



Library and Archives
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Electronic Publishing

Guide to Best Practices for Canadian Publishers

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Introduction

Welcome to the National Library of Canada's Best Practices Manual for online publishing.

In Canada as elsewhere, the nascent field of electronic publishing is confusing and fraught with unanswered questions. What sort of electronic texts are publishers producing? What formats and protocols are they using? Where and how are they distributing their electronic publications once they have created them? What is the market for electronic publications? Are electronic documents being 'deposited' with NLC as traditional print publications have been?

The purpose of this document is to provide publishers with an introduction to the pros and cons of various approaches to electronic publishing. Through the use of hyperlinks, it highlights examples of some of the most creative and efficient uses of new media technology for publishing, and points to sites maintained by organizations that provide resources for online publishers.

As a 'living' electronic document, this manual will respond to the issue of constant change in the field of electronic publishing through regular adaptation and iteration. NLC welcomes your input; if you have specific suggestions for this document, or would like to inform NLC of your own electronic publishing practices, you can contact the Library's staff.

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Part One: Surveying the Universe of Electronic Publishing

Who Wrote This Manual?

This manual was produced by the National Library of Canada, in conjunction with several members of The Commons Group and in consultation with a reference group composed of members of the Canadian academic and publishing communities. The project grew out of the NLC's January 2000 Consultation on Online Publications, a day-long conference whose objective was to provide an informal forum for identifying the key issues that the National Library must address when collecting and providing access to Canadian online publications.

Who Should Use This Manual?

This manual was written for writers and publishers who are relatively new to the realm of electronic publishing, and want to educate themselves about the options that are available to them before they proceed. Though publishers of all sorts will find parts of this document useful, those parties who are already producing print materials and wish to translate their publications into robust electronic versions suitable for a wide variety of applications (including archiving and long-term storage) stand to gain the most use from these pages.

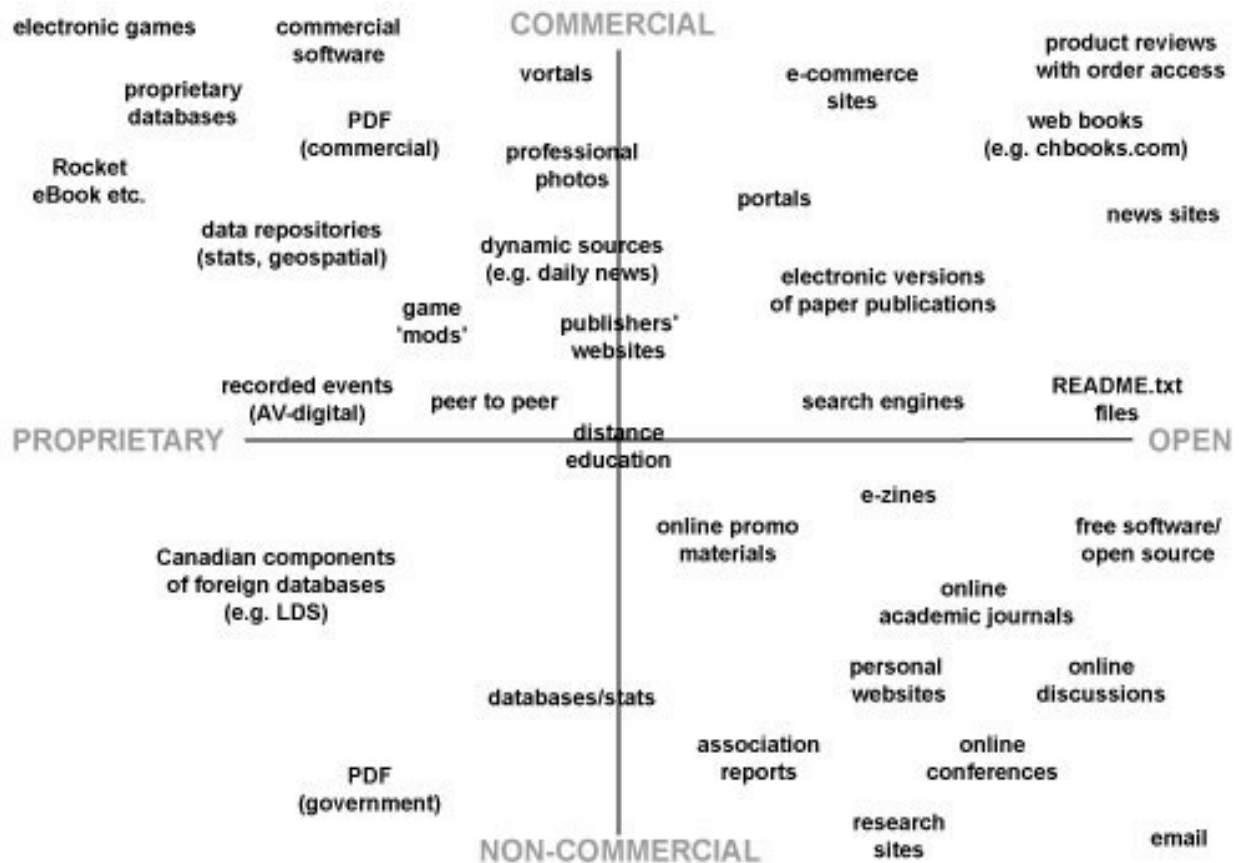
Part Two of the manual, 'Entering the Universe of Electronic Publishing', provides brief but detailed descriptions of the most common formats for electronic publications, along with links to more detailed resources, and the Web sites of publishers who are already utilizing these formats.

Part Three, 'The NLC and Electronic Publications', describes the NLC's mandate for collecting electronic publications, and outlines the various programs that the Library has instituted to facilitate the production, cataloguing and archiving of electronic publications in Canada. Part Three also provides links, email addresses and contact information for those wishing to learn more about these programs, or to reach Library staff directly.

The Universe of Electronic Publications: What's Out There?

The short answer to 'What's out there?' in the world of electronic publishing is 'Everything.' If something can be published in print, it's also being published online, somewhere. What's more, many kinds of publishing that aren't possible on paper or other types of physical media, such as animation, interactive applications and 3-dimensional games, are also happening concurrently.

A few of the many different kinds of online publishing that currently exist appear on the following diagram. There are many ways to conceptualize such a list; this diagram presents a grid that ranges from commercial to non-commercial forms on one axis, and from proprietary formats to standard formats along the other.



Outside of all four quadrants lies the realm of 'Things we don't know about yet', which will probably remain the major category of electronic publications as long as the current rate of innovation continues.

This manual currently deals with a relatively small segment of the online publishing universe, specifically, the portions that are most analogous to traditional print publications. While the NLC is actively interested in collecting all forms of electronic publications, its current electronic collection consists primarily of texts produced by print-based writers and publishers who have begun expanding their activities into the digital realm. In the coming years, the NLC hopes to strengthen its relationships with the producers of digital-only materials, as these materials constitute the majority of what is published electronically. As these relationships grow, the contents of this manual will also grow.

Pros and Cons of Electronic Publishing

Motivations for publishing online are varied and complex.

Before 1994, the Internet was in essence a 'free' medium, characterized by an open sharing of information, without regard to the commercial possibilities of digital publication. The development of the graphical Web browser, combined with the steady increase in access speed, produced a much wider interest in the medium, expanding the user base far beyond the original circle of academics and hobbyists. The first commercial web sites and 'dot.com' companies appeared not long afterward, though many lacked (and still lack) viable business models for making money online. In the late 1990s, the most common approach was 'Let's just get online now and we'll figure the money stuff out later'. Since the spring 2001 downturn in technology stocks, the level of interest among commercial enterprises for all things digital has become substantially cooler, and many companies have retreated to a more conservative position, either scaling back or cancelling their online ventures entirely.

For many print publishers thinking about expanding into digital publishing, the current 'wait and see' atmosphere comes as something of a relief. Selling books is a difficult business at the best of times; adding the expense of producing simultaneous digital editions without the presence of any clear solutions for the problems surrounding rights and licensing and secure distribution of digital publications is prohibitive for many publishers. On the other hand, some publishers have found that capitalizing on the general aura of excitement surrounding new technology by producing digital publications on a limited scale has boosted the sale of their print titles.

