

Accessibility Delivery Hub



A Gateway to Efficient Remediation and Accessibility Transformations

Introduction

Most publishers recognize the service and social responsibility for making their content accessible. But with the exception of content destined to inform, or impart information to, Federal Government departments and agencies, there are few laws or guidelines governing the circumstances as to when accessible content should apply, when it is practical and who should pay for it.

For these reasons, many publishers have taken a market demand approach to accessibility – when it is called for they produce it. This approach doesn't make for the most efficient and economic delivery. Nor is it a scalable process.

Obviously, incorporating an accessible contingency as part of the traditional production workflow is the most efficient approach. But this additional cost is rarely recouped through increased edition prices. In most cases an accessible version is required in order to secure a given adoption or content subscription and must be accommodated within standard pricing.

The same holds true for most remediated files. The publisher does not expect additional compensation for the accessible version. However, a fully accessible file executed to WCAG 2.0, PDF/UA, 508 or HHS standards, may well open up new markets for a publisher's content, or secure existing markets.

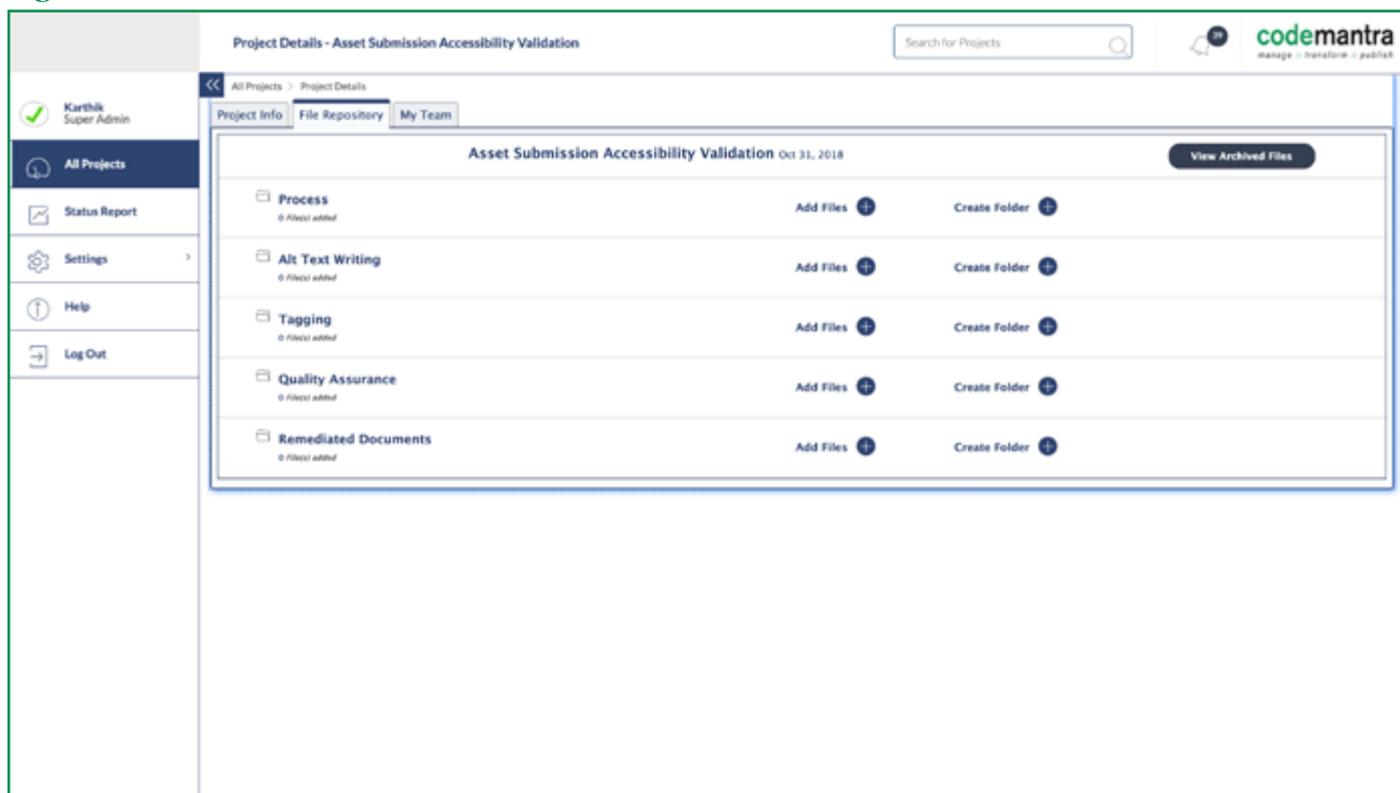
No matter the circumstances, publishers are in need of the most efficient path to deliver an optimally compliant and quality-assured, accessible output. This is the overall objective of codeMantra's *Accessibility Delivery Hub*.

