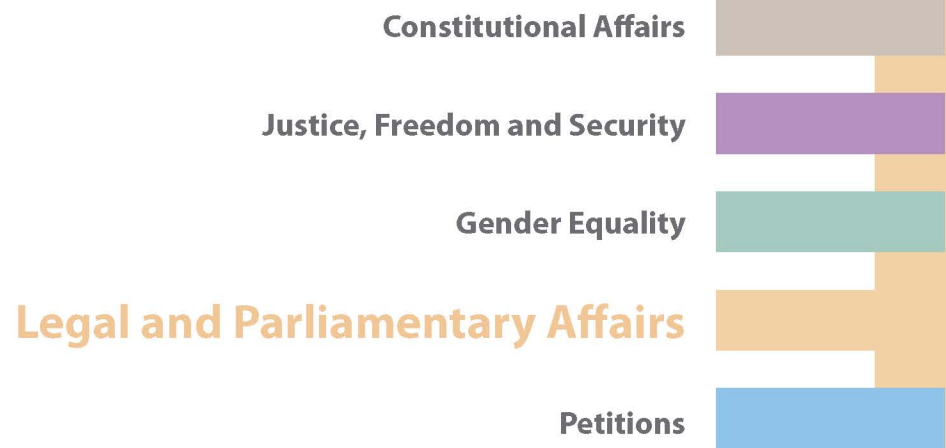


DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT **C**
CITIZENS' RIGHTS AND CONSTITUTIONAL AFFAIRS



Improving access to
works for visually
impaired persons

NOTE



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT C: CITIZENS' RIGHTS AND
CONSTITUTIONAL AFFAIRS

LEGAL AFFAIRS

Improving access to works for visually impaired persons

NOTE

Abstract

Organisations representing Visually Impaired Persons and publishers have a long standing tradition of working together to improve access to the written word for people suffering a visual impairment.

Within the legal framework set by the European legislation, stakeholders undertake initiatives that take advantage of the developments in ICT but have also to face their challenges.

Against the background of aiming to mainstream accessibility within content creation and production processes, solutions are provided as access through technology and through trusted intermediaries.

This document was requested by the European Parliament's Committee on Legal Affairs

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LINGUISTIC VERSIONS

Original: EN

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Manuscript completed in November 2009.
Brussels, © European Parliament, 2009.

This document is available on the Internet at:
<http://www.europarl.europa.eu/studies>

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LIST OF ABBREVIATIONS

AIE	Associazione Italiana Editori
CEN	European Committee for Standardisation
CLA	Copyright Licensing Agency
CNL	Centre National du Livre
CSS	Cascading Style Sheets
DAISY	Digital Accessible Information System
DRM	Digital Rights Management
EBU	European Blind Union
EPUB	Electronic Publication
EU	European Union
EUAIN	European Accessible Information Network
ECOSOC	Economic and Social Committee
FEP	Federation of European Publishers
HTML	Hyper Text Markup Language
ICT	Information and Communication Technologies
IDPF	International Digital Publishing Forum
IFPI	International Federation of the Phonographic Industry
INJA	Institut National des Jeunes Aveugles
IPR	Intellectual Property Rights
NUV	Nederlands Uitgevers Verbond
POD	Print-on-Demand
RNIB	Royal National Institute of Blind People

- SNE** Syndicat National de l'Édition
- VIP** Visually Impaired Persons
- VUV** Vlaamse Uitgevers Vereniging
- WCT** WIPO Copyright Treaty
- WIPO** World Intellectual Property Organization
- WPPT** WIPO Performances and Phonograms Treaty
- XML** Extensible Markup Language

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National implementation of Article 5.3(b) of Directive 2001/29/EC

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EXECUTIVE SUMMARY

Background

Organisations representing Visually Impaired Persons and publishers have a long standing tradition of working together. Their current shared objective is to improve the access to the written word for people suffering a visual or print impairment.

Faced with an ageing population, and therefore an increasing incidence of visual impairment conditions related to longer life expectancy, the European Union is in fact bound to deal with the issue of ensuring access to information to the visually impaired. The book publishing industry is set to play an important role in this process, given the prominence of books as means for conveying information.

Whereas many formats in book publishing are inaccessible to VIPs, technology can offer a number of solutions to improve access to works but can also become part of the problem, as the growing importance on technology in everyday's life risks enlarging the phenomenon known as eExclusion. However, in the publishing sector, the widespread adoption of ICT generates an interest in producing well-formatted digital documents, which are the key to accessibility.

Technological developments such as the move by many publishers to XML formats is greatly improving document structuring and the focus is shifting to integrating the production of accessible versions in the traditional production process. While currently the process of creating accessible versions is carried out from printed texts in specialised structures or upon individual requests, technological developments are switching demand to the scanning of works or the request to publishers of digital files.

Those who produce materials in alternative formats to serve people with disabilities could more easily use source materials, prepared for further transformation and in an agreed standard format. Still, the provision of digital masters can be made complicated by characteristics of the production process and by concerns about security issues (in particular copyright, the main protection and incentive to the production and distribution of creative works) and the constraints of economic realities.

In this field, a range of legislative instruments at European level are relevant for the improved access to works by VIPs. The main one, the Directive on the harmonisation of certain aspects of copyright and related rights in the information society (2001/29/EC), provides for an exception to copyright for people with disabilities. This exception is a "stimulating" one: if a solution is offered to the problem, it does not apply. The exception has been implemented, sometimes with slight differences, in all EU countries.

Technology has been instrumental in shaping solutions to the issue of accessibility: advances in technology and new publishing partnerships have made it possible to produce the same book at the same time in a format that everyone can read. Standards can help implement and test accessibility, but they need to be compatible and interoperable.

In particular, technology has set the conditions for publishers to join "trusted intermediary" schemes to make digital content available in secure conditions for conversion; relevant files are held by a "trusted intermediary" and used to produce accessible format books for sale

to bookshops, libraries, schools or individuals. We have therefore direct “access through technology” and “access through trusted third parties”.

Digital technology offers in fact the opportunity to use the same source files to create a range of formats; it allows converting inaccessible printed texts, publishing e-books which are accessible to VIPs and improving the quality, ease of manufacture and distribution of accessible works.

The main formats commonly used with regards to accessibility are: printed paper, printed Braille, audio (Wav), ASCII text, HTML, XML, multimedia packages. A closer look is given to audiobooks (recordings often reproducing commercial printed material are distributed in various formats, analogical and digital, which only recently have been allowed by European legislation to be applied reduced rates of VAT like printed books), large print, XML (a language for electronic documents at the basis of various e-book and other digital accessible formats).

Finding ways to mainstream the provision of accessible content and thus embed accessibility within the content creation and production processes at the earliest stages is the main goal of both content providers (publishers) and users (and especially those assisting VIPs).

In the absence of purely technological solutions, the ideal way forward is to have publishers make their content accessible through trusted third parties; to this end, several national publishing associations collaborate with trusted organisations helping print impaired people. In parallel with a number of national cases, a few European initiatives have been undertaken in the field, such as the EUAIN and ProAccess projects.

GENERAL INFORMATION

KEY FINDINGS

- Global trends show reduced rates of visual impairment worldwide and a **shift in the causes** towards a greater incidence of **conditions related to longer life expectancy**.
- The **ageing of European population** will bring about an **increase of the share of visually impaired persons** in the coming years.

People who are visually impaired do not see well enough to perform everyday tasks, even with the aid of glasses, contact lenses, medicine or surgery. Blindness, the most severe form of visual impairment, deprives people the ability to move about unaided.

According to the WHO (World Health Organization), **about 314 million people are visually impaired worldwide**, 45 million of which are blind. Most people with visual impairment are older, and females are more at risk at every age, in every part of the world. Global trends since the early 90s show **reduced rates of visual impairment worldwide** and a **shift in the causes**. Visual impairment and blindness caused by infectious diseases have been greatly reduced (an indication of the success of international public health action), but there is a **visible increase in the number of people who are blind or visually impaired from conditions related to longer life expectancies**.

Although about 87% of the world's visually impaired live in developing countries, **the size of the phenomenon in Europe cannot be neglected**, and it is bound to **increase due to the growing prevalence of age-related impairment and blindness**. In its "Action Plan on Information and Communication Technologies and Ageing [COM(2007)332]", the European Commission states that "by 1995 70 million people over the age of 60 were living in the EU, almost 20 % of total population. By 2020, this figure will rise to 25 %. The number of people over 80 years of age will more than double"; in addition, "21% of persons over 50 experience severe vision, hearing or dexterity problems".

