

The ELMCIP Knowledge Base and the Formation of an International Field of Literary Scholarship and Practice

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The OLE (Officina di Letteratura Elettronica) Workshop of Electronic Literature Conference and Festival in Naples is an auspicious occasion for the field of electronic literature in Europe. As the program describes, this is the first significant event in the field of electronic literature in Italy. Pulling together writers and researchers from around Europe and elsewhere in the world, this event is intended to showcase the nascent efforts of this field of practice in Italy, and perhaps to inspire Italian writers, artists and scholars to join in what is quickly becoming established one of the most vital and vibrant scenes of literary art, multimedia creativity, and scholarly inquiry: the international field of electronic literature. Fifteen years ago, this might have been understood as an avant-garde move, a bold step into an unknown and unproven territory—but today this field has grown past the point where we could consider it to be truly avant-garde. If electronic literature is yet not a mainstream field of literary practice (and I am grateful for that, as life on the margins is inevitably more lively and colourful than in the dead centre of the cultural moment), we today stand on much firmer ground than the early hypertext experimentalists. If ours remains a field in the process of becoming, at this moment, in the second decade of the 21st Century, we can note that we no longer hear talk of isolated experiments and fads, but rather of international networks of artistic and scholarly practice. With this event at PAN, Italy is explicitly and intentionally joining an international community dedicated to the creation, distribution, appreciation, and analysis of works of literature made for the computer and for the network.

Rather than presenting a purely theoretical paper or a critical reading of one or a number of works of electronic literature, today I will be speaking in my role as the project leader of the HERA funded ELMCIP project¹, and as a member of the board of the Electronic Literature Organization about some very practical

¹ HERA: Humanities in the European Research Area. ELMCIP: Developing a network-based creative community: Electronic Literature as a model of creativity and innovation in practice.

aspects of this process of forming a field in which we are all engaged. Specifically, I want to describe, and invite your participation as authors and critics in the ELMCIP Knowledge Base and the ELO's Electronic Literature Directory², and to describe ways that I think we can expect these two projects to function independently and in concert with each other, together with other international databases documenting works and practices of electronic literature, to further establish the field, to make electronic literature more visible and comprehensible to a wider constituency, to document and to some extent preserve works of electronic literature.

In describing the ELMCIP project and the goals and functionality of the ELMCIP project, I will crib extensively and directly from the project description, which was co-authored with all of the principal investigators of the project, most notably with Simon Biggs at the Edinburgh College of Art, who was responsible for significant aspects of the conceptual frame of the research project.

About the ELMCIP Project

Focusing on a particular creative community, of electronic literature practitioners, the central research question of the ELMCIP collaborative research project is **how creative communities of practitioners form within transnational and transcultural contexts, within a globalised and distributed communications environment**. We seek to gain insight into and understanding of the social effects and manifestations of creativity.

Creative communities can be regarded as microcosms of larger communities. Communities of artists develop as cultural paradigms crystallise or dissipate. Such creative communities have historically tended to be international and yet reflective of cultural specificity, acting as a lens through which social change can be observed. Such communities exist as both local and global phenomena, in 'creative cities' and 'global networks', and appear to draw value from this conjunction of opposites. An important insight is that while creativity is often perceived as the product of the individual artist, or creative ensemble, it can also be considered an emergent phenomenon of communities, driving change and facilitating individual or ensemble creativity. Our research seeks to exploit the characteristics of electronic literature in order to inquire into how a broader range of networked creative communities can develop.

In pursuit of purely objective research goals, it might have been possible to frame such a research project externally to the field itself, for example by

² ELO: Electronic Literature Organization.

limiting the study to ethnographic research conducted by disinterested social scientists. While an ethnographic study is an element of the project, however, ELMCIP does not pretend to a false sense of objectivity. Our researchers are active players, as scholars, writers, and artists, in the field that is the subject of our research. Our interest is not simply to study a field that has already been established and understood as completely formed, but rather to better understand the conditions for the formation and advancement of network-based creative communities by actively engaging in the work of better understanding and developing a field in which we as researchers are already actively engaged. The research outcomes are therefore not limited to cultural analysis, but include the development of research infrastructure for electronic literature.

