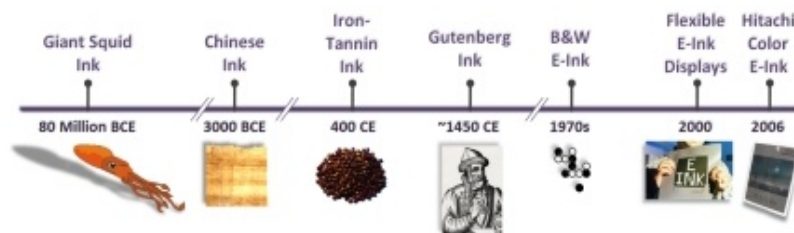


Weighty Words: The Future of e-Books

Part 1: e-Ink & e-Readers

In the near future, most of our media will be found on a hard drive. Film cameras have been replaced by digital, CDs are giving way to MP3s, Netflix has introduced movie downloads, television is being revolutionized by YouTube, even venerated filmmakers like David Lynch have committed to only using digital video. But our most ancient media of all hasn't budged: books. Sure we read and write on computers for school and for work, but at the end of the day when you curl up with a good book, it's unlikely to be on your laptop. Why hasn't the e-book taken off? And what happens when it does?

A Partial Timeline of Ink



Books are long overdue for the digital revolution. This essay considers the future of e-ink, e-paper, and e-books, and the implications for our libraries. I conclude with a case study envisioning the DC Public Library system as the e-library of the not-so-distant future. But first things first: You can't have an e-book without e-ink.

In the 1970s, the legendary Xerox PARC first developed something they called electronic ink, or e-ink. E-ink is comprised of millions of [microcapsules](#) the diameter of a human hair. Each microcapsule contains positively charged white particles and negatively charged black particles suspended in a clear fluid. When a minimal electrical charge is applied, the microcapsules flip and remain flipped until the next electrical impulse tells them otherwise.

E-ink is perhaps best explained by what it is not. It is not a plasma screen or an LCD that you may be accustomed to seeing on a laptop computer. Unlike laptop displays, e-ink is not backlit, meaning that if you want to read in bed, you'd better have a light on. The fact that e-ink doesn't rely on backlighting results in several advantages:

- **Easier to read:** E-ink has nearly the same resolution and reflectivity as a printed newspaper. Reading using reflected light is much easier on the eyes than backlit screens, and much easier to read in sunlight. Unlike plasma or LCD flat screens, you can view e-ink from several angles, just like regular paper.
- **Flexible e-paper:** Because e-ink doesn't require backlighting, it also doesn't require a rigid glass screen. The simplicity of e-ink means that it can be paired with flexible materials creating e-paper that can be bent, or even rolled up.
- **No need to recharge:** Once the electrical current tells the microcapsules whether to turn black or white, they remain in that state indefinitely without any additional power input. A page using e-ink (also called e-paper) can remain open indefinitely without drawing down a battery source. For example, you can read thirty books before you need to plug in [Sony's new e-reader](#).

Currently, several companies are pursuing e-ink and e-paper. Plastic Logic, the developer of the “E Ink,” announced on January 3rd, 2007 that it had completed a \$100 million round of equity financing. Their research is focused on flexible displays that will enable an electronic reader to hold hundreds of e-books and weigh less than a thin newspaper. For video on the flexible display prototypes, click [here](#).



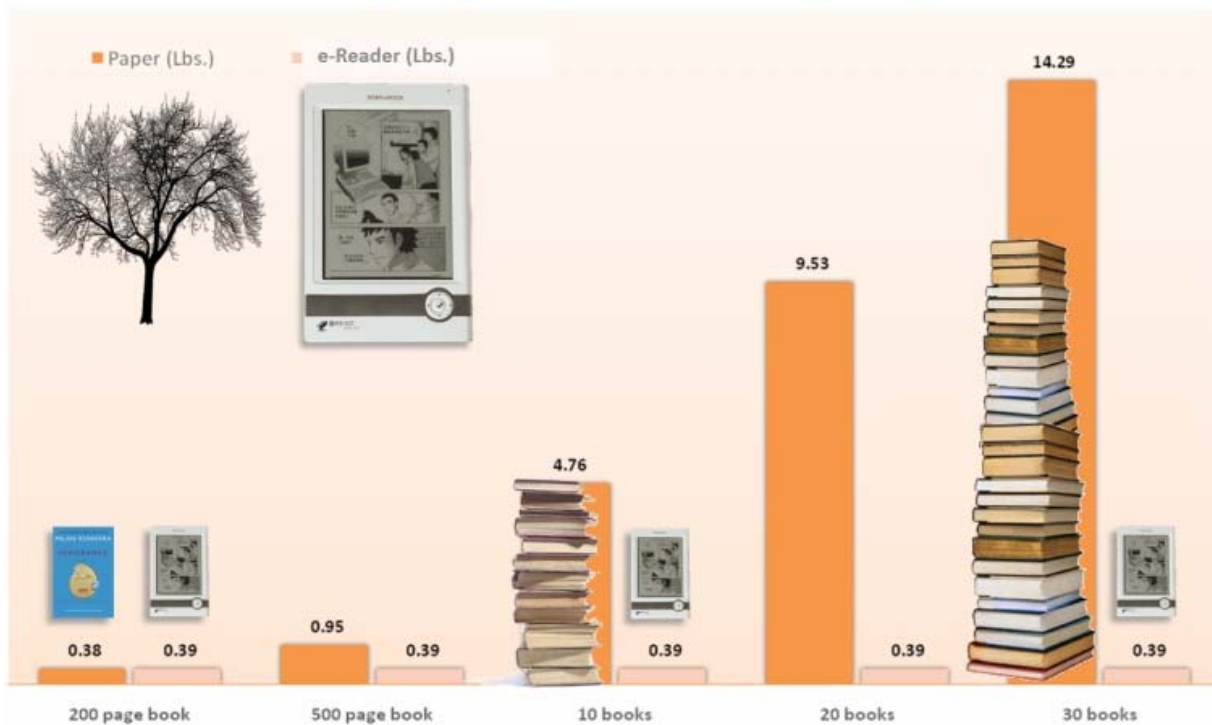
Plastic Logic Prototype Flexible e-Reader

