



## Case Study *January 2007*

Community-Based Learning Opportunities for Persons With Disabilities, Winner, 2006

# The CNIB Digital Library: Making Information Accessible to Visually Impaired Persons

### At a Glance

- The CNIB, in partnership with Microsoft Canada, developed a digital library to provide visually impaired Canadians with instant access to information.
- The Children's Discovery Portal is the world's first Internet portal for children who are blind or visually impaired. It offers them a safe "online" environment in which to chat with peers and access a virtual library.
- The technology is available to libraries around the world serving people who are blind and print disabled.

### OVERVIEW

**T**he CNIB is a national, community-based, registered charity committed to research, public education and vision health for Canadians. Since 1918, the CNIB has provided a wide range of services and programs, including rehabilitation services, blindness prevention, research and public education, to help people with vision loss enhance their independence and enjoy a good quality of life. The CNIB is a source of support, information and hope for all Canadians affected by vision loss.

The CNIB is Canada's largest supplier of innovative products and assistive technologies for people living with vision loss. Today, there are approximately 3 million

The Education and Learning case studies examine outstanding education and lifelong learning programs and initiatives. This case study addresses community learning.

**Name of Program**  
The CNIB Digital Library and Children's Discovery Portal

**Date Established**  
2003

**Skills Developed**  
Literacy, independent living

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Canadians who have a print disability, which prevents them from easily accessing conventional text. To help address this, the CNIB Library, founded in 1906, offers access to thousands of titles in braille, print-braille, talking books, descriptive videos, newspapers and magazines, as well as access to telephone, reference and online services.

- CNIB is Canada's largest producer of alternative format materials and is a certifying body for braille transcription.
- Every year, close to 2 million books and information resources are delivered online or across Canada postage-free from the CNIB Library.
- The CNIB Music Library houses the second-largest braille music collection in the world.

## DIGITAL TRANSFORMATION

In 2002, the CNIB undertook a complete digital transformation of its library infrastructure to offer Canadians the first fully integrated digital library service of its kind. The CNIB embarked on an ambitious nationwide campaign under the banner "That all may read ..." to raise funds for a digital library that would service people across the nation who are blind or living with vision loss. The CNIB worked in partnership with Microsoft Canada to develop the CNIB Digital Library in order to give people instant access to information and the ability to listen to books online or download them onto their computers.

Microsoft Canada committed \$2.5 million to the campaign through funding, consultation and platform development. This included developing the CNIB Digital Library system and its Children's Discovery Portal—the world's first Internet portal for children who are blind or visually impaired. Microsoft Canada designed the platform architecture to manage the digital library, combining some of the world's most complex and advanced digital access and storage systems.

The CNIB Digital Library was launched in 2003. The alternative format library provides thousands of Canadians who are blind or who have a print disability with access to an online environment containing tens of thousands of books, more than 40 newspapers and hundreds of magazines. The Children's Discovery Portal enables youth and children to interact with each other in an inspiring, informative and safe learning environment. The portal opens up worlds of opportunity for these children, giving them the safe access to information previously available only to their sighted peers.

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**In partnership with Microsoft Canada, the CNIB developed the Digital Library to give people instant access to information and the ability to listen to books online or to download them.**

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## OBJECTIVES

The objectives of the digital library are twofold:

1. Create and maintain a digital library for thousands of Canadians who are blind or have vision loss.
2. Create and maintain the Children's Discovery Portal, designed specifically for children who are blind and have a print disability.

## TARGET GROUPS

By enhancing access to books and information, the CNIB Digital Library helps adults and children who are blind or have vision loss to participate fully in the community, at school, and in the labour market.

## ACTIVITIES

The CNIB Digital Library is a web-based interface where clients can read more than 20,000 books and order from the Library's collection of 60,000 titles (audio, text and braille titles available online for instant reading). To date, the digital library has more than 5,000 online digital audio books available, including popular bestsellers.

The CNIB provides direct services to more than 100,000 blind or visually impaired clients. Through its many partnerships, the digital library service has the potential to reach a total of 3 million people who have print disabilities. The CNIB Digital Library is fully bilingual, serving Canadians in both English and French.

## RESOURCES

The CNIB Digital Library consists of two primary applications:

- A digital asset management system and storage repository (back end), which includes a 93-terabyte repository (Digital Handling System) for the secure and permanent storage of the Library's collection, and an Integrated Digital Library System (IDLS) for the coordinated acquisition, production, distribution and preservation of the Library's digital content.
- An accessible Internet service portal (front end) that allows instant access to thousands of books and information resources.

