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## CHAOS -- eBooks: Where Have All the Standards Gone?

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experienced foretell others, that the specialty that was his passion will no longer be recognizable. He makes clear in these words the reason why: "were I made to choose a single diagnostic attitude that epitomizes the difference between the surgeons retiring and the surgeons coming, it would be the startling shift in emphasis from the patient to instrumentality. The general surgical resident of my day struggled mightily to become a master of the physical examination; the general surgical resident of today struggles mightily to become a master of the menu."

The changes in how medical literature is used parallels this idea. No longer does the student see the library as the source of all information. Again, the instrumentality has come between the book and the student. This instrument is the computer and no one doubts it is remarkable in its ability to locate information, but the computer does not have the breadth

and depth of the library's collection with a wide array of books, journals, manuscripts, archives, illustration, and objects in a variety of formats.

**Walter Cannon**, the widely-known physiologist of the early 20th century, said that the following are the important traits for a career of investigations: curiosity, imaginative insight, critical judgment, thorough honesty, retentive memory, patience, good health, generosity. Those same traits are necessary for any scholar or researcher today. Reading the literature is the key to learning, the road to knowledge. The instrument is a tool, in the case of the computer, a mighty one. Our job is to use the tool and combine it with our myriad of resources to facilitate identifying, accessing, and building of knowledge with our users. 

Watch for additional reports from the *Charleston Conference* in the April issue of *Against the Grain!* The entire *Charleston Conference Proceedings* will be published by **Greenwood/Libraries Unlimited** later this year.

## CHAOS — eBooks: Where Have All the Standards Gone?

by **Karen Coyle** (Digital Library Specialist; Phone: 510-540-7596; Fax: 510-848-3913) <kcoyle@kcoyle.net> <http://www.kcoyle.net>

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**Column Editor's Note:** *Standards setting is an important part of product development and can make or break a new product. Karen Coyle, has been monitoring the eBook scene for years and has chaired the ALA Office of Information Technology Policy eBook task force, tells the story of standards development around eBooks. As Karen concludes there is much to be done to stabilize the eBook of the future. — PH*

In 1998, with much fanfare, a core group of publishers and technologists launched an effort to create standards for eBooks. The promise was that these standards would define an eBook format that could be used on any device; that would be interchangeable between eBook brands; and that would make it easy for publishers to create eBooks from the same data files that were used to drive the printing of the hard copy products.

It is now 2005 and that standard does not exist, and work on it has almost ceased. Did it prove too difficult? Hardly. What intervened in the years between 1998 and 2005 was the reality of the eBook market. In the digital market it is the delivery of products in proprietary formats that drives competition on the marketplace. With games (such as **Sega**, **Nintendo**, **Xbox**) and music, (such as **iTunes**, **Real**, **Microsoft Player**), the sale of hardware players stimulates the related sales of content, and the desirability of the content in turn stimulates the sales of hardware devices.

This model did not work for eBooks, and the various attempts to produce eBook reading devices that would drive a market for the books themselves failed. Instead, eBook reading software is often provided as a free add-on to com-

puting devices that users already own, either hand-held **Personal Digital Assistant** devices like **Palm** or **Clio**, or for personal computers. With the reader being given away for free, the revenue for the eBook delivery comes from converting the book to a particular proprietary format such as **Adobe PDF**, **Microsoft Reader** format, or **Mobipocket**. Although there are about two dozen eBook formats, those three capture the majority of the market.

Does this mean that there is no need for standards in the eBook arena? And what has happened to the years of standards work that has already been done?

The **Open eBook Forum (OeBF)** was formed by the original 1998 group to develop the standard eBook publication structure. After about five years of activity, a version 1.0 standard was published, and significant work was done on version 2.0, which would have a greater level of detail and additional features. It turned out that although the eBooks that were sold to consumers would be in proprietary formats, publishers needed a single format that they could use that could then be converted automatically to the many formats required in the retail market. Because there was no other standard, the **OeBF** publication structure has become a de facto standard inside many publishing houses. In addition, the version 1.0 standard forms the basis of the **Digital Talking Book**, (aka **ANSI/NISO Z39.86**) a clever marriage of voice and text that can serve sighted and sight-impaired readers equally well.

