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## E-reading for disabled persons: The French Digital Library for the Disabled (Bibliothèque numérique pour le handicap – BnH)

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### RÉSUMÉ

*L'accès à la culture et à la lecture, facteur important d'intégration dans la société des personnes en situation de handicap, est une priorité affirmée des institutions publiques. La loi du 1er août 2006 relative au droit d'auteur et aux droits voisins dans la société de l'information (transposition d'une directive européenne de mai 2001) prévoit une exception au bénéfice de ces personnes afin de favoriser leur accès aux oeuvres.*

*Les institutions publiques locales et les représentants de la société civile se sont donc mobilisées pour mettre à disposition des personnes handicapées l'information et les oeuvres de l'esprit.*

*L'objectif de la Bibliothèque numérique pour le Handicap, créée par la ville de Boulogne-Billancourt (région parisienne) en 2005, est de permettre à toute personne confrontée à un handicap d'emprunter un choix d'oeuvres littéraires numérisées. Elle repose sur la conviction que l'édition numérique est le moyen d'accès à la lecture le mieux adapté aux personnes en situation de handicap.*

*L'intérêt de ce projet unique en France repose sur l'innovation technologique, la recherche de partenariats multiples et le souci constant d'évaluation.*

*Cette intervention comprend une démonstration technique de la BnH et présente le modèle économique choisi dans le respect de la réglementation européenne et française pour le droit d'auteur.*

### ABSTRACT

*Reading and access to culture are an important part of the social integration of disabled persons and the French State has recognised this as a priority area. The Law of 1 August 2006 on Copyright and Related Rights in the Information Society (transposition of a European directive of May 2001) makes an exception for this sector of the population to facilitate their access to written works.*

*Therefore the local public institutions and representatives of civil society have joined forces to ensure that information and cultural works are made available to disabled persons.*

*The aim of the Digital Library for Disabled Persons (which I will be referring to as « BnH » throughout the rest of my presentation), a project launched by the City of Boulogne-Billancourt (in the Greater Paris region) in 2005, is to allow all those faced with a disability to borrow a choice of digitalised literary works. It is based on the belief that digital publishing is the most suitable means of access to written works for disabled persons.*

*The strength of this project, which is unique in France, is based on technological innovation, a solid support system thanks to the involvement of multiple partners, and constant evaluation.*

## OUTLINE

In today's presentation I will tell you a little bit more about this **project**, where it comes from and what its specificities are ; I will attempt to show you **how it works** through a demonstration and then talk to you about the **evaluation process** which opens up to new perspectives.

### I. THE PROJECT

Let's have a look at its original philosophy, then the genesis of the project, which is a very telling story, and finally the many partnerships involved. But first I will give you some contextual elements regarding digital books and disabled persons in France.

#### 1. Contextual elements

Copyrighted audio and digital books are scarce in the French market.

Digital books still very much depend upon their means of distribution and upon the users reading habits. E-books have been unsuccessfully commercialised for the first time in 2002. Since then the technology has evolved and we appear to be on the brink of a new attempt at commercialisation. Still, as of yet, French publishers haven't developed much of an offer : only 3000 fiction and non-fiction digital books are presently available. It should be noted though, that this number will increase exponentially when the French National Library completes its online digital library, Gallica2.

As far as the audio book market is concerned, it increases slowly and barely represents one percent of the book selling market ; with about 20 publishers only half of which are present in bookshops. In that case the Internet has clearly been identified as a key media to circulate those books.

The Law of 1 August 2006 on Copyright and Related Rights in the Information Society is likely to change a lot of things concerning disabled persons and reading. Not only will it allow a certified number of operators to freely transcribe books in order for them to be available to disabled persons, but it will also make publishers give their source documents when asked.

The decrees concerning this « exception for the disabled » should be published by the end of the year 2008. The whole system will revolve around the French National Library.

Culturally speaking, France is reluctant to segregating users, thus no « National Library for the disabled » as such has been developed.

So far two types of digital library exist :

- Digital libraries for all users which make an effort to be accessible by offering files in text mode (instead of image) and complying with Internet accessibility criteria. The French National Library Gallica II is the prime exemple.
- Digital library for disabled persons which offer adapted files in structured formats (such as the DAISY format) as for instance the Helene Library set up by the Braille Net association.

BnH specificity is, as we will see, a mix of these two types of digital libraries.

#### 2. Philosophy

I would like to start with a quote from one of the project's partners, Philippe Denormandie, who works for the Paris Public Hospital Network "Mission for the disabled".

He said, and I quote, « I believe that the important message is to explain that the BnH project has nothing to do with charity work, and that disabled persons are not some kind of second class group of citizens that would require free books where the others have to pay.

This library will offer an access similar to that of a traditional library with a registration process, rights and duties for the user and proper remuneration for the publisher. »

Those words relay well the philosophy of a project aimed at disabled persons though under regular copyright legislation.

In the case of books and reading it implies that disabled persons are to be able to have access to the same ressources as anybody and not to a selection of ressources adapted for them.

And indeed the BnH works just like a public library, purchasing digital books in the marketplace to propose them to its readers. Any person with any form of disability, wherever they live in France, can register. The library members then consult the works by downloading them via the Internet, using basic IT equipment and free reading software.