## INNOVATIONS

### ACCESSIBILITY AND ADAPTABILITY

Many sites on the Internet are not set up to work properly with adaptive technologies (e.g., screen reading programs or braille keyboards). The CNIB digital library, however, is designed to meet all accessibility needs. For example, screen contrast can be changed from dark text on a light background to light text on a dark background, depending on what works best for the client. The navigation bar on the CNIB Digital Library can appear on the top of the screen, the bottom, or both, depending on the user's adaptive technology.

## ACCESS AND EASE OF USE

Before the CNIB Digital Library was put into place, clients of the CNIB would order braille or audio books and materials over the phone. They would have to wait days for the materials to arrive in the mail, or be put on a waiting list if copies were unavailable.

Today, the CNIB Digital Library's platform gives all blind and visually impaired Canadians equal access to information. All services, including the CNIB catalogue, external information databases and digital repository of books, are contained in one unified Internet gateway.

- Clients can listen to a CNIB Digital Library talking book directly from their computer, or they can order a copy from the CNIB Library catalogue.
- Clients can read an entire book online or sample a few chapters.

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**Before, CNIB clients would have to order braille or audio books and materials over the phone.**

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## SOLUTIONS AND KEYS TO SUCCESS

The CNIB Digital Library is a state-of-the-art technological solution. By building accessibility into the design, adhering to the W3C Web Accessibility Initiative (WAI) standards and conducting usability testing with adaptive technologies, the CNIB was able to ensure that all new materials were created from a single digital file. From this single file, many formats (e.g., hardcopy or electronic braille, audio, e-text) could be created—making more titles and copies available more quickly and cost effectively than ever before.

CNIB's digital conversions and production of digital audio books also adhere to the international Digital Accessible Information SYstem (DAISY) standard. The use of such standards and mainstream technical solutions ensures that global resource-sharing can take place.

In June 2004, The American Library Association—Association of Specialized and Cooperative Library Agencies presented the Francis Joseph Campbell Award to the CNIB Library for its “pioneering and innovative work in using new technology to achieve equitable access to information to enrich the lives and literacy levels of children and adults with print disabilities.”

## OUTCOMES

The CNIB and Microsoft Canada developed an alternative format library to house tens of thousands of new books, over 40 newspapers and hundreds of magazines. Moving to a digital production platform enabled the library to speed up its book production, provide the opportunity for greater global resource sharing, and improve the quality of books that clients receive.

The Children’s Discovery Portal (part of the CNIB Digital Library) offers children who are blind or have vision loss the opportunity to:

- participate in an accessible moderated chat group—for some, the first opportunity to meet and interact with other children who are blind;
- play online games that have high-contrast resolutions for low-vision users—games that, for maximum accessibility, place greater emphasis on sound than on graphics and animation; and
- access a child-friendly virtual library, including online digital audio books for kids, and enjoy a variety of interactive content.

The Children’s Discovery Portal is considered to be a template for libraries around the world that serve those who are blind or have vision loss.

## IMPACTS AND BENEFITS

The CNIB Digital Library experiences approximately 235 “log-ins” per day. Hundreds of new clients register for the service each month.

It offers clients—adults and children—instantaneous access to information (including books, newspapers, and reference and research materials) that would otherwise take weeks to access.

This service helps adults and children who have vision loss participate fully in the community, school and the labour market. Most significantly, Canadians who are print-disabled are now able to enjoy an equitable level of access to books and information in libraries without having to rely on intermediaries to browse and select for them.

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**This service helps adults and children who have vision loss participate more fully in the community, school and the labour market through equitable access to library books and information.**

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## USE AS A MODEL

The CNIB Digital Library is a global solution that effectively closes the digital access gap among those with sight disabilities.

One of the desired outcomes of building the CNIB Digital Library portal was to make the technology available globally to other libraries for the blind and print disabled in order to avoid the high cost of duplication and to advance the concept of “The Global Library for the Blind.”

In the fall of 2004, the CNIB and Microsoft agreed to provide the back-end digital library technology solution free of charge to system integrators worldwide who operate libraries for blind and visually impaired persons.

The platform is currently being considered by more than 175 international libraries that produce alternative format information.

### Acknowledgements

Our thanks to Jeannie Tsang who provided information for this case study.

### About the Education and Learning Case Studies

The Education and Learning case studies examine outstanding education and learning programs and initiatives. The case studies provide in-depth analysis of the methods used to develop, assess, implement and deliver education and lifelong learning in schools, colleges, universities, workplaces and communities. They focus on goals, activities, resources requirements, achievements and outcomes, benefits, innovations and keys to success and challenges.

This case study addresses the theme of community learning and highlights an award winner from the Community Learning Awards, funded, in part, by Human Resources and Social Development Canada's National Office of Literacy and Learning.

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