The following are the services and cloud-based applications that make this objective possible.

Accessibility Delivery Hub and collectionPoint™

The *Accessibility Delivery Hub (ADH)* leverages collectionPoint – codeMantra (cM)’s content centric workflow and data management platform – to deliver the asset and metadata management capabilities for any amount of accessibility work in progress (WIP). This cloud-based solution supplies controlled access to directory sets consisting of Origin (source) folders, Remediated folders (output), and ALT text folders, at a basic level. Users are at liberty to configure a directory more to their liking and suitable to the myriad of collaborators and content components that may play a role in remediating a document, book, journal or web-hosted piece of content. As with other collaborative workflows, available on the collectionPoint platform, *ADH* offers a structured query-based communication capability to better direct and manage email communication. With intelligent configuration *ADH* can scale massive accessibility projects consisting of thousands of source files and millions of ALT text descriptions.

Figure 1: ADH Platform User Interface

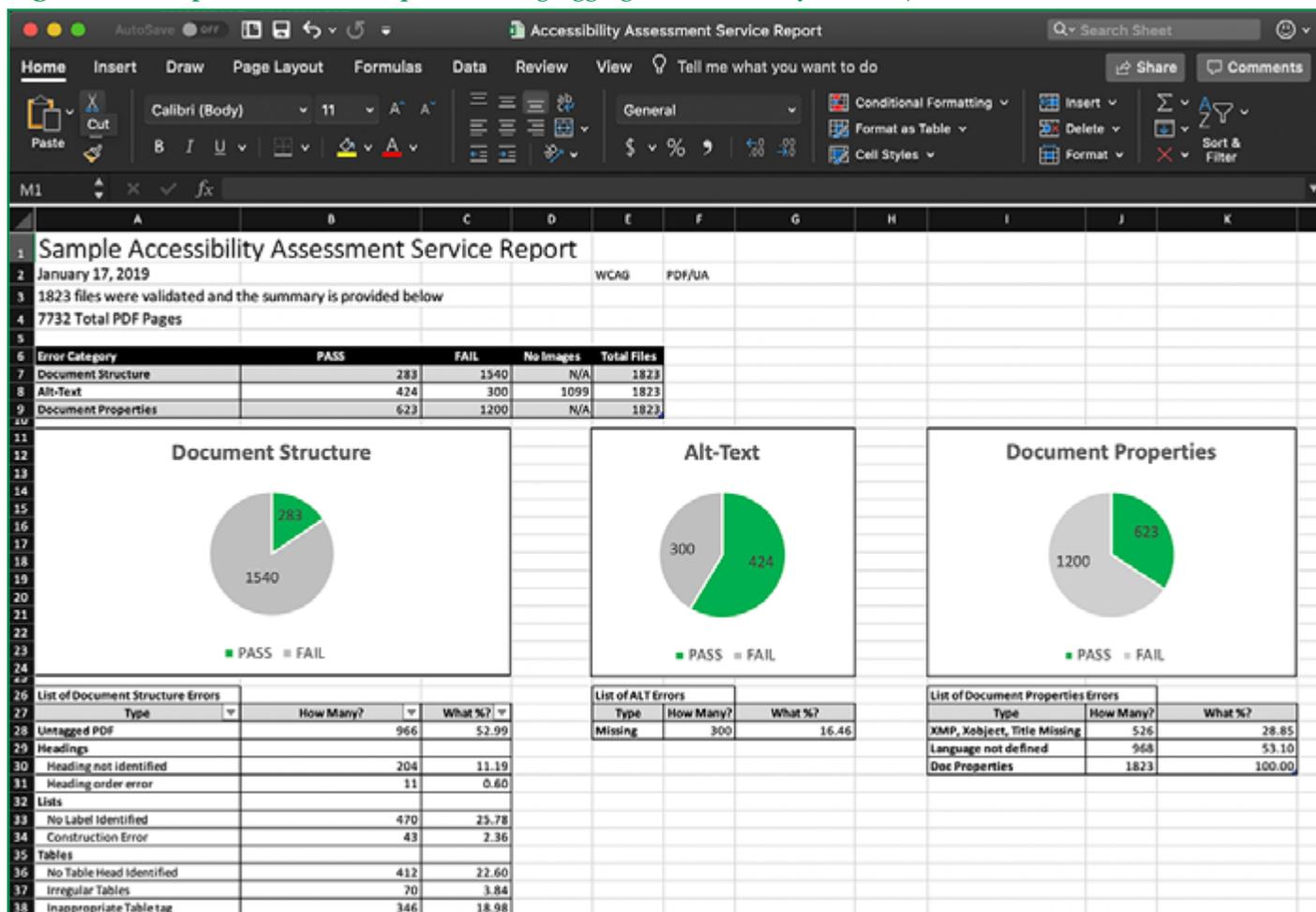


Accessibility Audit

One of the biggest challenges for publishers considering content remediation is understanding the scale of the project. The *ADH* offers a mostly automated audit of a publisher’s single document, book, journal, or an entire corpus of content. The results of which are a detailed summary of the structural and content gaps in the publisher’s finished goods, relative to a validated accessibility file. *ADH* audits can be executed for Word, Excel, PowerPoint, PDF and EPUB files. Files are simply uploaded to the *ADH* audit engine and a final report is made available to the publisher within 24 hours. Large volumes of files, will, obviously, take longer.

The system tests some 31 checkpoints consisting of 136 vulnerabilities as established by the international PDF Association (www.pdfa.org) in their Matterhorn 1.02 protocol. The vast majority of these vulnerabilities are automatically assessed by *ADH*'s audit systems. A handful of checkpoints require visual assessment on the part of codeMantra’s accessibility experts.