For other types of publishers, though, commercial success isn't an issue. Many individual writers, small magazines, specialized small presses, non-profit organizations and government departments have found the digital realm to be ideally suited for their purposes. Digital publications can be produced and circulated relatively inexpensively, and can reach a readership far wider than small-scale print publications. And beyond the selfish notion of 'publicity', many publishers see the process of creating broader access to texts of all sorts as a public good.

Here are some of the serious arguments for why electronic publishing isn't such a great idea:

- **Rights Management and Control:** it's virtually impossible to keep someone from copying an electronic publication if they have their mind set on doing so. Further, there are no effective national or international systems for managing rights and licensing issues around electronic publications, though some companies, such as ContentGuard, have made significant advances with XrML (Extensible Rights Markup Language).
- **Startup Costs:** outlay for the training, hardware and software necessary to publish electronically can be considerable.
- **Competing Standards:** There are currently a multitude of competing incompatible formats and delivery systems for electronic publications; some even require specialized (and expensive) hardware to access them.
- **Vague Market:** it's unclear who will buy electronic publications, and how they will buy them. The current downturn in the fortunes of the technology marketplace has created an atmosphere of fear, uncertainty and doubt around electronic publications, and many

companies have decided to take a 'wait and see' approach to the question of whether or not to expand online.

On the other hand, there are many good reasons for extending traditional publishing activities into the electronic universe:

- Portability: once a document is in electronic form, it is easy to repurpose it for any imaginable format (Braille, print-on-demand, Web content, etc.)
- Renewal: legacy material such as out-of-print books can take on a whole new life if recreated as electronic publications.
- Enhancement: electronic documents have characteristics not found in print documents, such as animation and hyperlinking. It's also far cheaper to produce full-colour electronic documents than it is to produce full-colour print documents.
- Ubiquity: if placed online, electronic documents have a potential audience far greater than any print document.
- Publicity: because of the excitement surrounding electronic publishing, electronic documents make effective advertising for your company and your other products.

While each business has to make such decisions for themselves, it's clear that electronic publishing in some form is an inevitability. There are definite benefits to be reaped from approaching electronic publishing with a pragmatic, carefully organized approach. This document is designed to help anyone interested in electronic publishing locate all of the resources they need to begin to publish online in an informed, risk-free manner.

Part Two: Entering the Universe of Electronic Publishing

Designing an Appropriate Structure for Your Document

Presentation-Based Design

When most people use the term 'design', they have presentation-based design in mind. Presentation-based design proceeds from the assumption that documents are fixed and stable, whether in print or on screen, and will be viewed through exactly the same types of display devices by all readers.

Unfortunately, these assumptions are rarely true in electronic publishing, especially in networked environments such as the Internet, where readers look at documents through a wide variety of display devices, ranging from 21" full-colour monitors to one-inch monochrome LCD cellular phone screens, and can reconfigure fonts, background and foreground colours, etc. at will.

Proprietary formats such as PDFs and CD-ROM based publications in Macromedia Director or similar environments provide a certain amount of stability, but cannot eliminate all of the unknown factors in electronic publication design. Such formats are most useful when presentation is the paramount concern, but an overt reliance on presentation-based criteria and proprietary formatting will drastically limit the accessibility and usability of any electronic publication.

Structural or 'Semantic-Based' Design

Semantic-based design proceeds from the perspective that the structure of an electronic publication should follow from the meaning of the information it contains, rather than from its intended appearance on the page or onscreen.

This document (along with many other Web pages) is an example of information presented semantically. Markup languages such as HTML and XML are ideal environments for semantic-based design, because they identify the internal elements of a document's structure, regardless of the appearance of those elements. This means that it is not only possible to search semantic-based documents more efficiently (for all subheadings of a particular type, say), but also that it's possible to use style sheets or other types of scripting to adapt semantic-based documents for many different kinds of display environments. It's also possible to add new types of information to existing documents with relative ease.

Jakob Nielsen of Nielsen Norman Group is a world-renowned expert on the subject of Web usability in general and semantic-based design in particular. His Web site contains much valuable information on the subject, including information about his milestone book, *Designing Web Usability: The Practice of Simplicity* (Indianapolis: New Riders Publishing, 2000).

Usable Web is a collection of links about information architecture, human factors, user interface issues, and usable design specific to the World Wide Web.

Microsoft's guidelines for improving Web Site usability and appeal are also worth a look.

Existing Best Practices and Standards

There are many working definitions of 'best practices', but generally, they are similar to this one, adapted from a definition penned by the Canadian Association of Career Educators and Employers (CACEE):

A Best Practice is an optimal process which:

- is recognized by peers in similar situations
- is applicable to a cross-section of organizations with varying resources and sizes
- takes ethical, legal, and moral requirements into consideration

Many organizations provide documentation of best practices in their particular fields as a resource for their constituents. For example, The World Wide Web Consortium is a world leader in establishing best practices for the various compatible technologies (specifications, guidelines, software, and tools) that lead the Web toward its potential as a forum for information, commerce, communication, and collective understanding. NLC will strive to make this manual play a similar role for electronic publishing in Canada.

Best practices frequently involve the use of Standards. The US Federal Glossary of Telecommunication Terms defines 'standard' as follows:

- Guideline documentation that reflects agreements on products, practices, or operations by nationally or internationally recognized industrial, professional, trade associations or governmental bodies. This includes formal, approved standards, as contrasted to de facto standards and proprietary standards, which are exceptions to this concept.
- An exact value, a physical entity, or an abstract concept, established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results. A fixed quantity or quality.

In the milieu of electronic publishing, practices and goals vary widely from publisher to publisher, and professional and governmental organizations dealing with new media are relatively new entities. Still, there are a number of standards committees and bodies (such as the W3 Consortium) which set the benchmarks that guarantee that computers can interact. However, because the notion of 'central authority' in the online environment is contentious at best, there are also 'de facto' standards which are defined by custom or common consent rather than authority.

Open Standards

Open Standards are standards with specifications which are open to the public and can be freely implemented by any developer. Open standards usually develop and are maintained by formal bodies and/or communities of interested parties, such as the Free Software/open source community. Open standards exist in opposition to proprietary standards, which are developed and maintained by commercial companies.

Open standards work to ensure that the widest possible group of contemporary readers may access a publication. In a world of multiple hardware and software platforms, it is virtually impossible to guarantee that a given electronic publication will retain its intended look and feel for all viewers, but open standards at least increase the likelihood that a publication can be opened in some form.

From a business perspective, open standards also make good sense. They help to ensure that product development and debugging occurs quickly, cheaply and effectively by dispersing these tasks among wide groups of users. Open standards also work to promote customer loyalty, because the use of open standards suggests that a company trusts its clients and is willing to engage in honest conversations with them.

Open standards also facilitate the archiving and storage of electronic publications. NLC's collection of electronic publications, for example, emphasizes the acquisition of 'format neutral' publications in order to avoid conversion of electronic documents whenever possible. In fact, when converting electronic documents from proprietary formats to standard formats is deemed necessary for the purpose of long-term preservation, the NLC is prepared to sacrifice a superior presentation format to long-term preservation needs. Publishers that adopt open standards for their publications from the outset can help to ensure that they remain relatively stable for posterity.

The Free Software Foundation / Open Source

The GNU Project was launched by Richard Stallman in 1984 to develop a completely free Unix-like operating system. With the addition of a kernel created by Linus Torvalds, this system has become known as GNU/Linux.

Gnu/Linux is the ultimate open standard -- an entire universe of software applications and document types that are extremely powerful and reliable, and are available to all, for nothing. For more information about GNU/Linux, visit Slashdot, Linux.com, and The Open Source Development Network.

There are a number of commonly used open standards for digital publications:

JPEG (.jpg) Graphics

Characteristics

The JPEG (Joint Photographic Experts Group) graphics format is a 24-bit compression method developed specifically for the online display of photographic images.

