Enhanced E-Cookbooks:
A Recipe for Accessibility

by

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B.C.S., MacEwan University, 2016

Project Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Publishing

in the Publishing Program
Faculty of Communication, Art and Technology

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SIMON FRASER UNIVERSITY
Spring 2019

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Abstract

Accessible enhanced eBooks benefit three groups: members of the general public who want eBooks to have more features, visually impaired audiences who want to purchase accessible books and not be limited by their choices or budget, and publishers who wish to reach a wider audience. This report delves into what makes accessible enhanced eBooks so different from standard eBooks, and current publishing industry perspectives on enhanced eBook publishing, with the primary goal of outlining how publishing houses can provide accessible eBook cookbooks to visually impaired audiences. Titles from Appetite by Random House are selected and used as a case study to provide an outline for how publishers can transition from publishing standard eBooks to publishing accessible enhanced eBooks.

Keywords: Appetite by Random House; e-books; enhanced e-books; cookbooks; accessibility; visually impaired
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Introduction

EBooks, Accessible EBooks, Limitations, and the Future

Visually impaired audiences are comprised of people experiencing impairments from low vision to blindness, and eBooks alone are not enough to provide adequate accessibility for visually impaired audiences. When it comes to eBooks, accessibility not only means that everyone — regardless of their visual capacities — can have access to the same content, but also that accessible formats of eBook publications are provided by publishers and can easily be accessed by individuals with different needs. For example, the hard copy that is on the shelf at Indigo may suit a customer with little or no visual impairment, but doesn’t serve or benefit the customer who is blind or has a severe visual impairment as the physical copy is not visually accessible to them. The standard eBook is one that may have all of the content of the print edition, but still lacks various functions and features that make the edition accessible to individuals with visual impairments. An accessible enhanced eBook is one that has been enhanced with features such as supported fonts, and clear headings and tag hierarchy, just to name a few. However, such accessible editions are often difficult to find. This is due to the limits of the EPUB format and its current compatibility with most eReaders, as well as the reluctance of many publishers to develop accessible eBooks. With regards to cookbooks, serious consideration must be taken to be able to provide accessible editions for visually impaired audiences.

Creating accessible content is expensive, involving hours of formatting and editing of both text and design features. Due to the cost of producing eBooks and the relatively low profit margin\(^1\) associated with eBooks, publishers are hesitant to provide enhanced eBooks in general, let alone accessible enhanced eBooks, despite the need accessible enhanced eBooks would fill among visually impaired audiences. However, Appetite By Random House’s position as one of Canada’s most well-known boutique cooking and lifestyle publisher makes them the perfect candidate for pioneering the changes necessary to develop a standard in which accessible enhanced eBooks are created and available for all.

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About Appetite

Appetite by Random House is a Canadian boutique lifestyle publisher specializing in cookbooks. While Appetite’s base and its team of in-house publishing and editing staff is located in Vancouver, British Columbia, the main office for Penguin Random House Canada is located in Toronto, Ontario, where much of the technical production takes place. Appetite has been publishing lifestyle and cooking titles since its launch in the summer of 2012. Because Appetite focuses on producing only the most carefully curated titles for their audience, only a limited number of titles are produced and published each year — around twenty-five titles at most. Their existing list features well-known chef authors such as Nigella Lawson, Anna Olson, and Lidia Bastianich. While most of the editing work is conducted in the Vancouver office, the main Toronto office provides additional editorial, design, marketing, and legal services. As a default publishing practice under Random House’s corporate policy, Appetite releases eBooks of each of their titles alongside the print editions. By looking at how eBooks have evolved and what it takes to make eBooks accessible, Appetite by Random House can take into consideration ways in which they can expand their production in order to provide accessible eBook cookbooks to visually impaired audiences.

Part One: eBooks and Accessibility

The History of eBooks

The first eBook to hit the shelves was the Rocket eBook, launched by NuvoMedia in 1998. The Rocket was about the size of a large, thick book, weighing in at 1.25 pounds, and could hold about ten downloaded books. While the Rocket sparked much excitement from the general public, few copies sold due to both the high price tag ($500 USD) and only a small library from which to choose digital books. From the publishing perspective, the Rocket eBook was the first step in “the electronic book distribution solution, by providing a networking infrastructure for publishers, retailers and end users to publish, distribute, purchase and read electronic content securely and efficiently on the internet.” Producers began launching competing eBook readers as

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3 Ibid.
5 Ibid.
early as the following year, including the EveryBook Reader, launched by EveryBook, and the Millennium eBook, launched by Librius. Already improvements were being made, from having a built-in modem to simply being smaller and available at a lower price to consumers, but still there wasn’t enough of a market for the devices, and they were discontinued.⁶

Throughout the years following, further attempts were made to develop an eReader consumers would latch onto, but with little success. In 2006, Sony released its Sony Reader: a 6-inch device that had extended battery life, claiming to last 7,500 page turns. Sony’s library boasted 10,000 titles, but only a few months after the Sony Reader’s release, Amazon’s Kindle hit the shelves with 88,000 titles available.⁷ Finally consumers seemed to find what they were looking for in the Kindle: large internal storage capable of holding roughly 200 titles, audio output, and functionality including a QWERTY keyboard and defined navigational tools. Despite its slightly hefty price tag of $399 USD, the initial release of the Kindle sold out in only five and a half hours.⁸

Since the Amazon Kindle, there has been strong competition with devices such as the Apple iPad — more than an eReader, yes, but still a popular reading device capable of displaying newspapers and magazines as well as books — and Kobo, coming pre-loaded with 100 classic public-domain titles, large storage, and sleek design. Needless to say, these eReaders have come a long way from the 1998 Rocket eBook. Now instead of blocks of text that appear on screen with no embellishments, design hierarchy, or any feature that makes the book aesthetically and appealing, eBooks can have full colour photographs, clickable links, and adjustable pages. And instead of holding only a few dozen books, eReaders are now capable of storing thousands. Dedicated eReaders include the Kindle, Kobo, Nook, and Onyx, just to name a few (and not to mention the many different editions of each model). Today’s eBooks are not just for eReaders; they can be read on the computer, tablet, or smart phone. Whether a reader is using a dedicated eReader, free app downloaded onto their phone, or Adobe Reader software on their computer, there are many ways publishers can supply eBook editions of the titles they publish, and indeed many ways those eBooks can be accessed, and all for a reasonable cost to the reader.

