# Your Content is Safe.

## Perspectives on Censorship Issues with Electronic Books

by Birgit Bachler, 2010

Christmas 2009 seems to mark a historical milestone since the invention of print when Amazon announced, that there have been more e-books sold than physical paper books for the first time ever. It seems that people are slowly getting used to abandon the classical format of books printed on paper and dare the step into the digital future. While the internet has already taught us reading from a screen, the major revolution of digital reading is likely to be led by the introduction of portable e-book readers, where E Ink technology promises a better and more durable reading experience than the pixel-screen alternative. This leads to the fact that more and more classical books are being digitalized and put into formats and standards that can be compiled and turned into a book-alike medium through specific hard- and software. With these new standards the consumers also face new restrictions, which makes them dependent on the publisher's and vendor's choice as well as the capabilities and restrictions of technology, and raises the question how issues around censorship and banned literature are being handled in the future.

Once printed a book exists as a physical medium that has to be distributed physically, which demands time and effort for logistics from the side of the publisher or author. But once a book has been distributed, the irregularity of its spread also makes it difficult to remove it from the market again. This removal would imply finding every single copy and physically destroying it, which again demands a huge effort in logistics. If content has to be corrected after being published these corrections cannot be implied in already distributed books. Revised paper books have to be re-printed and re-distributed new edition as for example known from encyclopedias, that have to adapt their content through the change of history. In an article from The Miami News from 1966 encyclopedist William D. Halzsey talks about the changing of "facts" and explains that most frequently biographies and references to living persons are being revised. He is also quoted saying "No encyclopedist in his right mind would give the correct formula for gunpowder, because some fine young man with an inquisitive nature would try it and probably blow up the Empire State Building".[1] This quote not only reflects the good-willed nature of censorship, by referring to the fact that a dangerous formula should not be part of an encyclopedia, it also reads differently after the incidents of 9/11 and would probably not be printed like this in an American Newspaper, thus this statement might have been come under censorship by itself.

Today the mechanism of book censorship contains the challenging and the banning of literature. According to the American Library Association "a challenge is an attempt to remove or restrict materials, based upon the objections of a person or group.  A banning

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[1] 'Facts' are changing, Encyclopedist Warns, by Jean Heller, The Miami News, August 2, 1966: http://news.google.com/newspapers?id=kUk0AAAAIBAJ&sjid=YusFAAAAIBAJ&pg=4716%2C474997

is the removal of those materials. [...] Books usually are challenged with the best intentions—to protect others, frequently children, from difficult ideas and information."[2]

The National Coalition Against Censorship names four main types of objections against books: Profanity, sex, violence and religion. Even books that are nowadays renown as literary classics have been challenged or banned in the past: John Steinbeck's "Of Mice and Men" has been challenged and banned due to objections to profanity, Nabokov's "Lolita" has been banned because of its inappropriate sexual passages, "One Fat Summer" by Robert Lypsyte has been challenged for being a work that trivializes violence and the reading of a translation of the Bible was once forbidden.[3]

A historical example of book censorship is the Index Librorum Prohibitorum. The Index is a list of publications prohibited by the Catholic Church promulgated in 1559 and formally abolished in 1966. This list has been revised twenty times throughout history, containing immoral books or works containing theological errors.[4] Both the issuer and the subjects of the censorship are obvious, and the Index was a printed and published medium by itself. In contrast to this I want to name an incident that occurred on the website of the bookseller Amazon.com in 2009, when suddenly titles containing gay and lesbian content disappeared from Amazon's sales ranks, which is a measurement for the popularity of a book sold by Amazon and at the same time a way to gain more popularity. After the author of one of the affected titles contacted Amazon about the removal of his book, Amazon released a state of apology and all titles have their rankings reinstated. Their "embarrassing and ham-fisted cataloging error"[5] shows, that censorship today does not need to be published and officially carried out by a big institution to have impact on the reading behavior of people. The subjectivity of Amazon's system detecting explicit adult content shows a good example on how censorship could be working in the future, and affect the availability of critical literature. A ranking system, such as used by Amazon influences the buying and therefore reading behavior of their customers, and by exerting invisible seen rules on those mechanisms the power of censorship through centralized digital book distribution through the Internet becomes apparent.

Even though the Internet can be seen as a tool, that helped to make content such as text widely available and accessible, the ongoing development towards format-dependent and the spreading of hard- and software that imply digital rights management technologies looks like a step backwards in the history of openly available content which leads to more subtle ways of control and censorship.

