



Accessibility Metadata and Export

Webinar presented by Cristina Mussinelli, General Secretary @ Fondazione LIA Gregorio Pellegrino, Chief Accessibility Officer @ Fondazione LIA

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Speakers

Cristina Mussinelli

Secretary General, Fondazione LIA

Co-chair of the W3C (World Wide Web Consortium) Digital Publishing Business Group, member of the Board of and chair of the Accessibility Working Group of EDRLab (European Digital Reading Lab), member of the Accessibility Steering Committee of ABC Consortium of WIPO (World Intellectual Property Organisation), the European Inclusive Forum Steering Committee of Daisy Consortium, the Accessibility Working Group of FEP (Federation of European Publishers) and UK Publishers Association and invited expert of the section ISO OT UNI / CT 014 / SC 04 "Automation and documentation".



Speakers

Gregorio Pellegrino

Chief Accessibility Officer, Fondazione LIA

Italian software engineer, he has a strong knowledge in the digital publishing field with particular attention to accessibility for visually impaired people. He takes part in consulting and training activities for national and international organizations willing to adapt production processes to include accessibility.

On behalf of LIA, he participates to international working groups on the accessibility of publications and format standards, in particular W3C Digital Publishing Working Group, Transition to accessible EPUB (DAISY Consortium) and DIAGRAM standard & TIES Production group.



Agenda

- An evolving context: Social commitment, innovation, and legislation
- The importance of metadata for accessibility
- Who creates accessibility metadata?
- Challenges in managing metadata for accessibility
- The standards for communicating accessibility information
- Display metadata to end users

Fondazione LIA

- Fondazione LIA is a non-profit foundation set up in 2014 by Associazione Italiana Editori (AIE) with Unione Italiana dei Ciechi e degli Ipovedenti (UICI), the Italian blind union
- In 2019, Associazione Italiana Dislessia (Italian Dyslexia Association) and the Italian Library for the Blind "Regina Margherita" of Monza joined the Foundation as institutional members
- 17 publishing companies (with 76 publishing imprints) and MLOL, the leading digital lending platform in Italy, are also members









The mission

• Fondazione LIA is a non-profit organization that promotes the culture of accessibility in the publishing field

FONDAZIONE

LIBRI ITALIANI ACCESSIBILI

- Its goal is to allow print impaired readers to choose how, when and, above all, what to read, thus fostering social integration and active participation in the world of culture, school and work.
- Fondazione LIA carries out research and development activities in the field of digital accessibility, organizes awareness-raising events, offers training courses and consulting activities and is part of an international network of organizations dealing with accessibility of contents.

Standard Organizations



World Wide Web Consortium

NGO which aims to develop all the potential of the Internet and manages its standards

- Digital Publishing
 Business Group
- EPUB3 Community Group:
 - Accessibility Taskforce
 - Accessible EPUB Fixed Layout Taskforce

 Publishing Maintenance Working Group



Daisy Consortium

International consortium of organizations whose purpose is to promote accessibility

- European Inclusive
 Forum Steering
 Committee
- Transition to accessible EPUB
- DIAGRAM standard
 & TIES Production
- Better EPUB from
 InDesign



European Digital Reading International Organization Laboratory for Standardization Financed among others The most important by the Ministry of Culture organization for the definition of technical and the French Ministry of Development, aims to standards develop reading and DRM solutions that take • OT UNI/CT 014/SC 04 into account accessibility "Automazione e documentazione" Accessibility Working Group



ationEDItEURThe organization that sets
the standards used in the
global book, ebook,
audiobook and magazine
supply chain

EDItEUR

• Onix code list 196"

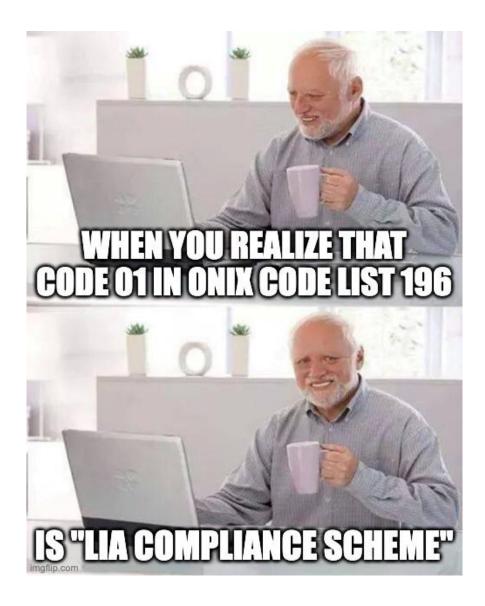


Schema.org

The organization that creates and maintains structured data schemas for online use

• Schema.org

LIA and accessibility metadata: An everlasting love



Live QA #1

How would you identify yourself?

- Publisher or content creator
- Service provider for publishers
- Aggregator or distributor
- Digital library
- Digital store
- Reading solution
- Specialist organization
- Metadata expert
- Other, please specify

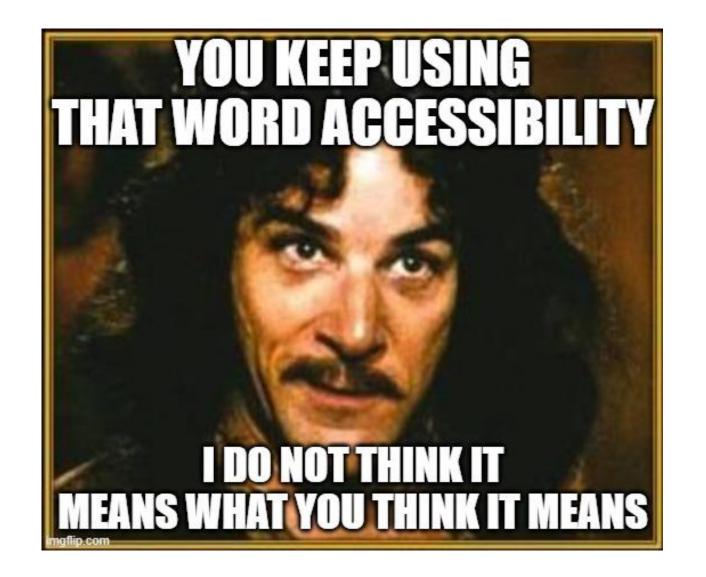
How much do you know about metadata?