But is displaying text and pictures within an eBook all that eReaders are good for? Not necessarily. In fact, downloading the latest best seller to read on the bus is just the beginning of what eBooks are capable of. The technology behind modern eReaders has advanced to the point where eBooks themselves can be more, do more, and provide more to readers across the globe.

**What is an Accessible eBook?**

When discussing both enhanced eBooks and accessible eBooks, one must bear in mind the following: All accessible eBooks are enhanced, but not all enhanced eBooks are accessible. To go step by step in understanding what makes accessible enhanced eBooks both possible and important, it is first important to understand what makes an enhanced eBook different from a standard eBook.

Standard eBooks are just that, standard text on a screen, perhaps with the occasional picture, but overall very similar to their regular hard-copy book counterparts. Enhanced eBooks often include easy to enlarge pictures, video and audio features that are embedded into the eBook, and clickable links that can either direct readers to a different page or section of the text, or even an external source such as a website. eBooks such as these have often been described as “multimedia books” due to their inclusion of audio, video, and interactive content. Some enhanced eBooks even include interactive quizzes, graphs, and behind-the-scenes content.

Accessible enhanced eBooks take these enhancements one step further, including navigational aids, enabled text-to-speech with special audio markup and aural styles, semantic tags to describe content to assistive technology, and embedded audio/image descriptions. Navigational aids are often identified as headings and page titles (e.g. “Chapter Seven — High Places”). The National Network for Equitable Library Service states that “the ability to navigate throughout the text is essential for accessibility purposes and the more opportunities for navigation that you can offer, the more accessible your product will be. Headings are one of the primary means of navigation

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10 Ibid.
for readers who use assistive technology.\textsuperscript{13} Without headings, it can be difficult for readers to make sense of the content, or follow any sort of text hierarchy.

Enabled text-to-speech allows for the text of the enhanced eBook (whether the body of the book or image descriptions) to be read by the eReader’s text-to-speech function. When an eReader has different available aural styles and voice-reader options, readers can more clearly understand what is being read by the text-to-speech function, which is useful for readers who may have visual impairments. Enabling text-to-speech with audio markup and aural styles creates a more natural reading tone instead of the stereotypical ‘clunky’ sounding text-to-speech computer voice. Including semantic tags that describe the content to assistive technology means that the computer can understand and clearly portray the structure of the content and be able to communicate that information back to the reader. Finally, it is important to also include alternative text to any images included in the eBook (including illustrations, photographs, cover art, logos, figures, and maps). These descriptions are usually 200 characters or fewer, and clearly describe what is being portrayed by the image. Each of these accessible enhancements is imperative for readers who have a visual impairment to be able to interpret and enjoy the content of any enhanced eBook. Similarly to semantic tags, having these embedded graphical features means that a text-to-speech reader can read a caption or data behind the image and describe the illustration/picture/graph to a visually impaired reader. If publishers are interested in converting their current titles (or producing new titles) that are accessible, these additions and enhancements essentially come with the territory. Additional or bonus potential elements for accessible enhanced eBooks include audio/video, read along, interactive images, scripted animation, and slideshows.\textsuperscript{14}

It is easy enough to say what makes an accessible enhanced eBook different from a “regular” enhanced eBook (one which does not employ the accessible features discussed above), but it is slightly more difficult to implement the technical language that allows for features like semantic tags, image descriptions, and even text-to-speech styles. What allows for these features is a digital format known as

EPUB3, a widely used and easily manipulable format for representing digital publications.\textsuperscript{15}

\textit{EPUB3 and eReaders}

EBooks rely on EPUB, an eBook format developed by the International Digital Publishing Forum in an attempt to establish a format that could span almost any platform, from Adobe Readers to eReaders to tablets.\textsuperscript{16} What makes enhanced eBooks technically different from standard eBooks is EPUB3, the latest version of the EPUB ZIP archive (a collection of the various types of EPUB formats), based in HTML5 standard (the markup language used for structuring content).\textsuperscript{17}

The use of an EPUB3 format allows eBook text to be fixed, rather than flowable. Flowable text readjusts and reorganizes itself based on the size of the screen or window the text is being viewed on, or the adjusted size of the font. Depending on the size of the screen and/or font size, the number of words on a page can vary drastically, and images may jump from one page to the next page as the screen size is adjusted. The goal of flowable text is to simply fill up the eBook page. In contrast, having a fixed layout means that each page is individually defined. In this format, the font sizes can’t be changed, and images and words stay where they were inputted and placed by the designer. That is, the layout of a page stays in order, page numbers are put in place and adhered to, and directions or references can be followed more easily from page to page (or indeed pages can be returned to regardless of the size of device being used).\textsuperscript{18}

No matter what the size of the page, the content appearing stays the same; a recipe that is on page 10 will always be on page 10. Fixed layout eBooks can be likened more to traditional books in that the layout and placement of words and images never changes and cannot be adjusted.