Especially Amazon closes down on compatibility by not selling open standard e-books but a special format, tailored to their e-reader Kindle, Amazon's flagship for electronic reading. Amazon, also a global player in the distribution of paper books through the Internet is now heavily advertising the Kindle through its features of being slimmer and lighter than typical paperbacks, making it possible to download a book in 60 seconds, and offering free global 3G coverage, which allows users to download content from Amazon at any time and place in the world.[6] The idea of being able to get wanted content within one

[2] About Banned & Challenged Books: http://www.ala.org/ala/issuesadvocacy/banned/aboutbannedbooks/index.cfm
[3] NCAC on Books: http://www.ncac.org/Books
[4] Index Librorum Prohibitorum: http://en.wikipedia.org/wiki/Index_Librorum_Prohibitorum
[5] http://markprobst.livejournal.com/15293.html
[6] http://www.amazon.com/Kindle-Wireless-Reading-Display-Generation/dp/B0015T963C/ref=amb_link_86425631_2?pf_rd_m=ATVPDKIKX0DER&pf_rd_s=center-1&pf_rd_r=11NN4DRY9E140AH59GV1&pf_rd_t=101&pf_rd_p=1243855842&pf_rd_i=507846

minute of time seems ridiculous in ages where broadband Internet connections allows us accessing information in milliseconds, but the advantage lies more in the fact that books seem to be the last resort of analogue media that has fought successful against the era of digitalization, so far.

While buying a paper books requires more effort by the reader when regarding the time needed to go to a bookshop or the shipping time when ordered online the Kindle summarizes all necessary steps to purchase a book in one device. It is catalogue, shop and the consumption device in one piece. The process of buying and reading a book is being made very easy and quick for the user, since the Kindle is always connected to its mothership Amazon through Whispernet and therefore prevents the user to leave Amazon's predetermined path. This model is similar to the relationship between Apple's iPods and iPhone with the iTunes store: Media can only be loaded on an iPod through the iTunes software, or directly be purchased at the iTunes store.

Jonathan L. Zittrain describes this trend towards "Tethered Appliances" both as a service for the user as well as a mean of perfect enforcement:

"Tethered appliances belong to a new class of technology. They are appliances in that they are easy to use, while not easy to tinker with. They are tethered because it is easy for their vendors to change them from afar, long after the devices have left warehouses and showrooms."[7] This means what customers buy is not only a device or content for that device but they also purchase an invisible but inseparable connection to the producer or seller of the product. Rather than having to return a malfunctioning item back to the store, it is continuously being monitored and the repair happens on the device itself through the connection it has to the manufacturer.

Zittrain radically distinguishes those devices such as iPods, iPhones, video game consoles, BlackBerries and TiVos from the classical, generative PC. The ongoing communication between the device and its vendor or producer ensures that no bad code is being installed and therefore ensures more glitch-free performance than users often experience with their PCs, where they are allowed to install and execute any code themselves, which leads to errors and disappointment on the user side.

The Kindle is a device that is continuously connected to its vendor Amazon and perfectly fits into the list of the already named tethered appliances. Especially with the Kindle as a device containing literature and news content I want to point out the worries of Zittrain, that these devices can be perfect tools for "regulability" as well as possible means of perfect enforcement through preemption, specific injunction and surveillance.

The customer is tethered to the vendor through the device via wireless technologies. The ongoing communication between the Kindle and Amazon assures users the functionality of the device, and updates can be made as new problems are found. The restrictions of this tethered relationship allows only Amazon not only to be the only instance allowed to change the device but also gives them insight on what the customer is doing with the product, an offers the vendor privacy invasions and retroactive alterations of features.

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[7] The Future of the Internet – and how to stop it: Jonathan L. Zittrain, Yale University Press New Haven, London 2008, http://futureoftheinternet.org/static/ZittrainTheFutureoftheInternet.pdf

A nameable example is the remote deletion of George Orwell's "1984" and "Animal Farm" conducted by Amazon in 2009. The company that added the two titles to the Kindle store did not have the rights on them. After the rights holder notified Amazon about the issue, the illegal copies were not only removed from the systems but also from the devices of customers who have purchased the book.[8] This example not only reveals the power that Amazon has on its customers not only as a seller of literature but also as a controller and permanent owner of content. The paper book as a physical, offline device never gave any vendor so much insight and control over the content bought by users than the Kindle. To make it amend Amazon sent a message to the affected customers, which contained the offer to "have us re-deliver this book to your Kindle along with any annotations you made. You will not be charged for the book. If you do not wish to have us re-deliver the book to your Kindle, you can instead choose to receive an Amazon.com electronic gift certificate or check for $30."[9]