- I am very knowledgeable about metadata
- I have some basic knowledge
- What do you mean by "metadata"?

How much do you know about digital accessibility?

- What do you mean by "digital accessibility"?
- I am an expert in digital accessibility
- I have a basic understanding of digital accessibility issues

To be clear



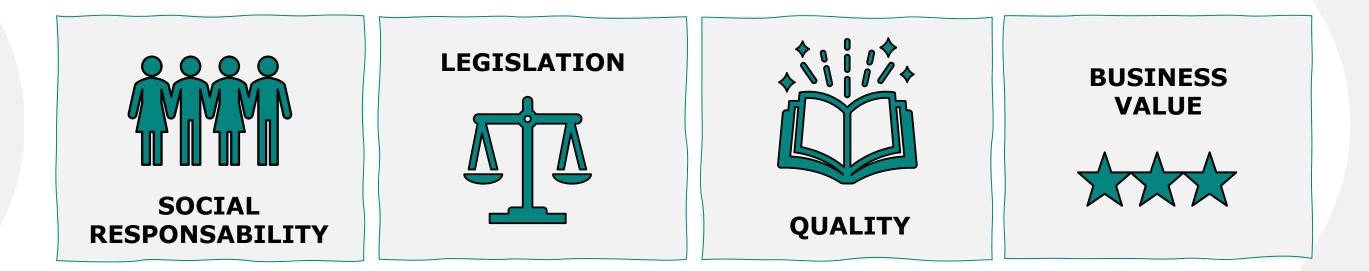
An evolving context

Social commitment, innovation, and legislation

Awareness is on the rise

- The U.N. Convention on the Rights of Persons with Disabilities (CRPD) promotes the full integration of persons with disabilities and specifically refers to the importance of international development for the affirmation of their rights.
- The **2030 Agenda for Sustainable Development** states very clearly that disabilities cannot be a reason to reduce the opportunity to participate in projects for personal growth and development and to prevent the realization of human rights.
- Among the **Sustainable Development Goals** (SDGs) are thirteen goals relevant to people with disabilities.

Why strive for accessibility?



European Accessibility Act

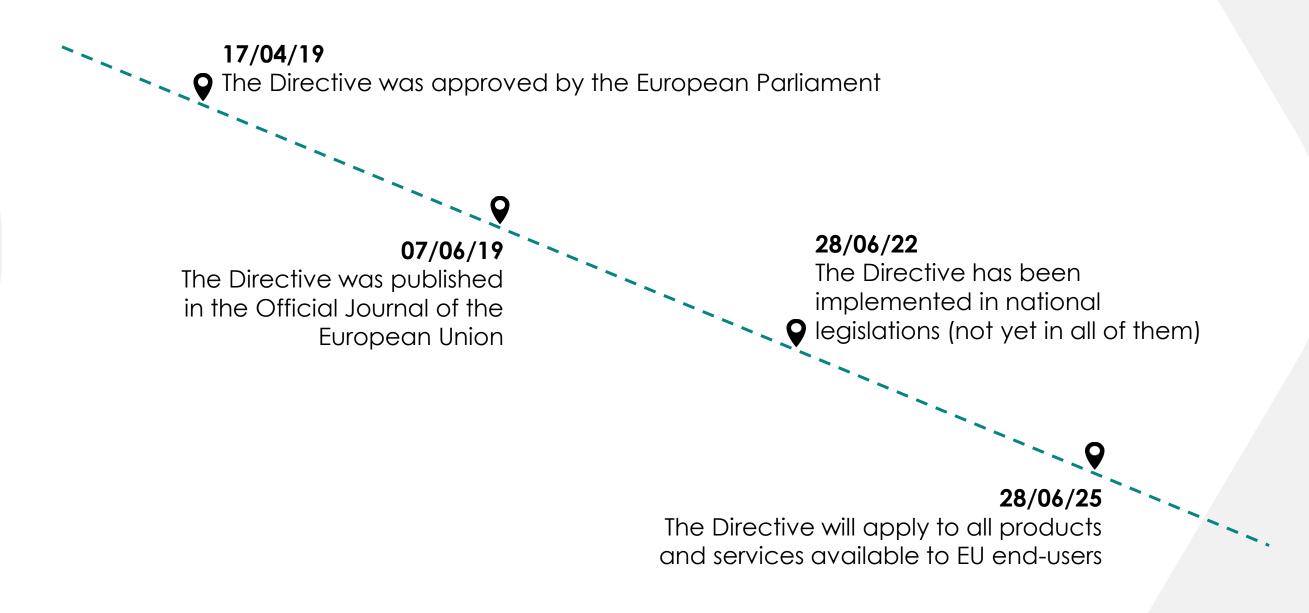
The European Directive on Accessibility Requirements for Products and Services (the so-called European Accessibility Act):

- Aims to improve the European market for products and services by introducing a **set of accessibility requirements**;
- It applies to many products and services such as commonly used device hardware systems, operating systems, self-service terminals, consumer banking services, electronic communication services, payment services, and audiovisual media access services;

European Accessibility Act /2

- It also applies to e-books and devices, reading software, and dedicated e-commerce services.
- From June 28, 2025, all businesses, including Canadian e-reader manufactures, publishers and e-book service providers, willing to sell their products and services in the European market need to comply with the Directive's accessibility requirements. In doing so, they will get access to the internal market as a whole.
 Businesses will also have to comply with certain reporting obligations. For example, they will have to inform consumers about the accessibility features of their products and services.

