

## The NT2 Hypermedia Art and Literature Directory: A New Knowledge Environment Devoted to the Valorization of Screen Culture

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Scholarly and Research  
Communication

VOLUME 3 / ISSUE 2 / 2012

### Abstract

In the shift from book to screen culture, the production and transmission of culture, and its literary and artistic manifestations, have changed. With the emergence of new technologies, these literary and artistic works are meant to be read or experienced using the Internet; yet, there is a lack of bibliographical, or other substantial listing, to preserve these works. This article considers the attempt of the NT2 Laboratory to fill this void through the creation of the *Hypermedia Art and Literature Directory*, which aims to promote studying, reading, creating and archiving new forms of text and works in hypermedia.

### Keywords / Mots clés

Database; Knowledge environment; Archiving; Digital media; Hypermedia; NT2 Hypermedia and Literature Directory; *database; environnement de connaissance; archivage; médias numériques; hypermedia; NT2 Hypermedia and Literature Directory*

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CCSP Press

*Scholarly and Research Communication*

Volume 3, Issue 2, Article ID 020122, 8 pages

Journal URL: [www.src-online.ca](http://www.src-online.ca)

Received August 17, 2011, Accepted November 15, 2011, Published August 15, 2012

Gervais, Bertrand, Lalonde, Joanne, Audet, René, Dyens, Ollivier, Paquet, Amélie, Mackrous, Paule, Dubé, Frédérique, van der Klei, Alice, Langlois Béliveau, Amélie, & Gaudette, Gabriel. (2012). The NT2 Hypermedia Art and Literature Directory: A New Knowledge Environment Devoted to the Valorization of Screen Culture. *Scholarly and Research Communication*, 3(2): 020122, 8 pp.

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*The INKE Research Group comprises over 35 researchers (and their research assistants and postdoctoral fellows) at more than 20 universities in Canada, England, the United States, and Ireland, and across 20 partners in the public and private sectors. INKE is a large-scale, long-term, interdisciplinary project to study the future of books and reading, supported by the Social Sciences and Humanities Research Council of Canada as well as contributions from participating universities and partners, and bringing together activities associated with book history and textual scholarship; user experience studies; interface design; and prototyping of digital reading environments.*

### **Introduction**

Moving from a book culture to a screen culture requires a paradigm shift in the manner of producing culture, notably literary and artistic manifestations, and in ensuring its transmission. Already in both the arts and literature, artists have appropriated the Web, radically changing its practices and language. As a result, the works produced, forged even, with new technologies are designed to be read or experienced using the Internet. Given these new formats, the usual strategies in literary theory, cinema studies and art history no longer suffice. The institutionalization of these works is not yet guaranteed either, so no bibliography or substantial listing exists. In response to this void, the NT2 Laboratory started its *Hypermedia Art and Literature Directory* project (for a full description, see <http://www.labo-nt2.uqam.ca/observatoire/repertoire>). Since 2005, NT2 has sought to identify and describe the works covered by this project created in previously unheard-of formats. In so doing, NT2 has acquired a unique expertise, solved various problems, and encouraged reflection in developing a new knowledge environment. What follows in this article is a presentation of the principles and results of NT2's endeavours.

### **Hypermedia works**

The NT2 Laboratory's mission is to promote studying, reading, creating, and archiving new forms of texts and works in hypermedia. We chose the term hypermedia to describe our main corpus, which includes primarily Net art, new media, and e-literature. Etymologically, hypermedia relates directly to hypertext, but appears to have evolved so that the textual is not only present but integrated into a far vaster whole of an iconotextual nature (Krüger, 1990). Hypermedia makes iconotextuality its baseline to which it adds digital components that existing software can manipulate. Besides the hypertextual dimension, which lies at the heart of the development of the Internet, the resulting artworks exploit the possibilities of image movement (as per *Deleuze and Guattari*, in Bogue, 1989) and its symbolic system in which filmed sequences, digital animation, and virtual figures interact and complement one another.

Our hypothesis is that hypermedia works may be avant-garde now but represent a future path for the arts. In these manifestations of screen culture, we catch a glimpse of the principles that will lay the foundations for the literary and artistic practices of tomorrow. Within this context, bearing witness to the early manifestations, creating a specialized vocabulary, and offering an adapted critical perspective become absolutely essential.

