

# PDF in the Classroom

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- Take untagged inaccessible PDF documents and ensure that they are WCAG 2.0, AODA, PDF/UA or Section 508 compliant.
- Team of staff dedicated to making PDF documents accessible.
- Adam and Karen are members of the PDF/UA (Universal Access) ISO committee (International Standards Organization).
  - Set the international standards for what an accessible PDF document is.
  - Adam is the Vice-Chair of the Canadian Committee.
- Karen has had over ten years experience remediating PDF documents to be accessible.
  - Wrote the book on working with accessible PDF, now in its third edition.

# The Basics of Document Structure

- When a student begins reading a textbook, they need to have information such as:
  - Headings or topic changes that are in a sequential order, moving from a Heading 1 to a Heading 2 to a Heading 3.
  - Lists of information need to be read to them correctly whether the list is bulleted or numbered or unordered.
  - Tables need to be tagged correctly so the student knows what column, row and cell position they are in which in turn tells them how the data is related.
  - Images that convey content need to have ALT-Text so the student knows what the image is and how it relates to the content.
  - The document must have a primary language so that the student's AT can read it correctly (This avoids a screen reader or Text-to-Speech tool trying to pronounce French words in English.)

# Accessible PDF Document: Demo



# What is PDF/UA?

- PDF/UA or Universal Access is a set of technical standards that will eventually ensure that PDF documents that are called “accessible” all have the same features and structural elements.
- There are three parts to the standard:
  - The PDF file and its compliance to the applicable two ISO standards
  - The viewer that is used to open and present the PDF
  - The adaptive technology that is able to read the PDF and give the student all the information that they need in the semantic way
- It doesn't matter what the document “looked like” when it was created, when it is tagged, there is a standard and uniformity of access...a reliability of expectation from one document to the next.

# Examples

Chapter  
**1**

*Introduction to Functions*

▶ GOALS  
You will be able to

- Identify a function as a special type of relation.
- Recognize functions in various representations and use function notation.
- Explore the properties of some basic functions and apply transformations to those functions.
- Investigate the inverse of a linear function and its properties.

Anton needs a summer job. How would you help him compare the two offers he has received?

## The Specifics of Document Accessibility

Ontario legislation is much more specific than Federal accessibility legislation.

- ◆ The Accessibility for Ontarians with Disabilities Act (AODA) includes two Standards which specifically reference accessible communications, that are both effective as of June 1, 2011; Customer Services Standard and the Integrated Accessibility Regulation.
- ◆ The Integrated Accessibility Regulation Section 14.5b requires, except where meeting the requirement is not practicable, all web content published on a website after January 1, 2012 must meet WCAG 2.0 A accessibility guidelines.
- ◆ The Customer Service Standard Sections 2, 3, 4 and 9 requires providers to develop policies and procedures to inclusively interact with all people with dignity and independence.

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## A strategic approach to document accessibility: Integrating PDF/UA into your electronic content.

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**Abstract:** Many countries, provinces and states have legislation mandating the accessibility of documents and formatted content. There are now existing and emerging standards for specific content formats such as PDF. The question remains as to why there are so many recently produced inaccessible documents if we have tools, legislation and standards clearly mandating accessible documents.

**Keywords:** PDF/UA, AODA, Accessibility for Ontarians with Disabilities Act, Information Communication Technology, ICT, procurement, training, standard, organizational policy

### 1. Organisational Policy

It is critical that any organization have a policy on the accessibility of Information Communication Technology (ICT) [1]. The best way to develop policies on accessible content or any aspect of inclusive design is to incorporate inclusion and accessibility into the overall organisational policy and not to have a separate policy that addresses any legislative or standards based inclusion. For the PDF/UA [2] or accessible PDF standards, there must be an understanding of what this standard represents to the work flow. For example, will the tools currently used for creating PDF documents support the standard, how much remediation will be required for documents and most importantly, who will be doing the remediation (staff or external contractor)?

ada, p. 1, 2011.

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- Each of the preceding document samples would have headings, correctly tagged tables, correctly tagged lists and so forth.
- Consistency across documents and across devices.
- PDF is popular because it is “device independent” and preserves the integrity of a document.
- PDF/UA ensures that there is a standard way of giving the visual information in a document to people who cannot see the document or who have print disabilities and who need Text-to-Speech.
  - Also allows flexibility for those using screen magnification.
- Can be opened and read on desktop, laptop or mobile devices and eventually it will be the same experience.