An **ageing EU population** means therefore that there are **increasing numbers of blind, partially sighted and other disabled people**. Already in 2002, the WHO estimated there were between 2.5 and 3 million blind people in Europe (including Israel and the Central Asian former Soviet republics), close to 1 million in Western Europe alone. As this number grows, so will the scale of the problem of the exclusion of a relevant share of the population from **access to information**.



1. THE ISSUE: VISUALLY IMPAIRED PERSONS AND ACCESS TO INFORMATION

KEY FINDINGS

- There is a need to keep working towards **increased availability of publications accessible to VIPs**.
- **Technology** can offer a number of **solutions to improve access** to works by VIPs but can also become **part of the problem (eExclusion)**.
- Many **formats** in book publishing are **inaccessible to VIPs**.
- The **widespread adoption of ICT** within the publishing industry generates an interest in producing **well-formatted digital documents**, which are the **key to accessibility**.
- Technological developments such as the **move by many publishers to XML** formats is greatly **improving document structuring** and the focus is shifting to **integrating the production of accessible versions in the traditional production process**.
- Currently, the process of **creating accessible versions** is carried out **from printed texts in specialised structures** or upon individual requests; technological developments are **switching demand to the scanning of works or the request to publishers of digital files**.
- **Agencies producing materials in alternative formats** to serve people with disabilities could more easily use **source materials, prepared for further transformation and in an agreed standard format**.
- The **provision of digital masters** can be made **complicated** by **characteristics of the production process** and by **concerns about security**.
- Integrated accessibility solutions need **accessible design methodologies; standards** can help implement and test accessibility, but they need to be **compatible and interoperable**.

Since today's world **full participation in education, employment, culture and the general life** of society can only be achieved if one is able to read the same material as others, possibly at the same time and at no additional cost, it is essential to **keep working towards increased availability of publications** in large print, audio, Braille or any other format accessible to blind or partially sighted people. As the amount of information around us grows daily - newspapers, magazines, documents of all sorts, internet pages and, of course, books (in the EU alone almost 500,000 new books are published every year) common efforts should continue to be directed to **ensure available content in a format that is both accessible and usable** for those with some kind of visual impairment.

All information that is made available to the general public should be accessible to anyone, regardless of any disability a person may suffer from. This especially refers to such information as **public sector information** (legislation and all kinds of official

information), **news**, **educational materials** (especially those used in public education), and **leisure materials**. **Books** are the main or one of the main sources of such kinds of information, which is the reason why it is paramount that **collaboration** keeps developing amongst all parties involved **in the conversion process** to make works accessible by reading impaired persons.

1.1. The twofold role of technology

A number of developments in **technology** have **increased the accessibility of books** over the years, though, starting with the development of the **Braille** language by Louis Braille in 1821, a method widely used by blind people to read and write. Ever since, technology has made it possible to develop **Accessible Publishing**, an approach to publishing and reading whereby books and other texts aren't only available in one standard format. **Alternative formats** that have been developed to aid different people to read include varieties of **larger fonts**, **specialised fonts** for certain kinds of reading disabilities, the aforementioned Braille, **e-books**, **automated audiobooks** and **DAISY**. Accessible publishing, in turn, has been made possible through developments in technology such as **Print on demand** (POD), **eReaders**, **XML** and the **Internet**. The main technological solutions to the problem of accessibility will be illustrated in Chapter 3.

Technology is therefore a huge opportunity to improve access to works for visually impaired people, but it can also become part of the problem. Blind, partially sighted and other disabled people are in fact very often **excluded from the digital world**. This exclusion is felt in all areas where digital technology is used.

The "**eExclusion**" of disabled people is moreover a **growing**, rather than diminishing problem. On one hand, as seen, there are a large and growing number of people with such disabilities in Europe. On the other, as **society evolves towards an "information society"**, people's dependence in everyday life on technology-based products and services increases; as the technological and digital component of life increases, the lack of accessibility in those new technologies and delivery of those technologies via new methods is excluding blind and partially sighted people from participating fully in society.

Nowadays **access to education, employment, online shops and services** including those provided by governments **all require access to digital systems**. If disabled people cannot access e-learning, use laptops, or carry out online research, they are less likely to be as well educated as their peers. Employers using inaccessible IT systems also exclude blind or partially sighted people, however qualified that person might be. This weakens the economy by both reducing the breadth of talent in the workforce, and by impoverishing individuals who are then less able to participate in the EU's economy.

1.2. Books and accessible versions

In the specific domain of **book publishing**, there are currently **many digital formats that are inaccessible** to persons with disabilities even through adaptive technologies. Those formats that are based mainly on images which are not described properly or at all are very difficult to access. Formats like PDF, when they show images of the final layout of a document, can be highly inaccessible if no accessibility features have been incorporated.

Such formats make it difficult to transform information into an accessible item; files in certain formats require quite deep transformations to this end. Still, given the **widespread adoption of ICT within the publishing industry**, there is a **general interest in the creation and provision of well-formatted digital documents**. For those people who are dependent on accessible information, this interest is of central importance.

Structured information is the first big step towards high-quality **accessible information**. A document whose internal structure can be defined and its elements isolated and classified, without losing sight of the overall structure of the information, is a document that can be navigated.

Most **adaptive technology** allows the user to access a document, and to read it following the “outer” structure of the original. If that structure is left to a range of visual clues (like a font size or style), the adaptive device will surely flatten that visual structure, leaving a document with no structure at all. But if the same document has also an “**inner**” **structure** that makes it possible for the adaptive device to distinguish, for example, between a paragraph and a footnote, between a chapter and a sub-chapter, then the level of **accessibility** of the whole document will be **greatly enhanced**, allowing the user to move through it in the same way those without disabilities do when looking at the printed document, following the same “logic”.

In an ideal world, any document made available in electronic format should contain that **inside structure** that benefits everyone. **Highly-structured documents are becoming more and more popular** due to reasons that are not necessarily related to accessibility for persons with disabilities. The **move by many publishers to XML** related formats and associated standards for metadata, linked to reasons of convenience in the production process, has provided an impetus for **far greater document structuring** than before. Whatever the reasons behind those decisions, the use of highly-structured information is of great benefit to anybody accessing them for any purpose.

In recent years, **the market for accessibility and assistive technologies has started to gain recognition**. It is clear that the **integration of accessibility notions into mainstream technologies** would offer previously unavailable opportunities in the provision of accessible multimedia information systems. It would open up modern information services and provide them to all types and levels of users, in both the software and the hardware domain. Additionally, new consumption and production devices and environments can be addressed from such platforms and this would provide very useful information communication opportunities, such as through mobile devices with speech assistance.

The issue of **producing accessible version of books was once a marginal phenomenon** that concerned only a few people directly involved and required specific, long and complex processing. With the advance of digital technologies in book production, **it is now becoming a matter of integrating the production of accessible versions in the traditional production process**, thus involving potentially all publishers and also delicate issues such as the use and control of digital files.

The **process of creating accessible versions** is currently carried out, in fact, by **structures specialised in the production of a specific format** - such as Braille or audiobook - from the printed text. This process is very long and expensive; therefore only a small part of fiction literature is directly from the outset available in accessible format, and usually with a large delay in comparison to the appearance in bookstores of the standard

versions. In the case of **school books**, instead, **specific versions** (digital, Braille, etc.) of individual texts are **produced according to the needs of individual students**.

As **new technologies become widespread**, the **demand is switching to the scanning of works or the request to publishers of digital files** that can be used as a basis to produce various accessible versions. This implies **modifying the majority of the productive processes** currently in place in the publishing sector and requires a **special attention to copyright related aspects**, as the correct management of such digital files is a very sensitive issue.

An alternative to ensure accessible material is the use of **agencies producing materials in alternative formats** to serve persons with disabilities by transforming content into formats that are suitable for those who cannot read it in the way it has been originally produced. The most suited way to facilitate the conversion of the works is to access them in their source form; if the **source material** is provided in a format that is already **prepared for further transformation** and in an **agreed standard form**, savings of time and resources will be even bigger.

However it is often **complicated to provide digital masters without the necessary guarantees and safeguards for rightholders**, who have to be confident that any digital format is being delivered through **secure gateways** to only the people who are intended to receive it. On one hand, in the majority of cases the **processing related to the production of publishing material takes place outside the publishing houses** (publishing studios, pre-printing companies, etc.) according to independent productive and organisational conditions. On the other hand, fear of **piracy and the evident ease with which it happens in the digital world** are understandably a reason why there is a need to ensure that the process is carried out and maintained within a **secure network** and by **trusted bodies**. In the modern environment driven by the internet for content dissemination, security is a vital issue for rightholders.

