

From SEP to SEPIA: How and Why Indiana University is Helping the Stanford Encyclopedia of Philosophy

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At over eight million words, it would take almost 14,000 large-format pages to do a traditional printing of the *Stanford Encyclopedia of Philosophy*¹ this summer. Wait a year, and you'd probably need about 15,500 pages. And that's just the current contents. Each quarter, all the entries are archived to provide a complete snapshot for scholarly citation and reference. The **dynamic** nature of the SEP means that revisions can be made anywhere in any entry, affecting many more pages than looking at the numerical growth alone would suggest.

The SEP's current growth spurt will eventually settle down, but even when it does, the SEP is designed to keep growing and responding to new scholarly developments. Authors edit their entries through a Web interface on the server and submit the changes for editorial review. Every addition and change is reviewed by one or more subject editors before the entry is published.

A traditional print edition is not in the SEP's plans, but maintaining **open access** is. The encyclopedia has been built with major grants from the **National Endowment for the Humanities** and the **National Science Foundation**. These grants have covered basic operating expenses as well as the design and implementation of software that allows a principal editor, an assistant editor, and a copyediting assistant, all working part time, to oversee over a thousand authors and over a hundred subject editors. Authors and subject editors volunteer their time and efforts because they see the value of the SEP for teaching and research and because of the prestige it brings to be associated with the project. But the principal editor and assistants have demands on their time and energy going far beyond reasonable volunteerism. Plus the server and software have to be monitored, kept running, and improved, adding to the basic costs of operation — currently about \$200,000/year.

SEP, SPARC and ICOLC

Hence, three years ago, the SEP started talking to the **Scholarly Publishing and Academic Resources Coalition (SPARC)** and the **International Coalition of Library Consortia (ICOLC)** about ways to keep the encyclopedia free to the readers worldwide who download hundreds of thousands of entries weekly. The result is an innovative

fundraising plan that seeks to raise over \$4,000,000 through individual and library contributions to a fund that provides a permanent source of income for the SEP under management by the **Stanford University Foundation**. A literally unique part of this arrangement is that **Stanford** has agreed to return library contributions with any unspent interest, should it ever cease to support the encyclopedia.

Indiana University finds SEPIA

When the idea of applying for a matching grant from the **NEH** came up, the **Southeastern Library Network (SOLINET)** stepped forward to represent librarians by applying for the funding. And when the grant was awarded, it required a fiscally independent entity to represent the contributing libraries. Enter **SEPIA (the Stanford Encyclopedia of Philosophy International Association)**² and **Indiana University (IU)**. **Colin Allen**, the SEP's Associate Editor, had just moved to IU in the fall of 2004, and was pleased to find a very receptive environment on campus for digital library projects.

The **Indiana University Libraries** have a national reputation in the field of digital library innovation and activity. Its **Digital Library Program (DLP)** was established in 1996 as a partnership among the Libraries, the School of Library and Information Science, the Office of the Vice President for Information Technology, and the School of Informatics. It is "dedicated to the selection, production, and maintenance of a wide range of high-quality networked resources for scholars and students."³ The DLP supports existing University digital endeavors, and also has published some of the special collections available at Indiana: the **Frank M. Hohenberger Photograph Collection**,⁴ the **Hoagy Carmichael Collection**,⁵ and the **U.S. Steel Photograph Collection**, a series of more than 2,200 photographs of the **Gary Works** steel mill held by the **Calumet Regional Archives at Indiana University Northwest**.⁶ Other DLP projects more clearly support the teaching and research of IU faculty: **VARIATIONS2**, a project that provides online access to selected recordings and scores from the **Indiana University William and Gayle Cook Music Library**;⁷ **Wright American Fiction**, a collection of the nineteenth-century American novels and

novelettes itemized in **Lyle Wright's** 1957 bibliography, *American Fiction 1851-1875*;⁸ *Film Literature Index*;⁹ and the **Russian Periodical Index Digital Project**, which digitized a twenty-year portion of **Letopis' Zhurnal'nykh Statei** (1956-1975), a serial publication that indexes both scholarly and popular Russian periodicals.¹⁰ In addition to conducting the research that makes these projects technically possible, **Indiana University** staff are dedicated to keeping the results of this work openly accessible to the scholarly community.