The first stage in this endeavour was to identify existing works and list them in order to build a corpus and, more important to NT2, to take on the role of witness to an already significant artistic and literary activity. Hence, the NT2 *Hypermedia Art and Literature*

*Directory* lists works that have been presented on the Internet but are also available on CD-ROM, DVD-ROM, and, for older pieces, diskette. The *Directory* was designed as a resource not just for NT2 Laboratory researchers, but for all those interested in the future of the arts. All it takes is a visit to the NT2 website to gain access to the material online. As such, it is a showcase for hypermedia production. It not only provides information on recent works but also redirects the user to the artwork itself. To date, over 3,000 works from Canada, France, Spain, Germany, and the USA have been treated. The list continues to grow and diversify, as some pieces are close to literature, while others play on cinematographic, artistic, theatrical, performance, animation, BD, graffiti, and videogame codes.

Three key principles have guided this listing since its inception. First, pluri-disciplinarity is required to report on these composite works. As a result, the project needed literature researchers, but also semioticians, art historians, ludologists, and cinema studies experts. Representatives from various disciplines joined the NT2 project in order to master the complex relationship between text and image, the use of photography and video, and also the omnipresent interactivity in the works. A specific field of study does not exist as yet for hypermedia; hence interdisciplinarity, and a multidisciplinary team, are necessary to take into account the different modes in which hypermedia works emerged.

A second guiding principle in the process was that new strategies were needed to find and identify hypermedia artworks. Given the relative newness of this artistic practice, there are no publishing houses, bookshops, libraries, or galleries holding these works and thus helping to locate them. Given the absence of established institutions, tracking techniques were created to pinpoint local networks of promotion and publication. That being said, virtual distribution spaces have begun to appear, such as [incident.net](http://incident.net) and [dreamingmethods.com](http://dreamingmethods.com), which improve access to some more recent works.

Although institutionalization has not happened, it has begun, and cataloguing like that at the heart of NT2 is part of the process. The challenge now lies in the ever-increasing number of works, ranging from basic amateur Web pages to pieces by established artists or writers. Indeed, NT2 had to set out minimal selection criteria for works, the first being the professional nature of the piece. Actually, the initial mandate of NT2 – to record the presence of literature on the Internet – has evolved to include hypermedia works because of their growing importance. We decided to limit our field of study to works which are now designed for the Web and which take advantage of the digital potential. What interests us is not so much persisting manifestations of book culture online, but rather the emergence of new cultural practices generated using production and distribution tools linked to the screen culture. Indeed, the *Directory* has already had an impact in terms of institutional recognition.

The third principle is the much-needed development of specialized description and analysis protocols. The works in the *Directory* seize new digital possibilities to blend various media using the same computer language, so they require descriptors for previously unheard-of modes of expression. In fact, traditional protocols for identifying literary works proved completely ineffective. Traditional bibliographic data were not always available. Moreover, it soon became clear that the bibliographic model, which seeks an author's name, organization or publisher, place of publication, year of launching

of the Website, etc., was of little interest. That model forced us to leave out several elements useful in gathering information and did not allow for an adequate description. We opted for a protocol that described each work according to the nature of the site, format, content, forms of interactivity, and, wherever possible, technologies used.

NT2 thus created its own format for bibliographic data entry. This required developing different fields of description that could contain all the possibilities of site description. A system using keywords related to different fields of description was set up after observing and becoming familiar with the works. The lists were not drafted using research premises, like other older directories, but rather using as reference the researchers' initial experience with the artworks. In fact, this principle became a cornerstone of the *Directory* methodology. As such, the works are described with the Internet user's experience in mind. The level of abstraction reached is not as refined, but we preferred an inductive system rather than a deductive one so that we could stay closer to our immediate questions.

Different descriptive fields for the works were thus created, including some based on keywords. The first six fields met current cataloguing directives: 1) nature of site, e.g., work, artistic or literary showcase, bookshop; 2) format, e.g., text, animation, research engine, text generator; 3) content, e.g., identity, abstract art, game; 4) year put online; 5) media; and 6) languages used. These lists provide minimal and official information on the artworks selected.

The last field, the most important to us, deals with forms of interactivity (Dinkla, 1996; Manovich, 2001; Ryan, 2001) designated through keywords. One of the main characteristics of hypermedia works is interactivity; hence the importance of considering it within the initial organization of the data. An overview of interactivity typologies revealed the practical limits of categories based on deductive models. These typologies yielded a consistent image of forms of interactivity but remained weak in describing the real demands made on the user when navigating.