Several companies have already licensed E Ink for their own devices. [Sony's \\$300 e-reader](#) holds 80 books, weighs about as much as a paperback and can turn 7,500 pages before it needs a charge. [Star eBook](#) just released its 6.2 ounce e-reader in Japan, claiming that it's the lightest reader on the market. And late in 2006, [Hitachi](#) released a 4,000 color e-reader, an innovation that could rapidly gain converts.

If the \$300 to \$500 price tag seems unrealistic, consider this: In 1996 DVD players hit the American market for about \$600 (in 1996 dollars). The least expensive DVD player at Walmart.com is now \$30, less than 5% of the price a decade ago. If e-readers have similar adoption rates, you might be able to pick up an e-reader for less than the price of a hardback book within a few years.

Weighty Words

Average Weight of Books Versus e-Reader (Pounds)



Part 2: E-book Sales

With the advent of [e-ink and e-paper](#), the only thing missing is the electronic content: e-books. E-books offer several clear advantages over print media. For example:

- Students could tote all of their color textbooks back and forth to classes in one 7 ounce e-reader;
- Backpackers could set off around the world with detailed dozens of detailed guidebooks and foreign language dictionaries in one lightweight device, downloading others as needed;
- Digital libraries would have more square feet for community activities and less space devoted to underutilized books (more on that below).
- If the 2.3 billion paper books sold in 2005 had been e-books, we would have saved more than 7 million trees.

Many analysts agreed that e-books would revolutionize publishing. In 2000, Accenture [predicted](#) that e-books would make up 10% of the [book market](#) by 2005. Unfortunately, e-books didn't live up to their great expectations. In fact, e-books only made up .07% of the 2.3 billion books sold in 2005: less than 1 of every 1200 books sold was in electronic format. Moreover, sales of e-books were flat between 2004 and 2005.

So why has the public rejected the digitization of print media? One problem is that, unlike CDs, there is no way to digitize your current library of paperbacks. E-books and e-readers also present the classic chicken and egg conundrum. Without most titles available in e-book form, expensive e-readers lose their appeal. And without flashy new e-readers to energize consumers (as iPod did for digital music), publishers are naturally less willing to commit to the new format.

Some of that may be changing. Apple's new [iPhone](#) is getting bloggers like [Booksquare](#) excited, "The problem with dedicated e-reader is the fact that the consumer isn't seeking a device that does only one thing. With its 'smart' orientation features, the iPhone could usher in the mass market e-book era."

Public Domain Twain Survey of E-book Prices for *Huckleberry Finn*



Although Apple could potentially revitalize the e-book market, if they insist on Digital Rights Management (DRM) as they do in the [music market](#), they may undermine their potential success. Just as Apple iTunes makes it difficult to share digital music downloads with friends, some e-book sellers impose similar restrictions. That makes the paperbacks more attractive than DRM-controlled e-books: you bought it; you can share it with friends. Not so with DRM e-books.

Traditional publishing houses are also delusional when it comes to pricing e-books. If you want to read *The Adventures of Huckleberry Finn*, for example, you can buy the Penguin Classic paperback for [\\$5.95](#), or for a modest 10% discount, you can download the same Penguin Classic from [ereader.com](#).

But consider this: Copyrights on many classic titles have entered [public domain](#). This means that almost everything written before 1923 in the United States is free to digitize and free to use.

In the past, Penguin Classics made profit by reprinting classic titles that would otherwise be unavailable. The Internet changes the equation. Take away the public's need for the printing press, and e-books would seemingly be a major threat to Penguin Classics.

For those rare readers who love classics and e-books, there is good news: [Project Gutenberg](#) has taken the Wikipedia approach to sharing books in the public domain. With 20,000 free e-books in their catalog - including [Huck Finn](#) - Project Gutenberg claimed more than 2 million downloads last month. Contrast this with the 1.7 million e-books sold in all of 2005 and we see once again that consumers of e-books are extremely price sensitive. (More about price sensitivity in music [here](#).)

The pricing premium for e-books lesson isn't restricted to the classics. Jimmy Carter's bestseller, *Palestine: Peace Not Apartheid* is actually cheaper in hardback at [amazon.com](#) (\$16.20) than the e-book version at [ereader.com](#) or [fictionwise.com](#) (\$16.99).

This pricing cannot be explained as higher production costs. New books are written, edited, and laid out and in a digital format before they are printed. Clearly, publishers are not using pricing strategies to encourage e-book sales. This antiquated pricing model is bad for consumers. Until publishers drop prices and loosen Digital Rights Management restrictions, the convenience and sensibility of e-books may remain a pipe dream.