Figure 2: Auto-produced Audit Report Showing Aggregate Accessibility Failures/Vulnerabilities



Remediation Specification

In consultation with the publisher, cM establishes the institutional or commercial audience for the content and draws up a remediation specification. The remediation spec takes into account all established standards – PDF/UA, Accessible EPUB, WCAG 2.1, along with the U.S. Federal Government’s 508 and HHS requirements. Given the publisher’s objectives 508 and HHS may not be required. A combination of PDF/UA or Accessible EPUB may suffice. The remediation spec will determine acceptable characteristics for the finished file and establish the validation engines to be used in the final Q/A process.

Source File Preparation

Source files are efficiently processed by *ADH* transformation engines, which interpret and impose structural tags. No matter whether the source file is a dumb PDF, a Word, Excel, PowerPoint or EPUB file, the *ADH* engines will add mark-up that ultimately guides the reading order and prepares the document for the auto-ingestion of ALT text. In the case of EPUB files, typically a valid structure exists, and this will be identified at that Audit stage. EPUBs are by far the most ready-made files for remediation.

ALT Text

Based on the audit report publishers invariably set about curating the ALT text requirements. Tables, charts, equations and non-decorative images will require descriptive copy. Certain inline vulnerabilities such as color-coded text distinctions will need to be addressed. Publishers may summon internal resources to deliver ALT text descriptions. In cM’s experience internal editorial

and even the author(s) of the original content are not always the best ALT text writers. cM has assembled a robust team of accessibility experts including more than 60 subject-oriented ALT text writers. ALT text requirements generally break down into:

- Short form: generally, a brief objective description of the element, telling the reader categorically what the visual represents
- Long form: where ALT text may describe in greater detail the context in which the visual element appears and perhaps even deliver some analytic copy