Our list of keywords related to interactivity is composed of 39 entries that strive to describe as accurately as possible the relationship between the Web user and the means used. The level of abstraction is low and the terms developed for the typology allow one to describe the steps necessary in manipulating the media without any prior theorizing. The list starts with an absence of interactivity in which the user cannot interact with the work, to simple activation, which takes into account the steps required by the user to access the work (often a click of the mouse). This is in the case of a website, so downloading a page would not be considered interactive. It culminates in more complex forms such as "generation with insertion," which involves the user choosing or supplying the textual, visual, or audio data that are processed by the software. There is also collaborative creation, which draws upon interactivity such as sending attachments, inserting images, audio, or video. With the category "involuntary participation," a simple visit to a site or response to an email may affect a work. Naturally, each keyword is defined and a lexicon was generated so as to represent all the steps taken by the user while "reading" the works.

Just running through a list of forms of interactivity entails examining the processes and operations used every day in our virtual navigations, such as online registration,

manipulation, and insertion of images, audio, text or video, navigation by multiple choice, downloading, “telepresence,” etc. In fact, prior to analyzing or interpreting works, before any higher-level readings, we felt it necessary to return to the step-by-step process required to view or experience the works. Although these movements become routine, they do form the very skeleton of our symbolic constructions.

### Groundwork for a community of interest

The *Directory* is the first significant resource developed at NT2. Putting it online enabled NT2 to garner experience in refining protocols and organizing data, as well as in developing software programs capable of disseminating the results. A free license software, Drupal, is the content management system (CMS) used. It enabled the team to build modules corresponding to the specific needs of NT2. Drupal proved to be an extremely effective collective research tool within a university context. Its simplicity and adaptability enable a user to manage texts, images, video and audio sequences, as well as to carry out research using specific aspects of the data already gathered. Yet, this type of directory could not adequately bear witness to the arrival of screen culture. More than a catalogue or a witness to transition, new cultural practices require intellectual activity and even participation.

University libraries put their databases online but do not need to develop further activities to enhance their use. On campus, researchers, professors, and students form a community of interests that is further cemented through teaching and scholarship. However, what happens when an emerging cultural practice has no real community of researchers yet? In short, the *Directory* does more than provide access to the works. It does more than bear witness to a cultural activity. The *Directory* itself becomes the site of that activity.

Keenly aware of this role, NT2 has opted to use the *Directory* as a starting point for a community of interest and to develop the tools and sites for exchange and communication so as not to merely witness but also contribute to the rise of a community. This choice implies a dynamic stance based on a renewal of the link between theory and practice as well as the channels between research, creation, and dissemination. In effect, we have created a pool of resources that takes into account the presence of a community. Obviously, by using the Internet to disseminate the data gathered and to report data use – thanks to what is now called Web 2.0 – we allow for the organic development of research communities interested by the same topics. Real-time dissemination offers a permanent transfer of research data so the results become available as they are developed. This further encourages dissemination, verification, and user participation as users receive organized pre-processed data, which may lead to analysis or means of appropriation.

Among the main online resources on the NT2 site are the enhanced entries, a series of virtual notebooks, and short pieces outlining ideas for reflection or simply the latest news gleaned from the Web, where hypermedia creations abound. There is also a link to the French-language magazine that specializes in hypermedia literary creation *bleuOrange* (<http://revuebleuorange.org>). In short, NT2's site remains a dynamic reference for the study and promotion of hypermedia art and literature.

Valorization of the works remains key, as seen on the homepage of NT2; for example, the “at random” section (*au hasard*) promotes a work drawn from the *Directory* and presented at random. The work changes from one visit to the next, thus lending greater visibility to a *Directory* that is, by definition, low profile. The discussion forum, *Délinéaire* (<http://www.nt2.uqam.ca/atelier/delineaire>), is dedicated to informative or thought-provoking short pieces written by members of NT2. Another space, NT2 Activities, (*Activités du NT2* <http://www.nt2.uqam.ca/labo/activites>), provides a listing and presentation of performances, conferences, launchings, and workshops organized by the NT2. All of the above serves to encourage an interest community as well as to showcase the works.

The decision to valorize means a renewal of the links between theory and practice. University studies have long abandoned a distant stance, so that the distance between subject and object studied is no longer understood using temporal but rather critical terms. It requires developing analytical methodologies that are of a scientific nature, or are highly subject appropriate. The contemporary period is no longer neglected but has actually become the main focus. The study of hypermedia art and literature fits perfectly within an epistemology concerned by the forms that artistic practices may take in a screen culture. Yet, this attitude implies greater commitment on the part of researchers who must recognize that their closeness to the cultural practice under study can easily influence its development. This is precisely the case of the *Directory*, which first identifies, then catalogues works before they “exist” formally, thus ensuring their institutionalization.