How PDF/UA and an Accessible PDF can facilitate access to math and science textbooks

# Accessible Math

# Rendering Math Content

Formula:

One over two, open paren x to the power of two plus one close paren minus three over two open paren x to the power of two minus one close paren.

$$\frac{1}{2}(x^2 + 1) - \frac{3}{2}(x^2 - 1)$$

Why should we start asking for it and how will it affect our students?

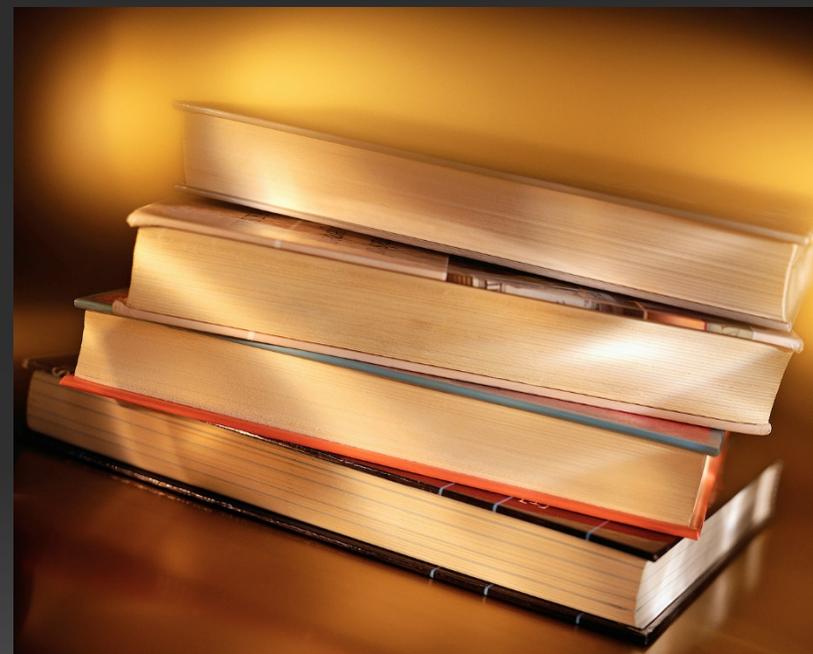
# PDF/UA is the Future

# Consistency

- Teachers are able to know with confidence that the PDF document is accessible.
  - Go to a specific page, topic, chapter or table.
- Students won't have to wait for an accessible version of a textbook.
  - If the text is produced digitally in PDF format, it is PDF/UA compliant as it is created.
- If students require differently accessible versions of the textbook, it can easily be done either by the student or an alternate text production centre such as AERO or AMAC.
  - Students can choose to save the text or document as a Word document, an accessible plain text document or 27 other formats.
- Empowers students with the ability to convert a text to something differently accessible that has the same structure and consistency as the PDF document.

# Alternate Text Production Centres

- With an accessible tagged PDF/UA compliant PDF an alternate text production centre can spend more time on the differently accessible versions of the document as requested by students.
- Don't have to spend time making the PDF accessible and then converting it.
- Don't have to spend time scanning and OCR of the document to convert it to another format.



# No Copyright Issues

- There are no copyright issues.
- Either the original PDF is accessible (PDF/UA compliant) or the alternate text production centre spends time and financial resources to make it PDF/UA compliant.
- There is no copyright infringement because the document remains intact.
- It is the underlying structure and accessibility of what you see on the page that has been enhanced so that students and teachers with disabilities can read the content.



- How much does it cost?
- “It doesn’t cost if we do it ourselves”
- Why not use our existing web developers , graphic designers or content authors

# The Role of Accessibil-IT

Accessibil-IT can provide the following services:

- Work with the publishers to ensure that when a digital textbook is available for students it is accessible (PDF/UA compliant).
- Act as the intermediary between the publisher and the alternate textbook production centre so that when the centre (for example AERO or AMAC) gets the PDF it is ready to convert to Braille or other formats.
- On-demand service for students who have hard copy of textbooks and need it in digital format with a fast turn-around time.
- Work with teachers to ensure that articles or course packs are accessible when provided to students.
  - If students need another format, they can then provide that document to an alternate text production centre.

# We get it!

Accessibil-IT understands that document accessibility is only truly achieved when an end user has access to all of the information that the author intended to convey.

Accessibil-IT prides itself on ensuring one document reaches the widest audience possible, cost effectively and without sacrificing message integrity or security.



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