Great Expectations for E-books

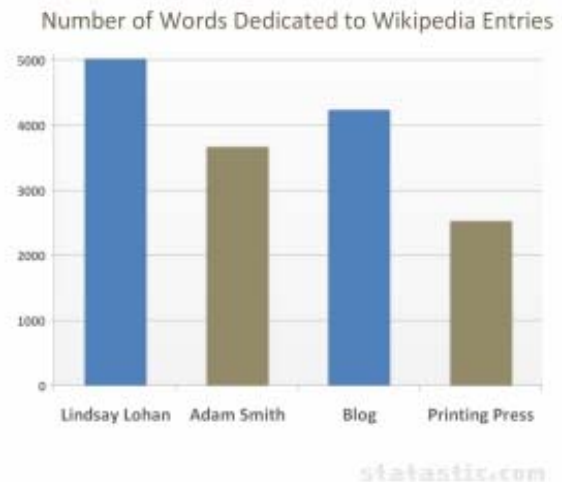


*2005 Projection made by Accenture in 2000 study, "The New Digital Content Consumer: Large and In Charge"

Part 3: Public & Private E-book Initiatives

If e-books have been a [commercial flop](#) thus far, then how do Americans access books? In 2004-2005 we were divided equally between [purchasing 2.3 billion books](#) and [checking out 2.4 billion books](#) from libraries. Libraries remain a critical steward of our world's knowledge. But even as the World Wide Web has made information more global, most libraries remain local in their focus.

For librarians, it must seem that the web has turned information gathering on its head. The Internet is a heady young fellow, self-obsessed, self-referential, and unflinchingly modern in its focus (see right). Libraries house history, centuries of wisdom buried deep in stacks, and even deeper in the un-searchable text of yellowing book pages. So how can libraries remain relevant?



Let's first examine the mission of public libraries versus the mission of major search engines. The following excerpts are from the mission statements of several major libraries and a certain web giant - see if you can distinguish between them (click the link for the answers):

- A. ["Helping people advance knowledge to enrich lives"](#)
- B. ["...to organize the world's information and make it universally accessible and useful."](#)
- C. ["...to sustain and preserve a universal collection of knowledge and creativity for future generations."](#)
- D. ["...collecting, cataloging, and conserving books and other materials... to serve as a great storehouse of knowledge... and to function as an integral part of a fabric of information and learning that stretches across the nation and the world."](#)
- E. ["...to create a comprehensive, searchable, virtual card catalog of all books in all languages that helps users discover new books and publishers discover new readers."](#)

Private Sector Libraries

Clearly the missions of Google (and other search engines) are converging with those of the leading libraries. Google recognized this as an opportunity and launched the [Google Library Project](#) in late 2004. The project started with five major library partners, but has since extended to [11 libraries](#) in three countries. Google is digitizing the contents of prestigious libraries such as Harvard, Stanford and Oxford, increasing access to tens of millions of unique books that were once accessible only to a small, elite

group. Google [spends between \\$10 and \\$30](#) for every book it scans. The entire project, which will span at least a decade, will only cost Google the equivalent of its 4th quarter profits in 2006. Not a bad investment for the web giant.

Google has already made these books available on its [Google Book Search](#), a fascinating portal that for the first time in human history opens up rare and not-so-rare books to anyone in the world. Not only are these books fully text searchable, Google has recently [announced](#) an integration with Google Maps, making [librarians](#), [technologists](#) and [Google-philes](#) giddy. No more leafing through musty books to find a quote or location.

Google's Library Project is distinct from several others such as the [Open Content Alliance](#) sponsored by Yahoo and Microsoft because Google is barreling ahead and scanning copyrighted texts. This has not only provoked lawsuits, but more importantly, it has also provided a necessary impetus to publishers and libraries to address the issue of how to manage copyrighted books in the digital era.

Google Book Search allows full text search for copyrighted works by simply telling you that the terms you searched for are in the book. They then provides a tantalizing "snippet view" of the text as if it was torn right from the page. If you want to read the whole book online, however, you'll have to wait. Rather than selling the e-book, Google paradoxically directs you to amazon.com which will happily mail you a hardback in 5 to 7 days for \$21.95.

This is about to change dramatically. On January 21, 2007, Google [announced](#) to the Times of London that it would launch an e-book service. Details are murky, but it seems likely that users will be able to purchase [all or part](#) of copyrighted books. I can only reiterate that pricing matters. With e-books, publishers can increase the exposure of previously obscure books and eliminate publishing costs. Ideally, this will increase profit margins *and* create significant savings for consumers. Because digitized books are easily divided, e-books could lead to a new model of [micropayments](#) enabling consumers to purchase only what they need, be it a chapter, a paragraph, or even just a quote.

Public Library Reactions

Google's mission is not without its critics. Jean-Noël Jeanneney, president of France's Bibliothèque Nationale wrote a plaintive book called [Google And the Myth of Universal Knowledge](#) warning of Anglo-Saxon cultural imperialism and the risk of market-driven libraries:

As anyone who uses Google knows, what is intrinsic to all the information it provides is hierarchization. Even if there are many pages of results, the searcher rarely goes beyond the first few. ...The profit motive will necessarily promote one product over another.

As long as there have been publishers with a marketing budget, there have been attempts to woo readers. And while the psychological effect of publishers' advertising cannot be stopped at the door of library, our French friend would like to see it diminished.

There is some merit to this view, but not much. Libraries and library science will continue to weigh market forces against intellectual ones, but this new digital medium should not be made the culprit. If a library were to license, buy, or rent the contents Google's digital library, couldn't they simply reorganize it in a neutral, intellectualized way that would make even Mr. Dewey Decimal proud? Or should the public libraries simply create their own digital library system from scratch?

Public Library Initiatives

Most libraries do see the upside to digitizing their libraries or they wouldn't be working with Google. In fact, Google recently gave a \$3 million grant to the Library of Congress for its [World Digital Library Project](#) in conjunction with UNESCO. The project is focused on improving web access to rare materials that, "...are physically stored in geographically dispersed locations, and which, when brought together with other collections through cross-national and cross-cultural multilingual search and browse capabilities, will yield new knowledge and insights."

The World Digital Library may sound ambitious, but its scope is much more limited than that of Google Books. It will focus primarily on the [long end of the tail](#): rare cultural treasures that most of us don't use, rather than popular literature that most of us check out from our local libraries.