The specific research questions of the project include:

- How do creative communities, amateur and professional, form and interact through distributed media? What are the implications of this for creative practice and its outcomes?
- What are the models for creative communities in the field of electronic literature? What forces, such as diverse linguistic heritages, affect the development of such communities? What general insights do these models facilitate?
- How might education function in the development and formation of electronic literature communities? What are the implications for and models available to educators?
- How do electronic literature practices link to networks and materialise in culturally and linguistically specific contexts? How might innovation emerge in this context?

The collaborative research upon which the project is based will result in deliverables including a series of seminars, each examining electronic literature from a perspective of a different cultural context. The seminar topics include Electronic Literature Communities (at the University of Bergen), Publishing Models for Electronic Literature (at the University of Jyväskylä), Electronic Literature Pedagogy (at Blekinge Institute of Technology), Electronic Literature and New Media Art (at the University of Ljubljana), Digital Poetics (at the

University of Amsterdam), and Performing Electronic Literature (at University College Falmouth). The concluding event of the project will be an international conference focused on the themes of the project, and including a performance and exhibition component, hosted by Edinburgh College of Art and New Media Scotland. In addition to the individual research conducted and published by the PIs and co-investigators, outcomes will include: a survey of electronic literature publishing venues in Europe, the publication of an online and DVD anthology of electronic literature, which will include pedagogical materials, publication of reports on all of the individual projects, conference proceedings, an ethnographic study of electronic literature communities, an exhibition catalogue, and the publication of several special issues of academic journals correlated to the research themes of the project. Linking all of these outcomes together and the central work package of the University of Bergen project team is the ELMCIP Knowledge Base. In the remainder of this presentation, I will first provide readers with the project description for the Knowledge Base, then move to an update on the work that has taken place in developing the platform and the challenges we are confronting in its implementation, before discussing the ways that we intend to make the project interoperable with its sister project and other related resources, and in the process to help develop both shared bibliographic standards for electronic literature and increased and more substantive interaction between electronic literature authors and scholars working in different parts of the world.

Objectives of the ELMCIP Online Knowledge Base

The online Knowledge Base for ELMCIP will serve as a central web resource for the Collaborative Research Project (CRP), keeping participants and stakeholders informed about progress on the project, events and deliverables as the CRP proceeds, and will serve as a open distribution mechanism for research generated by the project. The Knowledge Base will also serve as a centralized, searchable archive of information about European electronic literature and other related creative communities, which will be maintained by the University of Bergen beyond the grant period. The Knowledge Base will not simply serve as a set of information pages about the CRP but will also be a research outcome and distribution platform for the CRP, serving to widen the audience of the CRP and to increase the impact of the research conducted by the CRP. In developing the online Knowledge Base, our objectives are:

- **Breadth:** The Knowledge Base will be as comprehensive as possible, including presentation materials from all of the seminars conducted under the CRP, downloadable versions of articles produced as a result of the research, downloadable versions of the reports, exhibition catalogue, and ethnographic study, online versions of the works or documentation included in the exhibition DVD and the anthology, information about active and historical network-based creative communities, information about individual works of electronic literature, information about scholarship about electronic literature and resources specific to the CRP itself.
- **Granularity:** Rather than simply redistributing PDF files of research and reports conducted as part of the CRP, the Knowledge Base will extend the bibliographic usefulness and searchability of the research conducted by the CRP. Structured data about individual works, important critical and theoretical articles, individual authors, institutions, and events will be harvested from the research on an ongoing basis as individual records, thus resulting in a useful searchable bibliographic resource.
- **Open Access:** Once vetted and reviewed by project PIs, all information entered into the Knowledge Base will be available on a free open access basis. Whenever possible, knowledge produced by the project will be released with a permissive Creative Commons license or into the public domain.
- **Sustainability:** In order to make the Knowledge Base as durable as possible, we will use widely supported open source CMS and database platforms. UiB will further commit to host and support the Knowledge Base for a minimum of five years beyond the project period. Additionally, we will take steps to assure that the project is archived in its entirety by the Internet Archive (archive.org) and by the Norwegian National Library, and will therefore be freely available for the foreseeable future.
- **Usability:** The Knowledge Base will be designed and implemented according to Web usability best practices, emphasizing clarity, searchability, and accessibility.