In addition, **DRM** (Digital Rights Management) is a **complex matter for all content holders**; every publisher's content, client base and requirements are different, which often results in a personalised set of requirements for each case. However **DRM can accommodate accessibility** and be an opportunity to be exploited in order to facilitate conversion.

As will be seen in Chapter 3, **agreements with publishers** in which these **agencies** are seen as **"trusted intermediaries"** seem to be one of the ways forward to tackle conversion of files.

Moreover, the final objective should be to **make the majority of books published accessible/adaptable from the outset** so that reading disabled persons can have access to all books when they are published. In order to do that, it is important to give **incentives to publishers and other market players** to make material available to the visually impaired both guaranteeing respect of copyright and avoiding any abuses of digital files. This **market-based approach** would be consistent with the idea that all products should be directly accommodated for users with disabilities without having to be adapted at a later stage; otherwise the cost of producing an accessible version is far higher and the process more time consuming.

1.3. Standards

Accessible solutions are necessary for anyone who requires assistance in using the mainstream solution. This could be because a user is blind, visually impaired, or impaired in some other way (the term print-impaired is often used in this context). Accessible solutions range from small assistive applications (such as screen magnifiers) to full scale operating systems and screen reading environments. **The traditional problem with accessible solutions is that they are normally implemented as an afterthought.** This often results in solutions which are not fully integrated (or not well integrated) with the mainstream solutions. These independent applications are then at a disadvantage whenever software versions or operating systems are updated. In order to make this integration process easier, and provide more intuitive designs for the future, **it is essential that “design for all” and accessible design methodologies are widespread. Standards,** along with policy and legislation, can help ensure that accessible designers have a solid standard to meet to ensure future-proofing.

Notions of “accessibility” are normally equated with the **adaptation and conversion of digital content**, where this content can be made available. On a European level, and indeed on a national level, **much of the existing expertise on creating accessible adaptations of digital content is of a highly distributed nature.** Within specialist organisations supporting print impaired people, university research laboratories or indeed publishing houses, **many automated tools have been designed and implemented** at least partially to execute the necessary adaptation procedures. However, each automated tool has its **own, highly specific, field of application.** Furthermore, the knowledge required to build these very specific tools is equally distributed, so that there is currently **very little re-use of either tools or knowledge.**

Standards are needed for many reasons, but probably the most relevant one is that they tell manufacturers how to make their products accessible in a detailed, coherent way. Legislations promote the existence of standards, and they advocate for “accessible” technology or information; but **it is standards that give the technical specifications of how this accessibility can be implemented and tested.**

The existence of standards, though, does not imply that accessibility will be implemented in the same way or with the same results in all products. The existence of a number of standards for producing the same product (a document) may occasionally lead to two different levels of accessibility for the same “accessible” final product. Even within the same standard it sometimes happens that some features are considered essential while others may be considered expendable; as a result, the application of the same standard with different views on what is needed and what is not to make a document accessible may provide a wide range of accessibility levels for the same product, making it fully accessible for some users and not for others.

It may also happen that different standards are developed for the same purpose and though they deliver the same level of accessibility they are **not compatible.** This usually leads to **confusion for manufacturers and service providers** while it also **divides users** between the different existing standards. We can distinguish between **formal** (or de jure) **standards and de facto ones.** The former are those which have been “formalised” by standards organisations, while the latter are technical solutions that have been adopted informally by users due to their usefulness or reliability. Among the de facto standards, we can also identify two categories: **proprietary standards** (those developed by a

commercial company) and **open standards** (freely developed and updated by independent programmers and not commercialised).

Whereas an array of similar but not quite the same accessible formats is used with a matching array of equipment that interacts with them being needed, it is easy to generate frustration in users. No doubt this sort of frustration is widespread. **The publishing industry favours and has an interest in standardisation activities, interoperability and the facilitation of content transfer**, with the aim of enhancing competitiveness in the market, while taking into account the public interest. **Standards allowing interoperability can create very valuable and healthy industries and benefit all actors**, starting with end users.

Publishers' focus is on reading and on **meeting readers' expectations**. Readers expect to be able to read any kind of file on any kind of terminal - in other words, they basically expect to have a good reading experience; **visually impaired persons expect to access the same information and at the same time as their fellow citizens**; and here is where **standards and interoperability can play a fundamental role**.

It is understood that having many different standards is not a good thing; nonetheless, a single one is not necessarily the best solution either: **in many areas there is room for a small number of standards, simple and compatible**. In fact, trying to satisfy all requirements in a single solution will almost certainly lead to a very complex technology; on the other hand, splitting the requirements gives much simpler solutions, which can be implemented quickly. Different goals can call for different standards.

It is worth clarifying the **distinction between interoperability and standardisation**: while both are desirable, they are different concepts, and the latter is less stringent. It is in fact possible to have many different formats, but still interoperable, or just one format which is not. For example, standardisation focused on vertical integration and proprietary formats is dangerous. Moreover, proprietary does not necessarily imply closed: a proprietary format can be fit for some player's specific needs but still be accessible to others. Thus, proprietary standards are not necessarily negative, as long as they are open.

Interoperability in its essence is the ability of different players in a sector and of different technological systems to cooperate. Distinctions can be made between commercial and technical interoperability: the first one being related to the presence of different actors on the market and for example being hampered by closed proprietary formats, and the second dealing with different softwares, readers, etc.; and between theoretical and effective interoperability (one example being the adoption of a PDF format, theoretically readable by many different devices, made ineffective by other reasons, such as the addition of DRM). Interoperability is an enabler of access to content, anytime, anywhere, with any device according to different business models.

For the publishing sector, since its needs are mostly related to content, standards and interoperability of devices and software will be crucial. Interoperable standards shall support the digital switch by the European publishing sector, while at the same time also fostering the adoption of **formats and processes that favour accessibility**.

2. THE LEGAL FRAMEWORK

KEY FINDINGS

- A **range of legislative instruments** at European level are relevant for the **improved access to works by VIPs**.
- **IPR legislation** ensures the remuneration of rightholders and therefore **protects and encourages creativity**. In some cases, **“exceptions or limitation” to copyright** apply that restrict the exclusive rights of rightholders.
- The main legislative instrument at EU level, the **Directive on the harmonisation of certain aspects of copyright and related rights in the information society** (2001/29/EC), provides for an **exception to copyright for people with disabilities**.
- The exception of Directive 2001/29/EC is of the **“stimulating”** kind; this means that, **if a solution is offered to the problem, the exception does not apply**.
- **The exception has been implemented**, sometimes with slight differences, **in all EU countries**.
- The issue of **enhancing cross-border access to accessible content** for reading disabled can be tackled by **encouraging publishers to invest in accessible content and develop a market** for this group of customers and by **developing a network of proper functioning trusted third parties** in all European countries.

There are a range of **legislative instruments at European level** that are relevant in terms of **improved access for those experiencing a disability**. Some examples of these instruments are the **European eAccessibility Communication** (Com 2005 425) focusing on accessible information and communication technologies, the **Directive on labelling of medical products** (2004/27/EC) or the recently reviewed **postal services Directive** (2008/06/EC).

An important legislative block for reading impaired persons is that related to content such as books and journals and in particular **intellectual property rights**. According to current international legislation the author is attributed a series of exclusive rights (economic rights and moral rights) which can be transferred independently from each other in favour of different persons. The acknowledgment of intellectual property on works means that **anyone else wishing to perform any action on the works has to acquire prior permission from the rightholder**. Only when the deadline for protection has expired, can the work be used without permission but respecting the moral rights of paternity and integrity. However, in some cases legislation compresses the exclusive faculties of the author for the purpose of **allowing some uses of the work independently of the request of specific authorisation from the rightholder**: in these cases we refer to **“exceptions or limitations” to copyright**.

IPR legislation and in particular **copyright and related rights provide a reward for creativity** and, by enabling creators and those who have invested in creativity to gain a return on their investment, the rights granted by copyright **encourage more creativity** for the benefit of everyone. Publishers fully support the goal of allowing people with

disability a timely and comprehensive access to published works and positively share an interest in that this is achieved in a way that maximises the potential outreach to visually impaired persons while respecting the provisions of copyright laws.