JPEG uses a 'lossy' compression method, which means that it removes information from the source image during the file creation process in order to make the final image smaller for online use. Most software applications that are capable of producing JPEGs also allow the user to specify the level of compression, which allows for smaller files, but with a corresponding loss in image quality.

Aside from standard JPEGs, there are also 'progressive' JPEGs, which feature both higher compression rates than standard JPEGs, and support for 'interlacing', which loads the image into a browser in a series of incrementally clearer steps.

Applications

JPEGs were specifically designed for the display of photographs in an online environment. They work best with complex images that display a range of tones. For line art and other types of simple images, GIFs and PNGs produce smaller images, with no recognizable loss in image quality.

Examples

The Online Image Archive is an extensive archive of images stored in both the GIF and JPEG formats.

Resources

The official JPEG homepage leads to links to JPEG's committee members' sites, as well as to other useful sources of information about JPEG. It also provides information about how to join the JPEG committee.

The JPEG Image Compression FAQ appears in HTML on this web page.

PNG (.png) Graphics

Characteristics

PNG stands for both 'Portable Network Graphics' and 'PNG Not GIF'. PNG is a lossless compression standard which allows files to be stored at 8-, 24- or 32-bit depth.

PNG was designed as a replacement for the GIF file format, and has many advantages over it. Aside from its superior interlacing method (PNGs begin to display after a much smaller proportion of the file has been loaded than GIFs require), PNGs contain information about the operating system under which they were created, which means that computers can use this information to automatically adjust themselves to display the image properly. Like GIFs, PNGs support transparency.

Applications

Because PNG is a relatively new graphics format, it is not backwards-compatible with older browsers. PNGs also tend to be slightly larger than GIFs.

However, unlike GIFs, PNGs don't use the patented LZW compression format, owned by Unisys. If publishers create GIFs using a program containing an unlicensed copy of the Lempel-Ziv-Welch compression algorithm, that may leave them open to a charge of 'contributory infringement' from Unisys. See this article and the Burn All GIFs page for more information.

Examples

Many pages produced by members of the open source/free software movement feature PNGs. PNGArt features over 50000 royalty-free PNGs available for download. This page at WonderStorm provides information about using PNGs as Web page backgrounds.

Resources

The W3 Consortium officially endorses the PNG standard, and maintains links to its specifications and other resources, including a page that will test your browser for PNG compatibility.

Plain text/ASCII text

Characteristics

The most basic of open standards for electronic publication is an electronic document without any formatting (i.e. 'plain text'). Virtually all word processors are capable of saving documents in plain text; for example, Microsoft Word provides a 'Text Only' option in its 'File/Save As ...' menu (The default Word file format, sometimes called a '.doc' document, is a proprietary format -- see the section on proprietary standards for further explanation). Among PC users, it is customary to append plain text files with the '.txt' extension for easy identification; this practice has continued even into the current era of long filenames.

Sometimes people mistakenly refer to plain text as ASCII. The Webopedia provides the following definition for ASCII:

Acronym for the American Standard Code for Information Interchange. Pronounced ask-ee, ASCII is a code for representing English characters as numbers, with each letter assigned a number from 0 to 127 ... Text files stored in ASCII format are sometimes called ASCII files. Text editors and word processors are usually capable of storing data in ASCII format, although ASCII format is not always the default storage format. (For more information on ASCII, visit Yahoo!'s ASCII Page).

In other words, ASCII is a character coding scheme, and ASCII text is text coded using that scheme. Plain text refers specifically to unformatted text and does not make any reference to the coding. When people or institutions request a document in ASCII, what they usually want is plain text.

Publishers that find plain text too restrictive may want to consider the other minimal formatting options that word processors provide, such as 'Text Only with Line Breaks', which inserts carriage returns at the end of typed lines, making them easier to read in plain text editing programs such as BBEdit, SimpleText and WordPad.

Applications

The most frequent use of plain text documents is in the area of software documentation. Plain text is the best option whenever there is uncertainty about the technological capabilities of a publication's intended audience, because virtually any text reader/editor can open plain text documents.

Examples

Michael Hart began Project Gutenberg in 1971 with the avowed intention of transferring as many public-domain works of literature as possible into plain text datafiles. Many of these files were written before the advent of sophisticated word processors; their existence today is a testament to the archival value of the textfile.

HTML

Characteristics

HMTL, or Hypertext Markup Language, uses a system of tags to describe the structure and layout of a document in a manner that makes it viewable by web browsers and other forms of software. Like its cousin XML, HTML was designed to describe a document's structure, not its appearance (though it has been heavily retrofitted with the use of various plug-ins and supplementary languages to provide greater control over appearance). HTML also makes it possible to connect documents to each other via hyperlinks, an essential characteristic of the online medium.

Applications

HTML is the formatting or 'markup' language that is used to prepare documents for viewing on the World Wide Web. Increasingly, HTML is also being used as documentation for software distributed on CD-ROM, as its hyperlinks provides an excellent structure for reference materials.

Examples

Examples of HTML in its varying degrees of complexity lie under every page of the World Wide Web. To view the HTML source of a Web page, select the 'View Source' option from your Web browser's tool bar.

HighWire Press is one of the two largest free full-text science archives on earth, featuring over 260 sites, and more than 255,000 free, full-text articles.

Coach House Books, a small Canadian literary press, has been publishing HTML editions of its frontlist poetry, fiction, drama and art book titles since 1997. This case study presents a short description of the online publishing practices at Coach House Books.

Resources

The W3C's home page for HTML provides links to their specifications for HTML, guidelines on how to use HTML to the best effect, and links to related subjects on the W3C site.

The W3C also provides a free HTML Validation Service. This web-base device checks HTML documents for conformance to W3C HTML, XHTML and other HTML-related standards. Publishers using cascading style sheets (CSS) to format their HTML documents will also want to visit W3C's CSS validator.

Dave Raggett's HTML TIDY is a free utility for fixing HTML coding mistakes automatically and tidying up sloppy editing. This tool can also help publishers to identify where they need to pay further attention to making HTML pages more accessible to people with disabilities.

The HTML Writers Guild is the world's largest international organization of Web authors, with over 123,000 members in more than 150 nations worldwide. Its site provides resources, support, representation, and education for web authors at all skill levels.

Webopedia's HTML page provides a wide variety of links to other related resources.

XML

Characteristics

XML, or Extensible Markup Language, is exactly what it sounds like: a highly customizable, robust protocol for carrying the kinds of tasks that HTML performs one huge step forward. In fact, it is a sort of cousin to HTML, since both derive from SGML (the Standard Generalized Markup Language), an international standard created to solve problems in exchanging data between different types of computer systems.

Applications

XML describes a document's structure, not its appearance. Briefly, it allows a publisher to identify, quantify and define the information in their documents in a manner that makes sense to them and others in their industry, and allows the document to be reshaped for different needs (such as different types of displays) without disturbing its underlying structure. The relevance of XML today stems from the fact that basic HTML simply will not be capable of providing an adequate environment for the next wave of networked digital publishing, where data will have to be displayed in an increasingly varied number of environments, and searched in more sophisticated ways.

Examples

The XML 101 site provides a number of examples of XML documents of varying complexity, as well as other useful resources, tutorials and links.

Resources

XML in 10 points provides a Cook's Tour of the language. Answers to Frequently Asked Questions about the Extensible Markup Language can be found here.

O'Reilly's XML portal site and The XML Industry Portal go into considerably greater detail than the aforementioned sites, and provide access to discussion forums, resources and relevant recent news stories about XML.

For more technologically advanced publishers, The XML Cover Pages is a comprehensive online reference work for XML and SGML.

The Open eBook Publication Structure

Characteristics

The Open eBook Publication Structure is a specification for representing the content of electronic books. It is based on the premise that in order for electronic book technology to achieve widespread success in the marketplace, all electronic reading systems must be able to

access a large number and variety of titles, and to present of content with a reasonable degree of fidelity, accuracy, accessibility, and uniformity across various platforms.