European Accessibility Act timeline



EAA requirements for e-commerce

The EAA provides specific accessibility requirements for e-commerce services (for companies above two million Euros in turnover), which must:

- provide information on the accessibility of the products and services sold (when such information is provided by the responsible business operator);
- ensure accessibility of identification, security and payment
 features when provided as part of a service rather than a product,
 making them perceivable, operable, understandable and robust;
- provide methods of identification, electronic signatures and payment services that are perceivable, operable, understandable and robust.

EAA requirements for e-commerce /2

The EAA then explicitly refers to the web accessibility principles defined in the Web Content Accessibility Guidelines (WCAG), which must be adhered to at all stages of e-commerce service delivery.

EAA requirements to display metadata

The EAA provides specific accessibility requirements related to e-book accessibility metadata, specifically:

- Provide information on how the service works and, if products are used to provide the service, the link to those products, as well as information on accessibility features and interoperability with assistive devices and facilities;
- Make them discoverable by providing information through metadata about their accessibility features.

New opportunities for users

- Users need to find content that meets their needs
- Today, people with disabilities do not know if they will be able to read a title they wish to purchase

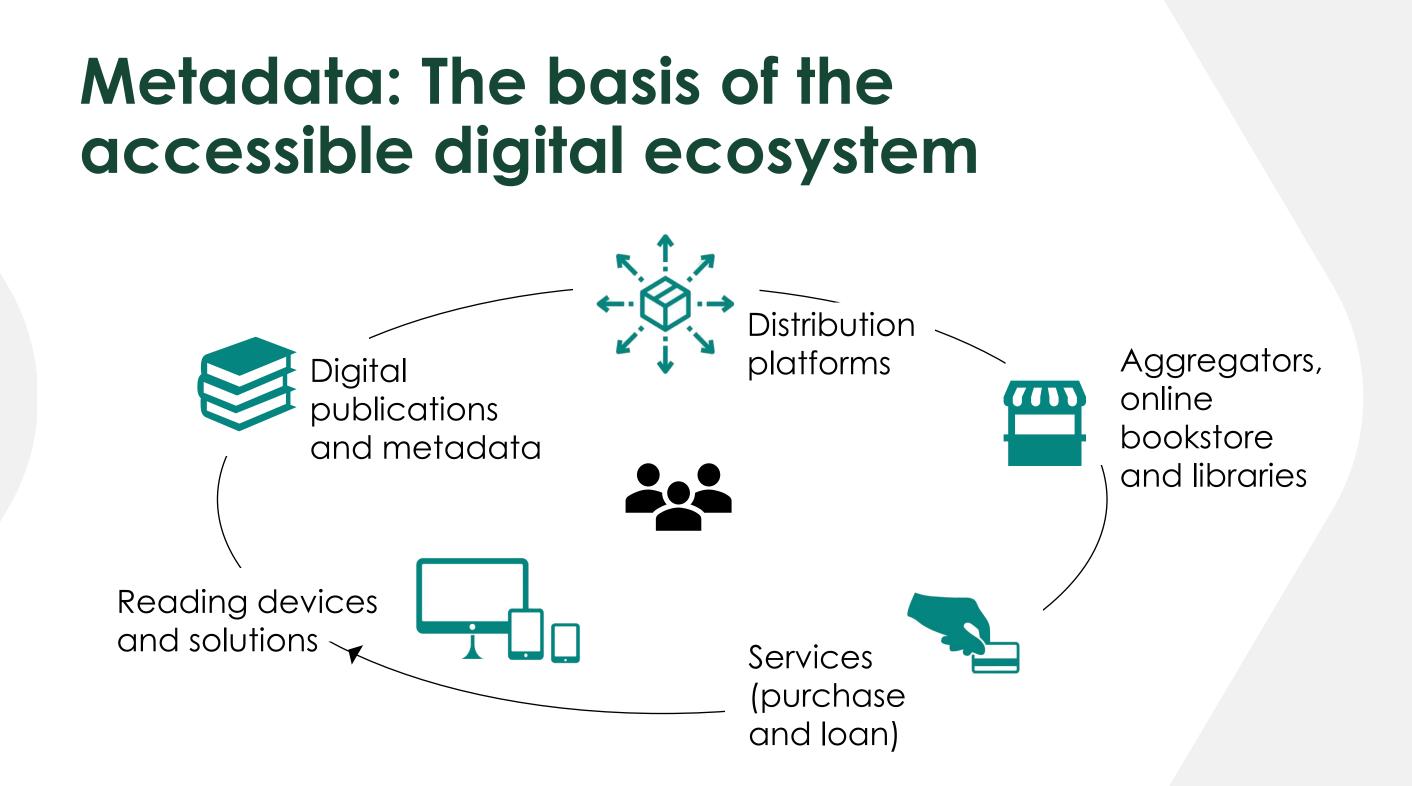


New opportunities for users

- Publishers are increasingly publishing natively accessible publications
- It is important to get these publications found by users
- Identify a consistent way to display technical accessibility metadata (platforms, libraries, bookstores, etc.)