While it may seem counter-intuitive to have a fixed layout where the font sizes cannot be changed, it is useful in some genres of books, particularly in multi-column

books such as reference books and cookbooks. In books such as these, having a consistently viewable layout between text, images, and references (e.g. those found in an index) lends more coherency and readability than would a flowable layout. By having a fixed layout available on the eReader, information no longer runs the risk of getting jumbled as it might in a flowable format. In the case of cookbooks, ensuring that the information (such as ingredients lists) are consistently contained in one area of a page (fixed layout), rather than potentially moving between pages (flowable layout), it is a trade off. Font sizes cannot be increased, but because the information stays in one place it can be more easily followed either by the reader themselves or by using a text-to-speech component.

In addition, EPUB3 has the potential to allow electronic files (like those of enhanced eBooks) to be used across a variety of formats, including eReaders, tablets, computers, and smartphones. Many alternative accessible devices can even accept EPUB files, such as audiobooks with embossed Braille, or electronic Braille,\(^\text{19}\) thus making the electronic files accessible. That is, rather than one file type being required for enhanced audiobooks and a different type of file being needed for other accessibility tools such as embossed Braille (created on a type of printer that outputs embossed paper with tactile Braille), one EPUB3 file can be used across these multiple formats. The flexibility of EPUB3 means that a variety of people in a variety of different environments and circumstances can still have access to the same content.

As far as everyday eReaders go, popular devices such as the Kobo and Sony eReader are already equipped to read EPUB3 files. While other devices are still in the upgrading process when it comes to the ability to read EPUB3 files, these upgrades are being made and should be available in upcoming generations of eReader releases.\(^\text{20}\)

In the meantime, advances can be still made within the publishing industry using EPUB3 technology to create not just enhanced eBooks, but accessible enhanced eBooks. An ideal place to begin is with the genre of cookbooks.

**Part Two: Accessible Cookbooks**

*Challenges of Making Cookbooks Accessible*

Part of what sets cookbooks apart from other non-fiction genres is their uniqueness between other books of the same genera, and the vibrancy of the photos they include.

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Often adorned with full-colour photographs and/or hand-drawn illustrations, no two cookbooks are ever exactly alike. Some offer simplistic, five ingredient “throw it all in a pot and stir” recipes that only take up a paragraph (such as Salad Love [Potter 2014]). Others feature complex multi-step processes with hard-to-find ingredients and tools. Some cookbooks focus on the recipes, while others focus on the stories behind the recipes, where they came from, and what the chef’s suggestions for serving are. In The Pioneer Woman Cooks: Dinner Time (Harper Collins 2015), recipes are introduced with anecdotes, poems, and blurbs from the author, Ree Drummond. In addition, each process step is accompanied by a full colour photo, and for each recipe, several “serve with” suggestions are given for accompanying dishes.

Like the recipes they feature, it is clear that each cookbook can be very different from the next, so there likely isn’t going to be a “one method fits all” approach to making cookbooks accessible. Format is not always straightforward when it comes to accessibility. That is, it can be difficult to follow along with a non-accessibly formatted cookbook that has a unique layout if the book is being read by an eReader or computer’s text to speech function. For instance, if the alternative ingredients or potential substitutions are at the top of the page and are read first, and the actual introduction to the recipe is read second, such a layout would cause much confusion with regards to the necessary versus optional recipe ingredients.

Most cookbooks are also graphic-heavy, using high-resolution colour photography to either show a finished dish, illustrate a step-by-step process of cooking preparation, process, or plating, or even candid photos of the chefs. For readers who are visually impaired, these images alone may not be as useful or easy to interpret unless accompanied by an accessibility feature such as embedded image captions. Similarly, some standard eBooks will often use .jps in headers in order to import embellished fonts that may not be supported by an eReader. While having a .jpg ensures the header “image” can be seen, in an accessible context this method can take away from the recipe experience when using a eReader or text-to-speech software. Not only will the images be skipped over by a text-to-speech reader, the font image may be so flourished that an individual with a partial visual impairment cannot clearly or easily read it.

While accessible enhanced eBooks generally do not allow for customized font or font sizes, the chosen font can still make a big difference. Ornate, decorative typefaces can be difficult to read because their shapes are not always clearly defined, especially on a screen. A more simple font with cleaner lines, little embellishment, and open
counters shows up much more clearly on screen and is thus more readable. For example, a cookbook type set in a decorative font like Monticello would be less accessible than one type set in, for instance, Verdana (the font of this report, chosen for its clean lines and ease of reading). Careful consideration should be taken when it comes to choosing typefaces for accessible eBook cookbooks when it comes to both body text and header text.

Further challenges to making cookbooks accessible are those that any genre would face: adding navigational elements, and text-to-speech organization. The biggest challenges when it comes to accessibility are not necessarily technical, however. Resources, namely time and money, are rarely readily available to pour into each book in order to meet accessibility standards.

**Production and Distribution of Cookbook eBooks**

Unfortunately, creating an eBook (enhanced or otherwise) is not a quick and simple process. They are design intensive and costly because of the technical redesign, reformatting, and recoding that has to take place. In fact, when it comes to enhanced eBooks, few publishers are even interested in the idea. According to BookNet Canada’s 2017 State of Digital Publishing report outlining responses from 54 publishers, only 22% of publishers were already producing enhanced eBooks, and 42% had no plans to produce them in the future.

![Enhanced eBooks Chart]

Question: Are you producing, or do you plan to produce, enhanced ebooks (i.e., with extra content such as audio/video?)

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Despite the low interest, according to BookNet’s study, “there was an increase from 33% to 55% between 2016 and 2017 for firms who reported seeing a positive increase in the correlation between enhancements and an increase in ebook sales.” In addition, “fewer firms indicated that they are not including accessibility features, down to 18% from 33% in 2016.” That still leaves 67% of firms who are not including accessibility features. While the report does not state the reasons for either the lack of interest in general or the lack of desire to include accessibility features, a likely reason could be the costs of both time and money associated with producing enhanced eBooks with accessibility features simply outweigh the potential benefits the enhanced editions may provide. It is important to note that, unfortunately, most organizations that gather publishing sales data, such as BookNet Canada and Nielsen BookScan, do not provide sales data on eBooks, so it is difficult to gauge the real net costs and profits.