On the more traditional side of the house, the Libraries, like its counterparts throughout the world, purchase and lease access to databases that benefit the **Indiana University** user community. As readers of these pages know, there are scores of ways for publishers and vendors to calculate costs for electronic resources: student FTE, academic unit FTE, Carnegie classification, size of materials budget, historical spend on periodicals, pay-by-the-drink, etc.¹¹ Throw in the complications of consortial purchases, and the permutations for payment models seem endless. The challenge for collection development and acquisitions staff lies in understanding, recording, and remembering the financial model for each individual license. So when **Colin Allen** approached the **Libraries** about supporting the *Stanford Encyclopedia of Philosophy*, librarians expected a variation on an existing model. Their opinion changed after Director of Collection Development **Cecile Jagodzinski** and Associate Director **Julie Bobay** discussed the **Libraries'** possible role in this venture with **Allen**; all agreed that this was a partnership worth exploring. Not only did **SEPIA** seem an improvement over the traditional financial model (libraries pay publishers; publishers provide content; license is renewed; libraries pay publishers again), but the idea of supporting a widely respected open access encyclopedia in partnership with faculty seemed to mesh squarely with the values of libraries and librarians and the **IUB Libraries'** commitment to open access. An especially attractive aspect to the project was the fact that it focused on a scholarly discipline in the humanities — one of **Indiana University's** (and the **Libraries'**) academic strengths. If partnering with the SEP would help increase the acceptance of and investment in digital resources and re-

search by humanities scholars, all the better — the **Libraries** would be fulfilling one of its traditional missions. More importantly, it was a way for the Libraries to participate directly in the publishing process by helping humanities researchers produce tools they would actually find useful. On the practical side, who could argue with a publisher who offers a money-back guarantee? The **Libraries** would serve as the front door for **SEPIA** on the Web, and its own financial contribution would help ensure that the **NEH** would offer those matching funds. **Jagodzinski** and **Bobay** took the idea to the then Dean of University Libraries, **Suzanne Thorin**, and she readily agreed that this was a project the **Indiana University Libraries** could and should support.

The move towards firm long term funding for the *SEP* does much more than guarantee open access for readers. It has already freed the *SEP*'s developers to start thinking about how the project can contribute to digital humanities needs in general. Instead of writing grant proposals simply to cover basic operations, it has been possible to turn to research projects that will enhance the functionality and utility of the encyclopedia, and that may have broader applications to other digital reference works.

Again, **IU** has placed itself firmly behind this research with a \$40,000 grant awarded through its **New Frontiers in the Arts and Humanities Program** supported by the **Lilly Endowment**. The project, titled "Automatic Metacontent Management for Dynamic Reference Works," seeks to develop tools and software that can ensure that rich and accurate metadata is always available for the *SEP*.

The scale, complexity, and dynamic nature of the *SEP* provide unique opportunities for digital humanities research. For instance, each time a new entry title is added to the database, a new entry comes online, or new research leads to an update of an existing entry the *SEP*'s metacontent must be modified to remain current — metadata, cross-references, themes for navigation and archival relationships may change and must be updated accordingly. To keep the *SEP* project economical, this metacontent management must be automated to the greatest extent possible.

The goal under the **IU** grant is to build tools for automatically maintaining a formal ontology for the subject domain of philosophy. This will allow improvements in several areas, including better methods for cross-referencing entries and enhanced search and navigation. Fortunately, the problem of getting philosophers to agree on how to represent the structure of their discipline can be sidestepped to a large degree given the practical objectives at hand. The development of effective methods for automatically managing the *SEP*'s metacontent requires interdisciplinary collaboration between computer scientists, who understand the technological

issues, and philosophers, who understand the needs of humanities scholars and students. The grant from **IU** is supporting two graduate students, one from philosophy and the other computer science, for the coming academic year; they, with **Colin Allen**, will be pursuing additional opportunities for external funding in order to further develop this line of research.

The **Libraries** have also reaped benefits from the **New Frontiers Program**. In fall 2005, the **Libraries**, in collaboration with **IU**'s sister campus in Indianapolis, decided that it was important to discuss the local implications of the draft report of the **American Council of Learned Societies' Commission on Cyberinfrastructure for Humanities and Social Sciences**¹² and for faculty to participate in this national dialogue. The joint application by the **Libraries** was successful, and funds will be used to host a two-day seminar (with follow-up discussions) on "New Models of Scholarly Communica-

tion: Defining the IU Perspective." By bringing together campus opinion-makers, the **Libraries** hope to challenge faculty, to give them the opportunity to think and about and articulate their needs in humanities computing, and to consider how computing can serve the very specific research needs of historians, philosophers, art historians, students of literature, and other humanists at Indiana University.

The librarians and faculty of **Indiana University** see the *Stanford Encyclopedia of Philosophy* and its supporting association, **SEPIA**, as part of the **University's** larger contribution to the transformation of scholarly communication. *SEP* and **SEPIA** return the funding and management of the products of scholarship back to their rightful home in the academy. By using technology appropriately and husbanding scarce financial resources wisely, scholars and librarians can ensure that the work of scholars remains a public good, freely available to readers throughout the world.

Endnotes

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9. Film Literature Index. <http://webapp1.dlib.indiana.edu/fli/index.jsp>. [accessed 16 June 2006].
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