Figure 3: Example of Short Form ALT Text

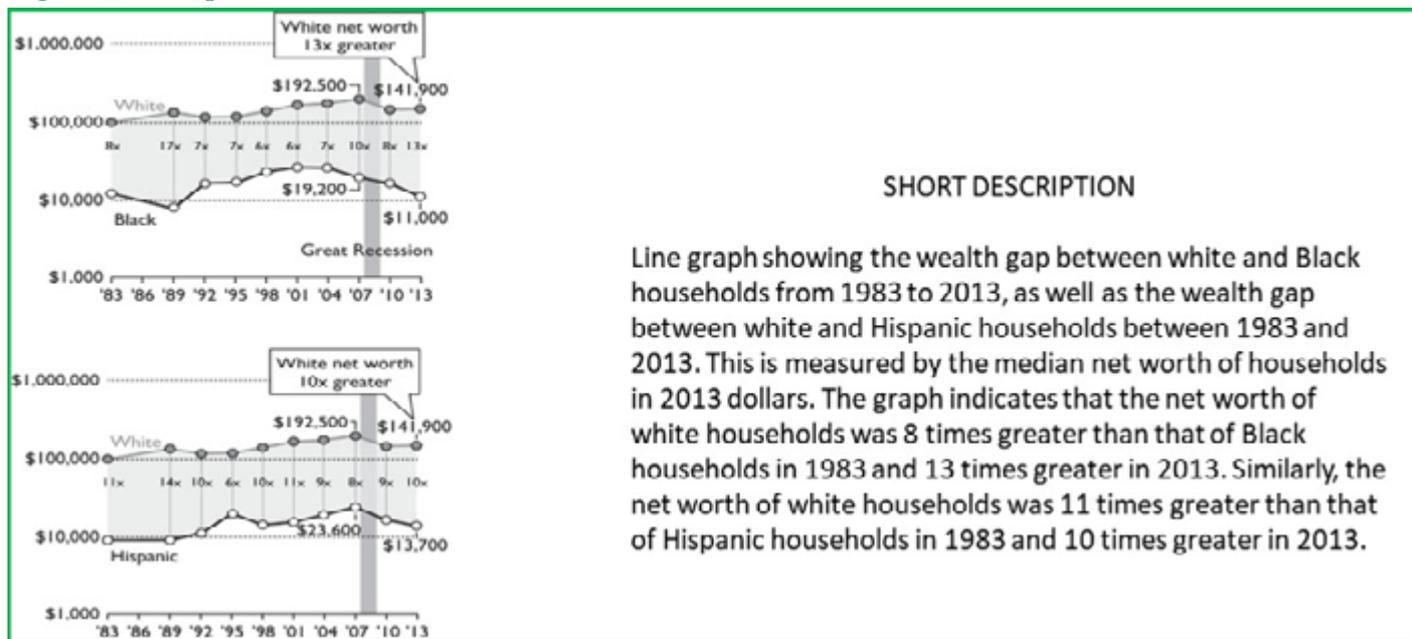
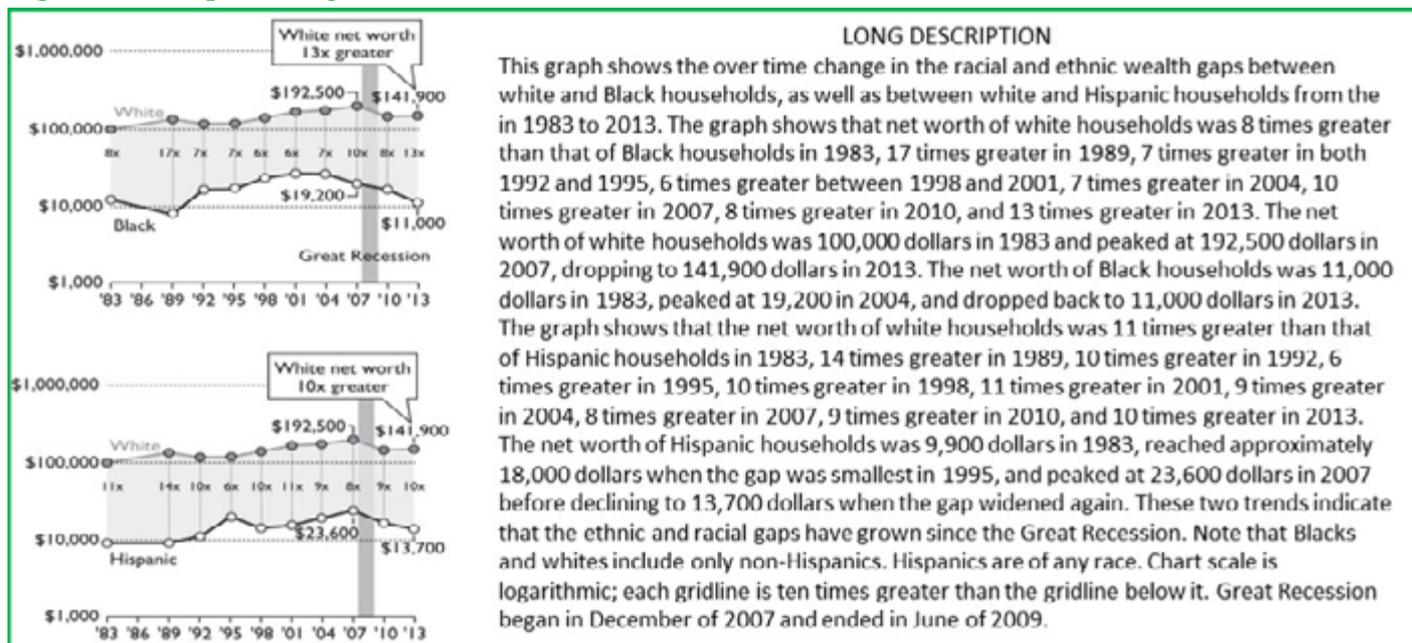