The standards work that has continued in the eBook area is that which facilitates business models. The **OeBF** has endorsed the use of the **MPEG-21 Rights Expression Language** for the rights management function of eBook de-



livery and protection technologies. There has also been work in **OeBF** on models for data that should accompany each eBook, such as that describing the author, title, and other important publication data that we normally seek on the

title page of a physical book. This

data relates to the publisher metadata standard "ONIX" and will provide for additional automation of data passing through the supply chain from the original publisher through the wholesale and retail systems.

There is still a great deal of need for standards in the eBook area. A more advanced publication structure would facilitate the long-term archiving of digital texts so that back list books could be easily republished, or published on demand, when some external factor causes renewed interest in the topic. Such a structure would also allow libraries to store archival quality versions of the eBooks that they purchase so that these can be preserved for future generations, long after the hardware and software of the proprietary formats have become technological dinosaurs.

The range of business models that are supported by both the delivery systems and the rights management standards is very large. There is also a large base of possible consumer models. Individual consumers will want to know what options are available with each eBook product that they buy, and will favor those that fit best into the existing hardware, software and workflows of the user. Institutional customers, like libraries and educational institutions, will negotiate particular contracts with eBook providers. These negotiations are often costly for both the institution and the provider, and could be made more efficient with the use of standard contracts that vendors can offer. And companies will want enterprise-wide solutions that will have different requirements from those of the institutions in the non-profit sector but that could equally benefit from some "best practices" for licensing agreements.

Where standards are often beneficial is in the areas where digital materials must cross the threshold between one system or function and another. In the most simple model, an eBook

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# Transaction Log Analyses of Electronic Book (eBook) Usage

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## INTRODUCTION

There has been much discussion of electronic books (eBooks) in the literature since the late 1990s. Some believe eBooks will replace print books,<sup>1</sup> while others tout that eBooks are dead and will never become a format of choice. **Stephen Abram** believes that the death of the eBook has been exaggerated and that eBook use is dictated by the situation and purpose for seeking the information and by the type of content accessed.<sup>2</sup> **Walt Crawford** expresses similar beliefs about the contradictions of death vs. overwhelming phenomenon associated with the adoption and viability of eBooks.<sup>3</sup> **Martha Whittaker** and **Daniel P. Halloran** state that print will always have a place, but that there is also a place for electronic materials, especially reference and scholarly materials.<sup>4</sup>

People continue to make predictions about the eBook. **Ronaleen Roha** and **Courtney McGrath** report, "...only 43,000 of the most curious among us have bought the [eBook] devices, though researchers predict anywhere from 2.6 million to 28 million in use by 2005."<sup>5</sup>

In order to determine if and how eBooks are used, librarians and publishers have queried both users and consumers of eBooks. There are several studies that compare the usage of a title that is available to users in both print and eBook format.<sup>6</sup> Other studies analyze eBook usage reports and user surveys to better understand what eBooks are being accessed and how users perceive their eBook experience.<sup>7</sup>