So we have the ivory tower approach and the commercial approach. Caught in the middle are the libraries that most Americans use.

[Is Google the only answer?](#) To be sure, they have a massive head start (see statistic below). In a decade they may have more books in their digital collection than any library system on earth. But if there is true intellectual concern about the earth's largest library being in the hands of a profit-driven company, why not launch a public initiative? Can the U.S. government even afford it?

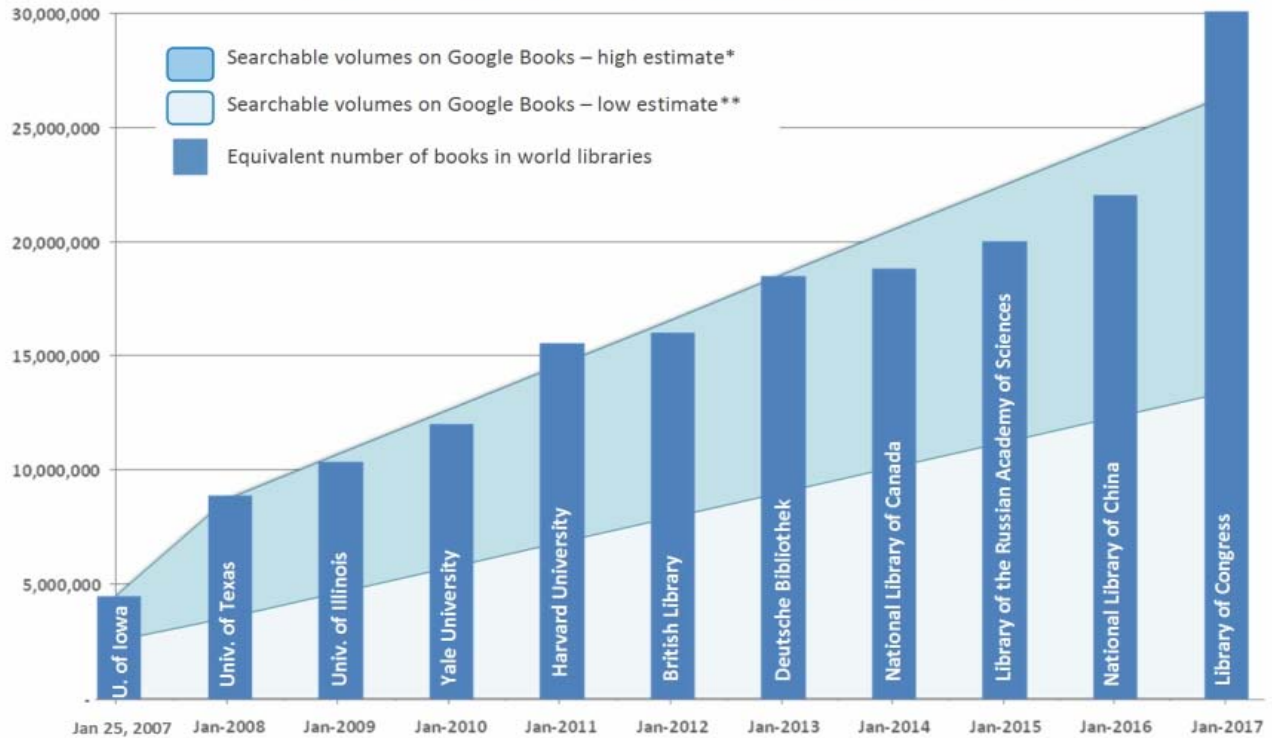
It's all about priorities. If the U.S. government decided to scan and digitize every one of the [65 million books](#) on earth, it would only cost about \$2 billion. That's less than we are spending for one week in Iraq, and it's less than kids (I presume it's kids) are paying for cell phone ring tones each year. We can afford it; so far, we just haven't chosen to.



*Assumes \$30 to scan each of the world's 65 million books

Google Book Search BETA Versus the World's Largest Libraries

Estimated Volumes Digitized in Google Book Search versus Total Volumes in Selected Libraries



Sources and assumptions for chart above: Google has not disclosed the number of books it is digitizing or its timeline for completing the project. Early in the project Google claimed that it would scan 3,000 books per day. This figure was used for the low estimate. The high estimate was based on expanded date searches (1500 to 2007) on Google Books that returned about 4.5 million books. This was extrapolated back to the beginning of the project to find the scan rate, which was then used to project the high estimate. Statistic believes that the high estimate is probably more accurate because the [3,000 books per day figure](#) referred to a contract with *only* the University of California library system. The fact that Google continues to add libraries to the project indicates that Google is likely to accelerate the scanning rate.

Part 4: Public vs. Private e-Libraries

Who should digitize the world's books? How do we ensure that authors get paid? What is the future of libraries in the digital age?

U.S. libraries have the potential to lead the digital book revolution. Libraries have a large market, consistent funding sources, and good relationships with private partners. Unfortunately, a lack of funding, a lack of focus, and usual bureaucratic hurdles have given Google the lead. Google certainly isn't [evil](#), but their market power does reduce the likelihood that public libraries will ever gain the political traction needed to fund this vision.

Before we start assessing the future of e-books and public libraries, let's set the framework for how authors should get paid and who has the power to provide a digital library for the world.