The **main legislative instrument at European level** in the field of copyright is the **Directive on the harmonisation of certain aspects of copyright and related rights in the information society** (2001/29/EC). This Directive transposes into Community law the main international obligations arising from the two Treaties on copyright and related rights adopted within the framework of the World Intellectual Property Organisation (WIPO) in December 1996. With regards to the content of the 2001/29 Directive, it harmonises some of the exclusive rights attributed to the author such as right of reproduction, distribution and communication to the public including making available. The European Directive also **harmonises a number of limitations** to these exclusive rights **including a limitation for the benefit of people with a disability**. This is enshrined in **Article 5.3(b)** of the Directive which says that Member States may provide for exceptions or limitations in the case of *“uses, for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability”*.

The exception provided for in the Directive is of the kind defined as **“stimulating” exception**; this means that, **if a solution is offered to the problem, the exception does not apply**. According to Article 6.4.1, *“...in the absence of voluntary measures taken by rightholders, including agreements between rightholders and other parties concerned, Member States shall take appropriate measures to ensure that rightholders make available to the beneficiary of an exception or limitation [...] the means of benefiting from that exception or limitation...”*.

The exception has now been implemented in all countries of the European Union. However, in some countries the exception has been transposed literally from the 2001/29 Directive (Belgium, Cyprus, Czech Republic, Denmark, Hungary, Luxembourg, Poland, Slovakia and Spain), while in others slight changes have been introduced. The following table briefly describes such implementation at national level in the EU:

Table 1: National implementation of Article 5.3(b) of Directive 2001/29/EC

COUNTRY AND NATIONAL LAW	DESCRIPTION OF THE EXCEPTION
<p>Austria</p> <p><i>Section 42d of Federal Law on Copyright and Related Rights as amended in 2003</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • Both acts of reproduction and (physical) distribution to disabled people are permitted. • Exclusion from the exception of works commercially available which are in a format suitable for them. • Fair remuneration for the author foreseen.
<p>Belgium</p> <p><i>Article 22, §1er, 11°, Law 22 May 2005 on Copyright and</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • Both acts of reproduction and communication to the public are permitted.

<i>related rights</i>	<ul style="list-style-type: none"> • Specific mention of part of the so called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders.
Cyprus <i>Article 7(2) 19 (s) of The Copyright and related rights Law of 2004</i>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • Both acts of reproduction and communication to the public are permitted.
Czech Republic <i>Articles 37(2)(c), 29, 30 and 43-45 of Law No. 131/2000 on Copyright, Rights Related to Copyright and on the Amendment of Certain Laws as amended to 21 January 2005</i>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • Specific mention of part of the so called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders. • The provisions protecting use of DRMs must specifically not be prejudiced by the exception.
Denmark <i>Sections 17, 11 and 75c of the Copyright Act consolidated in Act No. 164 of 12 March 2003</i>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It applies to blind, visually impaired and deaf people, people suffering from a speech impediment and people unable to read printed text on account of a handicap. • The use of the reproduction and distribution including public communication, but not distribution by rental, are allowed if published works have been used and if it does not imply a commercial activity, being compulsory the indication of the source. • Request to Copyright License Tribunal can be made where DRMs prevent enjoyment of exception and circumvention may be possible where Tribunal order not complied with, but does not apply to works made available on demand under agreed contractual terms
Estonia <i>Sections 19, 17, 803 and 87 of the Copyright Act of 11 November 11 1992, as last amended by the Act of 29 October 2004</i>	<ul style="list-style-type: none"> • The use of the reproduction and distribution, including public communication in Braille or another technical manner for the blind (except for those created especially for the blind to be reproduced in such manner), are allowed if it does not imply a commercial activity. • It only applies to blind people and it does not limit the use to the extent required by the disability. • The source must be indicated. • Specific mention of part of the so-called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice

	<p>the legitimate interests of the right holders.</p> <ul style="list-style-type: none"> • Right holders must adjust their application of DRMs to allow uses permitted by exception where a person has legal access to the protected work. Any failure to reach agreement with right holders can be referred to the Copyright Committee (further appeal to regular court possible).
<p>Finland</p> <p><i>Articles 17 and 11 of the Copyright Act, as amended on 9 October 1998</i></p>	<ul style="list-style-type: none"> • It allows copying and the right to communicate the works of literary, musical or artistic works in formats which are readable by visually impaired persons to the extent required by the disability. • It applies to visually impaired people and to people with other disabilities. • General requirement to indicate the source and authorship. • There were previously provisions on limitations for the benefit of people with a disability and it is subject to extended collective licensing.
<p>France</p> <p><i>Articles L122-5 and L331-5 to L331-21 of the Intellectual Property Code as amended to 1 August 2006</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • Both acts of reproduction and communication to the public are permitted. • It allows only legal entities such as associations representing handicapped people, public libraries, archives as well as documentation and cultural centres to ask publishers to transmit the electronic file of the work to the National Book Centre (CNL) or any other organism designated by decree for the State Council. This will be upon request and formulated within the two years following the legal deposit of the printed works. • It applies to people with a motor, psychological, hearing or visual disability which must be at least 50% assessed against specified relevant standards. • Except for works made available on demand on agreed contractual terms, right holders are required to take measures to ensure effective implementation of the exception where the beneficiaries have lawful access to the work and the exception does not conflict with the normal exploitation of the work or unreasonably prejudice the legitimate interests of the right holders. • An Authority is established to regulate, and to provide conciliation and adjudication, regarding the interaction between DRMs and exceptions, with the possibility to appeal to the regular courts if necessary.
<p>Germany</p> <p><i>Articles 45a, 63 and 95b of Copyright Act as amended on 10</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It allows reproduction and communication to the public when the work is not already available in an accessible way

<p><i>September 2003</i></p>	<p>at a price which is corresponding to the non-accessible reproduction.</p> <ul style="list-style-type: none"> • As far as reproduction exceeds a small number of copies, right holders are entitled to an appropriate compensation to be exercised by a collecting society. • Formats accessible depend on the specific disability. • The source must be indicated. • Section 95b (1) refers to the application of technical protection measures in the work and indicates that the right holder has the obligation to help the user by providing the necessary means to enable certain permissible uses. This applies to the uses permitted for the benefit of people with disabilities.
<p>Greece</p> <p><i>Articles 28A, 28C and 66A of Law 2121/1993, amended to 10 October 2002</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It applies to blind and deaf-mute people • It allows reproduction of the work (not communication to the public) • Compulsory license could be required by ministerial resolution • In the absence of voluntary measures, lack of enjoyment of exception due to DRMs should be settled by mediation or dispute is settled by Court of Appeal (not applied to works provided on demand on agreed contractual terms). • By resolution of the Minister of Culture the conditions of application of this provision may be determined as well as the application of this provision for other categories of people with a disability.
<p>Hungary</p> <p><i>Articles 41(1) and 33 of Act No. LXXVI of 1999 on Copyright as amended in 2001</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • Specific mention of part of the so-called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders.
<p>Ireland</p> <p><i>Sec. 104,106, 252 and sec 374 of Copyright Act and Related Rights Act, 2000</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It applies to people with physical or mental disability. • It allows reproduction and distribution by non-commercial bodies designed by the Minister. • DRM can be circumvented to allow the uses permitted in the exception.
<p>Italy</p> <p><i>Article 71bis and 71nonies of the</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability.