Figure 4: Example of Long Form ALT Text

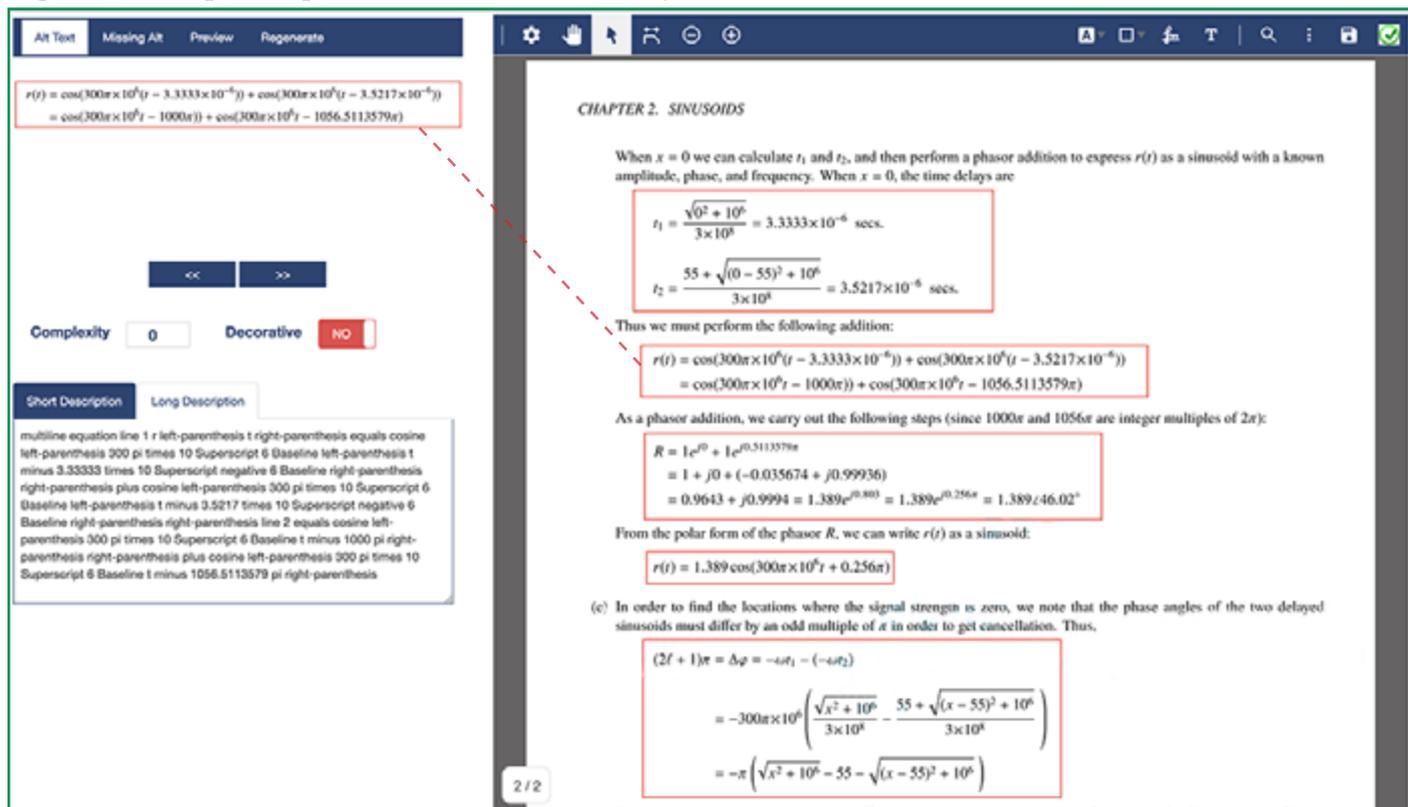


Math Equations

cM has perfected automated processes to produce a syntactic expression for most polynomial, algebraic or integral calculus equations. This process enables ADH to manage 1,000s of equations quickly and efficiently. A richer semantic description can be provided with subject matter expertise.

With an established document and object association in place ALT text copy is stored in *ADH* as it is reviewed and approved.

Figure 5: Example of Equation with Auto-Generated Syntactic ALT text



File Merge, Assembly, Validation & Q/A

With structural tags in place and established ALT text directories loaded with approved copy, the *ADH* engine auto compiles a first pass accessibility deliverable – either an Accessible EPUB 3.0 or a PDF/UA or both. As determined by the Remediation Spec, fully-compliant accessibility files are then submitted to an automated validation process. Any and all vulnerabilities are addressed by cM’s assigned accessibility team. Required files are then reintroduced to the WIP workflow for publisher’s correction or direction.

cM’s quality assurance will validate all accessibility characteristics and features as stipulated by the applied standards. In principle, any file that fully conforms to the Remediation Specification standards and fulfils all structural requirements will be validated.

cM’s Q/A experts include a number of reading-disabled testers who randomly excerpt portions of the file and test against the targeted or likely reading platforms:

- Acrobat Reader
- NVDA
- JAWS

A basic Q/A pass will confirm that ALT text is in place for all visual elements and that all identified vulnerabilities within the text have been addressed. These Q/A steps do not qualify or assess the appropriateness of the ALT text, such assessments should be applied at the copy authoring and editing phase of the workflow. Much more strident Q/A approaches, such as full monitoring of the entire audio playback is possible but pose a significant labour commitment.

Creating A Pathway to Accessibility

