compatibility is not as high on the list of design requirements as new functionality (especially if the latter represents a source of revenue for the provider). Lubell and colleagues suggest a refinement of the OAIS model, plus some sustainability metrics. Key perhaps is this comment:

> …the problem of long-term EI sustainability starts at the point of creation of the digital objects and ends in delivering the right information for the task at hand (reference, reuse, and rationale) to the end user.

Woods and Brown also report on experience, in this case dealing with migration problems in a long-term archive of US Government Printing Office datasets, previously distributed on floppy disks, CD-ROMs and DVDs. Although they do use emulation in some cases, they understand that emulation of older environments provides some significant challenges for modern users. Their approach is based on migration on request (i.e. the document should always be migrated from an original source format to a modern equivalent, rather than being successively migrated through different versions). One glimpse of the nature of their problem: in their test set of less than 2,000 collections, there are more than 19,000 Lotus 123 files!

Our contributed paper was Golding and Terras, analysing the current parlous state of preservation of computer games in the UK. This is another difficult area, where intellectual property problems compound suspicion by the rights owners, complexity of underlying hardware, and lack of interest from our traditional collecting institutions. Emulation may seem like the only solution for this kind of complex object, although the authors believe it does not meet all archival requirements.

Finally we have Cheung, Hunter, Lashtabeg and Drenna, who propose tools developed from their Provenance Explorer to encapsulate datasets and resources relevant to a document text. As always, their work is standards-based, linking to RDF and OAI-ORE. I am seeing an increasing amount of work linked to the authoring environment for science; the demands of science do seem likely to justify something with different capabilities than the average business authoring tool, but whether authors can be persuaded to take them up is another matter.

The seven general interest articles comprise two conference reports, two updates on work in which the Digital Curation Centre is involved, and three further papers, one of which reports experience from American Memory, one reports on an international copyright study with implications for curation and preservation, and the last describes steps being taken in Australia to establish a national distributed data service.

In closing, I should mention that we are thinking hard about the future of this journal, and have a number of ideas. However, we would very much like to hear from you, the reader, and from you, the author. Please send any comments you have on how this journal could best be improved to ijdc@ukoln.ac.uk We can't promise to act on all of your comments, but they will certainly help!

References

CCSDS. (2002). Reference Model for an Open Archival Information System (OAIS). Retrieved November 27, 2008, from http://public.ccsds.org/publications/archive/650x0b1.pdf