<p><i>Law for the Protection of Copyright and Neighbouring Rights, as amended on 9 April 2003</i></p>	<ul style="list-style-type: none"> • The categories of disabilities, the criteria to identify individual beneficiaries and the conditions on which this exception shall be enjoyed are specified in a separate Decree. • It allows reproduction and communication to the public of works • Specific mention of part of the so-called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders.
<p>Latvia</p> <p><i>Section 19 paragraph 1 recital 3, 18, 20 and Section of Copyright Law as amended on 22 April 2004</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It applies to visually and hearing impaired people. • It allows reproduction and distribution of works, in any format adapted to them, by organisations for the visually and hearing impaired. • Specific mention of part of the so-called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders. • The organisations for visually and hearing impaired people are able to request the author to give access to DRM protected work, but the author may refuse to do so if use would be contrary to the normal exploitation of the work or unjustifiably limit the lawful interests of the author; failure to reach agreement can be referred to a mediator.
<p>Lithuania</p> <p><i>Articles 22 paragraph 1 subparagraph 2, 19 and 75 of Law on Copyright and Related Rights of 5 March 2003</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. Furthermore the purpose must be educational, teaching and scientific research only. • It applies to visually and hearing impaired people. • The source and the name of the author are required. • Specific mention of part of the so-called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders. Adequate means to enjoy the exception must be provided to the users, others than those made available on demand. • Right holders are required to supply information to an institution as authorized by the Government about any voluntary measures permitting enjoyment of exceptions. Users may refer any disputes to the Council for mediation and later, the dispute can be settled by the court.
<p>Luxembourg</p> <p><i>Article 10 (11) of the Copyright Act</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • Reproduction and communications to the public are allowed

<p>Malta</p> <p><i>Section 9 (1) (i) of the Copyright Act</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It allows reproduction, translation, distribution or communication to the public of a work.
<p>Netherlands</p> <p><i>Articles 15i, 15c and 29a of the Copyright Act 1912 as amended on 20 January 2006</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It allows for reproduction and public communication to the public. • Fair payment to the author or right holder is required.
<p>Norway</p> <p><i>Sec 17, 17a, 17b, 11, 53b and sec 12 of Act No. 2 of 12 May 1961 relating to Copyright in Literary, Scientific and Artistic Works, Etc, as amended up until 17 June 2005</i></p>	<ul style="list-style-type: none"> • It allows the reproduction of literary or scientific works or musical works or films in favor of disabled persons and copies in other forms than sound recordings for the benefit of persons who are blind and who have weak sight, impaired hearing or inability to speak. • Reproduction could be done by themselves or through an assistant who does not act for gain. • Non-commercial nature. • The Government may specify organisations or libraries that are given a license to reproduce a published literary or scientific work through recordings for free use by the disabled. • Right holders should be given remuneration, which is negotiated according to the principles within the area, and may be subject to a dispute resolution. On the other hand, they could be ordered to permit enjoyment of the exceptions, and if this would not be possible, circumvention of DRMs to enjoy exception can be ordered.
<p>Poland</p> <p><i>Article 33¹ introduced by the 2004 Act</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • The source and the name of the author are required. • Specific mention of part of the so-called "three step test": It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders.
<p>Portugal</p> <p><i>Articles 80, 75, 76, 221 and 222 of the Copyright and Related Rights Code, as amended on 24 August 2004</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It applies to blind people and people with a disability. • It permits the reproduction, communication to the public and distribution of lawfully published books. • The source and the name of the author are required. • Specific mention of part of the so-called "three step test": It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice

	<p>the legitimate interests of the right holders.</p> <ul style="list-style-type: none"> • Right holders could be remunerated if works were made available on demand on agreed contractual terms. • Right holders must adopt voluntary measures to permit beneficiaries enjoy the permitted activity given by the exception. If beneficiaries were prevented they could apply to the General Inspector of Cultural Activities, or failing that the Commission of Mediation and Arbitration.
<p>Slovakia</p> <p><i>Sections 29, 25 and 38 of the Copyright Act 2003, as entered into force on 1 January 2004</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. • It allows reproduction, distribution, lending and communication to the public. • The source and the name of the author are required. • Specific mention of part of the so-called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders.
<p>Slovenia</p> <p><i>Articles 47a, 46 and 166c of the Copyright and Related Rights Act, as amended on 11 May 2004</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and for no economic advantage, to the extent required by the specific disability. • The reproduction and the distribution of works (as long as these are not available in an adapted form) • Equitable remuneration has to be paid for the use. • Specific mention of part of the so-called “three step test”: It is permitted insofar they do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holders. • Right holders must make available to a person in lawful possession of a work the means to enjoy the exception that is prevented by DRMs. If a right holder fails to do so, the dispute can be referred to mediation.
<p>Spain</p> <p><i>Article 31 of Royal Legislative Decree 1/1996 in Copyright, as amended on 7 January 2000</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability for the private use of the disabled. • It applies to blind people. • It allows reproduction of disclosed works (in Braille system or another specific method).
<p>Sweden</p> <p><i>Articles 17, 11, 3 and 52f of Act on Copyright in Literary and Artistic Works, as amended up to 1 July 2005</i></p>	<ul style="list-style-type: none"> • Includes uses for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature. • It allows reproduction, distribution and subject to certain conditions, communication to the public of disclosed literary, musical and visual art works (in synthetic speech or Braille displays) • The right to make copies does not, however, apply to sound recordings - talking books. Only libraries or

	<p>organizations with special permission from the Government are allowed to produce them freely.</p> <ul style="list-style-type: none"> • Libraries and organizations may be given permission to communicate copies of works through a network directly to people with disabilities and to make copies of radio or TV broadcasts and copies of films for people who are deaf or hearing-impaired. • The author has a right to remuneration and the source should be named. • If a person is entitled to use the exception, the Court may order the right holder to make it possible for the user to enjoy it (works made available on demand on agreed contractual terms are not included).
<p>UK</p> <p><i>Secs. 31A – 31F, introduced under the Copyright (Visually Impaired Persons) Act 2002</i></p>	<ul style="list-style-type: none"> • The UK Act provides two different exceptions for the benefit of the visually impaired: <ul style="list-style-type: none"> a. Single copies for personal use and free of charge by individual VIPs. They may ask others (such as teachers or librarians) to make such copies for them, without infringing copyright, provided that (i) The copies are made from lawfully acquired originals, are not adapted unnecessarily and are not passed on to others and (ii) The copies are accompanied by a statement that they are made under the Act, and carry a sufficient acknowledgment. b. Multiple copies for collective use. Organisations such as the RNIB may make multiple copies for their members of the same copyright works if both of the provisos set out above are complied with, but <i>only</i> provided that no licensing scheme exists. In fact, a Copyright Licensing Agency (CLA) licence is now available, so organisations wishing to make multiple copies still need to seek permission, ideally via the CLA licence. Any copies made under this exception must incorporate any (or equally effective) copy-protection applied to the original, so far as reasonably practicable, unless agreed otherwise. • Visually impaired people means a person (a) who is blind, (b) who has an impairment of visual function which cannot be improved by the use of corrective lenses to a level that would normally be acceptable for reading without a special level or kind of light, (c) who is unable through physical disability to hold or manipulate a book, or (d) who is unable through physical disability to focus or move his eyes to the extent that would normally be acceptable for reading. • The charge of a copy may not exceed the cost of producing it. • The exceptions allows reproduction and in case of multiple copies for collective use, also supply to a visually impaired person where there is no commercially available version accessible to that person; supply includes lending. • A person who has lawful access to a work and is unable to

enjoy the exceptions because of DRMs, other than in respect of a computer program, can make a complaint to the Secretary of State who can order the copyright owner to make available a means of carrying out the permitted acts. Failure to comply with the order is a breach of statutory duty which is actionable before the courts. The provision does not apply to works made available on demand on agreed contractual terms.

Thus, following the implementation in all EU Member States of the limitation in article 5.3(b) of the mentioned directive, **people with a disability can adapt an in-copyright work to the extent required by the disability in question. Nevertheless if the content can be properly adapted at the outset by the rightholder, there will be no need for the limitation to apply**, having guaranteed accessibility to the work and guaranteeing both respect of copyright and avoiding any abuses of digital files. This would be a win-win situation for all.

In order to **clarify which uses are permitted** under the current exceptions to exclusive rights contained in the current EU and national legal framework, two situations can be distinguished, depending on whether the available work is produced in an accessible format (e.g. audio book) for the visually impaired person or not.

Situation A

The work is not adapted to the need of the visually impaired yet and he/she requires that it is. In this case it will also depend on whether the work is available only in print or is already in digital form in its commercial version. If it is a printed copy, the person will not need to ask for explicit permission to make an adapted version and eventually provide access within an especially dedicated network. Once a lawful copy has been acquired by the visually impaired or a dedicated institution (e.g. library for the blind) they will be able to make the uses foreseen in the specific exception for the disabled. If it is a digital version and it is protected by digital rights management (DRM) systems, the person will need a copy without DRM in order to be able to make an accessible copy. The publisher is not under any obligation to supply the unprotected electronic copy but some countries have included provisions in their laws so that the exception continues to apply. However, if the publisher provides a digital copy under contractual terms these provisions do not apply. Publishers would need to adapt their contracts with authors and end users in order to cover such uses as well.

The following uses are permitted for the sole benefit of people with a disability by virtue of the exception to the right of distribution in article 5.3(b) and Article 5.4 of the Directive 2001/29:

- making a reproduction of the work;
- communicating the accessible version to the public (it applies only if the disabled person can not access it otherwise);
- delivering the accessible version online and posting it on a secure and closed network;
- distributing the accessible version.