The restoring of all personal data alongside the original purchased item is possible through the technology Amazon is using. Along with the book-file the Kindle also creates one associated file to every book that contains the personal annotations, bookmarks and notes of the reader. The Kindle User Guide states "all of your annotations on a Kindle book are backed up on Amazon servers in case you transfer your Kindle to another person or lose or break the device. When you download a previously annotated book from Amazon.com, your annotations and last location read will come down with it. When you open the book, you will be right where you were the last time you read the book and all of your annotations will be included."[10] This means that Amazon does not only see what the user is thinking and writing by reading, this data is also remotely stored. Furthermore the License Agreement and Terms of Use explicitly say that "The Device Software will provide Amazon with data about your Device and its interaction with the Service (such as available memory, up-time, log files and signal strength) and information related to the content on your Device and your use of it (such as automatic bookmarking of the last page read and content deletions from the Device).[11] Never before has a bookseller known their clients so much and never before did a seller have the right to store the content readers create by themselves while reading a book. This insight on the customer next to the possibility of updating, editing and deleting content wirelessly from the devices might be a first step into a future, where censorship enforcement has never been easier from a centralized instance such as Amazon.

The insight Amazon has on the owners of Kindle devices is extremely powerful and the information the reader shares with the distributor while reading has not been possible with analogue books. Not only does Amazon know the content a person is interested in, which has been there already through book-orders through the classical Amazon store – the reader also shares for example the last page having read in a book. Through continuous updating of this information it is very simple to have an insight on how fast a person is reading a book, which passages the person reads longer or more intensive and to what page or section a person is scrolling back regularly. The additional data on

[8] Amazon Erases Orwell Books From Kindle: Brad Stone, The New York Times, July 17, 2009
http://www.nytimes.com/2009/07/18/technology/companies/18amazon.html
[9] Kindle Censorship in 1984 . . . Err . . . 2009:
http://answerguy.com/2009/07/22/kindle-censorship-1984-err-2009/
[10] Kindle User's Guide, 4A Ed. – English:
https://kindle.s3.amazonaws.com/Kindle%20User's%20Guide,%204A%20Ed.%20-%20English.pdf
[11] Kindle (Global Wireless) - License Agreement and Terms of Use:
http://www.amazon.com/gp/help/customer/display.html?ie=UTF8&nodeId=200399690

bookmarks, annotations and notes gives a pretty clear picture on the reading habits of a single person. Since Kindle books are only available through credit card payment this single person or at least the household they are living in can easily be identified. I want to compare this to the insight TiVo is having on the television-watching behavior of its customers. TiVo is a digital video recording system that is connected to a central network and allows users a personal television programming schedule as well as the feature to pause, rewind and replay on recently viewed television.[12] Two disputed but very popular incidents during live-broadcasting were Madonna and Britney Spears kissing during the 2003 MTV Awards and Janet Jackson's "wardrobe malfunction" during the Super Bowl finals in 2004. TiVo's audience measurement staff could detect that watchers replayed these moments nearly twice as many times as any other moment in the shows. That information makes them the broadcast's most popular moment.[13] This evaluation of user behavior makes it easy for the broadcaster to detect these popular moments, and both of the above mentioned arouse the question of censorship and regulation on broadcasting. In case this behavior of watching television and replaying controversial moments more often during the broadcast than other scenes is analyzed continuously, this might be an easy tool to detect these moments remotely. Can these mechanisms of watching TV also be translated into the reading behavior of people? When suspecting people's most popular content often being scandalous and contended at the same time the surveillance data might help to evaluate critical content that has to be censored. In the case of the Kindle this content could be one page of a book that is exceedingly more popular than the rest of the book's content. If this popularity is accompanied by possible dubious book content, Amazon has created a great tool for censors to quickly inquire sections where content could be challenged.


