



# Document Accessibility Primer

Everything You Need to Know  
About PDF Accessibility





### Introduction: Electronic Documents

The need for documents in everyday life drove some of the very earliest technologies following stone tools; paper, ink and pen.

In the 21<sup>st</sup> century textual communication takes many forms, including paper. Even so, using physical media to convey documents is slowly going out of style in applications from publishing to records-keeping to invoicing that have used paper for hundreds – or in some cases, thousands – of years.

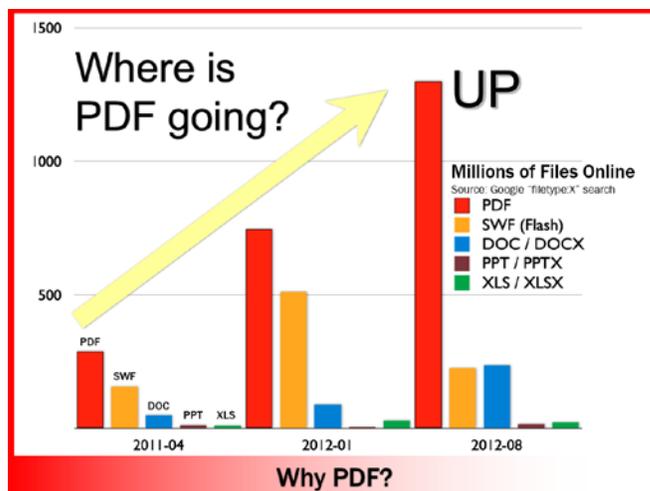
Electronic documents can also take many forms; a replacement for paper is only the first and most obvious. There are documents for many purposes, including writing, presenting, sharing and more. It's clear that documents – as distinct from web-pages – are going to be with us for some time.

### Why is PDF so Prevalent?

There are dozens of electronic document formats to serve many purposes. Familiar to all; besides the Portable Document Format (PDF) are the common authoring formats developed by Microsoft: DOCX, XLSX and PPTX.

Only PDF is truly synonymous with “electronic documents” because only PDF was designed from scratch with key characteristics that set it aside from any other format and led to PDF becoming ubiquitous:

- 1) Platform-independence. PDF files work on all sorts of operating systems and browsers.
- 2) Precise control over the positioning and appearance of content. PDF pages look the same no matter where or how they are viewed or printed.
- 3) A freely available and usable specification. Since 1993, anyone who could write software could make a PDF file without paying Adobe any royalty fees.
- 4) Always-and-forever free, Adobe and other software deliver a consistent viewing experience whether on Windows, Mac OS, Linux or other operating systems and software.
- 5) The PDF format supports multiple security, authentication, annotation, workflow and other business features that together make the format uniquely useful for a vast range of publishing and business purposes.



PDF files may be deployed on websites but PDF is not inherently a web-based format; it's a document format first, web-content second. Due to these many reasons, the amount of PDF content on the web continues to grow with some .gov web sites having as much as 38% of their total content made up of PDF files.



PDF files play a key and growing role in innumerable areas where documents are needed. In almost any setting and in every economic sector, from banking to education to healthcare and insurance and just general-purpose use, PDF is uncontested as the "final-form" electronic document format of choice.

### **What are “Accessible” Documents?**

With thousands of documents published to web sites daily (with the majority of these published in PDF format), what is an “accessible” document? There is much confusion around the subject, mainly due to the lack of standards and testing tools available. There are several accessibility regulations and standards in the U.S. and around the world. These standards attempt to define the accessibility requirements, but since both the U.S. Federal 508 Regulations and the WCAG 2.0 standards that are used internationally are designed to deal primarily with HTML content, it has left many questions about how to deal with documents such as PDF. The unique aspects of PDF documents are also one of the reasons that there is often some questions about how to ensure that documents are accessible, usable, and can be published to web sites knowing they can be accessed by everyone. For the purposes of this primer, we will primarily focus on PDF documents but will discuss the Microsoft Office documents briefly as they are often the basis of where PDF documents originate during the authoring process.

### **Accessible Microsoft Documents**

Since many documents are authored using Microsoft Office products, we will begin the discussion here. There are many published standards for authoring accessible Microsoft documents. While the Federal Section 508 and WCAG 2.0 standards do not directly dictate how to ensure Microsoft documents are fully accessible, there are many accessibility steps that can be taken to ensure that the documents you create are more accessible and will help to create more accessible PDF documents if PDF is the final format for web publication. Some good resources for making more accessible Microsoft Office documents can be found at <http://www.hhs.gov/web/508/accessiblefiles/index.html> .