The specification itself is based on HTML and XML, and is designed to allow publishers and authors to deliver their material in a single format. It describes a set of common, minimal guidelines which strive to reflect existing content format standards.

Applications

The chief reason for using The Open eBook Publication Structure is to attempt to capture a slice of the emerging eBook market. The more eBooks that exist, the more likely that the reader platforms that support standard formats will become ubiquitous. Companies that distribute eBooks may also offer more in the way of guarantees about tracking electronic documents and managing rights and licensing than most publishers may be able to manage on their own.

Examples

Netlibrary has a collection of over 3500 free eBooks.

Resources

The Open eBook Forum (OeBF), an association of hardware and software companies, publishers, authors and users of electronic books, is the primary source of information about this specification.

Brown University's Scholarly Technology Group (STG), in conjunction with NuvoMedia, Inc, makers of the Rocket eBook, have developed the Open eBook Validator, a free service that enables authors and publishers to quickly and easily test their publications for conformance with the Open eBook Publication Structure Specification.

Proprietary Standards

Proprietary standards are privately owned, developed and maintained specifications that have been created by commercial companies.

Proprietary standards for electronic publication such as Adobe Acrobat and iPIX usually consist of two components: an authoring tool that exists as a commercial product, and a freely distributed viewing tool, frequently in the form of a plug-in for web browser software. The authoring tool can include hardware as well as software, and is frequently expensive. Users of proprietary authoring tools and client tools are sometimes also expected to pay licensing fees to their creators.

What proprietary standards claim to offer potential users is an extension of the capabilities of basic electronic publishing formats. Acrobat (or PDF) documents, for example, retains exact page layout characteristics, including font formatting. Other proprietary standards might offer increased document security, 3-dimensional panoramic photography, and so on.

Publishers considering the use of proprietary standards should weight the value of added functionality against both the cost of authoring tools and the recognized preference of readers and consumers for open standards. Webopedia notes that 'Increasingly, proprietary architectures are seen as a disadvantage. Consumers prefer open and standardized architectures, which allow them to mix and match products from different manufacturers.'

Following are a few of the currently popular proprietary formats:

GIF (.gif) Graphics

The 8-bit GIF (Graphic Interchange Format), invented by CompuServe in the 1980s, is still the most common graphic format on the Internet. They are small in size, viewable by all graphic Web browsers, and possess useful characteristics, such as the capacity for animation, interlacing and transparency.

Because the lossless LZW compression algorithm used by GIFs is proprietary (it is owned by Unisys), some Web site designers have abandoned the use of GIFs in favour of PNGs, but the GIF remains a useful and versatile format.

Characteristics

GIFs are most appropriate for line graphics or non-photographic images. Because GIFs (like PNGs) support transparency, it is easy to make them fit seamlessly into the environment of a Web page. Like JPEGs, GIFs can also be interlaced and loaded gradually, but this is rarely necessary for smaller images.

There are two versions of the GIF format, the GIF87a, which allows for transparency and interlacing, and the GIF89a, which is also capable of being animated. Animated GIFs allow for a certain amount of novelty, but have little practical value, and they can become quite large. When producing an animated GIF, be sure to follow the procedures your software recommends for optimizing the GIF's size.

Applications

Most of the line-art graphics on Web pages are GIFs. Use them for spot illustrations or basic elements of Web pages such as logos and buttons.

Examples

Many online repositories, including The Online Image Archive contain extensive collections of GIFs.

Resources

This article on WebReference provides information on optimizing the size of GIF files.

This page, which contains useful information on a number of graphic file formats, provides copies of the GIF87a specification, the GIF89a specification, and an explanation of GIF compression.

'The GIF Controversy: A Software Developer's Perspective' is an article on the issues surrounding the use of LZW compression in GIFs.

RTF

Characteristics

Another option is RTF, or Rich Text Format. RTF is a standard which Microsoft Corporation developed for specifying the internal formatting of documents. In other words, RTF is a kind of minimal word-processor format. At their core, RTF files are ASCII files with hidden commands that provide a computer with formatting information about fonts, margins, and so on.

Applications

RTF is especially useful for ensuring that some basic formatting remains while also making it possible for people using older hardware and software packages to access documents (backwards compatibility). Documents in manuscript form are often submitted to the designer or printer in RTF versions to ensure compatibility.

Examples

This case history provides an example of the usefulness of RTF templates for generating reports that can be read on a wide variety of platforms.

Resources

The RTF specification can be found in Microsoft's MSDN Online Library.

For those publishers interested in exploring the possibilities of RTF, this directory contains RTF Tools, software for performing RTF document conversion, as well as copies of the Microsoft RTF Specification documents.

Word Documents (.doc)

Characteristics

Microsoft Word is far and away the most popular word processor in use. The files it produces, sometimes called '.doc' documents, because they are usually appended with the '.doc' extension for easy identification, are proprietary and cannot be opened by all text editors.

Applications

If a publisher knows that all of the readers of its documents have access to Microsoft Word (for example, on a corporate or government extranet), and is interested in taking advantage of Word's ability to include charts, tables and images, it may consider publishing in a straight .doc format. In any other instance, it's prudent to use RTF or plain text, which also eliminates the possibility of distributing the macro viruses which Word documents occasionally carry.

Examples

The Association for Progressive Communications (APC) provides all of the documents for their Mission-Driven Business Planning Toolkit in downloadable PDF, Word 97, and RTF versions as well as HTML. See this case study for more information.

Resources

This site features a free application that allows those PC users who do not have Word to open and view Word documents. It provides access to Word's zoom, outline, and page layout views, As well as headers/footers, footnotes, and annotations.

PDF

Characteristics

PDF ('Portable Document Format') files are created by Adobe's Acrobat technology, which captures formatting information from word processors and desktop publishing programs such as Quark XPress, and embeds it in the digital document in order to ensure that layout remains consistent both on screen and in printed form.

Applications

PDFs are ideal for the presentation of short documents with complex formatting, such as printable forms. PDFs are increasingly being used for many kinds of documentation, such as hardware and software manuals, and government and professional publications, but literary and arts documents are also starting to appear in PDF versions.

Examples

Broken Jaw Press, a small Canadian literary press, makes many of its publications available in PDF form, and distributes them through PublishingOnline. This case study provides more information about Broken Jaw's online publication program.

Resources

Adobe ePaper Solutions provides links to both Adobe's free and retail Acrobat-related software, as well as to tutorials, an online PDF converter and a PDF content server which allows users to package and distribute Adobe PDF eBooks directly from their Web sites.

eBooks Central provides news about the parts of the eBook world that relate specifically to Adobe's technology. This page also has resource links and a community forum for those interested in discussing the technology with their peers.

Microsoft Reader

Characteristics

Microsoft reader is a combination of a proprietary format for eBooks (documents with the '.lit' extension) and an accompanying software application. It makes use of ClearType anti-aliasing technology to present type with less eyestrain.

Applications

Publishers interested in testing the effectiveness of Microsoft's nascent content and rights management technologies may wish to try producing publications in the Reader format. In many respects, this is a competing technology with Adobe's PDF, which already has a considerable lead in the marketplace.

Examples

Barnes and Noble stocks a wide variety of Microsoft reader eBooks.

Resources

Microsoft's ReaderTools page provides downloads for both their 'Read in Microsoft Reader' conversion software, and third-party tools that will convert Word documents, HTML or desktop publishing files to Reader format. The site also provides tools for developers, style guides, and information on digital rights management.

Macromedia Director and Flash

Characteristics

Macromedia Flash is a vector-based tool for creating low-bandwidth animations, presentations and other forms of dynamic content. It offers scripting capabilities and server-side connectivity for creating applications, Web interfaces, and training courses. Flash files can be viewed through most browsers equipped with the Macromedia Flash Player plug-in.

Macromedia Director Shockwave Studio is a similar but more sophisticated product for the development of 3D entertainment, interactive product demonstrations, online learning applications and other types of interactive media on the Web, CDs, DVDs and corporate intranets. Macromedia's Shockwave Player, which plugs in to most Web browsers, is required to view online content created with Director Shockwave Studio; most Director Shockwave publications on CD-ROM and other types of media are stand-alone and do not require further software to run, though their hardware requirements can be intensive.