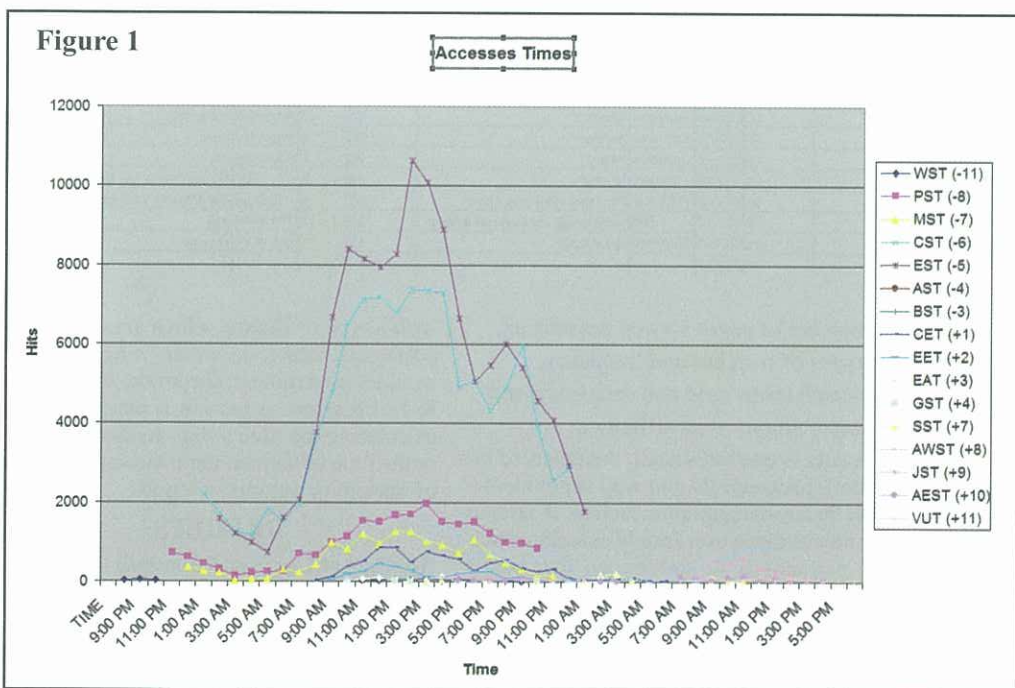
Another possible methodology for identifying the eBooks that users are accessing and

how they are accessing them is transaction log analysis, which can be integrated with other data collection methodologies, including those mentioned above. This type of analysis allows the researcher to unobtrusively identify user search and retrieval patterns and to evaluate systems. Transaction log analysis provides both macro analysis, an analysis of aggregate use data and patterns, and microanalysis, an analysis of individual search patterns. The data can be used to develop systems and services based on user behavior.

There are limitations to transaction log analysis. The users may not be identifiable; therefore, it is usually impossible to associate user demographics with usage patterns or to determine where they access the resource or how and why they use the resource. The transaction logs provide massive amounts of data to manipulate. The types of possible analyses are dependent upon the data collected and stored in the system and when systems change, the data collected may change or no longer be available for analysis. The data collected varies with each system, making comparative analyses between different systems difficult or impossible. There is also some question of the invasion of privacy since the users are not informed that they are being observed.<sup>8</sup>

eBook transaction log analysis can provide data about the items being accessed and the types of searches being conducted by the users. The number of accesses of each item and the number of times each screen or page is accessed can be collected and analyzed. This type of analysis can also identify patterns of access, such as the country, date, and time that the user accessed the eBook and the

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passes from the publisher to the company that provides the digital "package," then to the system that will allow the purchase and delivery of the eBook. But there is much more to the actual flow of eBooks than this simple model shows. Most eBookstores allow customers to store their eBook "library" online, and to down-

load their books onto a range of devices. The challenge of secure delivery of a product to multiple devices is that the product should appear the same and provide the same features even though the devices themselves may be significantly different.

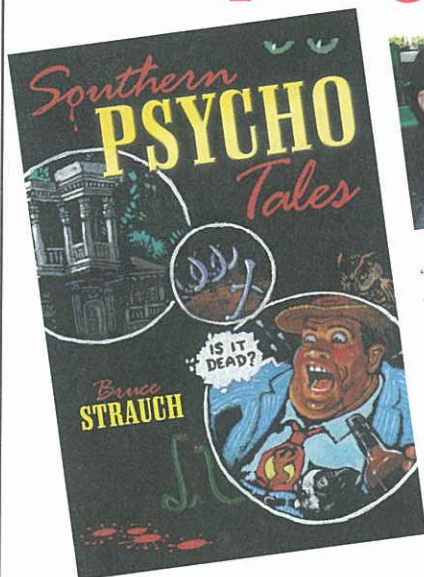
Libraries and e-learning systems provide an interesting challenge for the developers of eBook services. Libraries already have the ability to lend their eBooks to individual users, but