Despite the potential costs of time and money, it’s shocking to realize that enhanced eBooks are such a low priority for publishers. Considering the fact that 253 million people across the globe are reported to have a visual disability ranging from blindness to moderate to severe vision impairment, there are surprisingly few day-to-day literary resources being made available. Even if all publishers want to look at is the bottom line of their invoices (which is allowed; businesses can only survive by generating an income, after all) they are missing out on a stream of potential customers and potential buyers — that is, additional purchases and added revenue.

In fact, accessible enhanced eBooks have the potential to benefit three groups: members of the general public who want eBooks with more features; visually impaired audiences who want to have access to accessible books and not be limited in their choices; and publishers who wish to reach a wider audience (and be more accessible to all audiences). As is pointed out in the BISG Quick Start Guide to Accessible Publishing, “content that is more usable is more valuable: the feature that’s required for a person with a disability is a value-add for the person without a disability.” But there is still an imbalance between audiences who want or need accessibly formatted eBooks and the accessible eBooks that are actually available.

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24 Ibid.
25 Ibid.
Production costs can be high as well. While numbers are difficult to come by for enhanced eBooks, conversion companies such as Publish Green estimate that it takes about six weeks to create the average eBook — seven days for assessment, fifteen days for interior formatting, five days for each round of revisions, and five to fifteen days for distribution. Costs of production can vary widely depending on word count, number of images, number of footnotes, and document complexity (including but not limited to lists, centered text, sections and sub-sections — all of which are common in cookbooks). Whether these eBook conversions are done in-house or a third-party company is hired, it is clearly an expensive and time-consuming process.

**Current Barriers to Accessibility**

Unfortunately, it is a combination of limited publisher resources and limited consumer resources that make up one of the main barriers to accessibility and creating accessible content. According to the Canadian National Institute for the Blind (CNIB), only 5% of all printed materials are available in alternate formats. Of these formats, many have long been grossly overpriced. In the 1970s, the Webster’s New World Dictionary was released in Braille and was priced at over $400 (for comparison, the standard edition

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29 Ibid.
was a mere $14). While it’s unclear how much it cost to make the Braille edition of the dictionary, some publishers create accessibility editions despite working at a loss, simply in order to provide accessible materials to the consumer. According to the National Braille Press, it costs $70 USD to make the average Braille text, but they sell their accessible editions for the same price as the standard editions, in order to ensure copies are realistically available to all audiences.

Changing the production cost structure of accessible publishing is by no means an easy feat. Bearing in mind the 33% increase of interest in publishing firms to begin producing eBooks, it is a start, and changing publishing practices will take time. According to “Ebooks and accessibility” by Alistair McNaught and Huw Alexander, “practice perpetuates culture and cultures perpetuate practices... Many print-impaired people have only a scant idea of how eBooks could meet their needs, and even library staff and disability officers are not necessarily aware of the wide benefits that accessible digital text provides. This ignorance can lead to a dangerous complacency for less accessible publishers.” The figures below illustrate “the difference between the ‘hope the issue will go away’ approach and a more proactive ‘let’s show the customer what we can provide’ approach”.

![Flow chart](image)

Figure 1. A flow chart outlining how the lack of accessibility features leads to lack of information on features, which leads to lack of end user awareness leading to lack of institutional or corporate demand, resulting in high risk and low opportunity.

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34 Ibid.
36 Ibid.
Specifically creating accessible eBook cookbooks is an even more difficult process due to the multitude of elements each cookbook can have, such as infographics and step-by-step photo series, as well as the many different ways the recipes themselves can be laid out. Despite being a seemingly daunting task, over the years, attempts have been made to bring cookbooks into the kitchens of individuals with visual impairments, beyond the realm of accessible eBooks. The Library of Turkey for the Visually Disabled, in conjunction with the Turkish Rotary, produced *Good Smells From the Kitchen*, a Braille cookbook with an accompanying audio CD. The book, made up of family recipes rewritten especially for visually impaired audiences, has inspired many new home cooks. One reader reflects that they “usually do not spend much time in the kitchen, but thanks to this book [they are] more interested in cooking.” While copies of *Good Smells From the Kitchen* are distributed freely to library members, not all accessible cookbooks are, in fact, very accessible in terms of affordability. Like the previously mentioned Braille editions, Braille cookbooks can also be exorbitantly priced. For instance, *Fix-It and Forget-It Cookbook: Feasting with Your Slow Cooker* (Good Books 2001) sells for about $20.00 hardcover on Amazon, but the Braille edition is

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37 Ibid
priced at $141.95 on BrailleBookstore.com. While sales numbers are difficult to come by for Braille books, one can postulate that, at that high price, few copies have been sold to the average home cook.

Most visually impaired individuals who purchase a standard cookbook must undertake the arduous process of scanning each page by hand into a character recognition program. This process can take hours, if not days, and the resulting scans often have errors when it comes to terms in other languages (e.g. French cooking terms) as well as fractions in measurements (important information when it comes to following a recipe). These errors can require hours of skillful editing on top of the time it takes to scan the pages.

