Markup languages that allow provision of accessibility features and tools

HTML Living Standard

Hyper Text Markup Language is the ubiquitous web page Markup standard, with HTML Living Standard being the current version beyond HTML5 that is now constantly updated, although HTML5 is used interchangeably with this. It was originally developed as a language for semantically describing scientific documents. It can be used on web pages, documents and applications.

XML

Extensible Markup Language is a meta-syntax that can be extended with new custom tags and used across different platforms and devices. In web applications, XML is used to store or transport data, while HTML is used to format and display the same data.

CSS

Cascading Style Sheets is a style sheet language used for specifying the presentation and styling of a document written in a markup language. It is designed to enable the separation of content and presentation, including layout, colours, and fonts, which can improve content accessibility. Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices.

JavaScript

JavaScript is the scripting language used to programme the behaviour of web pages, while HTML defines the content and CSS the layout/styling. It is a step up from CSS, allowing complex web

page functions such as dynamically updating content, control of multimedia, and animated images.

Document Type Definition

A Document Type Definition defines the structure and the legal elements and attributes of an XML document. An application can use a DTD to verify that XML data is valid.

PreTeXt

PreTeXt is a markup language that captures the structure of textbooks and research papers in the mathematical sciences. PreTeXt documents serve as a single source which can be easily converted to multiple other formats, current and future. The best of DocBook, LaTeX, and HTML. Before June 2017, PreTeXt was called "MathBook XML."

MathML ISO/IEC 40314:2016

ISO/IEC 40314:2016 also known as MathML, MathML is a markup language for describing mathematical notation and capturing both its structure and content. The goal of MathML is to enable mathematics to be served, received, and processed on the World Wide Web, just as HTML has enabled this functionality for text.

LaTeX

LaTeX is a typesetting system which includes features designed for the production of technical and scientific documentation. It is widely used in academia for the communication and publication of scientific documents and technical note-taking in many fields, owing partially to its support for complex mathematical notation. LaTeX is available as free software.

The Difference Between MathML and LaTex

LaTeX is an input format. It is how we mathematicians write our articles, books, webpages, and anything else where mathematics is involved. (And often anything where mathematics isn't involved.) It is not designed to be read as-is. It is intended to be processed into a suitable output format and then read.

MathML is an output format. It is not designed to be written directly, but it is designed to be read. Of course, one needs a suitable renderer: a browser for the sighted and something like MathPlayer for those who want their mathematics read aloud, but then the same is true of any output format.

It is possible, though not always straightforward, to convert LaTeX to MathML. The main difficulty is that most websites don't bother with this route. They convert the LaTeX mathematics to a graphic which is then displayed, with the original LaTeX as the alt text. Because of how it is produced, the LaTeX is usually very simple (no complicated macros), and so it may be possible to get by with reading the alt text.

So if you want to read mathematics, look for MathML. If you want to write mathematics, learn LaTeX (or another TeX variant).

Source: https://www.access2science.com/latex/StaceyLatexNote.html

MusicML

Music Markup Language (MML) is an attempt to mark music objects and events with an XML-based language. Marking such objects should enable managing music documents for various purposes, ranging from music theory and notation to practical performance. This project is not complete and a work in progress. The first draft of a possible DTD is available and a few examples are provided of music pieces marked with MML that result in well-formed as well as valid documents. The approach is modular. Many modules are still incomplete and need more research and attention.

TTML

Timed Text Markup Language provides a standard markup language for synchronising text with media, for example for captions and subtitles. It is widely supported, unifies the increasingly divergent set of existing caption formats, and offers more control over subtitles than simpler formats.

SVG

Scalable Vector Graphics is a language for describing two-dimensional graphics in markup on a web page. This can be advantageous for inclusive design because vector graphics can be easily resized, and scaled up or down to different resolutions without loss of quality. SVG can also be augmented with additional semantics that make them compatible with assistive technologies such as screen readers.

VoiceXML

[Voice Extensible Markup Language](#) is a markup language for structuring interactive voice response applications and specifying interactive media and voice dialogs between humans and computers. It is used for developing audio and voice response applications In order to make these applications accessible to users who are deaf or hard of hearing, the language provides a mechanism for including text alternatives to audio content.

DocBook

[DocBook](#) is a markup language for publishing computing and other technical complex scientific documents including books. It allows you to convert one source format into multiple target formats.

DTBook

[DTBook](#) or DAISY XML is a markup language used in [DAISY Digital Talking Books](#).

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