CRAWFORD TECHNOLOGIES

Automating Document Accessibility

Supporting all communications and all formats

Introduction

Blindness, vision loss and cognitive disabilities affect a significant number of people. It is estimated that more than 258,000 individuals throughout the world, including 30 million in the United States, have difficulty reading and understanding conventional print and electronic communications. This number is expected to increase as a result of an aging population and common diseases such as macular degeneration and diabetes.

Despite new regulations and increased enforcement of current legislation regarding accessible documents, this population continues to be underserved. Industry experts point out that only 3% to 4% of all communications are delivered in an accessible format. However, statistics indicate that anywhere from 15% to 20% of the general population experiences some form of print-related disability.

Furthermore, when someone needs an accessible document, the onus is on the individual to make a request. The typical process is that a customer who is blind or partially sighted calls customer service, and asks for a particular document in an accessible format. The customer service representative often doesn't know what that means or what should be done and has to involve a supervisor. At that point there is often a discussion about what the company can supply, which may or may not meet the client's needs. It's not uncommon for a company representative to suggest that the client find someone to read the document to them or offers to read it to them – certainly not an appropriate solution for personal and confidential information! It should also be noted that this approach in no way constitutes compliance with document accessibility regulations.

Once it's agreed that an accessible format will be provided, the document needs to be located and sent for remediation. The completed file is then delivered to the customer. Although some companies are able to track accessible document preferences in their CRM system, it's more common that the customer needs to call every time he or she receives a new communication. Industry analysts estimate that the average American household receives 14 documents each month from the organizations they do business with, so this means that someone will need to make 168 calls per year – clearly a time-consuming and inefficient process for companies and their clients.

There's no doubt that this process takes time, erodes profits, negatively impacts the customer experience and ultimately is discriminatory, since a significant percentage of the population does not have equal access to important communications. A new approach is needed so that accessible documents can be delivered proactively, giving all consumers information that they can access and respond to in a timely manner.

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Accessible Document Formats

Before we discuss how accessible documents are created, let's take a quick look at the various formats used today. There are a number of alternate formats for accessible documents, and different individuals prefer different formats. One customer might request a braille document, while someone else requires large print. In order to properly accommodate requests for accessible formats, communication providers must deliver a document in the format requested by the client.

Traditional accessible formats include braille, large print, eText and audio. These are typically known as accommodation formats and are provided on demand.

The production and testing of documents in these formats are generally handled by a specialized service bureau. Each format has standards and best practices that must be followed. Specialized service providers can ensure that customer communications in alternate formats comply with legislation and meet industry standards. Electronic accessible formats include Accessible PDF and Accessible HTML5. In both formats, tags are applied to elements such as paragraphs, headings and tables, and text descriptions are added to images. These tags enable blind and partially sighted clients to navigate files using assistive technology such as JAWS, NVDA and Voiceover. Much of the current legislation only requires that Accessible PDF documents be tagged to WCAG 2.0 Level AA but some organizations still choose to have files tagged to the normative standard of PDF/UA (Universal Access, ISO 14289-01). In order for a document to be tagged it must be a standard PDF (e.g. it must comply with ISO 32000-01).

Accessible HTML, while a newer format that can be more challenging for enterprises to create, is preferred by many recipients, particularly as the use of mobile devices grows. Accessible HTML5 has other advantages as well. It is much easier to edit tags or alt text when necessary, even for someone who is not the content owner.

Voiceye is another emerging format. It uses 2D barcodes which allow a printed document to be scanned with a free smart phone app. The customer then uses their phone's accessibility settings to enlarge the text, apply contrast, provide speech output, or convert to braille if an electronic braille display is paired with the phone.

With the increasing use of as mobile devices and screen readers within the sight-challenged community, electronic formats and Voiceye are becoming increasingly popular. They also have the advantage of providing true document accessibility, since Accessible PDF, Accessible HTML5 and documents printed with Voiceye barcodes can be accessed by anyone, whether they have a print disability or not.

Despite the growth of electronic formats, organizations still need to consider the varying ways that their blind or partially sighted clients consume content, since assistive technology does not necessarily represent the needs of all users. Companies will still need to accommodate requests for braille, large print, e-text and audio.

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Types of Documents

Every organization produces a broad range of internal and external document types – forms, booklets, marketing material, web content, emails, invoices, statements, letters and more. Multiple individuals and groups, such as marketing and design, sales, legal, executives, human resources, and others share responsibility for these communications. Furthermore, a variety of applications and tools are used to create these communications. No wonder it can be so difficult for an organization to define and implement a document accessibility strategy!

Broadly speaking, these communications can be organized into several groups –

- Static: This term refers to information that is the same for all users, such as marketing material and web content.
- Structured or transactional documents include complex tables or forms, are data driven, and contain personal and confidential information.
- A blend of the above: documents that have static content and also contain variable data.

One of the first steps for an organization in developing a document accessibility plan is to assess which documents need to be dealt with, and to determine the following:

- Who is involved – which groups and individuals "own" the documents?
- Who is our audience - which formats have already been requested?
- Where should we start i.e. which documents should be given priority with regard to accessibility?
- Given our customer base and the documents we provide, which formats should we make available?

Once the above is done, a high-level strategy and specific processes can be developed and communicated throughout the enterprise. Given the range of document types, it makes sense to use different tools for different document, so let's review how files have traditionally been remediated.