Furthermore, the conditions for this exception to apply are:

- use non-commercial in nature;
- direct link to the disability;
- special cases;

- absence of conflict with a normal exploitation of the work;
- no unreasonably prejudice to the legitimate interest of the right holder;
- it does not apply to databases.

Situation B

Publishers make the necessary adaptation to the file at the production stage (e.g. tagging) so that an adapted version is created at the outset. In this case, there is no need for the specific exception for the disabled (Articles 5.3(b) and 5.4 of Directive 2001/29) to apply because accessible content is already provided. The rationale for the application of that particular exception disappears and only the remaining exceptions, which are not specific to people with a disability, might apply. Publishers would also need to adapt their contracts with authors and end users.

Another relevant issue to be considered is **enhancing cross-border access to accessible content for reading disabled**. Improved cross border access can be pursued firstly by **encouraging publishers to invest in accessible content and develop a market** for this group of customers in the future. Secondly, by **developing a network of proper functioning trusted third parties** in all European countries.

3. THE WAY FORWARD: ACCESS THROUGH TECHNOLOGY AND TRUSTED INTERMEDIARIES

KEY FINDINGS

- Many **initiatives** are in place **to make content available** to VIPs; **technology** has been **instrumental in shaping solutions**.
- **Advances in technology** and **new publishing partnerships** have made it possible to **produce the same book at the same time in a format that everyone can read**.
- Technology has set the conditions for **publishers to join “trusted intermediary” schemes** to make digital content available in **secure conditions** for **conversion**; relevant **files are held by a “trusted intermediary”** and **used to produce accessible format books** for sale to bookshops, libraries, schools or individuals.
- Solutions for providing access to works for visually impaired persons are made possible by technological responses, which in some cases secure a basis for further initiatives, involving third parties: **“access through technology”** and **“access through trusted third parties”**.
- **Digital technology** offers the opportunity to use the **same source files** to create a **range of formats**.
- Technology allows **converting inaccessible printed texts, publishing e-books** which are **accessible to VIPs** and **improving the quality, ease of manufacture and distribution of accessible works**.
- The **main formats** commonly used with regards to **accessibility** are: **printed paper, printed Braille, audio (Wav), ASCII text, HTML, XML, multimedia packages**.
- **Audiobooks** are recordings often **reproducing commercial printed material**; they are distributed in **various formats, analogical and digital**. Only recently has European legislation addressed a distortion by **allowing audiobooks** (on physical supports) **to be applied reduced rates of VAT** like printed books.
- **Clear- and large-print** use **larger fonts** and **stronger contrasts** to make books more legible; **large-print editions** of some current works are **published simultaneously with regular editions** and **many libraries have dedicated sections**.
- **XML**, a set of rules for encoding electronic documents, **allows the production of a series of accessible formats**, among which **ePub**, an increasingly popular **e-book format**, and **DAISY**, a system for creating **extremely versatile audiobooks**.
- In the absence of purely technological solutions, the ideal way forward is to have **publishers make their content accessible through trusted third parties**; to this end, several **national publishing associations collaborate with trusted organisations helping print impaired people**.

- In parallel with a number of national cases, a few **European initiatives** have been undertaken in the field, such as the **EUAIN** and **ProAccess** projects.

Indeed, despite some difficulties and the need to strengthen and widen accessibility to works for the visually impaired, **a series of initiatives have already been put in place that go in the right direction, with the collaboration of many stakeholders, including publishers.**

As mentioned before, **technology has been instrumental in shaping the solutions** that have been enacted so far, both directly and indirectly. Although it can in some instances open way to some problems, in fact, technology is not in itself a problem. **It is, however, necessary to consider how technology is or could be used**, as that is what determines its role as an enhancer or an obstacle.

The development of the **information society** and the increasing spread of **digital content** both on the internet and otherwise have opened huge **opportunities to make material accessible** to all categories of users. Technological developments also allow to significantly **enhancing the services provided by those assisting visually impaired people.**

Advances in technology and **new publishing partnerships** mean that it is possible now to **produce the same book at the same time in a format that everyone can read.** It is in fact possible to publish formats such as large print or audio and ensure that booksellers know they are available; and also license the work to a specialist audio or large print publisher, preferably with a view to simultaneous publication in all formats. It is possible to use “on demand” printing companies to produce other formats; this is already happening with large print publishing.

Finally, **technology has set the conditions for publishers to join “trusted intermediary” schemes.** Publishers make their digital content available in **secure conditions** for conversion to an XML file; the XML format is crucial because it uses “tags” to identify the various types of data in a file (more about technological aspects in the following section). These **files are held by the “trusted intermediary” and used to produce accessible format books** for sale to bookshops, libraries, schools or individuals.

Thus, solutions for providing access to works for visually impaired persons are made possible by technological responses, which in some cases secure a basis for further initiatives, involving negotiations between stakeholders and envisaging a role for third parties. This allows a broad categorization of solutions into **“access through trusted third parties”** and **“access through technology”.**

3.1. Technology for accessibility

It is worth exploring more into detail the **role of technology** in this field. **Digital technology offers the opportunity to use the same source files to create a range of formats.** This means there is enormous potential for the **integration of “mainstream” and “specialist” publishing.** This could allow new business models which would lead to: more titles becoming available; publication in accessible formats at or close to the date of original publication; the prospect of a revenue stream for authors and publishers.

Technology can provide solutions to the needs of visually impaired people mainly in three ways:

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- **visually impaired persons can take an inaccessible printed text and convert it to an accessible text**, for example by using Optical Character Recognition (OCR) technology and scanning devices in order to obtain access to the text using a screen reader or an electronic Braille display;
 - by **facilitating the publication of e-books and other digital media** that provide accessibility for visually impaired people as well as those without an impairment;
 - by **improving the quality, ease of manufacture and distribution of accessible copies** made by non-profit bodies for visually impaired people and also to improve the ease of use by visually impaired people who receive the copies so made.

In each case, though, right holders will have a **legitimate interest in** either **ensuring that technological developments do not also make it easier to use protected material illegally** or, if that is not possible, in developing security measures that can be used with new technological developments to prevent illegal activity.

The **main formats** which are commonly used in processes and interactions with supply chains with regards to accessibility, as resulting from careful consideration of specialist organisations, publishers and users, are:

- printed paper
- printed Braille
- audio (Wav)
- ASCII text
- HTML
- XML
- multimedia packages

We have already briefly introduced the Braille language in the first chapter; it is a special alphabet that can be read through fingertips touch and it offers the same flexibility as print does to a fully sighted person. Here we will give a few details about some of the other formats we just mentioned.

3.1.1 Audiobooks

After Braille, the next development in the field of accessibility was that of **audiobooks**, which originated from the United States Congress in 1931 and became popular thanks to advances in recording and the use of voice actors. An audiobook is a recording that is primarily spoken word; it is **often based on a recording of commercial printed material**, but it is not necessarily an exact audio version of a book. **Audiobooks are distributed on CDs, cassette tapes, downloadable digital formats** (e.g., MP3 (.mp3), Windows Media Audio (.wma), and Audible (.aa)) **and in digital formats**.

In 1931, the US Congress established the talking-book program, which was intended to help blind adults who couldn't read print. This program was called "Books for the Adult Blind Project." The American Foundation for the Blind developed the first talking books in 1932. By 1935, after Congress approved free mailings of audio books to blind citizens, the Books for the Adult Blind Project was in full operation. In 1992 the National Library Service for the Blind and Physically Handicapped (NLS) network circulated millions of recorded books to more than 700,000 disabled listeners.

While music fans rapidly accepted CDs, audiobook listeners were slower. Also, it was not until cassette players were replaced by CD players in most automobiles that this format eventually took hold. **With the advent of the internet**, and especially of broadband

technologies, new compressed audio formats and portable MP3 players, **the popularity of audio books has increased significantly**. This growth has been reflected with the advent of audiobook download subscription services.

Focusing on the European experience, it is worth here mentioning how until a few months ago **taxation rules in the EU tended to disfavour audiobooks** with respect to printed books, thus creating a discrimination that affected directly the visually impaired persons. In fact, whereas according to the norms on VAT printed books have always been allowed to enjoy a reduced rate (an indeed 25 out of 27 Member States apply a reduced or super-reduced rate to printed books), audiobooks had to be taxed at the standard rate until the adoption of a new Directive in May 2009.