### **Accessible PDF Documents**

In order to understand how to make PDF documents accessible, you first need to understand how documents are “read” by screen reader technology. Screen readers such as JAWS and NVDA are used by blind or visually impaired computer users to navigate and read text on a screen. These tools have become more sophisticated in recent years and when accessing web sites and programs that are properly designed to work with screen readers, blind computer users can fully utilize computers in the same way that sighted users access web content and applications. Just as poorly designed web sites can be difficult to navigate and use with a screen reader, web content such as PDF documents and forms can be a potential accessibility issue if they are not made accessible. Yet a properly tagged PDF document can be fully accessible and just as functional using screen reader technology. What is the difference?

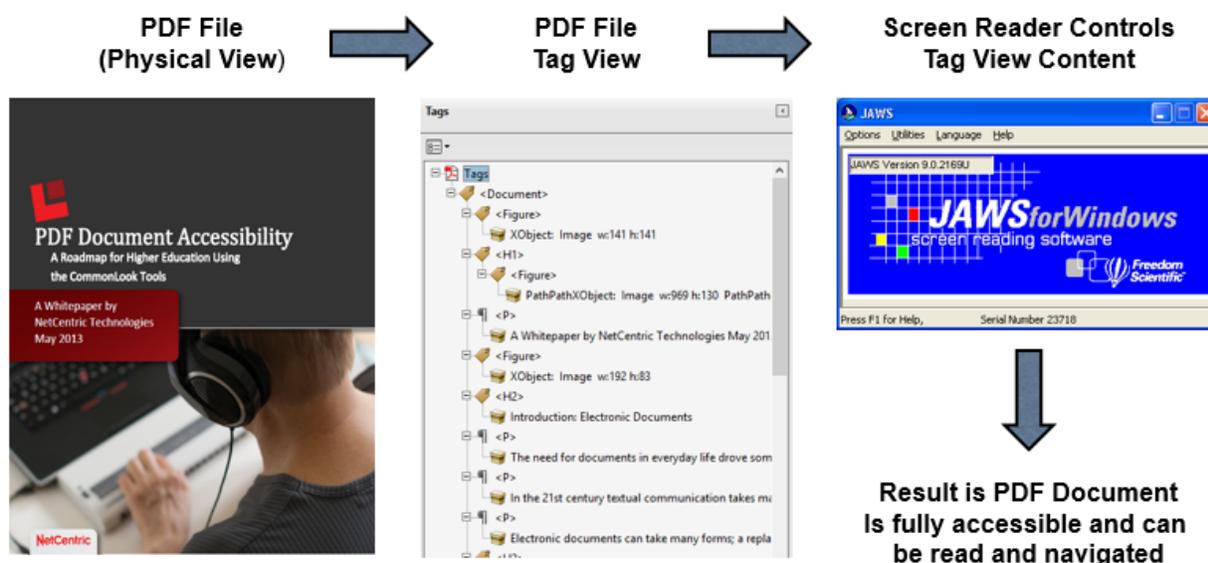
### **Tagged PDF - What is it and why is it important?**

As PDF technology began to become the standard for electronic documents in the early 2000’s, Adobe recognized the need to create some new accessibility features in the PDF format. The result was the



inclusion of the Tag View and Content View. These new features in the PDF format allowed for the creation of accessible PDF documents by giving screen readers the ability to read the navigation and Tag View, and correctly read the document in the proper order by using the Content View. The ability to add Tags to a PDF document has been built-in to many software programs such as Microsoft Office for many years.

## How Accessible PDF Works



### So what is the problem?

So at first glance, the fix is simple. Just create content using software that tags PDF and the documents are accessible, right? The truth is that most programs that can create tagged PDF files (including Microsoft Office, Adobe Acrobat and Adobe Creative Suite, and many others) do not do an adequate job of tagging PDF files correctly. Many organizations are tagging PDF documents, believing they are doing a good job only to find out that their documents and forms are still not accessible. There is much misinformation about how to tag PDFs properly and many “experts” are giving out false information. Adding to the problem is that the U.S. Federal 508 regulations and WCAG 2.0 standards don’t directly address how to properly tag PDF for accessibility. The result is there are many organizations that have invested time and money on the problem but are still not in compliance with the law.