The E-Book Market

It might be instructive to take a brief look at how Google has inserted itself into the e-book market. There are five major players in delivering e-books to readers:

1. **Authors:** Apart from a few writers of best-sellers (e.g. [J.K. Rawlins](#)), authors are peripheral to the development of e-books. That may change - as it has in journalism - but in the near future their power is too widely distributed.
2. **Publishers:** Publishers select authors, preen their works and prepare them for public consumption. Resembling the intransigence of record labels in the music industry, publishers are effectively dragging their feet digitizing their works by not offering any type of discount that would realistically lure readers away from paper books. Publishers fear that the sharing of e-books and emergence of virtual publishing will cut them out of the value chain.
3. **Google:** Google has used its deep pockets to rapidly insert itself into the e-books value chain. Google already reaches out directly to [authors](#), so it's easy to imagine that publishers may lose power and influence.
4. **Libraries:** Libraries are a widely distributed market and reliable customer, purchasing millions of books every year for their collections. They may choose to slowly adopt e-books as a part of their collections, but taking initiative sooner could them more control over the e-books market than any other player.
5. **Bookstores:** Bookstores - online and off - have lagged on developing a viable e-book model. Online e-book sellers are often small web companies with specialized catalogs (see [statastic](#) below). [Finding](#) an e-book at Amazon.com is a confounding experience. And corner bookstores should be shaking in their bricks and mortar when it comes to e-books.

Copyright Issues

There is one sticky issue that may be delaying the widespread adoption of e-books. Copyright is fundamentally a commercial problem, not a legal one. Intellectual property protection enables authors and musicians to derive profit from their works. Digital Rights Management (DRM) is absolutely critical to protecting the rights of authors. While many of us are familiar with the shortcomings of DRM in [music](#), it is much better suited to e-books, with some adjustments:

- Customers who purchase e-books must be given a discount. Of the \$20 you pay for a new hardback book, up to half is allocated to shipping, printing, publishing, and marketing costs. When you eliminate those costs by selling it in electronic format, you can charge less to consumers (say \$12) while also *increasing* publisher and author profits.
- Customers who purchase e-books should have the right to re-sell those books. Although Apple is having no trouble selling DRM music that cannot be re-sold, music downloads are fundamentally different: music is designed for repetition. Just try reading an e-book as many times as your little sister listens to the latest Justin Timberlake CD.
- E-books must be designed for partial sale. Just as you are able to buy a single MP3 song rather than the full album, e-books must give customers the option to part of a book - especially in non-fiction. For a few cents, customers should be able to buy a single recipe rather than the cookbook, or city museum guide rather than an entire country guide.
- E-books must be rent-able (a.k.a. subscription model or DRM time bombs). This is especially critical for the success of electronic public libraries.

If low-priced e-books are protected by reliable DRM and rent-able for public libraries, copyright protection should cease to be an issue. Why? Because people will have almost no incentive to share e-books and e-libraries would create a reliable profit center for publishers and authors.

The Wal-Mart Library?

Now that we have the commercial fundamentals of our new e-book world established, let's take a look at how this would impact the players.

Wal-Mart flipped the supplier-buyer relationship upside-down. Because of Wal-Mart's size and market share, suppliers are hesitant to be dropped from Wal-Mart shelves. This has increased Wal-Mart's power to negotiate supplier prices downward (often to a fault). Suppliers make less profit per item, but they bet on making it up on volume.

When Google enters the e-book market, it will do so as the market leader. This may have been Google's strategy all along: the network effect. For example, where would you go to auction an item? If you want the most eyes on your item, you will auction it at EBay where there are the most items for

sale. Google’s huge database of digitized books will provide a similar draw for readers of e-books. Rather than searching several smaller e-book catalogs, customers will head directly to Google Books. This will increase Google’s buyer power over suppliers - in this case publishers. With the promise of massive volumes of e-books being sold on Google Books, Google should be able to negotiate lower e-book prices with publishers.

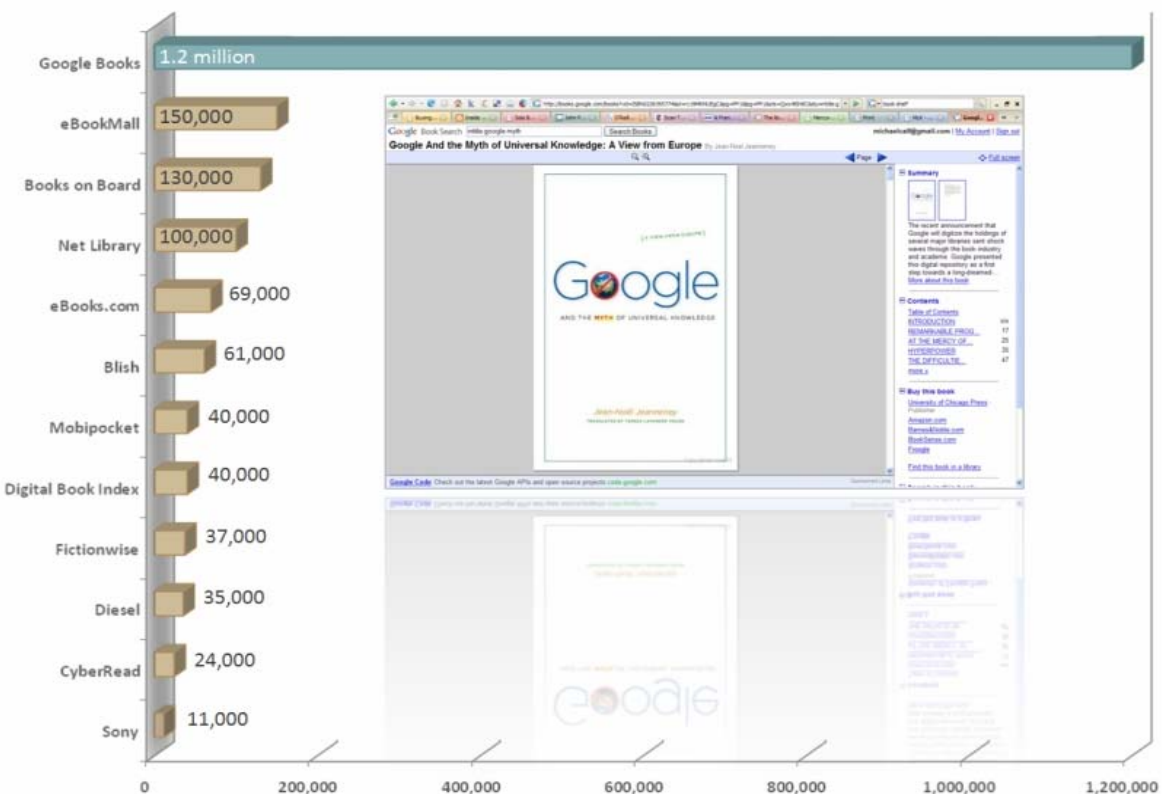
In a similar way, if libraries across the country were to unite and pool their resources, they could also create a single digital library. The federal government could negotiate lower e-book prices for its public libraries, just as Congress is considering using the market power of 300 million citizens to [negotiate lower prescription drug prices](#) for its Medicare beneficiaries.