The importance of metadata for accessibility



Without metadata ... e-books are invisible

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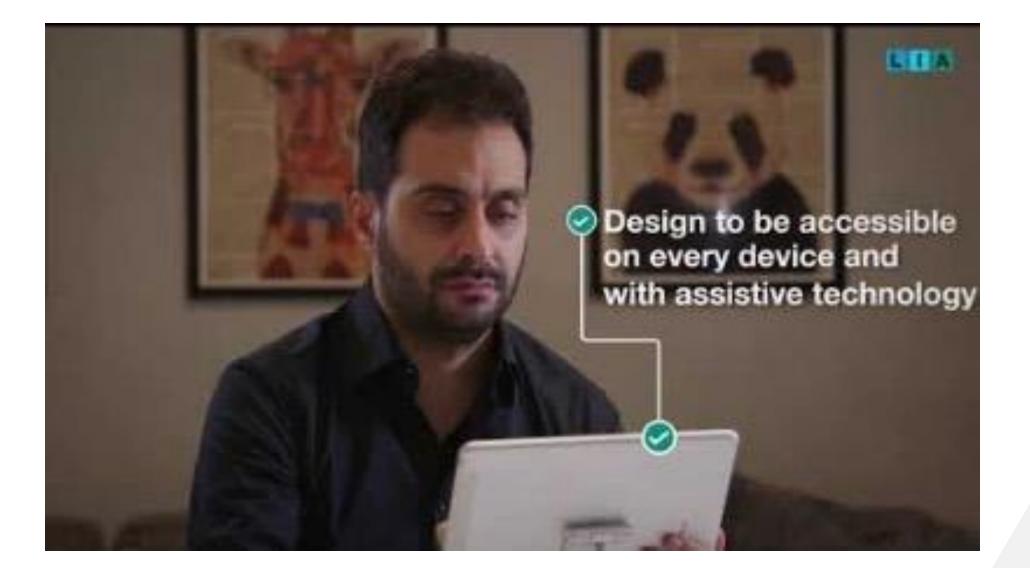
Offerte speciali e promozioni

Amazon Warehouse Deals, la nostra selezione di prodotti usati e ricondizionati in offerta. Scopri di più

I clienti che stanno visualizzando questa pagina potrebbero essere interessati a questi link sponsorizzati (Cos'è?)

• Profumi 🔄 - Confezioni regalo Profumi e Cosmetici: Il tuo Regalo di Natale! www.paginegialle.it/coluccio

The accessibility journey of an e-book

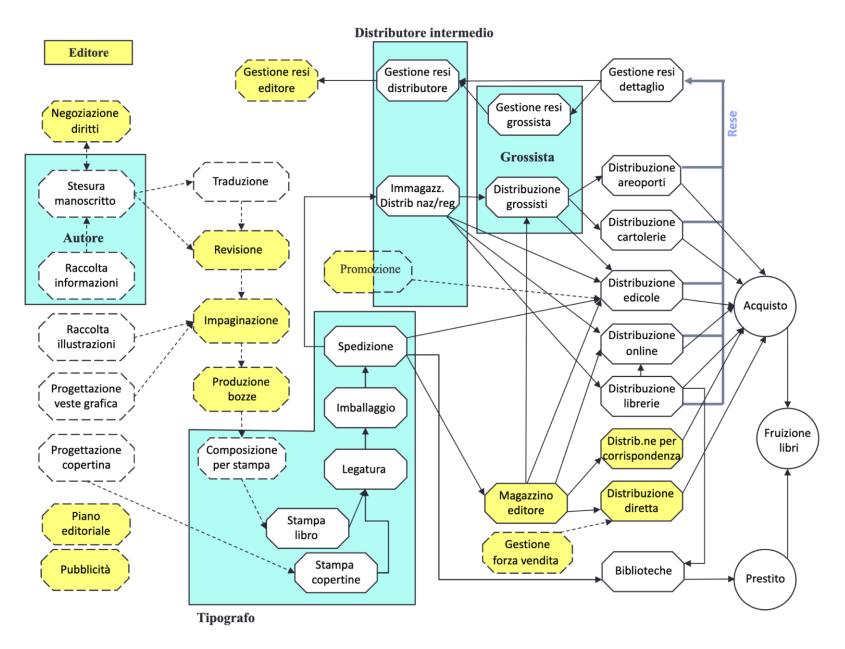


Open mic #1

- Do your platforms manage accessibility metadata?
- Is metadata displayed to end users?
- From which source does accessibility metadata come?

Who creates accessibility metadata?

