



ONLINE DATABASES

A New-Old Role for Libraries

By Carol Tenopir

IN THE POPULAR TELEVISION SHOW *Life on Mars*, the hero is transported 35 years back in time. At first things seem normal, but then he begins to see odd differences (like no mobile phones or personal computers). Well, I began to feel a bit like that character at the November 2008 annual Charleston Conference: Issues in Book and Serial Acquisition—"The Best of Times, the Worst of Times" (katina.info/conference). But even if I weren't actually taken back to the past, it sure felt that way after all the plenary sessions on archiving, with their clear retrospective focus.

At second glance, the archiving at issue wasn't your 20th-century variety. The discussions at Charleston focused on preserving born-digital materials, not just digitizing old analog or print items. Born-digital materials challenge us to identify and select from among the best of the billions of bytes created in the normal course of research, personal life, or work and then store those born-digital materials in perpetually usable formats.

Shifting archival focus

Derek Law, recently retired head of information resources at the University of Strathclyde, Scotland, admonished the audience of librarians, publishers, and vendors for "hav[ing] focused too much on the commercial material" such as books and journals. In the past, major research libraries concentrated more on noncommercial items including ephemera created by their own faculty and students. Today, Law believes that librarians "fail to engage with e-resources" and are instead "obsessed with licenses." As libraries fight to remain uniquely relevant, Law says "licensing e-journals and digitizing old things aren't our salvation." Rather, libraries should reconceive their role in providing access to unique, born-digital materials.

According to Law, these include research papers, conference proceedings,

theses, wikis, blogs, audio files, e-laboratory books, streamed lectures, images, email, and student-staff records. University repositories each can save digital content that is unique, rather than duplicating what is held at other universities. They can reach beyond final articles or books, which are available from many sources, to research ephemera in multiple forms.

Planning for the future

Managing 21st-century born-digital archives is different from traditional archives or records management in many ways. Archivists working with born-digital content need to ally right now with potential

digital materials, Law said. The first is to "receive the information with accuracy." Quality content still matters, as does making sure the accurate version of replicated content is preserved. Second, "store the information with integrity beyond doubt." Security remains an integral part of every archive, particularly when libraries hold the content uniquely, as with the metadata that accurately describes the sources. Users now and in the future must be able to trust the accuracy and integrity of the materials.

Third, "retrieve the information without amendment," even if it means resisting the urge to correct content that reflects a very different time in history.

In archiving born-digital material, libraries play an old-fashioned role that constitutes a new sacred trust

donors to plan ways to capture and collect their digital creations. Once a content creator is gone, his or her digital content may be gone as well. Librarians also need to help design standards for data preservation and description to guide creators.

It's an intimidating task to sift through exabytes (one quintillion bytes) of content after the fact to decide what to keep. Law quoted a Sun Microsystems estimate that in 2010 over 988 exabytes of new digital information will be created (a six-fold increase over 2006). But only one-quarter of this will be unique—fully three-quarters of digital creation is duplicated. Libraries must identify and preserve the important and unique content created by our own constituents. It's neither practical nor desirable merely to keep everything and rely on good search engines.

Born digital: five rules

In archiving born-digital material, libraries play an old-fashioned role that constitutes a new sacred trust. Five precepts of the Māori culture in New Zealand used to ensure transmission of oral traditions also apply to archiving born-

Fourth, "apply appropriate judgment in the use of the information," and, finally, "pass the information on appropriately." Some materials should be preserved for the future but, owing to privacy or security concerns, may require safeguards for their current use. Field data about the last surviving members of an endangered species, for example, may be too sensitive to make available to the general public.

Procedures and tools that ensure appropriate access and long-term preservation are important components of born-digital libraries. Law summarizes how libraries can remain relevant into the future by "building e-research collections and contributing to a virtual research environment of born-digital material." To make this happen, we must recognize the library's role in adding value to the content with quality assurance and trust metrics and codify our role in the management of these assets created at our institutions.

Carol Tenopir (ctenopir@utk.edu) is Professor at the School of Information Sciences, University of Tennessee, Knoxville