they would also like to allow teaching staff to add whole eBooks or parts of eBooks to their curricula in electronic courseware. This means that a selected part of an eBook will need to get the same features and protections as the entire book. It also means that the library system and the e-learning system must be able to communicate information about the eBook and its features, and both systems must be able to lend the

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# “I’d rather read these tales than eat shrimp & grits on Meeting Street...”



Bruce Strauch is an adopted Charlestonian and — as a professor of law at the Citadel — a genuine Southern colonel in the S.C. “Unorganized” Militia. He has published stupefyingly dull academic journal articles as well as five gore-drenched, mass-market horror novels with his wife Katina. An artist and world traveler, he is convinced that he can speak French.

“I’d rather read these tales than eat shrimp & grits on Meeting Street or bourbon-drizzled pecan pie with cream whipped in the kitchen. Strauch’s understanding of the droll sides of Southern culture is deep, wide, and endlessly fertile, and he has the ear of a feeding bat when it comes to setting down the rhythms and nuances of Low Country speech.”

— Jerry Leath Mills, author of *The Dead Mule Rides Again*

“Strauch’s stories are not the best of the South. They are better. *Southern Psycho Tales* bristles with stories of lies and treachery and things that do more than go bump in the night. They rise from the twisted, tortured and tattooed underbelly of the South. They are about people next door — people whose souls know no sane home.”

— Loyd Little, author of *Smokehouse Jam* and whose novels include the PEN-Hemingway winner *Parthian Shot*

“Strauch’s entertainingly bizarre imagination soars in *Southern Psycho Tales*. If the players from ‘Rockford Files’ or ‘Twin Peaks’ had ever flown to the South, they’d have landed in — and been right at home in — Strauch’s riotously venal social landscape. Nowhere else will one find a woman in bondage to a beauty-parlor hair-dryer.”

— Bland Simpson, author of *Ghost Ship of Diamond Shoals*



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loaded into the database, which means that the data need to be normalized. This becomes very time consuming when dealing with massive data files.

### CONCLUSION

Although there are limitations to the transaction log analysis methodology, it is an unobtrusive method of identifying the behaviors of eBook users. The data can be used to make collection decisions, such as what types of eBooks to acquire and what types of print books to digitize. Tracking and interpreting use patterns can provide information for the development of more user-focused systems. It would be beneficial to continue to collect and

the user’s local time.

The data are not formatted before they are

analyze transaction log data from the **netLibrary** system to identify what eBooks are accessed and when they are accessed. These data could provide a historical analysis of the evolution of eBook adoption and usage.

**Table 6 Top Viewed Books by Library Type and Subject for 2003**

Academic				Public				Other			
Subject	LC Class	Count	%	Subject	LC Class	Count	%	Subject	LC Class	Count	%
Social Sciences	H	11	44%	Social Sciences	H	13	52%	Science	Q	17	68%
Science	Q	11	44%	Science	Q	7	28%	Social Sciences	H	6	24%
Technology	T	2	8%	Technology	T	2	8%	Technology	T	2	8%
Bibliography: Library Science	Z	1	4%	Medicine	R	1	4%				
				Education	L	1	4%				
				Philosophy, Psychology, Religion.	B	1	4%				
<b>Total</b>		<b>25</b>	<b>100%</b>	<b>Total</b>		<b>25</b>	<b>100%</b>	<b>Total</b>		<b>25</b>	<b>100%</b>

