The e-reader industry: Replacing the book or enhancing the reader experience?
Nathaniel Stone, FIS2309, Design of Electronic Text

Abstract
Despite considerable media attention, portable electronic readers (e-readers) have not yet had a significant consumer impact. They offer several features unavailable in print media, such as easily accessible content and potential for interactive capacity similar to what can be found on the Internet. Flawed design and high cost, however, may inhibit wide end-user adoption. Using a mix of scholarly, electronic, and popular news media sources, this paper will analyze the impact of these factors on consumer acceptance of these devices.

Keywords: e-readers, technology, content ownership

Introduction
The November 2007 release of Amazon’s Kindle brought with it a considerable amount of media attention. Essentially a dedicated electronic book (e-book) reader, it was intended to be “an entirely new class of device” and “an exceptional reading experience” (Amazon, 2008) for readers. Although there have been dedicated electronic book readers for almost as long as there have been e-books – from the earliest Rocket Ebooks in the late 1990s, to the current Amazon Kindle or Sony Reader – they have yet to make any significant impact on consumer spending or reading habits (Coyle, 2008). Although the designs have evolved since the first e-book readers appeared in the late 1990s, it is thus far unclear how much of a sales impact they have actually had (Italie, 2008; Li, 2008).

Three factors seem to inhibit wider adoption of e-book readers: the current inability of these devices to replace printed media when it could instead be complementary to print media; design features that render the devices difficult to use efficiently; and an ongoing change in the paradigm of copyright enforcement and the forays of the publishing industry into digital rights management (DRM). This last point casts doubt on the controls consumers have over the books they purchase. While this last point deals directly with e-books themselves – and not e-readers, as such – questions over the ownership of the content placed on e-books must logically have an impact on the adoption of the technology as a whole.

The e-book reader industry, including products such as the Amazon Kindle, the Sony Reader, and the Iliad, is at a crossroads. Industry leaders, such as Sony and Amazon, must decide how to overcome cultural and design limitations while clarifying their stance towards content ownership. As this begins to happen, this technology will be in a position to broaden these companies’ consumer base. At this point, however, it is impossible to predict whether they will exploit the technology’s various potentials.

Complementary media
The first challenge facing producers of e-book readers is the notion of the cultural affinity readers hold for books. Klein (2008) noted that his first experiences with a reader felt like “a courageous betrayal of every word written from the moment papyrus gave way to paper” (p. 37). In a more academic bent, Gregory (2008) finds that 66 percent of undergraduates at a typical American
The difficulty producers of e-book readers have is in attempting to replace printed media with electronic media. Klein (2008) notes that electronic devices have capabilities that elude print media. For example, electronic text can be threaded with hyperlinks that have the capability of enhancing the reader experience by providing access to further information or to richer forms of parallel information. An example of this type of information is the linking of a quoted speech to an audio file of that very speech (p. 39). Instead, the design of electronic reading devices appears to be an attempt at mimicking reading a book, but in electronic format. Bell, McCoy, & Peters (2002) observe that e-readers are particularly well suited to classroom material and recommends augmenting the interactive components of electronic text by allowing such features as annotation and highlighting, among others.

This potential for rich content that e-readers possess is a major difference between these devices and printed media – one that producers have yet to exploit fully. Instead, they are designed in such a manner as to emphasize a book-like experience, rather than an e-book experience. It is in this area of the design that the devices demonstrate their greatest weakness.

Practicalities and design

When dedicated e-book reading devices first appeared in the marketplace, critics noted that their display was far inferior to that of print (Lynch, 2001; Sottong, 2001), but the e-book was considered to be a major innovation, with predictions that this technology would one day soon replace the printed word (Lynch, 2001). While this difficulty with display has been overcome with the current generation of electronic readers, other difficulties – such as navigation and interface complexities, competing content formats, potential obsolescence as technologies evolve, and the overhead cost of buying a piece of technology that may or may not fail or need technical support – have not been resolved.

The Kindle, for example, has garnered positive reviews from users, although some have given pause in respect of its user interface (UI), citing, in particular, slow response time and navigation button placement, which causes unintentional page turns (Amazon, 2008; Klein, 2008). Other reviews are not as preoccupied with button placement, but note that other, smaller design inconsistencies can impede a smooth reading experience (Timmer, 2007). While the overall reviews on the Amazon site are understandably overwhelmingly positive (Amazon, 2008), it is difficult to assess the overall impact of the device based on consumer habits since Amazon has not released sales figures (Italie, 2008). Nevertheless, estimates that Kindle sales contribute less than 1 percent of the company’s profit (Li, 2008) despite considerable media attention appear to indicate that the device has not made enormous headway into any market – this, despite apparent customer satisfaction (Amazon, 2008). This would imply that, despite whatever flaws that may or may not exist in the design and UI and any positive customer reviews, other factors must play a part in the ability of these devices – including the Kindle – to inspire mass adoption.

One difficulty potential users face is an array of products each with their own proprietary content formats. There are at least ten different e-readers currently on the market and 45 electronic text formats, including Amazon’s AZW and Sony’s BBeB (MobileRead wiki, 2008). While the devices clearly support more than one format, there are currently no standards. This may potentially give rise to difficulties in transferring libraries from one device to another should the
original reader malfunction, experience irreparable
damage, become obsolete, or need replacement for
any other reason. While the portable document
format (PDF) may be the de facto standard format
for exchanging documents, e-reader producers
prefer proprietary formats. This lack of
consistency may discourage readers from adopting
the devices, especially when factoring the
overhead cost of purchasing a machine in order to
further purchase electronic content.