Publishers can choose to engage with codeMantra's *ADH* on a number of different delivery paths. It may be that ALT text services are all that are required, or possibly just validation and Q/A steps.

For publishers who would prefer a full end-to-end solution *ADH* is both configurable and flexible. The platform can be integrated with existing workflows, which is particularly effective if the accessibility derivative is being addressed at the content origination stage.

From a services and pricing perspective cM offers three elevated levels of engagement.

Fundamental Accessibility

At this level all bases are covered, and the results will meet the requirements in the applied standards as specified in the Remediation Specification. Files will be delivered with:

- Rich Semantics that give content solid structure and value
- Navigation Aids
- Artefact Identification that excludes decorative or repetitive objects from the main reading order
- Labelled treatment of fields in document forms
- ALT text ingestion
- Document Properties that provide metadata and language related information

Comprehensive Accessibility

In addition to the deliverables and features covered in the Fundamental class the following are included:

- Additional attributes and usability testing
- Accommodation for complex tables with header/cell data association
- ALT text writing as supplied by cM SMEs
- Unique, succinct field labels for form documents

Premium Accessibility

With this level of engagement cM supplies consultation services and develops a priority-driven delivery plan. In addition to the deliverables and features covered in the Fundamental and Comprehensive classes, the following are included:

- Content manipulation to address instances where color is used to convey meaning
- Table disassembly and reconstruction
- Color contrast correction for images and other design objects that do not meet the minimum contrast requirements
- A full Q/A audit of JAWS playback

For More Information About cM's Accessibility Delivery Hub

To schedule a live demo of the platform go to: www.codemantra.com/Accessibility