



Guidelines for Accessible Publishing

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I. EXECUTIVE SUMMARY

These guidelines are for everyone seeking high-level information for producing accessible content. It offers a quick review of why accessibility is not only essential, but also profitable for all sorts of publications. It sheds light on accessible file formats, the process of starting an accessible publication, and the legal framework around accessibility.

These guidelines are mainly for the publishing community. Nevertheless, people from all walks of life who create digital content can benefit from it. These guidelines benefit from the work done on the subject by the Accessible Books Consortium, Book Industry Study Group, Inc. (BISG) and World Wide Web Consortium (W3C). Reference may be made to their Accessible Publishing guidelines for more information on this subject. Links to these documents are provided at the end of this document.

One billion people in the world are affected by some form or other of disability. This number is expected to rise for various reasons. Among impairments, print impairment affects 10 per cent of people in the developed world and 15 per cent of people in the developing world. These are people who have visual impairments, dyslexia or motor limitations that can make it difficult for them to read. The publishing environment is changing. It is becoming increasingly critical to ensure that material is available to and accessible by all prospective readers. Today's consumers want to use technology in a number of ways. The publishing industry's transformation from a print-dominated to a mixed and inevitably digitally-led sector gives an unparalleled opportunity for publishers to reach the broadest possible audience.

Commercially, legally and ethically, ensuring that your products are accessible makes sense. The purpose of these guidelines is to provide clear and succinct information to publishers to facilitate their endeavours.

All publishers can and should take on the responsibility of providing "access" to material for people with print disabilities. Regarding the standards for accessible publishing, publishers are urged to make mainstream publications as accessible as feasible, so that full access is no longer considered "exceptional."

Accessibility features do not need to be exclusive or invasive; they will benefit all readers. Including accessibility elements in publications will allow all readers to customize their own reading experiences, while also respecting the rights of copyright holders.

Adaptive technology will allow everyone, whether they have a print disability or not, to access material according to individual preferences. There is no longer such a thing as a "consumer." In today's mobile world, everyone may make use of the same access options. Anyone may read text, if it reflows to a range of screen sizes, independently of the device selected or need to use it.

II. WHY IS ACCESSIBILITY IMPORTANT?

Many of our most essential rights and values — education, employment, social inclusion, and democracy — are based on literacy and access to information. People with disabilities should have the same opportunities as everyone else to fully engage in society. This includes having equal access to content at the same time and for the same price. People with print disabilities (those who have trouble accessing printed books due to vision issues, dyslexia, mobility limitations, and other disabilities) have access to less than 5 per cent of books published in the United States, with the percentage being far lower in developing and least developed countries.

Exciting global initiatives are transforming accessible publishing, and transforming how individuals with print disabilities access information for understanding the world around them, entertainment or study.

And, as can be seen in everyday life—whether it's closed captioning in sports bars, speech recognition software, or kerb cuts on sidewalks—these initiatives help everyone.

This is a crucial and hopeful time, as technological advancements and major industry transformations are reducing the perpetual catch-up effort that limits access and necessitates so much extra effort to generate accessible material. When every digital content that is "born digital" will also be "born accessible," the goal of universal access to information will become a reality.

A. Legal framework

Domestic laws, international conventions, as well as corporate and social responsibility issues are increasingly driving the provision of accessible information and technology to persons with disabilities in a variety of situations. Content producers confront an increasing need, founded in the law, for both their print and digital goods to be accessible to persons with disabilities, whether in academia, professional settings, government procurement, or the broader consumer arena.

A college or university system, or a government body, that is obligated to comply with anti-discrimination laws, may frequently demand that materials and technology be accessible as a condition of their acquisition. In certain cases, regulations require publishers to take specific efforts to guarantee that persons with disabilities can access the content. Finally, with the adoption, in 2013, of the international Marrakesh Treaty, the world has moved towards significantly strengthening, including via amendments, for national laws to have provision that create copyright exceptions. The copyright exceptions would enable the creation and delivery of accessible-format copies of text-based works to users with disabilities in certain circumstances, without the copyright holder's permission.