The online Knowledge Base will be designed on the basis of best practices in usability, information architecture and humanities-based bibliography. Bibliographic records will be output in Chicago, MLA and ACM styles. Additionally, the database will be designed to allow for interoperability with

other online databases used within the field of electronic literature, including the ELO's Electronic Literature Directory, NT2's French-language electronic literature database and Hermeneia's online catalogue of electronic literature. Because electronic literature is a new field, and common bibliographic standards and archival practices have yet to be standardised, we will consult with other international research consortia and organizations on developing shared standards and practices as the project proceeds and the database is developed.

Implementation of the ELMCIP Knowledge Base to Date, and Challenges Ahead

The ELMCIP project was launched in June 2010, and the work on the platform for the Knowledge Base began almost immediately. The Knowledge Base is being developed in Drupal, a common but powerful, open source, community-developed content management system with robust database functionality. As much as possible, we are trying to avoid custom-coding the platform or the modules: the main reason for this is to be sure that the platform itself will be sustainable and less dependent on the idiosyncrasies of individual developers.

The first stage of Knowledge Base development has been focused on developing the information architecture of the project: defining the different types of records for the various types of objects and entities we are documenting, and the fields for each of those content types. Our information model is explicitly linked to the representation of creativity as a creative ontology on which the research project as a whole is to great deal based. That is, rather than simply recording information about individual works of electronic literature, we are attempting to show how the work of writers and critics emerges from shared resources, practices, and cultural formations. So our record types include works, critical writing, authors, publishers, events, and organizations. Additionally, rather than treating each record type in isolation from the others, we intend to make the relationships between them clear in the structure of the records themselves. For example, from a record of a particular event, such as the Bergen Electronic Literature Communities seminar, the user will be able to see not only a description of the event, but will also find links to records for all of papers presented there and all of the works presented there. Further, as we are developing records for critical records, we are not only documenting basic bibliographic metadata and abstracts but also linking records of critical writing to records of the works they discuss. Generally, it is

our intention that each record type links to all of the other records it references. Each author record will show all of the works and writing associated with the author, and so forth. By showing this, we show how creative communities form and how discourse builds around particular cultural artefacts.

One advantage of the platform we are using and the approach we are taking to documenting ELMCIP projects is that the content of any given record can scale from minimal bibliographic records to richer forms of content. While in some cases we might for instance only gather the title, author, URL, year, and other basic information about a work or article, in other cases we might have very rich content, including for instance linked videos, audio files, images, PDFs, and other ancillary materials. It is important not only that we can integrate these “rich data” materials, but also that the more minimalist bibliographic records are an aspect of our workflow. As we integrate critical works with references to works of electronic literature, and as we document those references, we will be creating “stub entries” in the Knowledge Base to return to later for further development. The idea will be to capture and work with the information at hand when it is available and to develop existing records in a recursive process. One could think in terms of the database as growing like a branching tree: as new entries are created and developed, the stubs that form off of them function like buds which will later grow into branches themselves.

Individual works and works of critical writing are tagged with keywords. These keywords will be used in the same way as they are evolving in use in the Electronic Literature Directory and the Electronic Literature Collection. Tags will be used in a “folksonomical” fashion to informally track and develop a critical vocabulary for electronic literature. Just as in a tagged blog, these tags will also function as links, so that a user might for instance locate all entries that are tagged “hypertext” or “documentary” or “hacktivism” or whatever other tags are contributing in the collaborative process of developing and evolving a critical and technical language for electronic literature. While this process of tagging will begin informally, we hope to work with the ELO to develop and share definitions, which will appear in glossary form with the tags.