### So what is the solution?

Learning what is required to properly tag a PDF document is the solution. In recognition of the problem, the PDF Association worked with the ISO to develop the PDF/UA standard to define what it means to properly tag a PDF file for accessibility. While the PDF/UA standard will take many years to become a legal requirement, in the meantime, organizations can learn what is required to ensure a PDF document is fully accessible and start creating accessible content. While PDF documents can be properly tagged and checked for accessibility using Adobe Acrobat Professional, the Acrobat Accessibility Checker cannot be trusted to ensure that PDF files are truly accessible and meet all the U.S 508 and International WCAG checkpoints (read the disclaimer in Acrobat Professional if you doubt this). Your choices are to become an expert in PDF accessibility, which involves learning about the various ways to tag content types, how to ensure that the content order matches the correct reading order and to manually check the document to ensure that all of the accessibility check points have been covered, or, to seek out purpose-built tools to verify, remediate and certify PDF documents as accessible.

### Why is this so important in 2014?

The Web has made it possible for people with disabilities to have equal access to the information and services available electronically via the Internet, mitigating or removing many of the barriers they experience in their physical world. In today's knowledge-based economy, access to online information and services is increasingly necessary, not just for reading the newspaper, but for work-related activities as well. Organizations are facing new and changing accessibility standards, outdated policies, potential legal challenges and a lack of time, tools and resources to address these problems. The results are increased exposure to legal risks and limited compliance with the current regulations at a time when the regulations are poised to become stricter due to the anticipated Section 508 refresh. Once restricted to government organizations, now the Section 508 and ADA standards are being legally required for private businesses and organizations.

### Current and Future Accessibility Standards

In the U.S. and in the rest of the world, the accessibility laws and regulations are changing and becoming stricter in both requirements and penalties for non-compliance.

### W3C Web Content Accessibility Guidelines (WCAG) 2.0

<http://www.w3.org/TR/WCAG/> WCAG 2.0 (ISO/IEC 40500) is the accepted international standard for web content accessibility, defining testable success criteria at levels A, AA, and AAA, with A being the most basic. Most countries base their accessibility standards on WCAG 2.0. W3C also publishes non-normative techniques, including [PDF-specific techniques](#) to assist developers and content authors achieve conformance.



### U.S Federal Government Section 508 and Americans with Disabilities Act (ADA)

<https://www.section508.gov/index.cfm?fuseAction=stdsdoc> The current (2001) Section 508 criteria for web-based technology are based on WCAG 1.0 and is an Amendment to the Rehabilitation Act of 1973. Section 508 is currently undergoing a refresh that is expected to result in a new WCAG 2.0-based standard. Most of the criteria for web-based technology and information are applicable to PDF documents in general terms. Title III of the ADA is now being enforced by the DOJ as corporate web sites are now being considered “places of public accommodation” and are subject to the same accessibility rules as physical buildings. See the recent ruling against H&R Block by the DOJ as an example of this type of enforcement against corporate business.

<http://www.justice.gov/opa/pr/2014/March/14-crt-239.html>

### PDF/Universal Accessibility (PDF/UA-1)

<http://www.aiim.org/Research-and-Publications/Standards/Committees/PDFUA> PDF/UA (ISO 14289-1:2012) is the international standard for accessible PDF technology, including PDF files, PDF readers and PDF-consuming assistive technology. PDF/UA sets clear rules for developers and authors of tagged PDF documents and forms. When implemented by conforming PDF writers, readers and assistive technology, PDF/UA assures an accessible reading and interactive experience. Unlike WCAG 2.0, PDF is entirely specific to PDF technology, and represents a best-practice for applying WCAG 2.0 Principles, Guidelines and Success Criteria to content in PDF format. (See [Achieving WCAG 2.0 with PDF/UA](#))

### Government and Private Lawsuits

There has been many recent cases and settlements against government and corporations related to web and document accessibility in the last 12 months. Organizations need to recognize that at least in the U.S. the accessibility laws are starting to be enforced and the scope of who needs to ensure their web sites are accessible has broadened to the point where **any public web site needs to be accessible** if you are a business or government organization

One of the most recent cases was brought against the **H&R Block Corporation**. This case is significant as the DOJ basically was enforcing the Title III of the ADA requirements to ensure the accessibility of the H&R Block web site for the blind. This may be the first case against a corporate organization where the ADA requirements were being used for web sites as “places of public accommodation”. More information on the case can be found here <http://www.justice.gov/opa/pr/2014/March/14-crt-239.html>

**Monster.Com**, one of the largest job search companies has agreed to start a new web accessibility program under an agreement with the Attorney General’s office and the National Federation of the Blind <https://nfb.org/monstercom-first-industry-make-website-accessible-blind-users> .