Four of the *Directory* resources used should be detailed here. The first is the series of enhanced entries. Several fields have been added to the basic entries: a description of the work, including historical and stylistic perspectives, a critical biography, an artist’s biography, several screen “captures,” and a filmed navigation within the work. The choice of entries to validate is not random but the result of a collective process. With a view to promoting works and ensuring greater visibility, over a hundred have been picked. Some are representative of the various stages of the development of a hypermedia art, such as the first fiction hypertexts and examples of Net art, while others represent various current trends. Some may also show artworks any interested amateur should know. The choice is arbitrary but explicitly takes into account the biases of the NT2 team.

The entries include a fuller description that details each work and the experience that it offers, suggests ideas for further reflection or research, and gives historical or stylistic reference points for the work. A short biography of the artist is given with a bibliography that brings together titles dealing with that piece or artist. Hyperlinks send the user to the articles or texts, if available on the Web; otherwise, extracts are provided. Every work is documented with screen captures (up to six per work) to provide an overview. Given that most of the works in the *Directory* are experimental, we have added “filmed navigations,” i.e., video captures filmed using the software Screenflow. The entire window (sound and image) appears, with the result being the efficient and cheap preservation of a work, achieved through an interactive path.

Filmed web navigation serves two purposes. The first purpose is to provide an overview of the work without leaving the *Directory*. The second, implicit but more important, is to record and store works whose shelf life is not certain, as already many works from the early 1990s are no longer available. One of the NT2 goals is to archive

new textual forms, thus allowing for long-term study. This goal has proven more difficult than originally thought. Works in HTML or Flash do not pose a problem, but increasingly dynamic databases and Internet resources are used to create “flux works.” Text generators are also used, which makes it practically impossible to archive those works, given cost and technical considerations. Filmed navigations bridge the gap by offering a videographic witness of the works.

The next two resources perform this witnessing function. First, *Derrière l'écran, or behind the screen*, is a project designed to produce video interviews with artist-authors, supplemented with biographies and cross-referencing links to the *Directory*. Each interview seeks to explore the process, i.e. the artist's creative process, and the technical and technological aspects of production. The video interview is inter-spliced with web navigation sequences showing the work itself in order to illustrate the artist's comments.

The second resource is a series of thematic files that allow for description that would be impossible in the simple *Directory* entry. Using these files, NT2 can highlight phenomena and link them to *Directory* entries. The thematic files break down into four main sections: a definition of the theme or phenomenon, a brief research article presenting the subject, a critical bibliography, and a selection of works from the *Directory*. Thematic files currently being produced deal with such topics as transmediatic adaptation, political activism video games, artistic use of GPS technology, *Machinima*, and *Second Life*, to name but a few.

Another resource involves the database software Drupal and its capacities. As we built the *Directory*, we went beyond the methodological questioning that underpinned our research to seek out a technological tool that could produce and support the works listed. This tool had to be user-friendly yet powerful enough to manage audio, video, and textual data. We opted for Drupal, a content management system. Drupal is an open-source solution, operating through a MySQL database, on a server able to interpret PHP programs.

The *Directory* benefits from one of Drupal's greatest advantages: the management of taxonomies. Our keywords are managed by a module, which organizes content by dividing data according to class and category. The module also organizes the categories among themselves, and enables NT2 to classify the content of the entries by grouping data with common characteristics.

NT2 created a media platform in order to integrate audiovisual files (mostly videos) into the *Directory*. We use a faceted search that also allows for cross-searches. This type of search is more fluid and intuitive, thus allowing users to navigate the content differently. One may refine or expand the results interactively, as needed. Moreover, this tool combines conventional research, i.e., keyword searches as in Google, with faceted searches. In short, the user may enter a keyword and then refine the results by clicking on one or more available facets.

These resources are being developed further but already seem suited to showcasing an emerging practice, destined to become emblematic of new literary and artistic productions. At NT2, we regularly face issues involving the actual development of an infrastructure, which, if successful, will help energize a community of interest and a

network of researchers. By using this virtual space and pooling resources, we hope to contribute to the development of a literary and artistic form already anchored in the twenty-first century and to the advancement of a new knowledge environment.

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