**Table 7 Top Viewed Books by Library Type and Subject for 2004**

Academic				Public				Other			
Subject	LC Class	Count	%	Subject	LC Class	Count	%	Subject	LC Class	Count	%
Social Sciences	H	12	48%	Social Sciences	H	16	64%	Science	Q	11	44%
Science	Q	8	32%	Science	Q	3	12%	Social Sciences	H	9	36%
Medicine	R	1	4%	Technology	T	2	8%	Technology	T	4	16%
Education	L	1	4%	Medicine	R	2	8%	Language and Literature	P	1	4%
Bibliography: Library Science	Z	1	4%	Education	L	1	4%				
Technology	T	1	4%	Philosophy, Psychology, Religion.	B	1	4%				
Language and Literature	P	1	4%								
<b>Total</b>		<b>25</b>	<b>100%</b>	<b>Total</b>		<b>25</b>	<b>100%</b>	<b>Total</b>		<b>25</b>	<b>100%</b>

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book to users while providing security for the eBook itself.

Enterprise systems also have complex needs.

Licensing for a company often means the need to identify subsidiaries and partners covered by the same license. Companies may already have sophisticated information systems used by their employees and will want the eBook system to appear to be a part of that internal system so that employees do not need to learn another interface. At the

same time, enterprise systems can have strict security needs, and any external system that interacts with the enterprise system has to conform to certain security requirements. And, of course, if the enterprise system is of military significance, these requirements can be very imposing.

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**Little Red Herrings:**  
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be flawed from the start. **Filtering Facts** made this clear in a report on the methodology published subsequent to the ALA report. In it **Christopher Hunter**, a doctoral student at the **Annenberg School for Communication** of the **University of Pennsylvania** and responsible for the ALA study, came clean, issuing a statement that his findings were *not* generalizable to the wider Internet. In fact, as has been shown, the exact opposite is true. Unsurprisingly, ALA has since dropped the report from its Website but without fanfare or correction. But even if it could be shown that filtering did block 25 percent of good information, the trade-off seems to me a good one. Get rid of 100 percent of the bilge water on the Web and have 75 percent of good information. Again, ten years ago we didn't have access to 100 percent of the Web.

**Myth Four: Most People Favor a "Filterless" Internet:** As must be obvious by now, even librarians disagree with this statement. Moreover, states issuing requirements for filtering are popping up everywhere. South Carolina, Wisconsin, Utah, Michigan, Alabama, North Carolina and Missouri have filtering laws on the books, or ones pending. In a **U. S. Supreme Court** case brought about by six Virginia professors, the high Court rebuffed them by refusing to take the case and upholding the U.S. Court of Appeals for the Fourth Circuit. The state argued that the law prevents employees from wasting time and from creating a sexually hostile workplace and the nation's highest court in the land upheld that ruling just this year. Moreover, evidence mounts that libraries are becoming not only the most readily available purveyors of pornography, but also key targets for pedophiles. The pedophile monitoring group, *PedoWatch.org*, has confirmed that online pedophiles are telling each other to use public libraries to download child pornography. Finally, even the argument that this is more clap-

trap from the wild-eyed Right no longer obtains: just three years ago, both **Al Gore** and **Hillary Rodham Clinton** publicly came down on the side of filtering the Internet!

What is clear from all of this is that ALA has an odd axe to grind: It wishes to vouchsafe the promulgation of pornography. Two summers ago, ALA's annual convention offered a panel on exotica in libraries. The enticement, so to speak, read, "The main focus will be on bibliographic selection along a number of different dimensions [and] ... explicitness: PG, R, and X. Different sexual subject areas will also be covered: 'vanilla' heterosexual, lesbian, gay, vampire, SM, anything goes, as well as factors like literary quality, audience, and trends..." **The Modern Language Association** now has a rival! Since libraries have *never* collected such materials in print (incidentally, the strongest argument in favor of filters), the session should help further ALA's argument that such material is "information."

The argument that filters restricted *information* leads to the obvious question, what kind of information? If ALA argues that this is sex education, surely no one will agree. What else is there? Nothing. **Horace** understood human nature better than most moderns: "The mind," he wrote, "is more easily stirred by the eye than by the ear."

