The traditional publishing industry is seeing the first signs of its own doom while desperately hanging on to the last few dollars of profit from selling pulped forest trees. The demise of paper-based publishing is as certain and as inevitable as the end of the use of stone hieroglyphics. It’s likely that Generation X will be the last to support the traditional print-publishing industry. The rationale for this prediction is simple: there is absolutely no reason for high school students to carry around pounds of books in their backpack when almost everything else is now paperless. In the following paragraphs, I will explain why the extinction of paper-based textbook publishing is inevitable and why the strategies of the publishing industry to maintain its grip should be viewed as last-gasp efforts.

The technology angle

From a technology standpoint, we have everything needed to make books, particularly textbooks, that are distributed and sold electronically. Almost universally, all publishers already require authors to send their drafts electronically—text, charts, graphs, pictures, and all. Instead of typesetting the manuscript for paper print, wouldn’t it better to enhance its cross-reference capabilities for easy search and retrieval? Unfortunately, this does not yet happen.

Rather than embracing the new electronic world, the publishing industry is hanging on to its archaic methods. Only a small subset of publishers provides electronic copies of books, and those that do, in general, provide only the PDF version of the paper copy. As you can imagine, this is as unpromising as it can be. It’s equivalent to sequential access on a tape drive. The reality is that the paper version provides a more convenient instrument for nonsequential access.

Considering that the entire book’s content, including text, pictures, and so on, is available for hypertext processing, why wouldn’t publishers provide more versatile electronic copies? Their argument is related to protecting copyrights. The sole business model with which publishers have become comfortable is the digital library pricing model in which access rights to PDFs last only for a set period. Because PDFs for long manuscripts are cumbersome, many users print a copy, thus defeating the entire purpose of digital production.

The business angle

With inexpensive computers (for example, the highly anticipated price point of $100 for a laptop) on the horizon, we should expect new business models for delivery of educational materials, including textbooks. It’s ironic that the cost of a portable computer as the new medium of textbook delivery would be negligible compared to the total average price of books purchased by a student. And no trees have been chopped down either. So basically, if we split the price of the textbook into price of the paper and price of the license to use the content (copyrights), then we will have a comparison basis for electronic textbooks.

The new model is relatively simple and is well suited for high school and college students. The book broker (that is, perhaps the role to which today’s publishers would evolve) sells students licenses for the desired books—books that are not just text and pictures, but come with the appropriate visualizations and animated explanations. Why? Because new books have not been bound by the 2D print medium. Licenses, on the other hand, can be quite diverse in terms of the privileges they provide. For example, they might be good for a certain period, or so many installs, or the number of simultaneous viewers. They might even specify the constraints of paper copy production. For instance, we can mimic single-page print, to align digital copy with the current copyright restrictions.
Incidentally, the more progressive book brokers will be inclined to supply a portable PC with the first batch of orders. Remember, if a college student is purchasing just four textbooks at a cost of $150 each, the total cost of the traditional mode of delivery (that is, paper and print) exceeds the price of inexpensive laptops.

The cultural angle

Textbooks are about the only objects that today’s young people read on paper. All studies universally attest to the fact that students acquire knowledge and information more easily from the digital realm. The strengthening of online social communities further distances Generation Y from the non-digital population. Another relevant point is the fact that students are paying a greater level of attention to environmental concerns. Motivated by the prospect of conserving trees, the new generation would be more receptive to switch from paper to electronic media than the rest of us.

Interestingly, the new model will undoubtedly have some peculiar impact on what we do in academia. A 2007 survey of students at California State University, Long Beach, indicated that more than 85 percent of students have a computer and 50 percent of them carry their computer to campus. With the new model for textbook distribution, almost all students will come to campus with a portable machine. The end result: the smart classroom and computer labs as we know them today will be replaced by highly networked areas with many docking stations for portable computers.

I chuckled as I selected this article’s title: *digital* and *textbooks*. These words seem to produce something of an oxymoron. Used in the context of a subject area, say, thermodynamics or operating systems, the terms become even further removed from reality. What is *book* in the digital realm, and what is *text* in thermodynamics? While the concept of the digital textbook serves as a transition point between traditional publishing and what will follow once print media is eliminated, the new electronic age certainly will require a whole new vocabulary.

Contact Forouzan Golshani at golshani@csulb.edu.