There are several advantages to a publicly-funded initiative to digitize the world’s books. Google Books Search is proprietary. In other words, if you use Yahoo as your search engine, no Google Book results will show up. In contrast, a U.S. Digital Library would be searchable by anyone. How could a national digital library come about? It may take the initiative of a large city library system to get the ball rolling. One of the prime candidates might be Washington, DC.

Where Would You Buy an e-Book?

Number of Volumes Online

- Number of e-Books for Sale Online
- Number of Copyrighted Books Online (Not Currently For Sale)



Can DC Public Libraries Play Leapfrog?

Part 5: Vision of the Future DC Public Library System

Washington DC's 37% rate of functional adult illiteracy reflects one of the most underfunded and underutilized library systems in the country. In 2004, former DC Mayor Anthony Williams launched a [task force](#) to examine the DC Public Library (DCPL). In November 2006 the [Mayor's Task Force Report](#) was released, envisioning that:

Revitalized libraries will offer fresh collections of current books and media, useful standard publications, multilingual materials, GED and SAT practice books, historic documents and records, pertinent online databases, and digital content.

Unfortunately, listing digital content last is symbolic of the vision for DC libraries. In the 370 page [Technical Report](#), e-books are mentioned only seven times in reference to the future of DCPL collections. Here some of the few excerpts that lay out technology vision for the DCPL in 2010 and beyond:

[Page 21]: The library should license digital content and make it available to registered borrowers whether they are in the library or using the collection from their home. E-books, digital audiobooks, videos-on-demand, and other digital content should be available for downloading to a customer's personal computer, PDA, or MP3 player. ...

[Page 60]: A "virtual branch" is fast becoming a necessary facility for successful public libraries serving large populations. ... A virtual branch can be a full-service location for searching licensed electronic databases, getting answers through an interactive reference service, downloading digital books and audiovisual content, using learning software, and participating in online programs such as presentations and discussions about books and topics of current interest. Also, items in the library's physical collections can be reserved and, when available, shipped to the user – with any fees charged to the user's account or credit card.

It all sounds pretty high tech until you hit on idea of shipping books around the city. In any case, if you've lived in DC for long, the vision of a virtual branch probably sounds like science fiction. In fact, the 2010 vision for the DCPL is based on technology that has been used in public libraries around the country for years.



Time for change at the DC Public Library

Buying vs. Subscribing to e-Books

Several companies including [NetLibrary](#), [Overdrive](#), and [Ebrary](#) already have partnerships with [public libraries around the world](#). All three offer a system for libraries to purchase e-books and popular audio book titles, though the technology is not cheap. NetLibrary has a rather shocking price structure. According to [LibraryJournal.com](#):

NetLibrary... now with more than 100,000 titles, has maintained its one book—one user access model. The company offers two primary purchase models based on title-by-title selection: libraries can subscribe to an ebook by paying the list price of the book, plus an annual access fee of 15 percent of the list price, or libraries can “own” an ebook by paying the list price plus a one-time access fee of 55 percent of the list price.

Unfortunately, the lack of a significant discount for subscriptions will encourage libraries to purchase e-books. If the library purchases a title, e-catalogs lose many of the advantages of digitization. For example, if econo-star [Steven Levitt](#) is heading to Seattle to talk about [Freakonomics](#) and 100 people want to read his e-book at the same time, they’ll have to wait. The King County Library System can only lend out [5 of his e-books at a time](#). E-books are made of 1s and 0s, not hardwoods and glue, so why not simply pay the publisher every time the virtual book is checked out?



Although the NetLibrary subscription model is extortionary, subscription e-books are the ideal model for libraries. E-books require few human resources: three weeks after you check out an e-book, it is automatically “returns” itself to the library by deleting itself from your computer or e-reader. A subscription service ensures that libraries pay publishers only when e-books are checked out, so no dollars are wasted on lonely, unread books sitting on dusty shelves. Best of all, 10 of your best friends can check out a copy of the e-book at the same time, eliminating excuses in your book club.

While a subscription service might seem to favor the publishers of bestsellers, it also provides increased exposure to authors of obscure or out-of print books - the so-called long tail. If libraries pay only when e-books are loaned, then there is no reason to limit the size of their virtual catalog. A proper e-book subscription service that costs a public library no upfront fees also reduces guesswork in collections management, enabling a smooth transition in budgeting for a dedicated e-library.

Leapfrog: DC Should Pursue the First True Virtual Public Library System

DC Public Libraries suffer from several problems that make them an ideal test case for launching a real virtual library: huge deferred maintenance costs, an aging central library, and a population disillusioned by years of neglect to local libraries.