One of the most famous cases was with **Target Corporation**. The NFB settled with Target Corporation in March of 2008. The results of this settlement was the establishment of a \$6 million dollar fund for California NFB members to make claims. Target also agreed to work with the NFB to certify their web through the NFB’s Non-Visual Accessibility Web Certification Program and agreed to a three year



relationship for the NFB to perform accessibility testing of the Target web site. Many similar cases with Healthcare, retail and banking companies can be found here <http://llegal.com/category/settlements/>.

### **Achieving Document Accessibility**

While the responsibility for accessibility varies among corporate organizations, compliance with accessibility standards resides, in many cases, with the CIO's office. Furthermore, responsibility often also resides with each individual business unit authoring electronic documents. The solution is a combination of policy change, dedication of resources to address the problem and the selection of tools and resources that support the policy enforcement and changes required to ensure compliance.

### **Focus has been on HTML and CSS Content**

Many enterprise organizations have focused their accessibility programs initially on their HTML and CSS content, as well as web applications. Portals built around accessible tools and policies developed to ensure that web sites are accessible are the first step, and most enterprise organizations either have addressed the problem or are in the process of moving towards accessible solutions. With PDF content being estimated at as much as 38% of the total content on some web sites, the focus now needs to be on document accessibility and specifically on PDF.

### **Now is the Time to Act**

With the laws and regulations about to get stricter, private lawsuits becoming more common, and the general shift of many organizations to have a greater reliance on online services and portals, 2014 is the year to make your web resources accessible. Whether you are a government organization, private business, educational institution or non-profit group, you need to be concerned about ensuring your web sites are accessible to everyone and in compliance with the laws or risk litigation. Most of the litigation has centered around organizations that have not started accessibility programs, so the smart thing to do is to get started this year with a formal accessibility program, publish your accessibility policy on your home page, and start taking steps to solve the problem going forward.

### **Research Software Tools and Training**

Up until recently, the software tools available to address accessibility compliance issues in the document space have been limited. Microsoft Office, even in the latest version (Office 2013), continues to create inaccessible PDF documents, and it is an unrealistic (and expensive) notion that content creators are going to have the knowledge to use Adobe Acrobat Professional to remediate and test the tagging of the documents they create for publication. Organizations need to research the available tools and training solutions now available to verify, correct and create 508 and WCAG accessible PDF documents. There are software tools on the market today to audit, verify, remediate and create accessible documents and forms.



### Summary

Organizations can mitigate the risks associated with Electronic and Information Technology (EIT) accessibility by doing the following:

- 1) Start a web accessibility program in your organization. Ensure accessibility standards define clear and achievable success criteria. Develop a formal accessibility policy and publish the policy on your web site.
- 2) Many organizations have focused their accessibility efforts on HTML/CSS content. Now the focus should be on the documents that are often a major cause of accessibility non-compliance.
- 3) Consider changing existing policy to share the burden of creating accessible content from the CIO/webmasters to the “content creators”, while maintaining central control over overall compliance.
- 4) Allocate appropriate resources towards the problem of document accessibility, including budget allocations for accessibility coordinators, software tools, training, and remediation.
- 5) Identify and utilize verification and remediation tools when available, and encourage their development where possible.

### About NetCentric

NetCentric Technologies is the leading provider of software tools and professional services enabling government agencies, healthcare, higher education and corporations to meet their obligations for electronic document accessibility, including compliance with Section 508 and WGAC 2.0 AA standards.

NetCentric’s CommonLook Suite of software tools enables significant time and cost savings throughout the document production cycle from authoring, to verification, correction and management of PDF documents. NetCentric’s CommonLook Services offers the most accurate and highest quality remediation in the industry. CommonLook Service is the only remediation service to provide a comprehensive Section 508 or WCAG compliance certificate for each remediated document.

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