The Convention on the Rights of Persons with Disabilities (hereinafter referred to as the Convention) was adopted "to promote, protect, and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity." It has been widely ratified by more than 160 countries, and the European Union. Ratification of or accession to the Convention involves a wide variety of commitments that include, among others, the following:

1. Ensuring that persons with disabilities have equal access to information and communications as everyone else. Multimedia and textual communications, as well as information and communication technologies, are all included in the definition of communications;
2. Promoting "universally designed" goods, services, equipment and facilities that are available for use. "Universal design" is defined as "the design of products, environments, programmes, and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design," although it does not preclude the use of assistive devices by specific groups of persons with disabilities;
3. Requiring commercial businesses that provide services to the general public, including online, to make information and services accessible for and usable by persons with disabilities;
4. Ensuring equal access to education;
5. Adopting legislative, administrative and other steps to put into practice the convention's rights.

B. What are the benefits to business?

The market for easily accessible data is here to expand. By 2050, more than 30 per cent of the population in 64 nations would be aged over 60, with 21 per cent having reading difficulties (Gartner.com). Many people may not consider themselves to be disabled, yet they do find big font size simpler to read. Making the most of this market makes perfect commercial sense. Furthermore, whether or not material is available might affect publishing sales. Many organizations may prioritize acquiring accessible material over non-accessible information.

Establishing accessibility as a fundamental company policy and appointing in-house advocates who can help establish strategy, organize training, and take responsibility for communicating the message about the importance of accessible publishing can help organizations capitalize on the business—and social—opportunities that "born accessible" content offers.

Some benefits that accessible publishing could generate for a business include the following:

1. **Commercial Benefits:** One out of every eight persons has trouble reading traditional print. They include ageing baby boomers, foreign language learners, and persons with invisible or hidden disabilities. Persons with invisible or hidden disabilities include readers with dyslexia, learners with attention deficit hyperactivity disorder (ADHD), autism, persons with dementia-related cognitive impairment, and persons with mental health issues. They represent a large market potential, especially when combined with persons who are blind, vision-impaired, and mobility-impaired. By not making information accessible for all users, publishers and content providers stand to lose money.
2. Increased discoverability on the web: Using ONIX, Schema.org, or the Learning Registry to add accessible information makes material more discoverable on the web and in online repositories. Simple metadata changes can have a big impact on discoverability.
3. Legal Benefits: Accessible publication aids business in meeting the market's legal requirements.

III. WHAT MAKES A BOOK ACCESSIBLE?

Everyone can access the content of an accessible book in the way that suits the abilities of each person. A book that is accessible for one person may not be accessible for another; there are several qualifications that vary depending on a person's capabilities, skills and preferences. A truly "accessible product," in general, is one that provides maximum user flexibility for all readers and allows material to be accessed and altered with ease by persons with and without impairments.

Features of an accessible book

1. Well-defined structure

All books have a structure: the sequence of Chapters, Sections, A-heads, B-heads and body paragraphs. The structure of the book is very important for reader comprehension of the book content. Importantly, for assistive technology users, the book structure determines the extent of capability which is much needed for navigating directly to any part of the book.

To make the book accessible, it is essential to clearly mark up all the sections and sub-sections with tags or codes that systems can identify.

In HTML/XML code it is the heading tag, <h1> for chapters and <h2>, <h3> ... for the sub-sections.

It is important to maintain the hierarchy of sections; heading levels should not be skipped. It is wrong to use <h3> after <h1>. <h1> can be followed only by a <h2> or <h1> after some content in between.

Visual presentation alone, such as differences in font, size and colour, is not sufficient to manifest the structure of the content. Visual presentation must be complemented by the use of appropriate styles or coding.

2. Separation of content and appearance

Content and appearance are the two most important aspects of traditional printing, and they are generally tightly related throughout the publication process. All three parts (structure, content and appearance) are essential for accessibility. The most accessible files are those that can be split and edited independently according to user requirements. For example, by disconnecting the look from the structure and content and making it changeable, the text may be delivered in a variety of ways, each adapted to the needs of the particular reader.