After hours of scanning and editing, the resulting scans can be fed into either a text-to-speech reader or a text-to-Braille machine which, up until very recently, often only displayed up to two lines of text at a time. In 2017, Ed Rogers won the Accessibility prize at the AbilityNet Tech4Good awards for his Braille machine which produces an entire page of text at a time. Indisputably useful, but still expensive (roughly £650, over $1,000 CAD). If a home cook doesn’t want to (or isn’t able to) fork out such a large amount of money for a Braille machine, they need alternative methods of acquiring the books they are interested in. While accessible enhanced eBooks may cost a bit less than a Braille machine and are therefore more accessible when it comes to affordability, it is also important to remember that other adjustments in accessibility need to be made. That is, as with eBooks, accessible enhanced eBooks are not simply a copy and paste of the content. Serious editing and reformatting needs to take place so that, whether the book is being transferred to a Braille machine or is being read or listened to on an eReader, tablet, phone, or computer, it is still easy to follow along with, and clear to comprehend.

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Part Three: A Way Forward For Appetite

Appetite’s Current eBook Workflow

In Appetite’s current eBook workflow, every title published is automatically slated to become an standard eBook as well as a print edition. The conversion process to eBook is done without prior sales analysis of similar eBook titles, and estimates of production costs are not provided or listed on the title’s corresponding P&L (Profit and Loss) sheet. Costs of the production and design of each eBook can potentially be covered by the sales of the corresponding print edition.43

While the paperwork behind a title’s eBook is processed at the same time as the print edition, the actual eBook production does not begin until editing and design of the print edition has been completed. When the final pages of the print edition are sent to the printer, copies are also sent to the PRH digital production team based in the Toronto office, who then prepares the pages to be sent to an e-book conversion company.44 The preparation process includes design modifications such as the removal of “unnecessary details, graphics, or aesthetic embellishments...The result is an extremely pared down, almost stripped, e-cookbook version of the title, with many elements that were included in the print version to supply aesthetic interest and appeal having been removed.”45 These reductions serve to decrease file size of the final eBook, which means faster downloading times for readers, as well as faster load times on eReaders. In addition, these reductions and eliminations are an effort by the design team to make the eBook content easier to read on different devices by different users.

While privacy agreements between Penguin Random House and the chosen e-book conversion company prevent the release of exact costs, “rough estimates provided by the PRH digital production team place the approximate conversion cost [of] an e-cookbook...anywhere from $600–$900 depending on the number of pages, the level of modifications required...and any additional features or changes being made to the title.”46 Perhaps thankfully, profit does not factor into the rationale behind the decision to convert all of Appetite’s print titles into eBook formats, rather title accessibility and PRH’s competition within a digital market serve as the top two driving factors.47

44 Ibid.
45 Ibid.
46 Ibid.
47 Ibid.
Necessary Changes to Make Cookbooks Accessible

In 2008, Clotilde Dusoulier, author of several books including Clotilde’s Edible Adventures in Paris (Potter 2008) hosted an interview with David E. Price, a passionate home cook who is also blind. During the interview, Price points out that losing his vision “has merely changed the mechanics” of cooking. An example he provides is that descriptions for plating (how food is placed on a plate) that refer to the layout of a clock face are helpful. For instance, “the chicken is from 5 to 8, the vegetables are from 9 to 12, and the salad is from 1 to 4.” For recipes that may center around being placed on a platter for entertaining, such reframing of directions and descriptions could be vital. Price mentions other common techniques that are often employed by visually impaired home cooks, such as using a spill pan (such as a pie plate) for measuring liquids, dipping spoons (metal measuring spoons with a 90 degree bend), and talking kitchen scales and thermometers.

During his interview, Price identifies one of the biggest problems of accessibility as the language within cookbooks. He points out that non-visual indications in the recipes would be useful, for instance, “stir the sauce for approximately 30 seconds, until it clarifies, thickens, and the spices become fragrant.” In addition, including ingredient quantities in the instructions would lessen the need for flipping or scrolling back and forth between ingredient list and instructions. Unfortunately, these are editorial adjustments that not every author may be willing to incorporate into their cookbook (however useful it may be to a particular population of readers).

Even so, there are other technical ways in which enhanced eBook versions of cookbooks can be adjusted to better suit a visually impaired audience. When laying out pages of an accessible enhanced eBook cookbook, it is vital that the pages follow a simple and linear format. Having embellishments or sidebars could interrupt the flow of narrated or text-to-speech reading. Such interruptions could be frustrating for anyone attempting to follow a recipe. For even greater clarity, recipe introductions, basic recipe information (such as prep time, cooking time, and serving size) and ingredients lists could be placed on pages preceding the directions depending on the length of the recipe (e.g. ingredients on page 132 and process on page 133). For shorter recipes, by having the ingredients and directions on separate, but facing pages, it could be easier

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49 Ibid.
50 Ibid.
to refer back to the ingredients list as needed, without having to lose one’s place on the directions page. For longer recipes that exceed one page of ingredients and/or one page of directions, it could be just as beneficial, if not more so, to reiterate the ingredients and their measurements in the recipe directions (e.g. “Add 1/4 teaspoon baking powder to 1/2 cup flour”). This measurement specification could also be done for shorter recipes. It is also important that each recipe have accurate and descriptive headings and sub-headings that can be read by an eReader or text-to-speech. Without proper headings and sub-headings on each page, a visually impaired reader may have to scroll through page after page, listening to extended text trying to find the one page or section they are looking for. With proper headings and sub-headings, the reader can quickly jump between pages until the correct recipe is found.51

In addition, any photos in the accessible enhanced eBooks should always be paired with a caption that can be read by the eReader or text-to-speech reader. A image, illustration, or photograph that does not have a text-to-speech readable description is rendered “invisible.”52 Assistive captions should try and capture the same mood and imagery that the photograph would, so that the home cook can get the best sense possible of the dish they are about to create. A sufficient caption could also give the home cook a sense of how best to plate or garnish a dish. If the recipe has step by step photos, such as for kneading a dough or carving a protein, sufficient captions should be descriptive enough that the elements and steps of instruction can still be followed along. Assistive tools such as the Poet Image Description Tool can be used to help with the process of developing image captions. The Poet Image Description Tool is an open-source, web-based tool that provides guidelines to create image descriptions for use in EPUB3 books.53 An EPUB3 book file is uploaded to the application, and each photo can be reviewed for caption development, using a window similar to a word processor tool. The guidelines provided with the tool include being concise and objective, and describing from the general to the specific. A general context should be created, and then details such as colour and other vivid and imaginative descriptors should be used to describe and enhance the understanding of the image. Metaphor and simile can be used, as well as emotional terms, for example “he appears gleeful.”54

Using descriptive language with these tools in mind will help translate the photos into the best captions possible.