So what is BnH ?

A [public service](#), settled so to speak, within the walls of a classic public library in the city of Boulogne-Billancourt.

An [adapted access to books vs an access to adapted books](#)

An [innovative project](#), relying on ICT

An [economically sustainable project](#) which respect the rights of authors and publishers

It is also, as we will see later on, [a multi-partner project](#) and [a project under constant evaluation](#)

### 3. History

Two previous projects led to the BnH. The first project launched by the public Library of Boulogne-Billancourt (greater Paris region, 110 000 inhabitants) was a lending service of electronic book reading devices, called Cybook, which began in February 2002. This project attracted mainly older people who were avid readers, and visually impaired persons. It didn't last long for the company behind the Cybook stopped its activities a few months later but the experience encountered an audience.

The second project was set up in partnership with Mobipocket, a company specialized in the distribution of digital books, to launch a library of digital books that members could borrow for two weeks.

In 2004, at the request of ALIS (Locked-In Syndrome Association - a condition in which a patient is aware and awake, but cannot move or communicate due to complete paralysis of nearly all voluntary muscles in the body), the digital library set up a partnership with the association for ALIS members to be able to access the library. This partnership was the seed for a national digital library for disabled persons.

Alain Patez, the librarian whose idea it was to develop an offer of digital books, didn't at first have in mind that this service could be of a special interest for disabled persons.

What happened is that occupational therapists and people from the Locked in Syndrome association took notice of the digital library and contacted the librarian, explaining to him that it was a unique chance for persons with a motor disabilities to have access to books.

Hence from the very beginning the BnH could rely on the knowledge and the knowhow not only of librarians but also disability specialist and disabled persons themselves.

Noticeably these associations which took an early interest in what would become the BnH, and who formed its core working group, were all representing persons with a motor disability.

The next stage, in 2005, was to shape and develop the BnH in collaboration with Paris Public Hospital Network "mission for the disabled" which choose the BnH as one of its research subjects. That partnership added a layer of *scientific* expertise to the group that would turn out to be of importance regarding the evaluation process.

Eventually the project was brought in front of the city elected representatives who approved the project.

In early 2006 the BnH was launched under the supervision of a steering committee including representatives of various disabled persons associations (by that time visual and mental impairment associations had joined the group).

### 4. Partnerships

To give you a clearer picture of the various partnerships the BnH relies on we can group them under three types :

- French public authorities : the City of Boulogne-Billancourt (greater Paris area), the Paris Public Hospital network (AP-HP) which Raymond-Poincaré Hospital in Garches is a part of.
  - Disabled persons associations : all types of disabilities (motor, visual and mental) are represented.
- Private companies, acting as commercial partners for example the digital content provider Numilog, which also runs the BnH technical platform, Mobipocket (concerning software), or as corporate

sponsors such as Hewlett Packard France.

## II. HOW IT WORKS

I'm now going to tell you a little bit more about how it works :

- what resources are offered to the users and in which formats
- how much does the BnH cost on a yearly basis
- who are the users and in what conditions do they have access to the BnH

Finally, I will show you how to borrow a digital book from the BnH.

### 1. Collections and formats

The BnH is not about offering just any document as long as it exists in a digitised format. The BnH is first and foremost a Library, therefore it has developed an acquisition policy. The collections, a selection of audio and text books, protected by Digital Rights Management (DRM) devices are bought through a digital content provider who negotiated the rights with the publishers.

It offers recent as well as classical books, 55 % fiction and 45 % non fiction. The youth sector is still underdeveloped due to the lack of offer.

There is a total of 1330 titles available with 5 to 10 simultaneous access per title, which represent 7000 copies that can be borrowed/ downloaded at the same time. 1120 of these titles are written books, 210 are audio books.

The books are available in three formats: PDF, PRC and WMA. PDF (Portable Document Format) can be read with JAWS (Job Access With Speech), a popular screen reader for Windows used by 80% of blind people. PRC (Palm Resource) is intended for PDAs and smartphones. For both formats, the library user can scroll down the book automatically - unlike a print book, there is no need for outside help - and can also choose a larger character font to read the text. The books can be read on any electronic device: desktop computers, laptop computers, PDAs or smartphones. The audio books are available in WMA (Windows Media Audio), to be listened to on a computer using Windows Media and Real Player, and on any WMA portable device. These books are read by actors, and sometimes even the authors, not by text-to-speech software.

### 2. Costs and funding

The global cost is of 50 000 €a year. The main *cost areas* are :

- staff cost which amounts to one full time equivalent
- technical costs : running the technical platform ;
- collections costs : 15-18 €per digital book, 15 000 €annual budget.

The city of Boulogne-Billancourt and The French Association against Muscular Distrophy (AFM) for 25 000 €each are the main contributors.

### 3. Users

The BnH is open to any disabled person (provided they submit a written proof of disability), living in any location (in metropolitan France for now). The handicap can be permanent or temporary, such as a stay in a hospital.