Content creators need to be aware that visual reading is only one way of accessing content. Blind readers may be using Screen Readers and many others may like to use the Read Aloud features to listen to a book while doing something else. Therefore, visual-only cues, such as colored text, font size or positioning, should not be used to convey the importance or meaning of any word or phrase. The meaning of the content should be the same, even if all formatting is removed.

In an accessible eBook, the appearance of the book is determined by the rules in the Cascading Style Sheet (CSS) included in the eBook. This allows the readers to change the appearance of the book as per their requirements. For example, readers with weak eyesight can increase text size and even change background and text colour.

3. Textual descriptions for visual content

All non-decorative visual elements in the book, such as photographs, charts and maps, should have textual descriptions for those who cannot see. The descriptions can be within the book content, in captions or in image properties in the “alt text” attribute. Complicated images require longer descriptions which can be provided in an external file with a link below the image. Several other techniques are also available for including longer image descriptions, see the [DIAGRAM Center Image Guidelines for EPUB 3](#) for markup best practices.

The DIAGRAM Center has also published [Image Description Guidelines](#) with examples to help content creators describe images.

4. Other features

Creation of an accessible book is mostly about adopting good practices in coding.

4.1 The book should have a logical reading order. This can be achieved by using structural markup for body text and secondary content such as sidebars and footnotes.

- 4.2 The language of the content must be declared in the eBook code, using appropriate lang attributes (global HTML attributes that developers can apply to any HTML elements to help with accessibility).¹
- 4.3 Mathematical and scientific expressions should be composed using MathML.
- 4.4 The book metadata should be well defined. Information related to the accessibility features in the book should be included in metadata.
- 4.5 Interactive elements if any in the book should be usable with different input modes such as a keyboard, mouse and touch.

IV. FILE FORMATS: WHICH ONES ARE ACCESSIBLE?

Choice of distribution file format mostly determines whether or not the readers will have an accessible reading experience. Some of the popular file formats used by publishers lack accessibility features, while the potential of other formats have not been fully utilized.

- **Microsoft Word:** This file format provides the simplest way to access information for many users with print disabilities, since the file's text content is readily modifiable and it may have all three parts of structure, content and presentation. Microsoft has provided an Accessibility Checker and guidelines to create accessible Word documents. The Word format may not suit the requirements of publishers and eBook retailers. However, CSOs, educational institutions, and business may create and distribute smaller documents like reports, circulars, notices, requests for proposals (RFPs), and contracts in Microsoft Word format.
- **PDFs that are Print-ready:** These PDFs are frequently the least accessible of all file types because they include information and appearance, but just a bare minimum of structure. There is neither a reading order nor structural or semantic labelling. This is especially true for image-based PDFs (such as text scans or graphically rich books), which have no textual content.
- **PDFs optimised for Digital use:** These files are more navigable and structured; therefore, they may be a good solution for some users, since they can include a reading order, ALT tags, and other features. If you are choosing PDF as the distribution format, make sure it is semantically tagged and tested for accessibility. While there are systems that can create tags automatically, human inspection and modification of the tags is almost always required.
- **DAISY:** This has become the most extensively used specialist standard format for creating accessible versions for persons with visual impairments and persons with other print disabilities, although it is not generally utilized (or even recognized) by publishers. Libraries for blind persons and disability services units in educational institutions all over the world are converting books to the DAISY format on a regular basis.
- **EPUB:** This has become the standard eBook format for commercial publishers, and with inclusion of accessibility features in EPUB version 3, it is increasingly viewed as the format most suited for both economic exploitation and satisfying accessibility requirements. EPUB is the most prevalent file format for commercially accessible e-books and is an open standard for e-book development

¹ The lang **attribute** is one of the global HTML **attributes** developers can apply to any HTML element, and it can really help with accessibility. Source:

and dissemination. It has been adopted by leading eBook retailers like Amazon Kindle, Google Play Books and Apple Books.