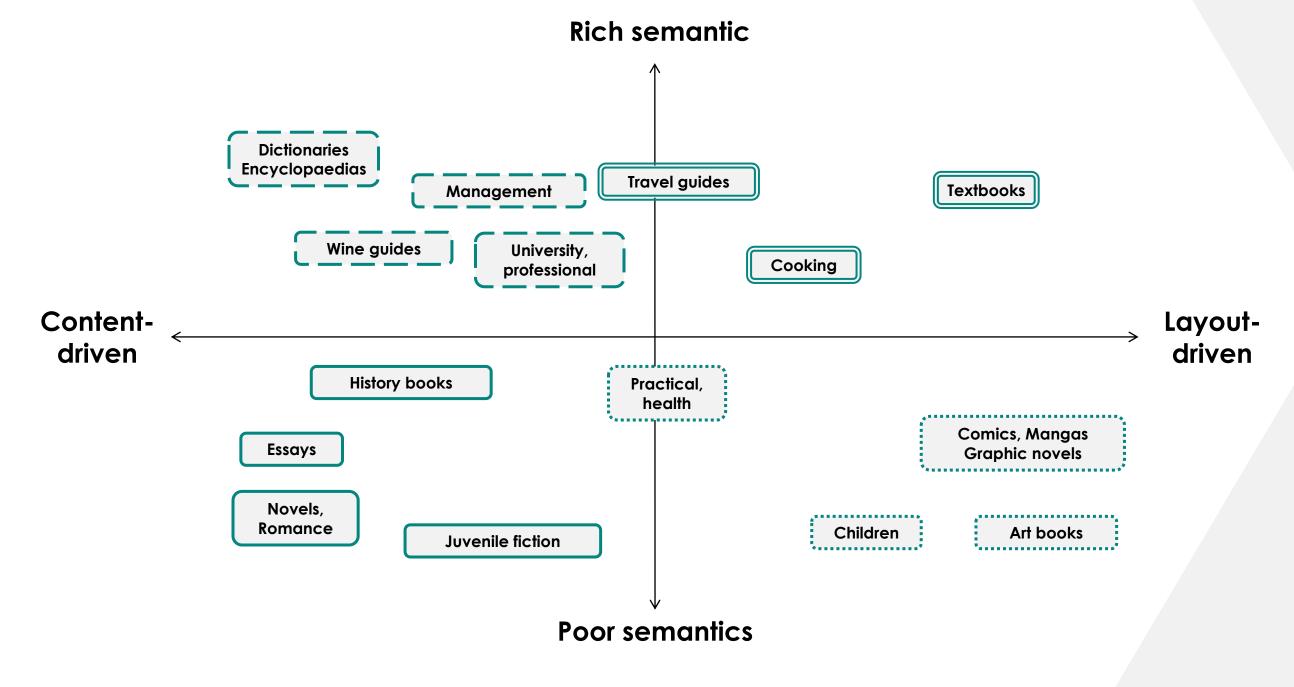
A long supply chain



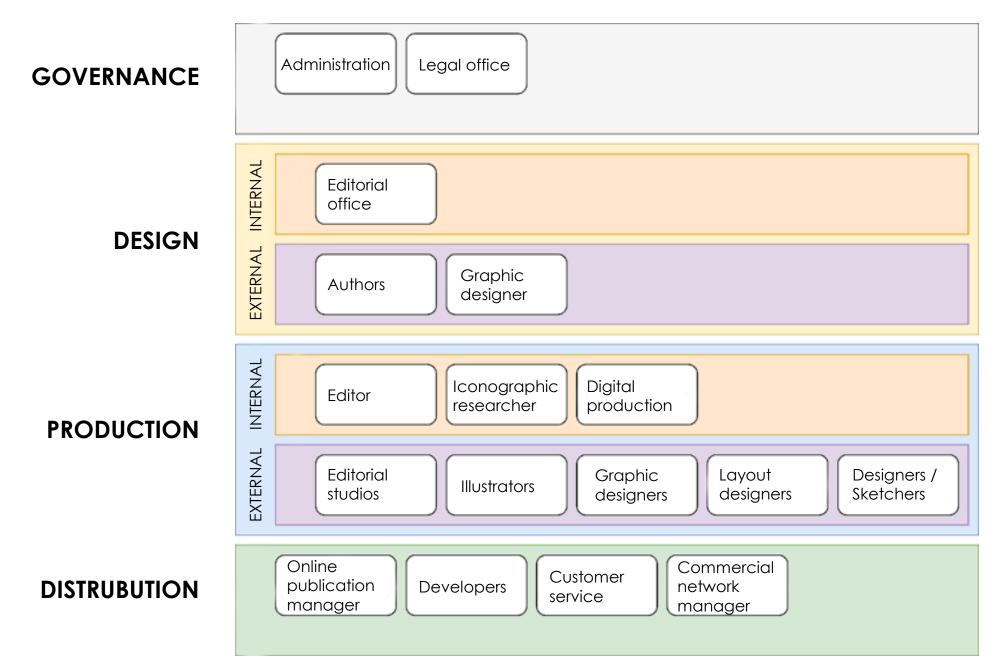
How is the editorial process organized?

- Many market segments with very different supply and demand (reference, educational, professional, university, STM, children, fiction, nonfiction, art catalog, travel guide...)
- Many different types of books, with very different levels of complexity (from simple text to layout-based content)
- Many different design and production processes even for publishers operating in the same segment
- Many authors and actors involved in the process often including those outside the publishing house
- Publishers vary widely in size and organization

Matrix of publications



Who do you think should be involved?





Live QA #2

Do you produce e-books? Who produces them?

- Internally (in-house)
- Externally (suppliers)
- We do not produce e-books

How do you make e-books available to end users?

- Through our website
- Through aggregators and distributors
- Via digital lending platforms
- Via trade platforms for digital reading
- On e-learning platforms
- Other

Live QA #2

Who do you think should create accessibility metadata for books?

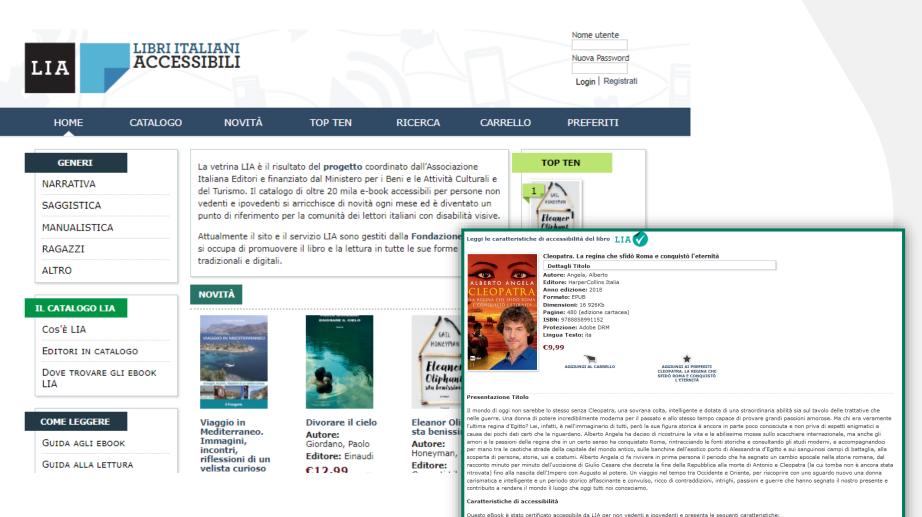
- Content creators
- Vendors working for publishers
- The aggregators or distributors
- Retailers
- The digital libraries
- The specialized organizations
- Others

Are there people in your organization with expertise in accessibility metadata?