Users can be individuals or collectivities such as libraries or specialized institutions (such as Garches). Specialised institutions bring the added bonus of offering a very much needed mediation between the BnH and its public. They can inform them of its existence, they can bring technical support and knowhow, they can also provide complementary reading equipment such as infra-red camera and virtual keyboard for locked-in syndrome sufferers.

There are presently about 400 registered users 40 % persons with motor disabilities, - 47 % persons with visual disabilities.

### 4. Demonstration

**The homepage** describes the registration and lending rules.

*Registration* was free at first but the city asked for a subscription fee, as a fee is applied to all users of the public library.

Registration remains free for people under 18 and people who live with less than the minimal

income.

For the others the amount of the subscription varies whereas the user is an inhabitant of the city of Boulogne. It runs from 8 to 15 €a year. As for collective users the fee varies depending upon the number of simultaneous access they are allowed from 20 to 50 €a year.

*The lending rules* are the same as that of a regular library : users borrow books by downloading them and either return them or can no longer read the files after a month. They can borrow up to 5 documents simultaneously.

The « **mode d'emploi** » page which could be translated as « user's guide » gives details on keyboard equivalents and how to use the catalogue.

The site gives to access to the **catalogue** in its main menu bar, through « catalogue » and through « recherche » (research).

The « catalogue » page proper is an alphabetical listing showing the book covers and some minimal informations. On the left column the option to sort resources out by format, title, author, keyword or theme.

Clicking on the cover leads you to a more detailed presentation of the book which allow you to read or listen to an extract. You don't need to be a registered user to do that.

The « research » page is a fairly typical advanced research page.

In order to borrow/download the books the users need some specific free software : the « **avant d'emprunter** » (before borrowing) page links to the three softwares required to read the three formats used by the BnH : PDF (Adobe), PRC (Mobipocket Reader), and WMA (Windows Media Player).

I will now show you how to borrow a digital book from the BnH.

#### Text book demonstration : PDF

First I'm going to choose my book from the catalogue.

I select the format and the theme. Today I want to read a law book in PDF. [sélection du format] PDF [sélection d'un thème] : droit

I choose to borrow the book about the French regulation on accessibility. Notice that the tag says « **Empruntez** » (Borrow) and not download. This is in line with the BnH policy but it has proved confusing to some users more familiar with the Internet than to with public libraries.

In order to borrow this book I now need to fill in my id and password.

I now access to a screen where I am offered to choose between downloading the book or reading it online. I download and save it on my laptop.

Then I go and open it...

#### Audio book demonstration

Let's go back online to now choose an audio book. **The proceedings to select the format and the theme are the same as for the PDF format.**

Being already registered the server recognises me and doesn't ask for a second identification but you can see that along with the audio book description I am given a licence number : this number will later allow me to read the WMA file and I need to copy it. I then right clic to download and « save under » the file which I can now open with Windows Media Player.

### **III. THE EVALUATION PROCESS**

From the outset all the partners agreed upon the importance of constantly evaluating the efficiency of the BnH. So the project began by an experimental phase lasting one year. Then a Study of Digital Reading for Disabled Persons was launched, known as ELUPHA.

This scientific study revealed both negative and positive aspects.

#### **1. ELUPHA**

ELUPHA aimed to get a better knowledge of the users, to evaluate the advantages of digital reading

for people with disabilities and eventually to ensure an easier access and an easier use to the BnH.

These purposes were achieved through an online questionnaire addressed to a national sample of users and completed by an on-the-ground survey conducted by a team of University students.

## **2. ELUPHA results**

On the downside the study brings out the limited number of copyrighted (that is to say recent) resources available. This is due to the weakness of the French digital book market and is therefore a built-in weakness of the project which is bound to improve with the offer.

More troubling maybe are the technical difficulties. Indeed users often find the use of the various formats and software challenging and the use of DRM and of proprietary technology such as Windows Media Player can prove difficult to handle.

In those regards the study provided technical recommendations to improve ergonomics make it easier to use the BnH.

On the positive side the study showed that the BnH allows its users more independence in the activity of reading, gives them better social integration thanks to access to recent works.

Users value to be able to access the public library remotely and appreciate the flexibility of the lending policy.

## **3. Awards**

The BnH has been awarded prizes from the French ministry of Health on the one hand : winner of the 2006 award for “Action, Innovation, Accessibility” of the ministry for Health and Solidarity; and the city won the 2007 award for “Promotional activity by a regional authority” in the “social” category.

## **CONCLUSION : PERSPECTIVES**

Through its two and half year of existence the BnH kept its experimental spirit and remains a work in progress. Its current challenges are the enrichment and diversification of its collection by developing its offer of youth documents and opening up to multimedia. As recently as last week a deal has been reached which grants free access for BnH registered users to a learning TV.

The creation of a selection committee will reinforce the strength of its purchasing policy.

To face the technical issues the creation of a hotline has been planned.

Yet the best solution appears to be to reinforce the partnerships with hospitals and specialized institution which can offer the proper mediation to potential BnH users and are ideal places to experiment new services such as in the Garches hospital exemple. My colleague Claudie Guérin will present it later.

Thank you for your attention.

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## **TO FIND OUT MORE**

About BnH :

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About books and disabled persons in France :

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