Tagging Accessible Documents

Document remediation -- the process of setting up a document for an accessible format -- is typically done manually. The tools or software used will depend on the format that is required. Since a different process is required for each format, it's understandable that organizations find the task of making documents accessible quite daunting. With thousands of documents, publications, invoices, statements, letters and books to convert, there can be significant costs involved, particularly at the outset. It's also important to note that achieving compliance is not something that happens overnight.

Static electronic documents such as PDFs are typically tagged with tools such as Adobe Acrobat professional or other software plug-ins. This requires an understanding of document accessibility (which includes both tagging and testing). In other words, an organization has to invest not only in the tools but also in training some of its staff to use the tools effectively. Remediation is a tedious process that requires a certain skill set. The tagged document may not be compliant or even usable if the work is done by someone who is not familiar with the software or with document accessibility requirements. Testing to verify that files are tagged correctly is a critical step requiring additional skilled labor and time. Documents can take days to remediate, and the end result is that only one file has been made accessible. And of course, when the document changes, the entire process needs to be repeated.

Many organizations outsource documents that need to be remediated to firms specializing in remediation. Manual tagging is traditionally priced on a per page basis, with a wide range of costs based on the complexity of the document. Simple documents run on average under $10.00 USD per page, while medium to complex documents can cost as much as $30.00 per page. Even when outsourced, the process can still take days or even weeks.

For structured, or transactional documents, automated tools based on business rules set up by a user has been the most recent advancement. These tools automate documents from inaccessible to accessible at hundreds of pages per second. However, this still requires that the base setup be done by a skilled individual who understands accessibility and can make sound decisions about things like read order and complex tables. These are great tools for high volume production of documents like invoices, statements, letters, policies and any structured or system generated output, but the initial setup will still take significant time and expertise.

Are There any Options?

Automated Tagging

With on-going development in the accessibility space, Accessible PDF tagging is beginning to see the genesis and deployment of auto tagging tools. These tools are used in both publication or static document categories as well in the personalized or variable transaction document world.

Using the ability to interrogate PDF fonts and utilizing an algorithm on text content location hierarchy, auto tagging can automatically tag inbound PDFs and remediate them into Accessible PDFs to WCAG 2.0 Level A and AA. This can save anywhere from 25% to 100% of manual remediation efforts, depending on the complexity of the document. However, it should be noted that quality assurance testing will usually still be required as part of the workflow to ensure correct interpretation of the document.

With auto tagging, the amount of labor involved in tagging the documents can be significantly reduced. In fact, an auto tagging solution can take only seconds to achieve an Accessible PDF that will meet regulatory requirements such as ADA, Section 508, AODA and other global mandates.

Crawford Technologies has recently introduced Auto Tagger for Accessibility. This solution allows all types of documents, ranging from static material to high volume transactional documents to be wholly or partially tagged automatically and converted to Accessible PDF or Accessible HTML5. This solution is offered as an on premises installed software and as a cloud SaaS solution through CrawfordTech's secure e-commerce site.

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Although the time saved with auto tagging is impressive, the most compelling reason to take advantage of this capability is that it opens the door to making all electronic documents equally accessible to any and all users. With a greatly reduced cost and guaranteed ease of use, Accessible PDFs and Accessible HTML5 can be created and delivered as a normal part of doing business – not as an exception or in response to a special request.

Consider governments and other organizations that have many documents created over the years that are provided to the public via a web site. These documents cannot be removed in order to achieve compliance but must be remediated and made available to all. The ultimate solution is to convert these documents to accessible PDF so that users employing assistive technologies can access the information without additional intervention.

With such large volumes of documents, manual remediation can take months and sometimes years to accomplish. And due to frequent updates, changes and additions, the task is literally never done. An auto tagging solution like CrawfordTech's Auto Tagger for Accessibility can reduce document remediation time from days or weeks to minutes or hours.

Organizations that need to remediate documents can access this solution to reduce costs and speed up delivery times. Whether it's one-time remediation, on-going maintenance, or an enterprise-wide solution, Auto Tagger for Accessibility will accept PDF files and remediate documents into compliant accessible PDF or HTML.

As stated earlier, some users will still need traditional accessible formats such as braille, large print, eText or audio. With CrawfordTech's underlying MasterONE architecture, Auto Tagger for Accessibility paired with one of our Accessible Transforms solutions can produce all alternate formats from a single set up. This reduces the time and effort involved, making it easy to provide accessible documents in all formats.

There's no doubt that the future is bright as far as creating accessible documents and providing equal access to communications for all users. We are proud to be a recognized industry leader in providing a robust and extensive selection of services and solutions that make it easier than ever to create accessible documents.

CrawfordTech Solutions

Crawford Technologies develops software and solutions to help enterprises optimize and improve the secure and accessible delivery, storage and presentment of their customer communications.

With over 1,800 customers on six continents, CrawfordTech solutions and know-how enable the largest banks, insurers, healthcare providers, utilities and print services companies to use their existing technologies, documents and data in new ways. We help them navigate the challenges in leveraging legacy applications in the platforms and applications of the future.

CrawfordTech's products, services and domain expertise reside at the nexus of content, data, and output management and are essential components of our customers' digital transformation, output management and document accessibility strategies.

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