- Yes
- No

The LIA catalogue: over 30,000 Born Accessible e-books

- Thanks to the efforts of 76 publishing imprints
- Constantly updated with new titles
- Accompanied by accessibility metadata
- LIA Quality Assurance



www.libriitalianiaccessibili.it

• Il contenuto segue un ordine di lettura logico e corretto. I rimandi di nota sono linkati e consentono di accedere alle note e ai siti esterni, se presen

Immagini, grafici, tabelle (e tutti gli altri contenuti non testuali) hanno una descrizione alternativa breve.

ette alla sintesi vocale di rispettare le regole di pronuncia e sillabazione della lingua del testo

andimento dei caratteri del testo e la modifica dei colori e dei contrasti per il testo e lo sfondo

Challenges for managing metadata for accessibility

Every player should play their part

Publishers and content creators	Digital distributors or aggregators	Books in print catalogues	Digital bookstores or digital libraries	Reading solutions
 Produce new publications as born accessible 	 Ingest and distribute accessibility metadata 	 Ingest and distribute accessibility metadata 	 Create graphical user interface following accessibility guidelines 	 Create graphical user interface following accessibility guidelines
publications following the guidelines	 Implement non- blocking accessibility 	 Create a catalogue of born accessible 	 Display accessibility metadata to end 	 Display accessibility metadata to end
 Make the catalogue 	DRMS	publications available	Users	Users
accessible		on the market	Expose accessibility	 Implement non-
 Checking Accessibility 			metadata to search	blocking accessibility
 Quality control and 			engines	DRMS
certification for Accessibility			 Inform end user of the compliance 	 Inform end user of the compliance with
 Create accessibility metadata 			with accessibility requirements	accessibility requirements

Need for specific skill set

- Interdisciplinary knowledge is required to be able to create and manage accessibility-related metadata:
 - have a good understanding of **born accessible** and digital accessibility principles
 - have an in-depth knowledge of the technical specifications
 for creating accessible content (EPUB Accessibility, WCAG, etc.)
 - know the needs of end users and the assistive technologies they use
 - \circ know the $metadata\ standards$
- Inexperienced publishers may compile incorrect or contradictory metadata

A lot of data to manage

- Compared to the total bibliographic and commercial metadata normally managed by sales and distribution platforms, accessibility metadata is a **substantial number**:
 - Over 30 specific codes for accessibility in ONIX, plus genre codes used in the area of accessibility
 Over 50 specific codes (some redundant)
 - for accessibility in EPUB accessibility metadata

Accessibility = quality



There is probably a need for an expert



The common mistakes we find most often

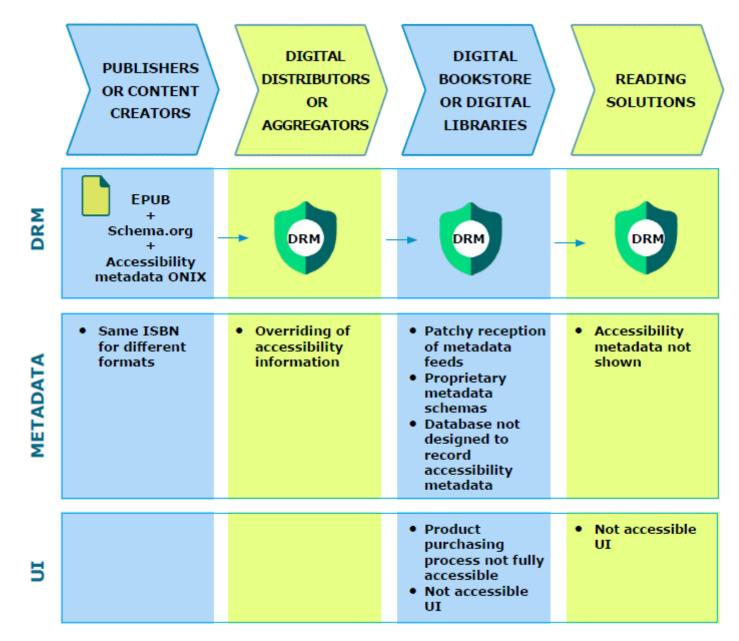
- Accessibility metadata that does not reflect the content of the accessible file (e.g., MathML even where no formulas are present)

 Or presence of features within the e-book that are not listed in the accessibility metadata (e.g., TOC, or page-list)
- Lack of specification conformance metadata

 Or metadata indicating conformance to specifications, even when there are serious accessibility errors

• Indications in the Accessibility Summary metadata (free text) that are not listed in the machine-readable metadata

Possible issues in distribution



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Open mic #2

- What problems do you think are most likely to occur in accessibility metadata management?
- Have you encountered any of these problems?