The process to get to this important result was quite difficult. In July 2008, the European Commission adopted a proposal for a Council Directive amending Directive 2006/112/EC as regards reduced rates of VAT (COM(2008)428). This proposal included some technical drafting adaptations, to allow, among others, reduced rates for audiobooks, CDs, CD-ROMs or other physical supports that predominantly reproduce the same information content as printed books.

The course of the proposal was particularly controversial, and during the many months of discussions there was the risk that the provision regarding books was dropped, especially in the first months of 2009. In that occasion, the Federation of European Publishers (FEP) and the European Blind Union (EBU), which had given impulse to the inclusion of audiobooks in the Commission's proposal, resumed vigorously their advocacy campaign in order to avoid the risk of having this discrimination perpetuated. The campaign had started following an infringement procedure initiated against Sweden, where audiobooks, quite popular, had been subject to a reduced rate of VAT since a few years before.

Finally, in March 2009, the ECOFIN Council reached a political agreement, which included the provision on books, with the wording "books on all physical means of support". On 5 May the Council of the European Union adopted the **new Council Directive 2009/47/EC**, which entered into force on 1 June. Ever since, **EU Member States are allowed to apply reduced rates of VAT to audiobooks**; FEP and EBU and especially their national members are campaigning for the EU countries to implement the new provisions and thus offer an **economic incentive to access to works by visually impaired persons**.

3.1.2 Printed paper: clear print, large print

Using 12- or 14-point text in a medium or bold weight, and ensuring a strong contrast between the text and its background, make books more legible and accessible to many people who struggle with smaller font sizes. This is what is commonly defined as **clear print**.

Large-print (also large-type or large-font) describes a type of book or other (paper, online or otherwise) published material in which **the typeface (or font), and sometimes the medium, are considerably larger than usual**, to accommodate people who have poor vision. Large print should use a clear font in a medium or bold weight and have an uncluttered design with good line spacing. Particularly among librarians, large print is defined as print that is at least 16 point in size. Often, public special-needs libraries will stock large-print versions of books, along with versions written in Braille.

Large print book publishing in English began in 1964 in Leicester, UK, when Frederick Thorpe, a retired book and magazine distributor, decided to meet the needs of elderly poor-sighted readers by reprinting older classic books in editions about twice the physical size of the original book. These editions met the need but were difficult for frail elderly readers to handle because of they were oversize. In 1969 Thorpe's company, Ulverscroft, began to retypeset the books in 16 point type and print them in normal-sized bindings. This change greatly increased the acceptance of large print in public libraries.

Today large print editions of some current books are published simultaneously with regular print editions by their publishers; many, if not most public libraries in the English-speaking world have large print sections and most bookstores do carry some large print editions.

In recent years, new portable e-readers have come to handling talking books in a wide variety of formats, including DAISY (see below), MP3, text only, and many others. New technology has the ability to alter the size of the font automatically.

ReadHowYouWant is one of the leaders in developing this technology; it works in partnership with publishers to make books available in all formats all around the world. This includes specially designed fonts for dyslexia, macular degeneration and line tracking problems.

3.1.3 XML

XML (Extensible Markup Language) **is a set of rules for encoding documents electronically;** it is defined in a series of specifications, all **based on fee-free open standards.** Advances in digital technology mean that **once a properly structured master file has been created (ideally in XML), a whole range of accessible formats can be easily produced from it.**

XML is one of the main bases upon which e-books are produced; accessible e-books are particularly useful for a growing minority of people. For example, access technology (computer software) can convert accessible text into audio or Braille. For example, **XML is used for the ePub** (electronic publication) **e-book format,** which is **one of the formats that make it easier to create accessible versions** and is becoming **more and more popular among publishers.**

ePub (also sometimes EPUB, EPub, or epub) is a **free and open e-book standard,** by the International Digital Publishing Forum (IDPF). Basically, EPUB internally uses XHTML or DTBook (an XML standard provided by the DAISY Consortium) to represent the text and structure of the content document, and a subset of CSS to provide layout and formatting. Cascading Style Sheets (CSS) is a style sheet language used to describe the layout and formatting of a document written in a markup language. It can be applied to any kind of XML document, and it is designed primarily to enable the separation of document content (written in HTML or a similar markup language) from document presentation, including elements such as the layout, colors, and fonts. This separation can, among others, improve content accessibility. CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. XML is used to create the document manifest, table of contents, and ePub metadata.

Digital Accessible Information System, or DAISY, is a means of creating **digital audiobooks for people who wish to hear - and navigate - written material presented in an audible format**; many such listeners have print disabilities, including blindness, impaired vision, dyslexia or other issues.

Using DAISY, a talking book format is presented with enabled navigation within a sequential and hierarchical structure consisting of (marked-up) text synchronized with audio. DAISY is an open international standard for accessible multimedia based on XML; it is developed by the DAISY Consortium, set up by not-for-profit organisations from around the world serving visually impaired and dyslexic people.

DAISY assists people who, for different reasons, have problems using regular printed media. DAISY books have the benefits of regular audiobooks, but they have also important extra features. A DAISY book in fact is a set of digital files that includes:

- one or more digital audio files containing a human narration of a text;
- a marked-up file containing some or all of the text;
- a synchronisation file to relate markings in the text file with time points in the audio file;
- a navigation control file which enables the user to move between files while synchronisation between text and audio is maintained.

As a result, DAISY books allow the visually impaired listener to navigate - for example - an encyclopaedia; this is impossible using conventional audio recordings because they lack search and navigation features and they require linear listening. While reading a DAISY book, a reader can go to the next or previous page, chapter or sentence. It is possible to search, browse, book-mark and retrieve.

DAISY books can be heard on standalone DAISY players, computers using DAISY playback software such as AMIS, mobile phones, and MP3 players - with limited navigation. DAISY books can be distributed on a CD/DVD, memory card or through the Internet.

* * *

It is clear how **technology can provide numerous solutions** to the problem of accessibility. As we have seen, though, **technology also gives rise to threats to rightholders** due to **potential illegal uses** that can seriously undermine the returns on investment of the creation of copyright works, books included. These threats are not just theoretical: the music industry has been the first to experience widespread illegal use of its protected material as a result of technological advances, and other sectors are being affected as well. Book publishers are aware of the damage that can be caused to their industry by those engaged in illegal and widespread dissemination of protected material over the internet. The solutions mentioned hereafter illustrate important **cases of good practices**, since they take into account this aspect and therefore **enhance accessibility to works for visually impaired persons while at the same time securing respect of copyright laws and thus protecting the legitimate interests of rightholders**.

3.2. Developing a European network of trusted intermediaries

In the absence of accessible/adaptable books, publishers should be encouraged to make their content accessible through trusted third parties. To this end, they should either permit the trusted party to digitise the book and make it available, against

remuneration if jointly agreed, to reading disabled persons within extranets, or they should be providing the electronic file which has been used by the printer, to facilitate access to reading disabled persons within extranets. The same applies to electronic books which would be published in a non-accessible/adaptable version; the publishers should be encouraged to provide the electronic file to a trusted third party, which in turn will provide access to reading disabled persons within extranets.

Several national publishing associations are already collaborating with trusted organisations helping print impaired people to make their works accessible. Others are in the process of setting up collaborative schemes. For example, in the UK the Publishers Association, the Publishers Licensing Society and some major publishing houses have developed a pathfinder project with the Royal National Institute of the Blind (RNIB). In the Netherlands, the Nederlands Uitgeversverbond (NUV) has a longstanding agreement with Dedicon, a Dutch organisation that produces and distributes content in alternative reading formats. In addition, a number of initiatives at the European level have been undertaken as well.

3.2.1. Examples of trusted intermediaries and voluntary arrangements at national level

The Netherlands

There have been arrangements in The Netherlands between the umbrella associations representing publishers on the one hand and libraries for the blind on the other since 1985. The main principle of the agreement is the will to cooperate in an environment of mutual trust. On the one side, print impaired people depend on the service provided by the Libraries for the Blind and on the other side, publishers aim to minimise the chances of abuse especially in view of a growing audio book market. Cooperation has been possible thanks to a flexible and efficient system where the publishers facilitate the conversion and delivery of the files at low or nearly no cost and the Libraries for the Blind offer secure and closed distribution channels where the visually impaired can benefit from the works.

After the implementation in the Dutch law of the 2001/29 Directive in 2004 and the new exception for disabled, the situation has not changed much since the system in place was already providing the mechanisms to provide accessible content in a more effective form as to what is foreseen in the statutory exception.