Applications

Though Flash may be used to design interfaces for Web Sites, this severely limits access to such sites. Flash is most appropriate for the presentation of short online animations.

Likewise, Director Shockwave Studio is very impressive, but will only function well on multimedia PCs equipped with high-end sound and video cards and fast processors. Its scripting language is very powerful, but also difficult to master; thus, the financial layout for Director Shockwave publications may be quite high.

Examples

Sites presenting short animated films, such as Camp Chaos and Hahabonk, rely heavily on Flash to present their content. Macromedia's Showcase page details a number of sites that have used their technology to good effect.

Resources

Macromedia's Web Site provides downloads of their products, as well as links to online galleries, resources, tutorials and discussion forums.

eBook Hardware Platforms

Characteristics

In current usage, the term 'eBook' or 'eBook reader' can refer to either hardware or software. This document has already discussed the some of the types of software eBooks; eBook Hardware Platforms, on the other hand, are small handheld or 'palmtop' computers that are capable of accessing various types of (usually proprietarily formatted) electronic publications.

Applications

Most eBook readers are still in the developmental stage, and existing models are still primitive, expensive and in limited circulation. Committing to the exclusive production of electronic publications for an eBook reader, especially if a proprietary format is required, is inadvisable at this time.

Examples

At the time of this writing, the best known eBook reader is the GemStar eBook (formerly Rocket eBook). In January 2000, Gemstar-TV Guide International announced its entry into the electronic book business through the acquisition of NuvoMedia, Inc., makers of the Rocket eBook, and SoftBook Press Inc., makers of the SoftBook Reader. The GemStar eBook Web Site includes information for publishers interested in publishing for their eBook platform, including a contact form.

Resources

about.com provides a detailed listing of current eBook reader platforms with links to the manufacturers' pages. Those interested in publishing eBooks for various types of handhelds might also want to peruse netread's index of resources and professional organizations.

The Association of Electronic Publishers (AEP) is a self-policing organization whose members attempt to assure that high standards of trustworthiness, professionalism and quality are maintained within electronic publishing.

Metadata

Metadata refers to data that is not the contents of a document, but information about that document. It describes how, when and by whom the information in a given publication was collected, and how the data is formatted. Metadata is essential for being able to effectively navigate and search large collections of documents, whether online or in an offline database.

Meta Tags

The most common form of metadata in electronic documents is the 'meta' tags in HTML. Meta tags can be used to identify properties of a document (e.g. author, expiration date, keywords) and assign values to those properties. Meta tags also provide search engines with information about how they should classify your page, whether they should ignore it, and so on.

This page contains a simple form that will generate meta tags for your Web page and then mail you the results.

The Dublin Core

The Dublin Core Metadata Initiative is an open forum engaged in the development of interoperable online metadata standards to support a broad range of purposes and business models. DCMI's activities include consensus-driven working groups, global workshops, conferences, standards liaison, and educational efforts to promote widespread acceptance of metadata standards and practices. Their site features a page of tools and templates that are very useful for those organizations interested in working with this popular metadata standard.

Accessibility Standards

People Using Assistive Technologies

The primary goal of the guidelines in this section is to promote accessibility for people using assistive technology. However, following them will make Web content more available to all users, no matter what platform they are using or the conditions in their current environment. Following these guidelines also helps to ensure that overall usability increases, and that people find the information they are seeking rapidly.

The W3 Consortium provides guidelines that explain how to make Web content accessible to people with disabilities. The guidelines are intended for all Web content developers (page authors and site designers) and for developers of authoring tools. These guidelines do not discourage content developers from using images, and video, but rather explain how to make multimedia content more accessible to a wide audience. W3C also maintains an entire second site, the Web Accessibility Initiative (WAI) to examine this question.

The HTML Writers Guild's Accessible Web Authoring Resources and Education (AWARE) Center intends to act as a central resource for publishers that wish to learn about web accessibility. This page features a comprehensive list of important resources.

WebABLE is a leading provider of Web accessibility technology, consulting, and training. The WebABLE! library is a collection of books, press releases, white papers, articles, plans, standards, reference guidelines, and journals that focus on accessibility, assistive and adaptive technology for people with disabilities. They also invite readers to contribute to this library.

Access Adobe is a resource designed to help people with visual disabilities work more effectively with Adobe Acrobat software and PDF files. It provides tools to help visually disabled users whose screen reader software is not compatible with the Adobe Acrobat Reader 5.0. These online tools convert Adobe PDF documents into HTML or ASCII text, which can then be read by a number of common screen reading programs that synthesize text as audible speech (these tools may also be of use to general developers who want to convert documents into open formats for other reasons). The site also includes white papers and FAQs in HTML format and links to other useful resources on the Web.

In 1988, Microsoft became involved in accessibility issues and since then, has worked hard to improve the accessibility of products as well as create new and better technologies that others can use. This page of guidelines lists news & events, training programs, products and aids, development guidelines.

IBM's Accessibility Center provides guidelines, checklists and techniques for a variety of web-development related issues.

Bobby is a free service designed to help Web page authors identify and repair significant barriers to access by individuals with disabilities. The online version of Bobby will test one page at a time; for publishers who wish to test entire site as a batch, there is also a downloadable version of Bobby.

People Using Older Technology

A document or program is backwards compatible if it runs not only on the computer for which it was designed, but also on smaller and older models. Upwards compatibility, on the other hand, refers to documents and software that function not only on the computers for which they were originally designed, but also on newer and more powerful models. Upward compatibility is important because it means that data will continue to function without the need for converting it.

Publishers need to keep both kinds of compatibility in mind when planning and releasing new electronic publications. Issues of backwards compatibility can generally be dealt with if publishers adhere to the accessibility and usability guidelines outlined above; upwards compatibility becomes of interest as soon as a publisher starts to consider archiving its publications for posterity.

Storage and Backup

Digital media is notoriously fragile. Data can disappear from a system due to anything from static electricity to hard disk crashes, and the lifespan of all current forms of digital storage is open to question. In order to prevent the loss of many hours, days, or even years of work, it is crucial for publishers of electronic data to establish regular backup cycles of their publications on stable mass storage media, and probably to engage a second party such as the NLC to provide reliable archiving and storage of such data.

Archival Media

There are many forms of mass storage media available today: removable media (floppy, zip/jaz disks, superdisks, tape drives, CD-ROMs, CD-RW, DVD etc.) and fixed media types, such as hard disks.

Storage Management.org is a 'living appendix' to a book by Jon William Toigo, *The Holy Grail of Data Storage Management* (Prentice Hall, 1999). The site exists to facilitate the education of technology end users and to provide a vehicle for communicating to the community of vendors the actual requirements and experience of present and prospective storage technology consumers.

The PC Technology Guide's storage page features an extensive outline of the construction, operation and interface standards for all major forms of computer storage.

The Network Storage Buyers' Guide provides information on storage hardware and software. It features a searchable database of products, links to vendor Web Sites, a library of white papers, press releases, resellers information, product presentations, and more.

Version Control

In the world of software development, version control refers to the process of tracking the development of a given piece of software. Each stage or version of a program's development is identified by a 'build number'; initial 'beta' versions typically are represented by decimals under the number one. A stable 'alpha' release is usually version 1.0, and represents the first fully functional version of the software. Subsequent releases incorporating new features and improvements are assigned new values according to the same logic.

In the last few years, developers of corporate intranets and extranets such as Open Text, makers of LiveLink and B2Bscene, have utilized the notion of version control to describe the process of managing a document's evolution in a collaborative environment.

Google's Document management page provides a useful set of links to sites concerned with version control, and to vendors who provide document management products and services.

AIIM, The Association for Information and Image Management, is an international organization made up of people in the information management community. It is the meeting place where users, vendors and solution providers come together to solve problems, present ideas, provide solutions and establish relationships.