Besides the fact that Amazon offers only a limited amount of titles in the Kindle store, these titles are also not available for every region or country in the same way. This system of closing software down to countries can also be found when looking at the AppStore for Apple's iPhone and iPod and also the iPad. The applications of Apple are specially meant for these tethered devices that do not offer a common PC-interface but restrict the user's possibilities of input and control specifically for every application in a tailored way. Recently Apple has performed a major censorship act on apps containing sexual content, criticized by the developers of not having made changes in their terms clear. [14]  The App Store concept has already been criticized earlier for having seemingly arbitrary rules for determining whether an app contains objectionable content or not.[15] When seeing Apple as a company that succeeded in revolutionizing the business model for selling digital goods, their style of putting restrictions and censorship through their system as well as on their own hard- and software and on the products they sell through the iTunes store seems to be a good example of how much power the seller of digital goods has on the content. A centralized source for digital goods like iTunes might stand for a future where censorship is not longer carried out by institutions like a state or a church but by a commercial enterprise. This could lead to a future where censorship is not being carried out by concerned individuals with their personal intentions but by a company that is led

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[12] Tivo: http://en.wikipedia.org/wiki/Tivo
[13] Jackson's Super Bowl flash grabs TiVo users, Ben Charny: http://news.cnet.com/2100-1041_3-5152141.html
[14] Apple's War On Porn Is Just Getting Started, Nick Saint: http://www.businessinsider.com/apples-war-on-porn-is-just-getting-started-2010-2
[15] Apple and App Store censorship: where to draw the line?, Chris Foresman:
http://arstechnica.com/apple/news/2009/01/apple-and-app-store-censorship-where-to-draw-the-line.ars

by their turnover and profit margin. The seemingly morally correct removal of explicitly sexual content from the App Store resembles the child pornography law recently adopted by Germany. The law allows deletion of sites with child pornography related content but is heavily criticized by Internet activists that fear the consequences of the law, which could mean the installation of a comprehensive censorship-infrastructure on the Internet that could endanger the neutrality and freedom of the Internet as well as jeopardize civil liberty.[16]

A customer at the iTunes store can only purchase items of the store for the country where having a bank account. Still the iTunes store is not available in every country. Residents in other countries can only buy a gift card from a merchant or have to limit themselves to downloading free podcasts and previews. As stated in the Terms and Conditions of the iTunes Store in the United States "purchases or rentals (as applicable) from the iTunes Store are available to you only in the United States, its territories, and possessions, and are not available in any other location. You agree not to use or attempt to use the iTunes Store from outside of the available territory. Apple may use technologies to verify such compliance."[17] Every single country with an iTunes store shares this information on territorial restrictions of the use of the store. This means for example that a tourist is not able to download Dutch applications about weather, news or public transfer. These restrictions might have some legal background, but would technically make it possible to release completely different functioning Apps with the same name in different countries. The country-specific regulations also led to a business in selling iTunes gift cards to foreign countries, such as the iTunes Japan Music Card.[18] Furthermore Chinese hackers have succeeded in generating their own iTunes gift cards by cracking Apple's algorithm to control and issue the cards. The generated cards with a value of $200 were sold for $2.60 and the generator was sold to other hackers and companies.[19] By closing down the borders between countries through their store policies, Apple stimulates an illegal business of circumventing the given restrictions. When developing with the iPhone I encountered the problem that many well-advertised and reviewed applications found on the Internet were not available in the Dutch store. A person who is only searching for content on the device itself might not encounter this problem, since their iPhone or iPod only shows them the content they are allowed to download according to the country-specific terms and conditions. Moving away from the Internet as a central resource for browsing for content towards devices that only offer specified offers for a country will narrow down the variety of software and also generate redundant applications from country to country. So the user who abandons the PC for a tethered appliance will never be able to see the content that is available in another territory and will therefore never be able to judge on the similarities or differences between the offered content.

When looking at the way Amazon handles country-specific content with the Kindle we discover similar regulations: "Due to copyright restrictions, you will only be able to purchase Kindle titles available in your country. When you move to a new country, you should update the country setting to be able to purchase Kindle titles available in your new location."[20] When having a Kindle bought in your own country, you will only be able

[16] Chaos Computer Club fordert Erhalt der Freiheit im Netz: https://www.ccc.de/en/updates/2008/freiheit-im-netz
[17] Apple iTunes Store U.S.: Terms and Conditions: http://www.apple.com/legal/itunes/us/terms.html
[18] iTunes Japan Music Card: http://www.jbox.com/PRODUCT/ITUNESCARD
[19] iTunes Gift Cards hacked: http://www.appletell.com/apple/comment/itunes-gift-cards-hacked/
[20] Kindle User's Guide, 4A Ed. – English, page 117
https://kindle.s3.amazonaws.com/Kindle%20User's%20Guide,%204A%20Ed.%20-%20English.pdf