54 Ibid.
It is imperative that each accessible enhanced eCookbook is supplied with a text-to-speech option. While some enhanced eBooks or scanned pages can be fed into a text to Braille machine, it can often be inconvenient for home cooks to have to interrupt their food preparation after each step to read the next step by hand. Imagine attempting to hand-mix a sticky loaf (or worse, a meatloaf!) while potentially having to refer back to the recipe and touch an eReader or Braille reader? Not only can such a predicament be frustrating, it can also be contaminating to the work space. Many eReaders, such as Amazon’s Android Kindle, are equipped with voice direction capabilities. For instance, a user can simply use the voice commands “Forward,” or “Previous page” to navigate between pages. This is also why having text-to-speech equipped in the enhanced eBooks is important so individuals do not have to worry about interrupting their mixing (for instance), or getting their eReader or tablet dirty.

Bonus elements (that is, features that may not be necessary for clarity of the recipes but could also be provided if the author and/or publisher were willing) could enhance and add richness to the accessible enhanced eBook. These bonus elements could include mini cook-along audios and/or videos. Many enhanced eBooks already offer these or similar features, such as Valerie Bertinelli’s One Dish at a Time: Delicious Recipes and Stories from My Italian-American Childhood and Beyond (Rodale Books 2012), which features over 25 exclusive videos. Until technology takes the next leap, however, any included bonus videos would have to be short. If eBooks include videos, the videos must be highly compressed files under 100MB, and Apple will even turn down eBooks that include video over 200MB. This is because as the videos become larger, the eBooks themselves become time consuming to download and take up too much space.\(^{55}\) While the technology continues to catch up, what is available should still be utilized. Other enhanced accessible eBooks have included digital recipe timers, and grocery lists.\(^{56}\)


Case Studies

The overarching goal of accessible publishing is this: a publishing house in which all titles are released not only as physical copies and eBooks, but also as accessible enhanced eBooks for visually impaired audiences. However, this will not be an overnight transition. New ways of envisioning cookbooks must be employed, and that is something that takes practice. As tempting as it is to say that Appetite should immediately convert all of their backlist to accessible enhanced eBooks, this is not a realistic demand. Instead, the Appetite production team must ease into the process by taking simple books on their list and converting them into accessible enhanced editions. By starting small, Appetite can begin to build the processes necessary to then convert more complex books and, eventually, all books on their past, present, and future lists.

This ultimate conversion can begin by breaking the overall process down into a four stage process using four specific titles (anonymized for the purposes of discussion in this report). The first two stages will be illustrated with two anonymized titles which would be ideal for Appetite to begin the conversion. The second half of the process will be illustrated (again, with two anonymized titles) by using a more in-depth conversion process that Appetite will have to take. After these four titles have been converted to accessible enhanced eBooks, the hope is that Appetite would be fully equipped to meet the final and longest term goal: converting their back list, as well as all future books (whether in the lifestyle or cookbook genres) to accessible enhanced eBooks. By splitting up the incorporation of accessible enhanced features over four titles, the Appetite production team can ease into the process of producing accessible enhanced ebooks and make sure that, as with eBooks and physical editions, the process can be completed with care and attention to detail. Starting “small” will ensure the new flow can be adapted to, rather than starting with the most complex features all at once and becoming overwhelmed (and possibly frustrated) by the process.

Prior to beginning the conversion process, both the Appetite/PRH editorial and production teams should install and familiarize itself with the “Accessibility Checker for EPUB,” also known as Ace by DAISY. This is a free open source accessibility checking tool, created to evaluate conformance to the EPUB Accessibility Specification. The tool can be used at any stage of the production process and provides an automated list of errors within the scanned EPUB file that need attention in order for the text to be considered accessible. For example, an error occurring on a video may have the
description "The multimedia element does not have a captions track." Also provided are suggestions for fixing the errors. Ace by DAISY is a common tool that has been used frequently by companies such as Kobo and HarperCollins.58

Some elements of the workflow would not have to change drastically. Like the standard eBooks, the real development of the accessible enhanced eBooks cannot begin until the print version is finalized. This may mean (depending on the decided features of the accessible enhanced eBook, such as narration by the author and/or included video clips) that the accessible enhanced eBook is released shortly after the print version is released. It would be important to ensure ample time to code, design, layout, and edit the additional features. The converted eBook would be sent to an eBook conversion company, and accessible specifications would be followed: simplified fixed layout, readable font, and photo captions. As is standard for all eBook editions, the accessible enhanced eBook would then be sent to the title’s editor for approval.

Overall, the only additional step that would need to take place besides the obvious steps of converting the print edition to an enhanced eBook (such as adding image tags, etc) is the step of referring to the Ace by DAISY Accessibility Checker. This check would need to be included at the end of the drafting process, as well as if and when major changes are made to the document that may impact the flow of accessibility.