- **HTML based e-books:** These files may be one of the most accessible. It is advisable to ensure that clients with disabilities are well-versed in utilizing the file type with their assistive technology by employing the most common web technology. Web browser customization is straightforward and well-known. Since these books are viewed in web browsers, efforts to make the files more adaptable will help a wider range of readers, including those who are not disabled.
- **XML Files:** XML files have the potential to be incredibly accessible. XML files have structure and content without any visual formatting. XML files are not for end users; they are used to create different formats for end users. End users (and those who support them) are unlikely to have the specialized skills required to use them. Creation and conversion of XML files require specialized skills. These files are likely to be appropriate only for people with unusually advanced technical capabilities, technically skilled publishers/commercial organizations or intermediary organizations that support persons with print disabilities in the creation of accessible books in formats such as EPUB, DAISY and Braille.
- **LaTeX files:** These files are occasionally a good option, especially for mathematical and technical content. Publishers who receive manuscripts in TeX or LaTeX or who typeset in these formats may be able to provide the files in this format for accessibility reasons. They are, however, only acceptable for readers with print disabilities who possess the required technical abilities.
- **Custom/Proprietary e-books:** One might prefer to use an e-book vendor with a proprietary e-book format and, maybe, a proprietary distribution method. Unfortunately, many sellers advertise their items as "accessible" when they are not.

In the end, even the most "accessible" formats may be abused to make publications completely inaccessible. The format's accessibility potential is built in, but it must be used appropriately and carefully to generate an accessible result. This is true of all formats, and accessibility built-in cannot be presumed.

V. WHERE TO START

Decide upon the tone and philosophy, before you begin. The quality of the ensuing accessibility will be determined by how you deliver the issue. If you make it clear that you believe this is vital, your accessibility programme will acquire traction thanks to workers' enthusiasm for the opportunity to make a difference.

To get started, you'll need to:

- Perform an accessibility audit.
- Understand the specific legal positions in your market
- Make sure your business is registered in Publisher Lookup, and that your permissions and sales teams are well-versed in all aspects of accessibility.
- Understand the types of digital files used to create your products, both internally and by your vendors.
- Understand how and where your digital data are saved so that you can have control over it in the future.
- Research the industry guidance available for your market.

- Finalize a file format for your publications. EPUB may be the best bet considering all factors.

A. Preparation of Files

When creating your files, you should think about things that might have a big impact on how accessible the content is that you are making. While it is good for any file to be adaptable and allow the readers to design their own version, you should consider their demands from the beginning. The Royal National Institute of Blind People (RNIB) in the United Kingdom provides a number of clear print and eBook style standards concerning elements that impact print-impaired readability:

1. Text should be 12—14 points, ideally 14 points, in size.
2. Avoid anything stylized and use a font that is clear and open.
3. All body text should be oriented to the left.
4. Maintain a clean, basic, and consistent text layout.
5. Use bold, italic, or all capitals only when absolutely necessary.
6. Images should not have text put on them.
7. The text and backdrop contrast should be carefully examined.
8. On the page, all text should be oriented in the same way.
9. The space between columns and lines of text should be wide enough to be distinguishable.
10. Any information communicated in colour or by visuals should be specified as well.

B. Preparing and Editing Images

If your publications contain photographs and graphics, it's helpful if you can provide alternate descriptions for them (often known as ALT Text). In many cases, an image intended for sighted persons is not the most effective method to convey information to a blind person. A better choice is to write a description. If the image has a title or reference number, be careful to include it; the text may then be cross-referenced to the original image, if necessary.

While writing ALT Text, it is important to consider the following aspects in the image being described:

1. Is the image only decorative? If this is the case, a simple caption with no citation may be sufficient. If the graphical component is only decorative, leaving the Alt Text field blank might be fine.
2. Is the image accurate in reflecting the information in the surrounding text? It may be necessary for comprehending the page or book, although the main body of the text may already be sufficient.
3. Is there information in the image that isn't in the surrounding text that is important for comprehending the page or book? If this is the case, ensure the ALT Text contains all pertinent information. For those editing and preparing ALT Text, this is the most difficult work. Longer descriptions of information-dense graphical artefacts, such as a complicated diagram or infographic, are being developed.

C. Workflow options

Many forward-thinking organizations have already reviewed their internal workflows and created imaginative new ways of generating and selling their content in response to the challenge of digital publishing. In today's digital world, time-honoured procedures established for the efficient manufacture of print-based products are no longer necessarily the solution. For any organization that has not previously looked at its editorial and design processes, now is a good moment to start thinking about how the organization operates and what is appropriate for the various types of products being launched.