The standards for communicating accessibility information

Different metadata standards for different domains

ONIX

• Trade distribution chain

Schema.org

- Within the EPUB file
- In web pages (SEO)

MARC

- Two formats: MARC 21 and UNIMARC
- Used in the library system

EPUB Accessibility Guidelines

	An accessible e-book is a high-quality publication that:
	Is compliant with Web Content Accessibility Guidelines (alternative text, semantics, reading order, colors)
77 66	Presents metadata to learn about accessibility features
	Offers solutions to navigate the document in different ways (including by reference to print pages)
"	If has audio of the written text, it is synchronized with a karaoke style



Sources: EPUB Accessibility 1.1, WCAG 2.2

Risky business



The importance of machine-readable metadata

- The **accessibility summary** is an accessibility metadata that consists of free text, allowing content creators to describe the accessibility characteristics of a book.
- Over time, the accessibility summary has changed its purpose and now serves to provide information that cannot be represented by **machine-readable metadata**.

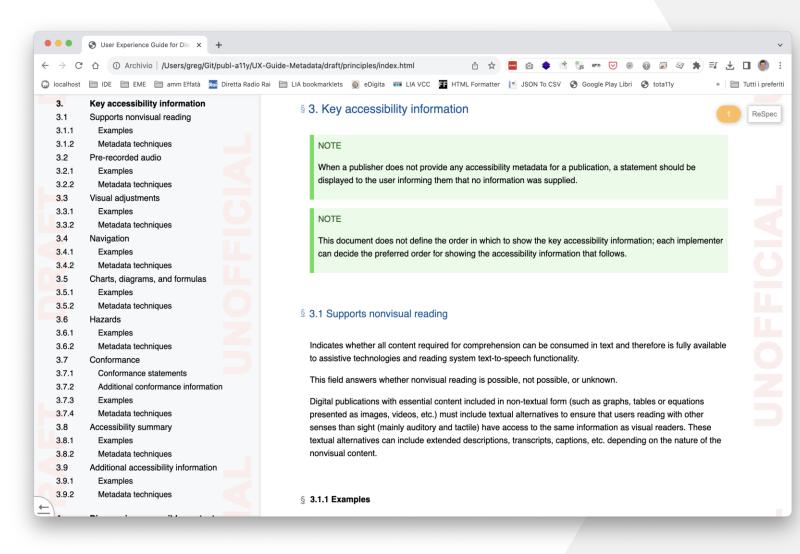
The importance of machine-readable metadata /2

- Machine-readable metadata are automatically interpretable by machines, allowing for better management and filtering of information.
- Using accessibility summary to describe accessibility features can lead to inconsistent and confusing descriptions for users.
- Machine-readable metadata approaches aim to standardize and simplify the presentation of accessibility information from different sources and languages for end users.

Displaying metadata to end Users

Guidelines for displaying accessibility metadata

In W3C we are involved in the Accessibility Task Force of the Publishing Community Group working on metadata for accessibility.

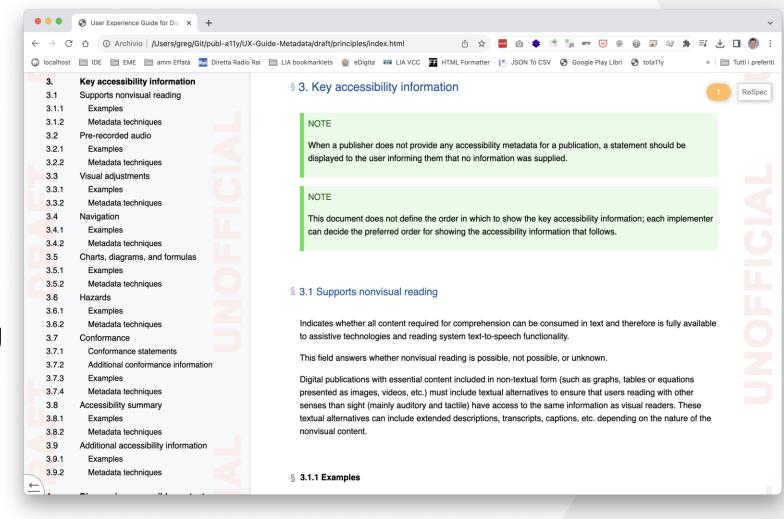


Guidelines for displaying accessibility metadata /2

We proposed grouping many metadata into categories and sub-categories, and for each:

- Identify a name (which will be localized in different languages)
- Identify a textual description
 (which will be adapted according to the metadata present)