The issue refuses to go away no matter how hard ALA and its minions wish it would. Librarians who flaunt their intellectual freedom credentials may find danger ahead. **The Greenville County (S.C.) Commission** unseated four of the five incumbent library trustees seeking reappointment to the 11-member body. The commission's February 15, 2000,

action came one month after the library board resisted public pressure to have blocking software installed, opting instead to require written parental permission before minors can surf the Internet on the library's unfiltered computers. The library's director also felt the axe fall. Last fall in Oklahoma, after a director made a grand stand for a filterless Internet, local voters rejected by a wide margin the library's bond bill. This could be a trend.

While some librarians increasingly opt for the "tap on the shoulder" approach (also devoutly opposed by ALA), parents are becoming increasingly angry at the refusal of librarians to act *in loco parentis* when their children come to call. The end result will be a battle royal. Oddly, a few years ago we nearly destroyed the apple industry because eating 740 alar-treated apples everyday for 70 years *might* cause cancer. We did it for the children. Today, however, apparently 100 million pornographic sites are not too many for our kids. Hey, they might miss those famous dancing hamsters having sex! Librarians cannot hope to win this issue if they unwisely continue to support ALA's misguided, wrong-headed and error-filled approach.

The sad fact of the matter is this: If we do not make the case that hardcore pornography can be filtered defensibly, then others will make the logical deduction that nothing can. **Huxley** once said that the true intellectual is one who finds something other than sex to be interested in. The serious fact of the matter is the anti-filtering position held by ALA may result in the loss of librarians' public voice, not to mention our public standing, and, most importantly, our public. 🐘

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## Leaving the Books Behind! — The Alter Ego

by **Mary E. (Tinker) Massey**, Column Editor (University of South Carolina, School of Library and Information Science, Columbia, SC) <MMassey@gwm.sc.edu>



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All of these complex functions are possible, but developing these systems will be costly. Having standards would mean that developers could create systems that work for an entire market, which makes it possible to recover the cost of development.

Although work on standards for eBooks is mainly on hiatus at this moment while the market for eBooks builds and the industry gains experience, it seems clear that a wider use of books in electronic format will require more standards development. This development will arise from different market sectors and use communities as their needs reach a critical point, yet there will be areas where those needs intersect. It will take a combined effort of the publishing community, engineers and data specialists, and the cultural and educational communities to create the standards needed for our eBook future. 🐘

Wow! Can't believe it is a new year, 2005. Late last year after the course work was completed, I reverted to my alter ego of writer for my grandchildren. Bet you didn't know I have fourteen of those wonderful creatures related to me. Truly a gift, but rough at Christmas. My gift to them is a booklet each year of children's stories revolving around my childhood and that of my deceased husband who is their blood kin. They are full of the mysteries of growing up in the 50's, but also filled with morals and family relationships that seem to be lacking today. We all have such a fun time with them and it is good for me to remember the "rules of living" my parents have given me. I have also begun to write some adult novellas that are full of relationships and wisdom learned through my growing years. It is a way to leave my history behind. The oral tradition has come to almost a complete stop in the world, as we relish technology, speed, separation and "throw-away" life. We have forgotten where we come from or even

where we are going. Libraries are starting to renew our interests in family with programs on lineage studies, genealogy research and an occasional program visitation with older folks in the community who remember certain celebrated times (e.g., World War I or II, the Roaring 20's, Roosevelt, or the Civil War). Every chance I get, I am encouraging new writers to pursue penning their memoirs, or doing stories or poetry around their youthful memories. I also try to encourage Public Libraries to add programs of local history from the folklore of the older residents. Why not? We need to learn from the past and move in positive directions.

My coursework sometimes overshadows the pleasure writing, but I can always find time even through the two jobs, MLIS work and helping a needy family all year long. We find time for the important things in life. My recent work in the Special Collections at **USC Libraries** has led me to a new interest in writing. I have been

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