Washingtons Compared:
DC vs. Seattle Public Libraries

	DC	Seattle	% Difference
Expenditures per capita	\$47.61	\$67.00	41%
Books and Materials per Capita	\$4.56	\$7.73	70%
Maintenance budget/square foot*	\$1.50	\$4.23	182%
Computers per 1,000 residents	0.32	0.49	53%
Staff per 1,000 residents	0.53	0.79	49%
Circulation per Capita	2.1	10.1	381%
Weekly operating hours*	40	64	60%

*versus national average

DCPL is too far behind the technology curve to play catch up. Instead they should [leapfrog technologies](#). Statastic proposes that new DC Mayor Adrian Fenty and DCPL Director Ginnie Cooper consider a bold experiment in virtual collections.

The DCPL should start phasing out the acquisition of *new* paper books in 2008, with the goal of e-books making up no less than 90% of new acquisitions 2013. By 2017, the DCPL should have digitized 90% of its existing collection and sold the millions of hardback books in its stacks to help generate revenue. This will reduce required square footage - and overhead costs - of neighborhood libraries, eliminate the frustration of missing books, and create more space for the computer terminals that are sorely lacking.

Advantages to the DC Virtual Library

One of the most obvious advantages to a virtual library is the 24-hour access to books that might otherwise be checked out or unavailable. It could also expand the size of the DCPL available collection from 2.7 million volumes to as many as 32 million - every title in the WorldCat system. More titles mean more attention from residents, which increases reading and circulation.

In a city with 17% of its residents and 30% of its children living in poverty, it might seem that DC is not well-suited for e-books. After all, how would someone living in poverty afford a \$300 e-reader? And how would they download a book with access to the Internet? Statastic expects the prices of [e-readers featuring e-ink](#) to drop to less than \$75 within 5 years (we already have [\\$100 laptops](#)), and less than \$40 by 2017.

Under this plan, the DCPL would phase in heavily subsidized or free e-readers for every low income DC resident. Children could also use these e-readers in the public schools where textbooks are in such short supply making it impossible to assign homework from textbooks. And assigning a hot new technology like e-readers to under-privileged citizens might just spark their interest in reading.

With the advent of Google Books, do we need a virtual public library? Many DC residents with their own e-readers and home Internet access will soon have access to millions of Google e-books. But the digital divide is real and if public libraries aren't centrally involved in digitization of books, the gap will widen. As the high-income, early adopters turn toward e-books, wealthy taxpayers might see less value in funding the DC Public Library System (if this is even possible). This would exacerbate already grave funding shortfalls, leaving an underclass with an ignored and outmoded library system.

E-book Public Library Budget

Free e-readers, millions of e-books... sounds expensive, doesn't it? Actually it could save taxpayers millions of dollars while increasing the square footage of community space in libraries and providing better service. The DCPL proposed budget for 2007 is \$43 million, of which \$19 million is for reference

and library collection services. Facilities make up another \$9.4 million. All three of these categories will have enormous savings if transitioned to an e-books catalog:

1. **Book Sale:** Bound books would be liquidated, with proceeds dedicated to digitizing rare books and subscription to an e-books catalog.
2. **Deferred Maintenance:** Neighborhood libraries that have been already been closed or that suffer from huge deferred maintenance costs would be sold and replaced by an increased number of smaller, leaner e-libraries that offer better neighborhood access to computer workstations, distribution of e-reader and training and reading programs. Neighborhoods with little Internet access would be served by DCPL e-book kiosks (more on this below).
3. **Staff reductions:** With fewer books to re-shelve and a 24 hour virtual library online, collections and maintenance staff could be reduced. As D.C. Library Renaissance Project Director Robin Diener recently [commented](#): “We have evidence of incredible abuses — people who work for [the library] and draw a salary and rarely come to work. It’s a no-work culture.”
4. **Private Partners:** The DCPL should pursue technology partners such as Google or Yahoo which will be naturally be drawn to the cutting edge, high-profile project of digitizing the library system of the nation’s capital.
5. **Private & Public Grants:** The DCPL’s innovative virtual library experiment will also attract attention from major donors such as the Bill & Melinda Gates Foundation as well as federal grants.

By 2017 when the DC Virtual Library System is in place, there will be some new expenses (2007 dollars):

1. **New Staff:** Tech savvy staff capable of managing a virtual catalog and training patrons on the use of e-books, e-readers, and online catalogs. The new, more expensive staff hired will be offset by staff reductions due to reduced maintenance and collections services (e.g. re-shelving). Reference [librarians](#) will still be [necessary](#), though they may take on new roles dispensing valuable advice through online forums. It’s even easy to imagine 24 hour access to an online librarian.
2. **Subsidized E-readers:** Assume that students would be issued e-readers at school. The DCPL would purchase e-readers for any adult with a household income of less than \$35,000 per year. Nearly one-third, or about 184,000, DC residents would qualify for free e-readers. If new e-readers are issued every 2 years and the price of e-readers averages \$40 in 2017 (it is more likely to be about [\\$15 to \\$20](#)), it would cost the city about \$3.7 million annually to supply free e-readers. Other ways to help defray these costs are to require a deposit or small co-payments from those above the poverty line.

3. **E-book Subscriptions:** Circulation in all DC public libraries is about 1.1 million books. If the DCPL can reach a circulation rate similar to Seattle's, residents would be checking out 6 million e-books per year, or about 1 book per month for every reading-age citizen. If the DCPL cut a deal with publishers to pay \$2 for every book checked out from its libraries, it would cost the DCPL \$12 million per year to maintain its e-book collection.
4. **E-book Kiosks:** For residents in neighborhoods with limited home Internet access, DCPL could provide e-book kiosks near public areas like schools or community centers. Pre-distributed e-readers would have RFID technology that identifies the DCPL account. The customer would simply touch the e-reader to kiosk to log in. After selecting a title, the user holds the e-reader next to the kiosk for a free Wi-Fi download of the e-book. Installation and maintenance could be covered by corporate advertising on the outside of the kiosk.