According to the last agreement, Dedicon Netherlands (Library for the Blind) is responsible for the production and conversion as well as selling and rental of general texts, e-books and specialised literature required in a study programme or a profession. A new body representing public libraries, including libraries for the blind, will deal with the registration system for the visually impaired, still maintaining the system of a "closed network". However whether the visually impaired orders books from a public library or from this new body, all orders will be centralised in Dedicon who will contact the publishers to receive the content. The Dutch experience proves that legislation is not necessary to improve accessibility, since over the last 25 years the number of registered users has been no less than 30.000 and a total of 50.000 audio book titles have been made accessible so far.

The United Kingdom

A plurality of publishing houses and organisations making accessible formats have been active in the UK for years in the area of accessibility for visually impaired. Furthermore, many activities are ongoing in the UK to improve accessibility such as a set of guidelines

that have been issued by the Publishers Association for its members to answer permission request on behalf of visually impaired. .

Another important development has been the setting up by the Department for Business, Enterprise and Regulatory Reform of a feasibility project involving the RNIB, the NLB (now absorbed by the RNIB), publishers and relevant associations such as the Publishers Licensing Society and the Booksellers Association. The project's main goal is to assess how to increase the number of published material made available in digital form and then converted into the necessary accessible format. It analyses whether the number of books accessible in audio book, Braille, electronic, and large print formats can be increased if publishers provide trusted intermediaries (such as the RNIB) with the electronic files. The project will include looking at how to make these accessible works available through mainstream shops, existing distribution methods and new online services. The project will be followed up by pilots projects in the areas of (i) a trade book pilot (ii) A text book Central service pilot (iii) a central clearing service for improving access to books in higher education (iv) plan to increase the production capacity of the RNIB (v) bring convergence in the use of XML .

France and Germany

In order to support the further development of adapted publishing in France, INJA and Brailletnet have worked, in close collaboration with the French Publishers Association to the preparation of a unique model contract (which has been validated by the Board of the SNE in 2003). This framework agreement is meant to be an instrument for all publishing houses concerned by a request to provide digital files for a transcription in Braille or an adaptation in large letters, possibly including cross-border exchange of files.

An initiative to facilitate adapted content in Germany has been the agreement signed between the German National Library (Deutsche National Bibliothek), the Boersenverein des Deutschen Buchhandels and the German group of the International Federation of the Phonographic Industry (IFPI) allowing the National Library to give beneficiaries of statutory exceptions, such as visually impaired, access to DRM protected works. The visually impaired can, at request, make a copy of a work without DRM protection for his or her personal use.

Italy

Since 2001, a framework agreement is in place between the Italian Publishers Association (AIE) on one side and the Italian Blind Union and the Biblioteca dei ciechi di Monza (specialised library linked to the Italian Blind Union) on the other side. The AIE has committed itself to raise awareness of the needs of people with visual disabilities within the publishing community and to promote collaboration between publishers and the Biblioteca dei ciechi di Monza in order to improve in terms of efficiency and time-consumption the production of accessible versions. The AIE could also provide expertise to achieve this result and act as a single point of contact to define the general rules in this area.

Belgium

In Belgium, the Publishers Association in Flanders (VUV) is in the process of negotiating a Memorandum of Understanding with a representative organisation of dyslexic people, with the aim of making available converted teaching material to be used via special computer software. The system works through a Trusted Third Party (Die's-lek-ti-kus vzw, working together with Probraille Hellen Keller – PHK vzw), which is liable for any misuse.

The memorandum has not been signed formally; but teaching material is currently being converted on a quite large scale, under the (albeit indirect) supervision of publishers and in full respect of the Belgium legal provision for the benefit of disabled people. All income from the making available of the aforementioned works is transferred, for the time being, to a blocked bank account, since no remuneration deal has been developed yet with the TTP.

3.2.2 European projects

It may often be easier to develop technological solutions to meet the needs of visually impaired people without meeting the needs of publishers and other rightholders or vice versa. Technology developers therefore have the challenge of accommodating all these needs and therefore need a full understanding of the different perspectives. **Sharing information about current accessibility technology, standards and security technology as well as co-operation between all stakeholders to make sure that developments and improvements in these areas are compatible with each other** could therefore be useful. This sort of collaboration could enhance the likelihood that technology will facilitate any other initiatives to address copyright barriers and the needs of visually impaired people. This information sharing and cooperation could be facilitated by Governments at national level; **the EUAIN Project is a good example of how this sort of collaboration can be enhanced at an international level.**

The **European Accessible Information Network (EUAIN)** is a very successful EU funded project in which FEP participated alongside with EBU, academics and accessible formats producers. The project was established in 2004 by Dedicon, when a **core group of organisations involved in accessible content production** came together on a European level to seek **greater clarity and systematisation** for this field. This was made possible through the European Commission support under the 6th Framework Programme.

During the last 5 years the EUAIN Network has brought together the different stakeholders, including publishers and associations representing people with disabilities, in accessible content processing and sought to **find new ways to mainstream the provision of accessible content.**

The EUAIN Network is the result of extensive preparation in the area of accessible content processing alongside the CEN Workshop on Document Processing for Accessibility (managed by the Nederlands Normalisatie-instituut) and the ProAccess project (co-ordinated by the Italian Publishers Association, see below) which has contributed with industry-level guidelines for this area. Based on this extensive work over, it has been possible to **identify key trends in accessible content processing** that are likely to be of some importance in the coming years.

The first principle is the clear need for **accessibility on demand**. There are many different motivations for wanting to create accessible content: be it legislative requirements, good practice, conformity with national guidelines, commercial imperatives, etc. In a sense the motivation in itself is a secondary consideration: what is required is a **suitably flexible infrastructure to enable on-demand services** to thrive.

The second requirement is for **accessibility to be embedded within mainstream content creation and production processes at the earliest stages**; that is, **accessibility from scratch**. This principle can be captured by considering the move from accessible content processing to adaptive content processing. In order to build extensibility

into a system, the architecture should be such that every element used for processing the information is adaptable. This can be achieved by creating a representation layer which builds an object oriented structure from the information and which is free to adapt the meta relationships and hierarchies intrinsic in that data genus. This is defined by identifying the parameters upon which the structure is built, and ensuring they are interconnected in such a way that promotes future adaptability without degrading the system: which is to say, using the right parameters for adaptive content processing.

In synthesis, **EUAIN provides support, tools and expertise to enable the provision of accessible information**. One tool developed by the EUAIN Network is the **Demonstrator**: this has been set up in order to illustrate the potential of accessible publishing, whose concepts underpin the EUAIN project. The Demonstrator can be used for producing different output formats on-demand, from the same well-structured input file.

As a roll out of the EUAIN Network, another successful project has been developed (which is still ongoing) under the name of **ProAccess**. This is a “**network of networks**” project funded under the Digital Literacy strand from within the eLearning strand of the Commission. **Improving accessibility of educational material for visually impaired people** is the main pillar of the ProAccess project.

This project aims at providing publishers and intermediaries in the e-learning value chain (libraries, schools, charities and associations devoted to impaired people) with practical guidelines and instruments for the production and use of accessible content in a more effective way both from the productive process and copyright standpoint.

Within the framework of the EU project ProAccess a set of **guidelines** have also been developed to **help the drafting of contracts between rightholders, intermediaries and final users**. These guidelines aim to provide operational instructions to publishers, producers or other content providers of works in accessible format for the purpose of acquiring works in accessible format and making them available to disadvantaged people, also through libraries and other institutions, in compliance with legal and contractual rules on intellectual property rights.

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT CITIZENS' RIGHTS AND CONSTITUTIONAL AFFAIRS **C**

Role

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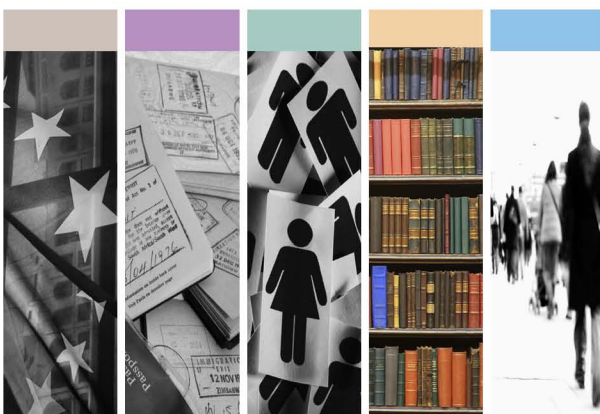
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