The strings will be localizable in different languages



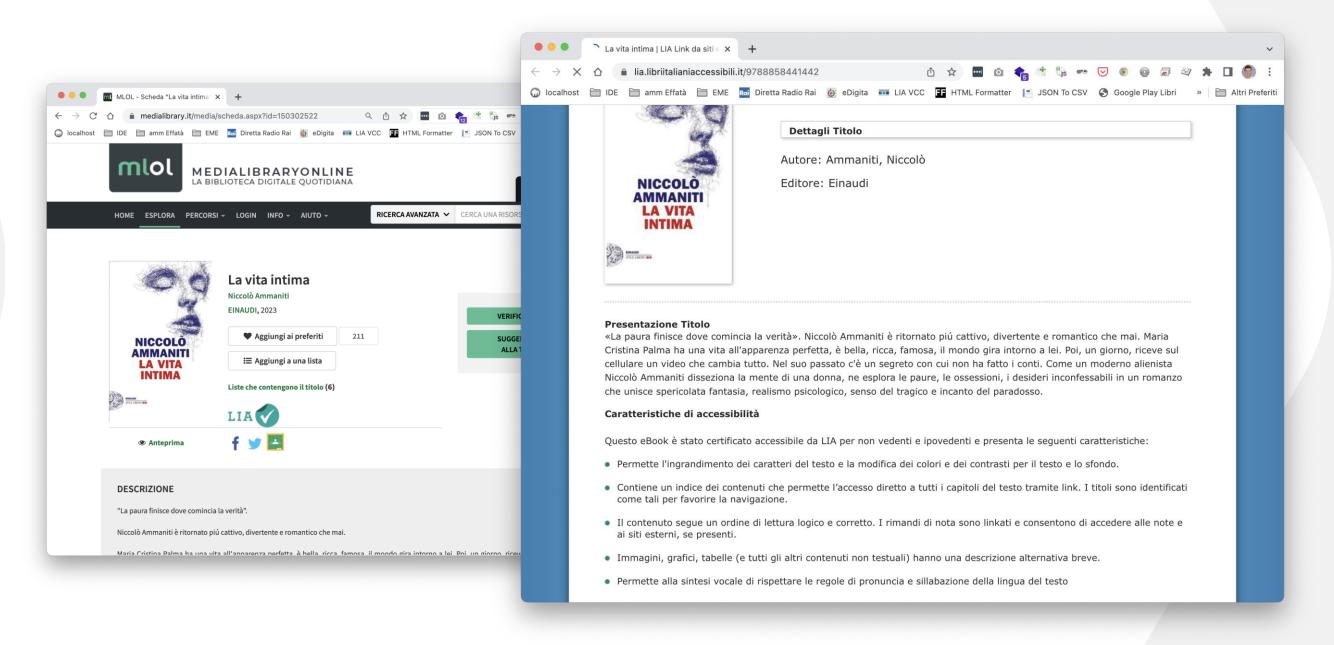
Open mic #3

- What do you think is the most important accessibility information for the end user?
- What does the end user check when looking for an accessible e-book?

The LIA catalogue since 2011

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GUIDA ALLA LETTURA DIGITALE esig GUIDA AGLI E-BOOK un s PROVA EBOOK ACCESSIBILE ACCESSIBILE GRATIS PROVA UN EBOOK ACCESSIBILE GRATIS PROVA UN EBOOK ACCESSIBILE GRATIS FAQ CONTATTI CONTATTI	anorama o tracci i confini, i milanesi sono abituati a far da sé (ghe pensi mi) e rimodellarla ogni volta a nuove sigenze, adattandola allo spirito del tempo senza temere di stravolgerla. In mancanza di montagne hanno innalzato n «monte», senza lago se lo sono scavato, hanno deviato e tombinato fiumi, aperto e richiuso canali. Della città di n secolo fa non rimane quasi niente, e chi fosse venuto in visita venti, trent'anni fa faticherebbe a riconoscerla. legli ultimi due decenni è stato ridisegnato lo skyline, e con lui interi quartieri. La Milano della nebbia e del anettone è sparita. È passata anche quella da bere, delle televisioni, sostituita oggi da quella della moda, del esign, degli influencer e delle week. Le fabbriche sono location o coworking. In un paese spesso rivolto a un assato glorioso e a tradizioni eterne, è facile deridere una città che abbraccia il nuovo senza troppi pensieri, perché età dell'oro per i milanesi è sempre domani. E in questa corsa verso il futuro Milano non guarda in faccia a nessuno erché, da vera seduttrice, non giudica ma si specchia negli occhi di chi guarda: accogliente o terribile, attraente o espingente, liberatoria o fagocitante, aperta o omologata. Come la sabbia su cui è costruita, si lascia plasmare
FAQ CONTATTI Que	enza opporre resistenza, continuando a inventare, produrre e poi vendere desideri
Contatti	
• C s • I a • I • P	Caratteristiche di accessibilità Questo eBook è stato certificato accessibile da LIA per non vedenti e ipovedenti e presenta le seguenti aratteristiche: Permette l'ingrandimento dei caratteri del testo e la modifica dei colori e dei contrasti per il testo e lo sfondo. Contiene un indice dei contenuti che permette l'accesso diretto a tutti i capitoli del testo tramite link. I titoli sono identificati come tali per favorire la navigazione. Il contenuto segue un ordine di lettura logico e corretto. I rimandi di nota sono linkati e consentono di accedere alle note e ai siti esterni, se presenti. Immagini, grafici, tabelle (e tutti gli altri contenuti non testuali) hanno una descrizione alternativa breve. Permette alla sintesi vocale di rispettare le regole di pronuncia e sillabazione della lingua del testo Per conoscere le caratteristiche di accessibilità dei dispositivi, software e applicazioni di lettura consulta la sezione

The LIA label on platforms



Interviews with users

- We held two focus groups with visually impaired users to **identify their needs**
- Currently to understand whether an e-book meets their needs, users download the **free sample** (where available)
- Users identified these important elements:
 - Having clear accessibility information
 - Presented in a **concise manner**
 - But also explained in a way that everyone can understand what they mean

Comparison with international peers

- We found that there are many national working groups working on local guidelines on how to display metadata: **they are not all aligned**.
- Over the past few months, LIA's metadata team has met with the different working groups:
 - EDRLab (France)
 - Börsenverein (Germany)
 - Les Librairies indépendantes du Québec (Canada)

- Demarque (Canada)
- Dedicon (Netherlands)
- Kobo (Canada)
- We discussed different approaches in showing metadata, presented our model, and called for collaborative work in participating in the W3C to help draft the new guidelines.

Consensus and release of the new version

- The process of publishing W3C documents is based on **consensus**
- Therefore, LIA is working to raise awareness among all the stakeholders involved to arrive at a proposal that everyone agrees on
- We would like to arrive at an updated draft of the User Experience Guides for Displaying Accessibility Metadata by the end of 2023

Q&A

Please type your questions in the Q&A panel





Thank you

Please fill out an evaluation: https://www.surveymonkey.com/r/FXHMYDP

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