The Sony Reader costs US$299 (Sony,
2008), while the Amazon Kindle is US$60 more,
with the iRex Iliad costs consumers US$699.
Amazon and Sony e-books retail at between US$7
and US$15 approximately (Kindle books, 2008;
Sony eBook store, 2008). While the price of e-
books may be slightly less than that of print books,
it would still take consumers an extremely large
number of e-book purchases to recoup the cost of
the device. This may be a stumbling block to cost-
conscious consumers who are also avid readers,
especially considering the very high overhead cost
of the device. Coupled with the lack of format
consistency and the further associated costs called
for if the device requires maintenance or
replacement, consumers may be hesitant to
convert to purchase e-readers.

Content ownership
Users who make use of Amazon’s and Sony’s e-
book stores pay for and download content under
the impression that they now own this content.
Closer inspection of the terms of service, however,
shows that users are in fact granted the right to
store and make use of content, but they do not own
it – its content subject to certain restrictions of use
(Kindle license agreement and terms of use, 2008;
CONNECT terms of service, 2008). This is very
different from purchasing a book where the
consumer actually owns the book, although is still
subject to some restrictions (the reader cannot sell
copies of the book).

The Amazon terms allow the reader
unlimited views, but permission is given to store
only one single master copy on the Kindle (Kindle
license agreement and terms of use, 2008, ¶ 8).
No permission is granted for users to distribute the
content in any manner whatsoever (¶ 9). The Sony
license permits users to store as many copies of
downloaded content as they wish. This implies
that users are permitted to store a master copy on
another device and install and remove their
content at will. Instead of restricting the
distribution of content, the terms state that there
may be restrictions placed on the number of times
the content may be moved or viewed, although
this number is not stated (CONNECT terms of
service.2008, ¶ 4). Moreover, the terms go on to
state that digital rights management restrictions
may be placed on certain content, causing the
content to be beyond access should the rights be
violated.

Many readers are accustomed to more
flexibility in their use of what they consider to be
their property. Books are lent, borrowed, sold
second-hand, and read as many times as (the
multiple) readers wish. Under the terms proffered
by Amazon and Sony, this is not the case since the
readers have permission to store the content, not
own it. A forthcoming paper analyzing the two
companies’ terms notes that while the laws on the
ownership of books and e-books differ, they are
consistent with “the consequence of new digital
products outgrowing traditional copyright
doctrines” (Batra, Padro, Paik, & Calvert, 2008, as
cited in Buchanan, 2008, ¶ 17).

In a 2001 paper, Lynch notes a growing
tendency within the publishing industry to adopt
features of the music industry’s copyright
practices and relationship with its consumers.
While perhaps a natural progression as digital
technologies move faster than intellectual property
laws that cover their content, Lynch believes that,
despite technological similarities, the industries
are too dissimilar for the transfer of practices
between them to be valid. Moreover, music and
books have very different positions in Western
society such that equating one with the other in a
legal perspective is inaccurate. Because books
document the flow of ideas over time, they occupy
a vastly more important place in society’s cultural awareness. Any restrictions on their distribution, Lynch argues, are counter to the function of books in society. Thus, manufacturers of electronic reading devices stand to come-up against ingrained societal mores in their attempts to restrict content ownership and distribution. It is far too early in the technology’s lifespan to predict how these competing notions of content rights management will unfold, but it is something that merits close attention, both from a legal and an academic standpoint.

**Conclusion**

E-readers have a potential that has yet to be realized. Although the technology is not new (especially when considering the speed at which digital devices and content have evolved and continue to evolve), they have not yet taken over public perception as have the omnipresent iPod, laptop, and smart phone – the latter being the e-reader’s main technological rival. Smart phones combine various segments of digital technologies, including network voice and Internet capabilities, email, text messaging, Voice Over Internet Protocol (VOIP), and, increasingly, various electronic text capabilities that integrate fully with the network to which they connect. Although their monitor displays are not as conducive to reading as are the newest generation of e-readers, their multiple functionalities, more efficient UIs, and status appeal have so far eclipsed electronic reading devices, as anyone who followed the recent launch of the iPhone 3G can attest.

While e-reader manufacturers appear to have moved to a proprietary stance on content ownership, it remains to be seen whether readers will accept this paradigm. This uncertainty is compounded by high costs, inconsistent design quality, and the absence of a standard format. Although recent additions to the industry like the Kindle and the Sony Reader have generated a lot of press, so far they seem to be more of a technological curiosity than a viable and useful addition to any household – this, despite the great potential they hold.

The biggest advantage that electronic text has over print media is its ability to present extraordinarily rich content with which readers can interact. Hypertext linking, anchor tagging, public tagging, and tangential file extensions – such as parallel audio and video files to accompany the text – are all within the grasp of these devices. Instead, the current generation of e-readers attempt to mimic the book reading experience with very mixed results. Society already has bound documents used to transmit knowledge, experience, and ideas within a broader cultural context. These objects are known as books and it is unclear whether they need to be – or can be – replaced. Electronic reading devices have the potential to complement books and surpass them where they fall short. When this occurs, perhaps they will find their own societal niche.

**Works Cited**


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