The team working on the development of the ELMCIP Knowledge Base includes researchers Scott Rettberg, Jill Walker Rettberg, Patricia Tomaszek, and Eric Dean Rasmussen (who has a researcher appointment from Jan 2011-June 2012 to serve as an editor on the project). Drupal developer Stein Magne Bjørklund is working on technical aspects of adapting the Drupal platform to our specific needs and objectives, and additionally maintaining the project in a way

that it will be ready for and compatible with a shift in the Drupal core from Drupal 6 to Drupal 7. Elisabeth Nesheim, a graduate student at UiB, and Magnus Lawrie, an ELMCIP Ph.D. student at the Edinburgh College of Art, are working on aspects of visual design and user interface. Librarian Thomas Brevik is also consulting with the project, in particular in helping to develop our record formats and in assuring that our efforts will be compatible with and useful for contemporary digital library systems.

As of mid-December 2010, the Knowledge Base is about 80% implemented. The majority of the fields and functionalities are in place with a few notable exceptions. As I mentioned above, the Drupal core is currently undergoing a major revision. Drupal functions using modules, and some important modules used in the ELMCIP platform are not yet ready for the new version of Drupal. From the standpoint of making the Knowledge Base a durable platform, we feel that it is important that is developed for the most current version of Drupal and regularly updated. While we expect the necessary modules to be ready early in 2011 and to make the transition at that time, we will need to wait to implement some functionalities, or risk having to do a good deal of rebuilding later.

Two of the important functionalities that are not yet implemented in the Knowledge Base include multilingual records and exportable bibliographic formats. Language becomes a somewhat complex matter in the context of this project. As ELMCIP is a European project, it is both important that we have a common language, and at the same time that we do not engage in linguistic imperialism. Our planned standard then will be to include records in English for all records, but to allow and encourage abstracts of works and article to also be published on the Knowledge Base in the original language that the work or article was first published in. This functionality will be added with the transition to Drupal 7. A second vital functionality will be to allow the export of individual records in a number of different "human readable" bibliographic styles of citation (MLA, Chicago, etc.) as well as in machine-readable formats, such as BibTex. This last factor is going to be particularly important for the purposes of sharing information with other related electronic literature databases, with libraries, and other users, and using the Knowledge Base to promote international exchange, as I will explain in the following section.

Although I have identified the team, mainly based in Bergen, responsible for the first stage of developing the Knowledge Base, it is important to emphasise that this core team is not expected to be the only or even the main source of contributions to the ELMCIP Knowledge Base. As the project is fully

implemented, we expect that the project will be useful to all of the researchers involved in the ELMCIP project, as it will provide an excellent way for researchers to develop their resources and bibliographies while they develop their own projects and essays. Beyond that, of course, we intend for the Knowledge Base to be useful to researchers working in the field more generally, and hope that authors and contributors not directly associated with ELMCIP will join us in this endeavour. As the OLE network develops for example, we hope that researchers affiliated with it will take advantage of the ELMCIP Knowledge Base to make their research and creative work better documented and available to a wider audience through this platform.

Principles of Openness, Information Portability, International Standards for Exchange, and “Coopetition”

I have been closely involved in the development of another electronic literature database: the Electronic Literature Organization’s Electronic Literature Directory, both in its first incarnation, which was launched in 2000, and its new version, launched last year under the supervision of the Directory group directed by Professor Joseph Tabbi. In concluding this discussion of the ELMCIP Knowledge Base, I would like to outline some principles of exchange we are working to develop between the ELMCIP Knowledge Base, the Electronic Literature Directory, and other international electronic literature projects.