Take some time to learn about the various file formats used to deliver work in the office, as well as those you could support in the future, and the amount of accessibility they can give. It is critical that you comprehend the ideas of Content, Structure, and Appearance. There is greater flexibility in delivery and any number of "appearances" adapted to each individual reader's needs that may be applied to the text by disengaging the appearance and making it flexible. This may be accomplished by ensuring that you're the structure of the draft is captured and maintained throughout its publication process.

A well-structured document created using an XML workflow might be the first step toward success in terms of accessibility.

D. How to set up internal teams and processes

Companies should select an accessibility lead who will ensure that all departments and personnel inside the organization work together to execute accessible policies. The in-house leadership team must support this function by demonstrating the value of accessibility throughout the firm.

Large corporations frequently have "silos" that allow for an infinite number of different procedures and tactics. An accessibility lead can endeavour to standardize and bake accessibility into processes, while also spreading the accessibility message both inside and externally.

The main tasks include the following:

1. Documenting, explaining, promoting, and gaining consensus on the application of your company's accessibility policy set at the highest level.
2. Internal understanding of accessibility challenges and changes in the messaging business.
3. Influencing decision-making at all levels of seniority and throughout all departments to ensure that your accessibility policies are harmonised for consistency and efficiency.
4. Vendors, clients, partners, and consumers are all informed about the company's accessibility standards.

Publishers should undertake an accessibility audit to see how compliant their products are in order to assess their present capabilities and understand what they need to do moving forward. They can do this in-house or hire one of the many accessibility firms that can undertake comprehensive technical and non-technical audits.

E. How to conduct an accessibility audit

The following are the steps that could be taken to conduct an accessibility audit:

1. Conduct an internal survey to see whether the publishing team is aware of accessibility challenges and how well they grasp what it means to develop "accessible goods." This may be done informally with a sample or create an online questionnaire for larger distribution. Ideally, it should be possible to:
 - Get clear support for this from the company's most senior management, to facilitate and enlist the participation of all employees at all levels.
2. Submit an anonymous request to the team or individual in charge of handling customer enquiries to test the reality of the user experience. This will show how well prepared the business is to react to requests for accessible information from persons who are print-disabled or from institutional support personnel.
3. Make an overall assessment of the products on offer—make sure you understand your product type and the numerous formats you offer --- as a firm, both directly and via others (including for example large-print specialists).

How many books are ever released in big print, and how soon after their first release? How many of your e-books have text-to-speech capabilities? Has anyone ever had publications translated to Braille? Is anyone aware?

4. Examine your archiving—are the correct files easily available, and who is in charge of monitoring and providing them when needed? You may have accessible formats on hand, but are the teams who respond to consumer enquiries able to access them or know who to contact to get them?
5. Examine in-house and out-of-house production workflows. Is an "XML-first" methodology in place or is a more conventional method being used? Quickly analyse existing capabilities for delivering various sorts of digital files by knowing the type of process (or workflows) in use.

F. Supplying files to Intermediary Organisations

If files are being sent to an organization for conversion to an accessible format, the following principles may aid in providing organized information in the proper manner:

1. Special format providers accept a variety of file formats, and it is good to see which ones they accept and which ones they find most helpful.
2. Make every effort to submit your content as a single file. Splitting your title into files for chapters and parts makes the converting process more difficult.
3. Make sure the original files are well-built and have as much structure as possible. Here, consistency is crucial to aid conversion.
4. All information should be precise and up-to-date, including particular codes to indicate the level of accessibility. The conversion process might be slowed by missing data.
5. Check for consistency in the reading order.
6. Instead of depending on others to produce the alt text, it is incredibly beneficial if that could be done by oneself.

RESOURCES

More information on Accessible Publishing is available in the following documents which are available online.

1. [BISG Quick Start Guide to Accessible Publishing: Book Industry Study Group](#)
2. [Accessible Publishing Best Practice Guidelines for Publishers: Accessible Books Consortium](#)
3. [Top tips for Accessible EPUB](#)
4. [Image Description Guidelines: DIAGRAM Center](#)
5. [Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled.: WIPO](#)