Part Three: The NLC and Electronic Publications

The National Library's Mandate for the Collection of Electronic Publications

The National Library of Canada's mandate for the collection of publications of all sorts is to gather, preserve and make them accessible to the Canadian public through cataloguing and bibliography.

The NLC's recent collection of electronic publications is an outgrowth of its print collections. For pragmatic reasons, the initial focus of the NLC's electronic collection efforts was on federal government publications, which are accessible to the Library at no cost; furthermore, the NLC is expected to collect such material. However, the NLC is also collecting electronic publications from commercial and private Canadian publishers.

The NLC's definition of an electronic publication is deliberately wide: any intangible publication that is available through a communications network has been 'published', and therefore needs to be collected. At the moment, this mandate is a moral rather than legal one, though the laws around mandatory legal deposit are currently being rewritten to include electronic publications as well as print publications.

To date, the NLC's efforts to collect electronic publications have been characterized by their experimental nature. Everything is subject to change as new opportunities arise, so this is an exciting time both for publishers and for the Library itself.

Electronic Deposit and Its Benefits

The deposit of electronic publications at the NLC benefits the Library's collection, the Canadian publishing industry and the general population in the following ways:

- The NLC's electronic deposit program helps to ensure the long-term survival of electronic texts by providing a secure mirror facility
- The Library's cataloguing activities help to guarantee that potential readers will be able to locate texts by providing a central, stable archive
- Its promotion activities such as the New Books program help to create a larger audience for electronic publications, albeit a non-paying one

In other words, the NLC's electronic deposit program is an important part of a viable business model for electronic publishing, because, although deposit does not contribute to the bottom line, it provides a simple and powerful system of risk management for static Web sites (at this point, the NLC cannot collect database-driven publications, though it can and does take periodic

'snapshots' of some dynamic sites) with little expenditure of resources on the part of publishers. Depositing an electronic publication with NLC guarantees that it will be there whenever the publisher – as well as potential readers -- needs access to it.

Given the National Library's mandate to preserve the Canadian published heritage and the aforementioned instability of the online environment, simply acquiring the right to point or link to an electronic publication stored at a publisher's site is not sufficient to ensure the long-term accessibility and preservation of Canadian items. Therefore, the NLC collects an electronic copy of all electronic publication selected for its permanent collections.

By acquiring a copy of an electronic publication from the originator as soon as it becomes published, the NLC can assure the preservation of the integrity of a publication as it was originally released. The Library is also able to verify and ensure that the electronic publication is in a form that is readable by standard software and is therefore accessible for current and future generations of readers and researchers.

While all networked electronic publications collected by the National Library are in principle accessible to both on-site and off-site users, the National Library recognizes that there may be restrictions on access to some materials from time to time, especially when their salability depends on limited or metered access. Wherever necessary and possible, the NLC will institute restrictions on public access to an electronic publication by storing publications offline for a time period negotiated between the NLC and the publisher.

The National Library has made a commitment to provide access to its electronic information resources in a manner that respects all intellectual property rights as required by Canadian law. While central issues around rights management and licensing for electronic publications are far from resolved, the Library is following developments in the field, and is currently examining how to adapt its own practices to meet both the security needs of publishers and the need to archive important Canadian documents for posterity.

Who Should be Interested in Electronic Deposit?

Any Canadian individual, collective body or corporation that produces and publishes electronic publications of any type should be interested in electronic deposit with NLC.

The Professional Publishing Community

As the Publishers' Window on the Government of Canada site demonstrates, there is a wide range of existing government services for traditional publishers of all types. Professional publishers of books, music, periodicals and reference materials who have a long-standing relationship with NLC and recognize the benefits of this relationship (for posterity as well as themselves) will also recognize the advantages of depositing their electronic documents in a manner analogous to the way that they've always handled their print documents. But in the new world of electronic publications, many non-traditional 'publishers', such as makers of software, builders of databases, portals and other types of information services can also benefit from government services in general and the NLC's electronic deposit program in particular.

Self-Publishers

In a digital world, everyone can be a publisher. Much of the stigma traditionally associated with 'self-publishing' is disappearing rapidly as an increasing number of individuals begin to produce professional-quality electronic publications. Through depositing with the NLC, self-publishers can help to assure that their work is assigned the proper identifying numbers, catalogued by the Library and made accessible in definitive form to the widest possible audience.

Benefits of Electronic Deposit

A Worldwide Audience

By placing an electronic document in the NLC's collection, publishers immediately increase the size and range of the audience for their publication by placing it in a high-traffic, centralized but secure location. The NLC site receives hits from all over the world; such traffic can drive readers and potential customers to the publisher's home site in search of further information and/or similar products.

Organization and Classification

Depositing an electronic publication assures that a fixed identifier number such as an ISBN or ISSN will be attached to it -- a number that will allow customers and readers to locate the publication with ease and coincidence. NLC provides bibliographic access to

the networked electronic publications it stores through free access to its AMICUS database and associated products.

Backup, Redundancy And Posterity

The National Library takes preservation measures to ensure the content, functionality, and presentation of all archived networked electronic publications will remain intact for the long term, and that the publication will be accessible on an ongoing basis. Many businesses and most individuals cannot afford a full-time archivist; for this reason alone, electronic deposit is an incredibly useful service for all electronic publishers, because it ensures that their publications will be tracked, described, and stored in a secure location other than their own premises.

The National Library preserves networked electronic publications in standard formats. It will also accept electronic publications in non-standard formats, in some cases (when necessary, feasible, and agreed to by the publisher) converting them to more standard formats. In general, the NLC does not compress the electronic publications in its collections. While the National Library currently handles all of the work related to its electronic publications collection, in the future it may enter into agreements with other institutions to ensure the collection, preservation, and access, of some types of Canadian networked publications.

What Sorts of Electronic Texts are Currently in the Library's Collection?

The National Library strives to comprehensively collect and archive indefinitely all original networked electronic publications of Canadian origin, published both domestically and abroad.

However, the NLC does not necessarily collect every version/edition of all networked electronic publications. Whenever possible, the Library collects, displays, provides access, and stores networked electronic publications in the formats in which the publications were originally published. For pragmatic reasons, the NLC allocates priority to collecting standard format publications, and also ensures that formats collected include those accessible to the perceptually disabled.

The current Electronic Collection contains works of literature, nonfiction and memoirs, government publications, periodicals, zines, and a wide variety of other forms.

How To Submit An Electronic Publication to the National Library

The following formats may be sent through regular mail:

- diskette
- various CD formats (CD-ROM, CD-RW, etc.)

Send all such submissions to the following address:

Electronic Publications Acquisitions Section
National Library of Canada
395 Wellington Street
Ottawa, Ontario K1A 0N4
Telephone: (819) 997-9565
Toll free in Canada: 1-877-896-9481
Fax: (819) 953-8508
e-mail: e.publications.e@nlc-bnc.ca

Publishers also may transmit their electronic publications to the Library over the Internet, using the following methods:

- e-mail
- FTP

(contact the NLC at the address given above for specific information on these deposit methods)

HTML publications must be easily transferable and operational on the NLC's server. To meet these criteria, all files and sub-directories must be organized under a single directory. Relative URLs (e.g. ../images/flowers.gif, images/flowers.gif, flowers.gif) must be used for hypertext links accessing the publication directly, while absolute URLs (e.g. http://www.nlc-bnc.ca) must be used for hypertext links accessing information outside the publication. For more information on the subject of relative URLs, see this page at Wired magazine's Webmonkey site, an excellent source of tutorials and articles on developing content for the Web.

The Electronic Collection resides on a server running a Unix operating system. Unix is a case-sensitive language, which means that it recognizes uppercase and lowercase letters as distinctly different entities. Therefore, the files 'flower.gif', 'Flower.gif' and 'FLOWER.GIF' are all seen as different from each other, because of the difference in case. When preparing files for deposit at the NLC, you must always use the same case for file and directory names as you used in the HTML code itself. Also, file and directory names should not have any 'space' characters in their names. For example, use 'afile.txt' instead of 'a file.txt'.