As I write this in December 2010, I am currently in Australia, where last week an important meeting took place in Sydney, a workshop for the international collaborative development of a Glossary of Literary Terms For Digital Environments. Anna Gibbs and Maria Angel of the University of Western Sydney, who are directing a research project recently funded by the Australian Research Council, organized the workshop. I participated along with Joseph Tabbi and Dene Grigar from the ELO, Peter Gondolla and Joergen Schaefer from the University of Siegen, and other researchers. Among other reasons for the gathering was the fact that ELO, ELMCIP, the University of Siegen Media Upheavals project, and the UWS electronic literature project all have already or are in the process of developing databases or directories focused on electronic literature. An important outcome of the meeting was the drafting of a CELL (Consortium for Electronic Literature) agreement, which outlines some principles for cooperation in developing the field of electronic literature internationally, both in a general sense and the specific case of sharing information between the different databases.

Our consensus regarding the different database projects is:

- As a first step, we have agreed as a general principle to make records in all the databases available on an open-access, creative commons licensed basis, and to allow each of the databases to reuse and develop records from any of the other participating databases.
- Further, and somewhat more complex to implement, is an agreement to share machine-readable short entries for works of electronic literature and related critical writing, and to do so in an automated way. These records will further be “watermarked” to identify the source of the record.
- We will develop a common format for entries describing works of electronic literature and work together, along with other similar international projects, to develop an international bibliographic standard to document works of electronic literature.
- We have agreed to work to implement a mechanism to allow searching across all of the active databases from within the interface of any one of them.
- Finally we agreed that we should find a common archive in which to mirror all of the databases, and to share bibliographic information within any of the databases if any one should go offline due to a loss of funding or any other circumstance.

The research goals and objectives of ELMCIP, the ELD, and the other projects are all different in a number of subtle ways. For instance, while the descriptions of works in the ELD are often discursive and lengthy subjective scholarly discussions of the work addressed, our intention in developing records for creative works in the ELMCIP database will be to maintain essential bibliographic information and short abstracts of each work. The Siegen database is purely bibliographic and limited to works of critical writing. The Australian project will have a regional focus on the work of Australian digital writers, while the ELMCIP project will be primarily but not exclusively focused on European work. Although all of the projects and those of related research networks, such as the E-Poetry Festival, Barcelona-based Hermeneia, Paris-based Laboratoire

Paragraphe, Brazil-based FILE, and Montreal-based NT2, share common goals, certain aspects of our research agendas and artistic programmes will differ.

I would like to conclude with the observation that these differences are very much a source of strength for our field as it is developing internationally, and are almost as vital to its success as the things we share in common. I am not of the opinion that the strongest field of electronic literature would be structured like an octopus, with its tentacles flailing from one common body. My preference would be to be part of a field that is growing much like a forest, populated by many different types of trees, functioning together as an ecosystem.

A number of people have asked me why we are developing the ELMCIP Knowledge Base, when the Electronic Literature Directory exists and is already in progress (when I am indeed part of the group working on it). My answer is simple: I believe that the ELD will benefit from what you might call "coopetition": this is a term I borrow from Mark Amerika, who used it when I had a conversation with him in Boulder in 1999, when we were in the process of founding the ELO. Mark and I were discussing the potential relationship between the then nascent ELO and the Alt-X Online Publishing Network. The idea is that different entities in a field of practice, each with their own objectives and perspectives, can work together in relationships that are neither purely competitive nor absolutely integrated. I'm enough of a capitalist to believe that enlightened competition can spur innovation and enough of a social democrat to believe that people with common goals should work together unselfishly to advance the values they share. The CELL model of an international consortium for electronic literature, in my view, could be a superb example of coopetition. We will work together towards common goals even as we test out different approaches towards achieving them, learning from and freely sharing with each other as we progress.

Web sites and networks referenced

ELMCIP: <http://elmcip.net>

ELO: <http://eliterature.org>

Electronic Literature Directory: <http://directory.eliterature.org>

Officina di Letteratura Elettronica: <http://www.elettroletteratura.org/>

Hermeneia: <http://www.hermeneia.net>

Laboratoire Paragraphe: <http://paragraphe.univ-paris8.fr/fr/>

File Electronic Language International Festival: <http://www.file.org.br/>

E-Poetry Festival: <http://epc.buffalo.edu/e-poetry/archive/>

NT2: <http://nt2.uqam.ca/>

Alt-X: <http://www.altx.com/>