Sponsored Neighborhood DC Public Library E-book Kiosk circa 2017

The total new expenses of subsidized e-readers plus e-book subscriptions are equal to about \$15.6 million. Compare this to the \$19 million being spent on collections and references this year alone.

It's important to remember that not all books, documents and historical will be digitized, so there will be still be a need for a central library, whether it is the renovated [Martin Luther King, Jr. Library](#) in downtown DC or the [new one](#) proposed by the outgoing DC Mayor. Either of the central library proposals are would cost about [\\$275 million](#) according to city estimates. Statastic doesn't prefer one proposal over another, but it is imperative to rethink the needs of a central library with e-books as the heart of the collection.

Unknowns and Opportunities

There are two unknowns in creating the world's first truly digital library:

1. Are publishers willing to negotiate lower e-books subscription rates, and
2. Will the DCPL create its own e-book collection or outsource it?

One major pre-condition for this proposal to succeed is that subscription e-book prices must be negotiated downward. Publishers and authors must be made to understand that low-priced e-book

“rentals” in public libraries will increase readership. Publishers will sell higher volumes of e-books, and they can count on a reliable revenue stream.

It is not cost effective for the DCPL to digitize its collection from scratch. Google has already inserted themselves into the e-book [value chain](#) and Google is far and away the [leader](#) in the number of titles digitized. In fact, Google may be the only corporate partner for creating a virtual public library. According to Jeffrey Toobin in this week’s [New Yorker](#), because of publishers’ lawsuits against Google, they might be the last company to digitize the world’s books:

Google’s advantage may well be cemented if the company settles its lawsuits with the publishers and authors. ... [Lawrence Lessig , Professor at Stanford Law School said], “The publishers will get more than the law entitles them to, because Google needs to get this case behind it. And the settlement will create a huge barrier for any new entrants in this field.”



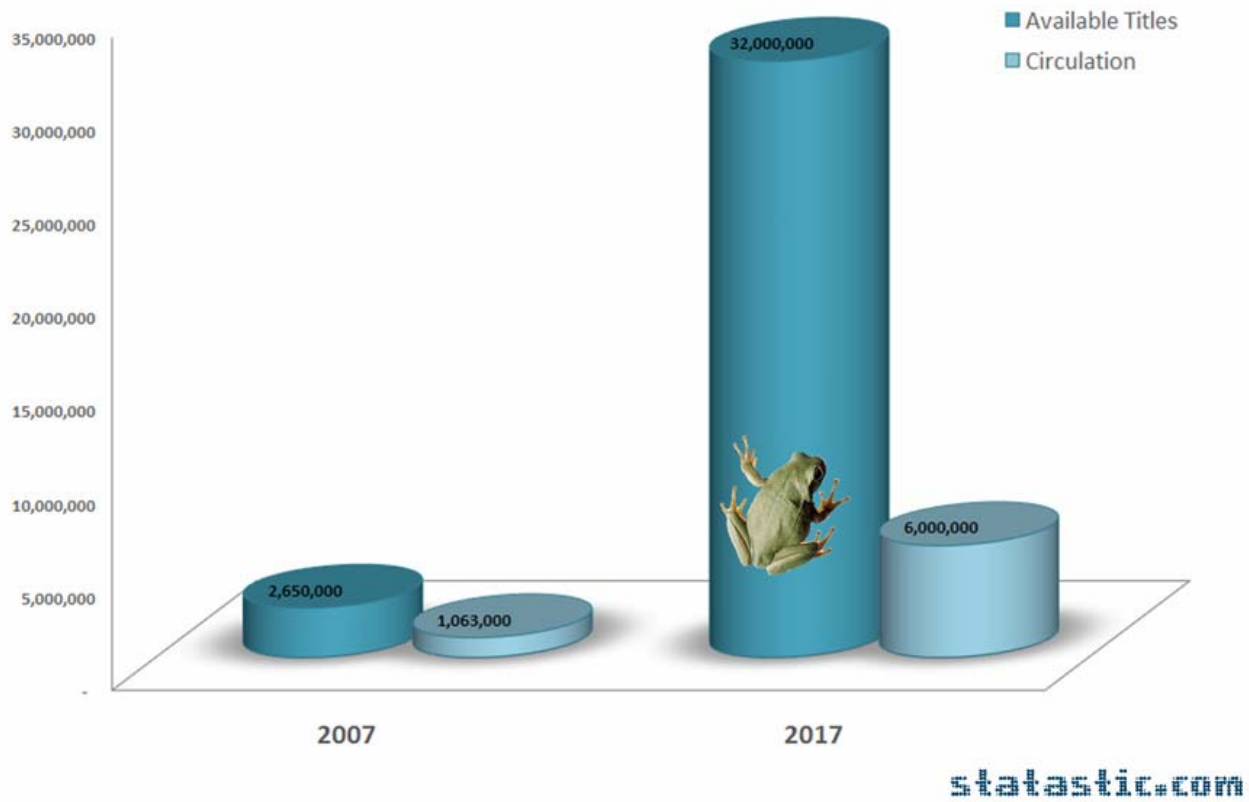
I'm Feeling Lucky

What if Google Books teamed up with the DC Public Library?

Google will complete digitization of the 6 million books at the University of Michigan by 2010 - the same target year for the DCPL’s modernization. The DCPL should approach Google immediately to negotiate a partnership for the DC Virtual Library.

Are DC residents feeling lucky?

Leapfrog: The DC Public Virtual Library in 10 Years?



Adapted from Statistic.com

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