**The Process**

The process of converting the print edition to an accessible enhanced format would be straightforward over the course of all four titles (and all titles after the initial four). To begin, if the author is willing and able, accessible language should be added to each recipe (such as the previous example mentioned above, “stir the sauce for approximately 30 seconds, until it clarifies, thickens, and the spices become fragrant”). If the author chooses to add such accessible language to the text, the text would then be reviewed by the editorial team to ensure clarity. Next, the eBook production team should begin the conversion process. This would include removing any unnecessary embellishments and/or sidebar asides that may otherwise interrupt the flow of narrated or text-to-speech reading. Navigational aids, headings, audio markup, and semantic tags should then be added to allow for accessible compatibility.

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Photos and/or illustrations should be run through the Poet Image Description Tool (described above) to develop appropriate image captions. Once these steps have been completed, the eBook production team should use Ace by DAISY to check for any accessible errors, and adjust the document as necessary until the manuscript passes. Once the layout is complete and finalized, the eBook is essentially complete, it can be sent either back to the design team or editing team for a final Ace by DAISY check to ensure complete accessibility.

**Title A**

The first book Appetite could undertake this conversion process is Title A. While Title A is not a cookbook per se, it does include recipes at the end of each chapter. Otherwise the book is classified as a memoir. It has a simple design and layout which lends to easier translation into an accessible enhanced eBook format. Each chapter begins with a short note which could, in the accessible enhanced eBook version, have its own page to signify the beginning of a new chapter. The simple, one-colour illustrations could easily be paired with readable (by text-to-speech) captions.

Perhaps the most daunting aspect of the conversion process is the best way to format the recipes so that each one can be clearly read by a text-to-speech program. In Title A, the recipes are already simply laid out with few visual embellishments. This simplicity makes it easier to translate into an accessible format without the need to strip away as many elements or features (such as illustrations or dynamic colours or symbols). The recipes in Title A can be formatted so that recipe title, recipe notes (such as preparation time, cooking time, and yield/serving size) and ingredients can be listed on one page, while the recipe directions can be listed on the following page.

The process of translating it to an accessible enhanced eBook is far less daunting when a simply designed book with comparatively few recipes is chosen, and the process can become familiar without running the risk of becoming overwhelming. In addition, the fact that the book leans more towards being a memoir means it could very easily be narrated. The absence of photographs in the print edition means that fewer image tags or image descriptors would be needed in the accessible enhanced edition, thus saving time throughout the overall conversion process.
Title B

Title B is one step closer to a cookbook, but still technically falls under the “memoir” category. However, unlike Title A, it includes rich, full bleed colour photographs, and more recipes. Dealing with a book like Title B, having full colour photos and more complex recipes, will be the next step in the gradual process of working up to incorporating traditional full colour cookbooks as accessible enhanced eBooks. Title B can also be narrated, as well as simply formatted (not so differently from how the book exists in its physical copy).

The challenges that Title B brings are the full colour photos as well as the more complex recipes. Some recipes feature multiple parts which will require more well-thought-out and well-placed navigational aids and headings to ensure clarity. The full colour photos will require thoughtful image descriptions to best express and describe the contents of the images. Besides the additional focus needed for these elements, the overall process of converting this title to an accessible enhanced eBook is the same as Title A.

One benefit to this title is that the author already uses many non-visual cues and descriptions in the recipe descriptions and directions, such as how smooth the dough is supposed to feel (a tactile sense), or how many times a pot of water is required to boil over before its contents are finished cooking (an audible sense).

Title C

By now, Appetite should feel comfortable with the processes behind converting books (and recipes) into accessible enhanced eBooks. The process has been well-practiced, providing simple layouts, including photo captions, and choosing accessible fonts. In the next leap forward, the next title to be developed and translated into an accessible eBook would be Title C, a full blown cookbook. In its physical copy, Title C is already very simply laid out, with short recipe introductions, clear headers, and sectioned ingredients lists that appear separate from the process directions. Most recipes in this title take up only one page, and each is paired with a simply composed full colour photograph.

An additional challenge Title C brings is having a unique font used for the recipe title headers. This would likely need to be edited to match the font used for the recipe body itself to ensure readability across accessible devices. Illustrations are also used for some recipe notes (such as cooking time, whether the recipes are gluten-free, as
well as the complexity of the recipe). Similarly to the title headers, these would need to be edited into a text-only format so that they could be read by text-to-speech readers. Some photographs include illustrations and short how-to suggestions and directions (such as recommended toppings). These notes would ideally be moved to the body of the recipe so as not to be missed or made to seem out of place by text-to-speech readers.

**Title D**

Title D will be the fourth and final book used to familiarize Appetite with translation into enhanced eBooks. This title will need the most alterations due to the physical copy’s layout, sidebar notes, quotes, and images, as well as extensive full colour photography of varying sizes throughout the book, and irregularly placed notes and suggestions (i.e. these notes do not appear after each recipe). Finally, many of the recipes included in Title D span more than one page, and can often span more than two if a large, full colour photo is also included.

However, new headers and navigational aids, simplistic recipe formatting leading to a more simplistic layout, along with embedded image descriptions will provide the layout for an accessible edition of this title.

**Looking Ahead**

After translating Titles C and D into enhanced eBooks, Appetite should now feel confident about translating the rest of their backlist to accessible enhanced eBooks. Moving into their current list and future lists, translating their titles to accessible enhanced eBooks can become as second nature as translating them into standard eBooks has become.

Of course, the barriers to long term translation include two things vital to any successful business: time and money. It is important to remember that not only will these accessible enhanced eBooks be available to visually impaired audiences, anyone interested in having the accessible enhanced copy will also be able to purchase them. As the Appetite production team becomes more and more comfortable with creating accessible enhanced eBooks, they can consider phasing out the production of standard eBooks. If Appetite wanted to continue slowly easing into the conversion process after converting Titles A, B, C, and D, they could choose books that have already proven to
be their highest sellers and/or books that have resulted in the highest profit margins so as to more easily absorb the cost.