For more information on deposit, with the NLC, see Information for Publishers.

How To Access An Electronic Publication on the National Library Web Site

The online portion of the NLC's electronic collection can be searched through a variety of means:

- browsing by title
- browsing by subject, using the first three Dewey Decimal numbers
- full text search of ASCII, HTML, .txt, .doc, and .wpd files
- AMICUS Web, which searches the National Library's catalogue by title, author, subject, ISBN, ISSN, publisher, subject, AMICUS number and much more.

Some Common Misconceptions about Electronic Deposit

Legal deposit is the National Library's primary mechanism for acquiring publications issued in Canada. At present, it is still being determined whether current legal deposit legislation can be interpreted as covering networked electronic publications or whether amendments to the National Library Act will be required. The main advantage of extending legal deposit to network publishing is that it gives NLC the legal authority to acquire electronic publications for the national collection.

The NLC recognizes that there are inherent problems in applying a Canadian law like legal deposit in an international communications medium that does not necessarily recognize jurisdictional borders. For example, what would define a publisher as 'Canadian' or a network site as 'Canadian' given the ease with which networked sites can be mirrored and networked publications can be copied (i.e. many resources at a Canadian site may not be Canadian in origin)

and given the volatility of network addresses (i.e. a document hosted at a Canadian site can be easily transferred to non-Canadian sites which are outside the jurisdiction of Canadian laws).

The NLC is not merely collecting 'content'. The Library's mandate is to collect 'the thing itself', in whatever format the document circulates in public. Further, the NLC's mandate for accessibility is focused on providing information about publications in Canada. While the actual legislation pertaining to legal deposit does not extend to the providing access to the publication itself, the Library's *raison d'être* as a national agency is to provide as wide access as possible. Accordingly, in many cases, the NLC has provided free public access to its archive of electronic publications over the Internet.

Effects On Copyright

Copyright protection in Canada is automatic upon the creation of a given work, regardless of the medium of its creation, and it lasts until fifty years after the creator's death. Depositing an electronic publication with the NLC does not affect copyright one way or the other, but in the event that someone contests your copyright, it may prove useful to have deposited an electronic document with the NLC, because such deposit could help to establish the date at which your document was created. For more information on copyright, visit the Web Site of the Canadian Intellectual Property Office.

Lesley Ellen Harris, author of *Canadian Copyright Law*, maintains Copyrightlaws.com, a Web Site devoted to international copyright law, digital property, media, and other intellectual property issues, which publishers may find useful and informative.

Effects on Distribution and Salability

Some publishers have found that placing deposited electronic publications in the online section of the NLC's collection actually increases the profile of that publication, and creates sales of both print and digital publications. Publishers who are concerned about the time-sensitivity of their publications may wish to arrange with the NLC to have their electronically deposited publications stored offline for an initial period of negotiable length.

Related Services

ISBN and ISSN

The International Standard Book Number (ISBN) is a system of numerical identification for books, pamphlets, educational kits, microforms, CD-ROM and Braille publications. By assigning a unique ten-digit number to each published title, the system provides that title with its own, unduplicated, internationally recognized 'identity'. Publishers, booksellers, libraries and other participants in the book industry use ISBN to identify publications in order to expedite their handling and retrieval. ISBN ensures that ordering, inventory control and accounting are executed more efficiently. In Canada, ISBNs are assigned by the National Library of Canada, and also, by the Bibliothèque nationale du Québec for francophone publishers in Québec. For more information, see this page, and the Canadian ISBN Publishers' Directory. Further queries may be directed to the appropriate addresses below:

Canadian ISBN Agency
National Library of Canada
395 Wellington Street
Ottawa, Ontario
K1A 0N4
Telephone: (819) 994-6872
Toll free number in Canada: 1-877-896-9481
Fax: (819) 997-7517
E-mail: isbn@nlc-bnc.ca

To obtain an ISBN electronically, visit the online form.

or:

ISBN/BNQ
Bibliothèque nationale du Québec
2275, rue Holt
Montréal, Québec
H2G 3H1
Telephone: (514) 873-1100, ext. 319
Toll free number in Québec: 1-800-363-9028, ext. 319
Fax: (514) 873-4310
E-mail: isbn@biblinat.gouv.qc.ca
Website : <http://www2.biblinat.gouv.qc.ca/isbn/accueil.htm>

The ISSN is a unique code for identifying serial publications, such as periodicals, newspapers, annuals, journals and monographic series. It provides an efficient and economical method of communication between publishers and suppliers. Canadian publishers of serials can obtain ISSN from ISSN Canada, a service of the National Library of Canada. For more information, see

this page, or contact:

ISSN Canada
National Library of Canada
395 Wellington Street
Ottawa, Ontario
K1A 0N4
Telephone: (819) 994-6895
Toll free number in Canada: 1-877-896-9481
Fax: (819) 997-6209
E-mail: issn@nlc-bnc.ca

To obtain an ISSN electronically, visit the online form.

CIP

Cataloguing in Publication (CIP) is a voluntary program of cooperation between publishers and libraries. It enables the cataloguing of books BEFORE they are published, and the prompt distribution of this cataloging information to booksellers and libraries. The Canadian CIP Program is coordinated by the National Library of Canada. For more information, see this page, or contact:

CIP Coordinator
National Library of Canada
395 Wellington Street
Ottawa, Ontario
K1A 0N4
Telephone: (819) 994-6881
FAX: (819) 997-7517
Internet: cip@nlc-bnc.ca

An online printable version of the CIP application form is also available.

The New Books Program

The New Books Service is a recent addition to the virtual collections of the National Library of Canada. It is also the latest enhancement to the NLC Cataloguing in Publication (CIP) program.

A dynamic New Books web page on the National Library of Canada's site will showcase new print and electronic publications. Each entry will include cover art, a table of contents, sample text, information about the author and illustrator, reviews, and details on awards and author readings, along with authoritative Cataloguing in Publication data prepared by the NLC's expert

staff.

As the service develops, links will be added from the New Books Collection to the Canadian ISBN Publishers' Directory in order to promote greater awareness of Canadian publishing companies and their products. Book buyers will be able to browse the New Books site for new releases, then follow links from the site to a directory of Canadian bookstores, where they can order the books they have discovered. Eventually, users will even be able to access the Web site of their local library and reserve a copy if it is already held in the collection, or recommend its purchase if it is not.

Publishers wishing to participate in the New Books service can submit New Books items as attachments to the NLC's forthcoming online Cataloguing in Publications application form. A browse function will allow the publisher to easily select files from their own computer and send them electronically to NLC staff for development into a New Books record. Through the same interactive process, authenticated bibliographic data will be returned via the Internet to publishers for inclusion in their publications.

The New Books system accepts the following file formats:

- JPG or GIF
- 72 pixels/inch resolution
- 648 pixels on the longest side (9 inches at 72 dpi)
- RGB Colour mode
- 8 bits/channel
- PC or Macintosh format
- File must be named by the 10-digit ISBN, e.g. 12545332.jpg
- Image should be full front view of cover, no border
- File size should be less than 200KB

For more information about the New Books program, contact NLC staff at the following address:

Leacy O'Callaghan-O'Brien
National Library of Canada
Acquisitions & Bibliographic Services
Strategic Initiatives Officer
395 Wellington St.
Ottawa, Ontario
K1A 0N4

leacy.O'Callaghan-O'Brien@nlc-bnc.ca
(819) 994-6889
Fax (819) 953-0291

Case Study: The Association for Progressive Communications (APC)

The Association for Progressive Communications (APC) is a global network of non-governmental organizations (NGOs) whose mission is to empower and support organizations, social movements and individuals in and through the use of information and communication technologies to build strategic communities and initiatives for the purpose of making meaningful contributions to equitable human development, social justice, participatory political processes and environmental sustainability.

The APC defends and promotes non-commercial, productive online space for NGOs and collaborates with like-minded organizations to ensure that the information and communication needs of civil society are considered in telecommunications, donor and investment policy. They are committed to freedom of expression and exchange of information on the Internet. To this end, APC members develop Internet products, resources and tools to meet the unique advocacy, collaboration and information publishing and management needs of civil society.