to download the content for this country, also when traveling abroad. This means that a traveler who is interested in foreign books, or foreign editions of books still has to fall back to the classical paper format. The attempt of Amazon to launch the Kindle in every country of the worlds seems to imply a lot of efforts from the side of the company. Not only does Amazon have to deal with the issue that several books have one or more different publishers in every country, they also have to ensure their customers Whispernet connection in their country of residence, since books are delivered wirelessly. This means that Amazon needs to make contracts with local 3G providers to be able to deliver purchased books via the network to the customer's Kindle. The Kindle ships today to more than 100 countries in the world. China, for example, known for its strict censorship policies, is not included in this list and Amazon does not ship Kindles or offers Kindle content in China. But the wireless coverage map of Amazon shows 3G support around areas with high population in China.[21] I am especially interested in this country since by browsing the web I came across some cases where books were confiscated by Chinese customs for no obvious reasons since there exists no public available index about banned books in China.[22] So what happens when a person wants to enter China with a Kindle that might contain content that looks harmful to the Chinese customs? Technically the Chinese customs would not even have to search through your Kindle manually if the device is connected through Chinese wireless networks to the Whispernet service. I forwarded my concerns to Amazon whether a government or service provider in China might be able to make use of the Whispernet to browse through my Kindle content in order to detect critical content and I received the following answer:

"Information on the content you purchase through Amazon.com for your Kindle will only be accessible to you and our software developers. The only time we access you information is if you are having an issue with an order or your Kindle device. Also we will only access your information with your permission. The Whispernet wireless connection for your Kindle utilizes Amazon's optimized technology plus AT&T's 3G high-speed data network in the U.S. and partner networks outside of the U.S. The information on your account and orders are secure. Books are sent directly to your Kindle and do not have to be approved by the country your traveling in."[23] The answer seems to satisfy the expectations of a prospect Kindle buyer but in my opinion the security of wireless networks in countries like China is questionable. By providing a service network to a foreign book seller a country gains a channel to monitor that is brought within the borders and since the remote deletion of books is possible through Amazon there will be also a way for other instances to access and delete content from Kindle devices.

My enquiry to the British organization Index on Censorship has not been answered yet, but I learnt that they have not addressed the specific topic on censorship issues arising with the Kindle or other electronic reading devices yet. In my opinion this casts a damning light on the future of control and censorship in the age of digital reading, since the content and the services spread much faster than organizations can deal with.

The undisputable point for me is, that the continuously updating content always erases a previous version of itself and therefore deletes a part of its own history. Devices such as the Kindle that do not act generatively and do not offer their users options to perform

[21] Kindle with Global Wireless: http://client0.cellmaps.com/tabs.html#cellmaps_intl_tab
[22] Tilting at the Customs Administration over confiscated books:
http://www.danwei.org/books/tilting_at_the_customs_adminis.php
[23] E-mail from Amazon Customer Service cust.service03@amazon.com received on March 5, 2010

their own code on the system prevent on-device influence on the content. The data the users generate themselves is always backed up and transferred to Amazon's servers and the behavior and thoughts of the readers are therefore always remotely backed-up and visible to the developers. This gives the distributors of the Kindle software an incredible amount of control on the personal literature of people. While a physical book left the store with the seller, the electronic book always stays connected with the producer and generates feedback of the readers. Such locked down systems like the selectiveness of the Kindle store and the minimal control interface of the user could influence people in a vast manner. These mechanisms could be abused for control, especially in countries like China where censorship is already being performed on an invisible level. The printed book still exists as a reliable resource for literature and caducity ensures that we can learn from books that have been printed long time ago to have a better understanding of thoughts and perspectives from the past. Even if the revolution of digital reading will fail, the selectiveness through remote book stores and wireless reading devices could cause a major shift in society. The quote of Ray Douglas Bradbury "You don't have to burn books to destroy a culture. Just get people to stop reading them" should make our alarm go off when looking at the selectiveness of digital books the Kindle store is offering. Both the book as a medium and the mechanisms of censorship have changed during the evolution from Gutenberg to Kindle. The paper book as a concrete, physical object, where the owner had the free choice to read, store or destroy the book has turned into a digital file that is remotely managed and virtually owned by the bookstore. When censorship used to be a clear index of prohibited book in the past, today's censorship is happening more subtle and invisible to the public and is carried out by unseen code. Censorship should not become an invisible commodity carried out by algorithms of book selling applications and websites, if we want to continue living in a society that is based on free will and people's sanity.