At first, the new conversion process may prove to be complex, intricate, and vexing, particularly if producers and editors are not used to thinking of their books in an accessible way. But by slowly working with the process, starting with simpler titles, and not implementing time restraints (i.e. starting with backlist titles rather than upcoming releases), the conversion process should be easy to adapt to. The time and money it takes to implement the codes and consider design reformatting should be considered a transition in the existing publishing process rather than a disruption.

**Why Appetite?**

But why should Appetite specifically be the one to pioneer these changes and embark on creating enhanced eBook versions of cookbooks? Appetite does a lot of things superbly, but there is nothing they do better or are more well known for than their cookbooks. Hours, days, weeks, and months are poured into every cookbook on their list, and no stone is left unturned when trying to determine the best elements that will make each cookbook succeed. Each cookbook is unique, and each one fills a need, from easy at-home vegan recipes, to sumptuous coastal fine dining. By translating these books into enhanced eBooks and making them accessible for visually impaired audiences, the dozens of books and thousands of recipes can finally be shared with everyone who wants to take their home cooking to the next level.

Appetite already automatically provides eBook editions of their entire list, and they’ve nailed it. As Jennifer Olsen, manager of digital production for the Knopf Doubleday Publishing Group points out, “Cookbooks often have incredibly complex layouts...they are very tricky to produce as e-books.”60 However, like their hardcopy editions, Appetite’s eBooks go through a rigorous process of font selection, layout, and revisions, all in order to make the electronic edition as captivating as the physical edition. All of this is done without adjustment for cost of production or potential profit gained. The logical next step not only to Appetite’s growth in the digital market but also in becoming a more accessible publisher is accessible enhanced eBooks. Now that technology is slowly but finally catching up to fill the needs of visually impaired home cooks, a pillar of publishing like Appetite by Random House has the opportunity to close

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the gap and provide accessible cookbooks for visually impaired audiences. With Penguin Random House’s backing, as well as Appetite’s already well-developed standard they bring to the cookbook and lifestyle genre, Appetite is well-positioned to become an industry leader and solidify their already strong position in the digital market. If Appetite can enact the changes necessary to provide accessible cookbooks, it would say to the publishing industry that not only can it be done, there are few excuses not to.

**Conclusion**

"Accessibility is the complete ability to join in, participate or attend the activity or conversation as much as anybody else of my age in my community."

– Anonymous

According to Arnaud Nourry, chief executive of Hachette Livre, “We, as publishers, have not done a great job going digital. We’ve tried. We’ve tried enhanced or enriched ebooks...We’ve tried apps, websites with our content – we have one or two successes among a hundred failures. I’m talking about the entire industry. We’ve not done very well.” ‘Going digital’ has, as Nourry points out, had its struggles, but the fact that enhanced eBooks (let alone accessible enhanced eBooks) are even an option today proves that great strides have been taken when it comes to the technological side of publishing. By facing the challenges of converting their formats and processes now, publishers can get ahead of becoming familiar with the changes and new requirements.

In the future, if and when technology changes again, or if more strict regulations are put into place regarding accessible formats being mandatory (similar to how the Canadian Radio-television and Telecommunications Commission dictates that closed captions are required on all television programs), less work will be needed to be done by the publishers. Despite some difficulties and so called failures in transitioning to more enhanced publications in general, those who have tried and failed have not given up altogether. In fact, Vice President and Editorial Director of Hachette, Karen Murgolo, states “Enhanced is a direction we want to go in more, when it makes the e-book even

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more helpful to the reader.”63 While eBooks and enhanced eBooks may not have proven to be successful (i.e. turned into a profitable regularity) in the mainstream market yet, there is still more at stake than the dollar signs. It is important to remember which audience may benefit the most from accessible enhanced eCookbooks and the reasons why they would be purchasing them: visually impaired individuals who want to spend time in the kitchen, cook delicious meals, and feed themselves and their friends and family. Not only would accessible enhanced eCookbooks benefit the reader, but publishers who provide an accessible product can open the door to an untapped market — a boon for both audiences and publishers.

Whether it’s with dinner parties, backyard barbecues, or a weeknight one-pot-wonder, the kitchen means more than just the place where food is cooked. Being able to cook means being able to be independent, engage in social interactions and events, and be part of a community of like-minded individuals. However, barriers to this social inclusion still exist in the form of hard-to-access information, or information that is presented in ways that make it hard to access, read, or understand.64 Accessible editions of books do not only benefit visually impaired audiences. As is pointed out in the BISG Quick Start Guide to Accessible Publishing:

"publishers and content creators are leaving money on the table by not making their content accessible to all users, such as aging baby boomers, foreign language learners, struggling readers, and learners with ADHD and autism—individuals with “invisible” disabilities. Together with those who are blind and vision-impaired, dyslexic, or mobility impaired, they create a huge market opportunity." 65

Creating accessible content involves producing content that is organized, easy to use, and available for users of all ability levels. If publishers are unsure of how to go about producing accessible materials, the resources outlined in this paper can serve as launch points for gaining the understanding needed, and there is a plethora of other resources available, such as The Publishers Association, the Publish Licensing Society, EDItEUR, Jisc TechDis, and the Royal National Institute of Blind People, just to name a few. The Accessible Publishing Best Practice Guidelines for Publishers is an invaluable guide for any publishing house wishing to create and provide accessible content.

To put it all simply, publishers have to be the ones to redefine what it means to be accessible, by pushing the boundaries companies have placed upon themselves, and

63 Ibid.
64 Ibid.
by providing accessible versions of texts available to anyone who may choose to have their life enriched by them. Appetite by Random House is in the best position to push those boundaries and provide accessible editions of texts. As a boutique publisher with an already carefully crafted list and established presence in the publishing industry, there is no one better situated to turn a corner on what it means to be an accessible publisher.