One of the APC's most recent initiatives is the Business Planning Toolkit. Developed in response to the growing tension faced by NGOs as they seek to balance sustainable business practice with their missions, this collection brings together the creative ideas, expertise and experiences of APC members and its private sector partners. It includes articles, issue-specific presentations and ready-to-use forms that address the various business planning processes for Mission-Driven organizations. These tools are aimed at helping individuals working in the non-profit ISP business, but may be more broadly applicable to other mission-driven sectors.

Since the APC's audience is diverse and global, utilizing many different levels of technology, the production of the Business Planning Toolkit required that the information be presented in highly useable HTML (i.e. no plug-ins, few graphics). In addition, because many of the documents in the Toolkit (such as contracts and various types of templates) have to be editable and printable, the same information is also available in a number of different document formats for downloading, including PDF, Microsoft Word and RTF. The availability of all information in both HTML and print formats allows publishers to locate what they want quickly, browsing online, and then selecting those elements that are most central to the development of their specific organizations.

Case Study: Broken Jaw Press

Broken Jaw Press was founded in Halifax, Nova Scotia in 1985 by poet/artist Joe Blades. Currently based in Fredericton, New Brunswick, Broken Jaw and its imprints publish poetry, fiction, drama and nonfiction by new and established Canadian authors.

In 2001, Broken Jaw is publishing eight new trade paperback books and one reprint, along with approximately twenty Broken Jaw Press eBooks. Broken Jaw's eBooks are published in Adobe Acrobat's PDF format (with version 3.0 compatibility). At the present time, there are approximately 22 BJP eBooks in existence, including several works by award-winning poet Rob McLennan, and Moynan King's acclaimed play *Bathory*.

Publisher Joe Blades enthuses about the merits of publishing small-press literature in PDF format:

'That anyone, anywhere in the world, with a computer online, can receive in less time than it takes to walk or drive crosstown, a poetry book we've published is incredible. It certainly increases the possibilities for a poet's recognition earlier and further afield. Ideally, this might help poets and their generally small-press publishers better become self-sustainable. We now are producing "electronically publish[ed]" books that [small presses] couldn't even imagine, books that we still cannot afford to have offset printed and bound. Full-colour PDF eBooks, while resulting in a larger file size than text-only eBooks, are a pleasure to create and read.'

Currently, Broken Jaw's eBooks are retailed through PublishingOnline. Broken Jaw presents the following quotation from the PublishingOnline site as the rationale for their choice of this distribution method:

In a step designed to protect the intellectual property of our authors and publishers, we have installed on select titles our own customized version of the Internet's leading Digital Rights Management (DRM) solution, Adobe's PDF Merchant. When fully implemented throughout our site, this software will prevent the unauthorized copying or transfer of all digital books in Adobe's Portable Document Format (PDF) that we offer for download.

With the customized installation of PDF Merchant, customers may download a title purchased from PublishingOnline onto three separate computers and may read those titles for as long as those computers are in use. Customers may not, however, copy the books onto CD or other media, nor can they email the eBooks to unauthorized users. If a customer attempts to download the book onto more than three devices, he or she will be prompted to purchase another copy of the book.

While this software is currently designed for use only with desktop PCs and laptops, we are committed to providing over time DRM solutions specifically for PDA devices, eBook readers, and ZIP drives.

The specter of the 'Napsterization' of the digital publishing industry has long cast a dark shadow over the eBook industry, and by taking this necessary and proactive step, PublishingOnline has ensured that the battles of Internet theft that music distributors have been fighting will not be waged on PublishingOnline's eBook front.

'Poetry' says Blades, 'has always played a key role in the development of the human race. The ever-growing multitude of Web sites, eBooks, e-zines, audio and video streaming, chatrooms and whatever else to come ... let poetry continue to chronicle, sing and explore our world.'

Case Study: Coach House Books

Located on bpNichol lane, in the heart of Toronto's Annex district, and at www.chbooks.com in cyberspace, Coach House Books publishes Canadian poetry, experimental fiction, artists' books and drama, making full use of both the past hundred years of printing technology and tradition and the promise of today's new media. Perpetuating the best aspects of small-press publishing, Coach House authors, artists, editors, typographers, designers and printers work collaboratively to produce some of the country's most innovative, finely crafted print objects.

In 1997, Coach House Books was resurrected from the ashes of the defunct Coach House Press by the press's founder, Stan Bevington. Hilary Clark was hired as Managing Editor, and remained in that position until August of 1998. Long-time press members Rick/Simon and Victor Coleman joined as Designer and Editorial Consultant, respectively, and Chris Bolduc was hired as Coach House's first Webmaster. In the fall of the press's second year (1998), Darren Wershler-Henry assumed the role of Editor, and Damian Lopes was hired as Web Editor. In the summer of 1999 Coach House added Alana Wilcox to its roster as Managing Editor and then also as Fiction Editor. The press now sees the printed book and web publishing as separate but equal parts of a unique whole.

After over four years in existence, Coach House is still the only publisher in Canada - and perhaps the world - to publish its entire frontlist in unexpurgated form on the World Wide Web, as HTML 'books'. While the majority of these books are fairly standard but well-designed HTML documents with images, sound and animation, some employ advanced elements such as CGI scripts, Java and JavaScript, Flash, and so on. The press believes that this dual approach allows it to experiment with technological innovation while keeping a large number of its titles accessible to a wide variety of viewers.

Coach House believes that simultaneous physical and virtual publication creates an opportunity for complementary marketing and addresses the increasing dominance of the online universe. In the hopes of establishing an ethical set of precedents in this emerging field, they have taken an aggressive approach to the moral, financial and technical issues that electronic publishing raises, working with both national and local arts groups, as well as authoring and contributing to several articles and opinion pieces on the subject. (See, for example, the press's 'Manifesto for an Electronic Literary Culture in Canada', which also appeared in *Quill & Quire* magazine).

In its first year (1997), Coach House Books published eight full-length books of poetry and fiction, and launched a website that featured 14 full-length electronic books by year's end. In 1998, the www.chbooks.com website was rebuilt completely, and by year-end, featured 33 full-length works of drama, poetry, and fiction, plus various and sundry other projects. At the time of this writing (summer 2001), the Coach House site features sixty online titles, plus various web-specific projects, including a digital postcard server and the Coach House Cybrarian, a tool that

allows readers to browse the site's vast contents thematically (e.g. according to parameters such as 'serious – funny and 'difficult -easy').

Coach House Web Editor Damian Lopes remarks:

'Publishing books online presents options for our publications that would be too costly to produce physically (if they were possible at all), such as full-colour images, sound, animation and streaming video. The National Library of Canada, McGill University, Simon Fraser University and the University of Toronto have all demonstrated their support for the project by archiving it as mirror sites on their own websites; other universities will hopefully follow in the coming years.'

Aside from regular distribution channels, all Coach House books are also for sale over the Internet via a simple order form on the press's website. All Internet transactions are handled by Internet Secure, a secure e-commerce server which can process both Visa and Mastercard. Customers uncomfortable with the notion of using their credit card online have the option of filling out an e-mail order form, which notifies the press that the customer wishes to receive a phone call from the press to place an order directly. Coach House also has a toll-free number for direct sales.

The Reference Group

Andrew Clement
Professor
Faculty of Information Studies, University of Toronto

Rob Lidstone
Advertising Manager
Literary Press Group of Canada

Rowland Lorimer
Director
Publishing Program, Simon Fraser University

Alan MacDonald
Senior Advisor to the Director of Information Resources
University of Calgary

Jocelyn Nadeau
Directeur général
Centre international pour le développement de l'inforoute en français (CIDIF)

Consulted but unable to attend the meeting

Guylaine Beaudry
Directrice des publications électroniques
Presses de l'Université de Montréal

David Caron
Executive Director
Literary Press Group of Canada

Ed Carson
President, Professional, Trade and Reference Division
Pearson Canada

Shirley Onn
Director
University of Calgary Press