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EDITORIAL

This issue of *Library Hi-Tech News* is not as full of conference reports as many previous issues. Actually there are only two and we will resume publishing more as the conference schedule becomes active again now with the beginning of most academic calendars. Thus, we only offer conference reports from the European Association for Health Information and Libraries (EAHIL) that took place in Alghero, Sardinia in early June, the Library & Information Technology Association (LITA) Preconference held at the American Library Association meeting in San Francisco later in June, and the first of what we hope will be more coverage of the International Federation of Library Associations (IFLA) meeting that took place in late August in Boston.

We have several columns that we hope you will find as interesting as we did. John Matylonek and Laurel Kristick explore how to build library collections to support a growing engineering program and the data collection that they conducted to learn what the expectations of such a collection are. Howard Falk's eCurrents piece covers the accusations against Dimitry Skylarov and the implications it has for the ebook industry with a growing interest in etextbooks and new releases of ebook readers. Lourdes David and Arlene Marza take us to the Philippines for their contribution to the "Around the World" library visits column and their description of the challenges facing the College of Science Library at the University of the Philippines in Diliman.

Gerry McKiernan eprofiles *Perspectives in Electronic Publishing (PeP)* in great detail and offers some comparisons with other evaluative criteria for ejournals. The Research in Progress column by Dr David Bradbury and Georgina Payne describes the Online Personal Academic Librarian (OPAL) initiative at the Open University in the UK.

We have a long list of new references in the "Professional Literature"

Table I.
Deadlines for future issues volume 19, 2002

Issue	Month	Editor	Due to Editors
1	February	JG	November 5, 2001
2	March	JG	December 3, 2001
3	April	PC	January 7, 2001
4	May	JG	February 4, 2002
5	June	JG	March 4, 2001
6	July	PC	April 8, 2002

Notes: JG – Julia Gelfand (jgelfand@uci.edu);
PC – Philip Calvert (philip.calvert@vuw.ac.nz)

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E-PROFILE
PERSPECTIVES IN ELECTRONIC PUBLISHING: AN OPEN ACCESS-DYNAMIC-VIRTUAL ELECTRONIC JOURNAL

Gerry McKiernan

Open Access Publications

On June 26, 1997, Al Gore, then Vice President of the USA, formally announced open and free access to the MEDLINE database via the World Wide Web (*NCBI News*, 1997). Among the participants in the PubMed inauguration was Dr Harold Varmus, then director of the National Institutes of Health (NIH). Nearly two years later, Varmus formally proposed E-biomed, a plan to create a centralized archive that would provide open and free access to the full-text of biomedical publications (Varmus, 1999a). For while PubMed offered a number of advanced features and functionalities rare in most bibliographic databases (Entrez PubMed, undated), until recently, it primarily provided access to the citations and abstracts of the world's medical journal literature and not to associated full-text source publications.

As envisioned by Varmus (1999a):

> E-biomed would transmit and maintain, in both permanent online and downloaded archives, reports in the many fields that constitute biomedical research, including clinical research, cell and molecular biology, medically-related behavioral research, bioengineering, and other disciplines allied with biology and medicine. The essential feature of the plan is simplified, instantaneous cost-free access by potential readers to E-biomed's entire content in a manner that permits each reader to pursue his or her own interests as productively as possible.

Although many embraced and supported this plan, it also aroused substantial criticism from many commercial publishers and professional societies (Day, 1999). After a period of public comment, a modified version was prepared and released. In the revised proposal, Varmus recommended that the NIH sponsor the establishment of "a Web-based repository for barrier-free access to primary reports in the life sciences . . . [to] be called PubMed Central, based upon its natural integration with the existing PubMed biomedical literature database." In the new proposal, the scope of PubMed Central (PubMed Central, 2001b) would be expanded to include the life sciences in general, plant and agricultural research, as well as biology and medicine (Varmus, 1999b).

In the prologue to his E-biomed proposal, Varmus highlighted the arXiv.org e-print service (McKiernan, 2000) and the efforts of Paul Ginsparg and others to establish and expand the arXiv.org model and articulated the benefits that "freely available" electronic preprints and publications through an analogous E-biomed service could offer the biomedical community (Varmus, 1999a; Day, 1999). Among these are:

- Open access to scientific reports and assembly of personalized journals.
- Improved format for publication of modern biology.
- More rapid dissemination of scientific information.
- Reduced costs.

PubMed Central

Yet, today – more than two years after the formal announcement of the E-biomed proposal – open access to the full text of the commercial life science literature through PubMed Central is severely limited (PubMed Central, 2001a) and the biomedical e-print literature is only indirectly available through a participating publisher (bmj.com, 2001). While the recently established Public Library of Science initiative to make "the world's scientific and medical literature freely accessible to scientists and to the public around the world . . ." (Public Library of Science, 2001a) complements the PubMed Central initiative, the number of journals currently available in this collection is but a fraction of those commercially available (Public Library of Science, 2001b).

Existing PubMed Central features include unified search and display interfaces for its incorporated journals, links from a PubMed Central journal article to a corresponding PubMed abstract, and links to bibliographic records for publications related to the PubMed Central article under review ("Related Articles"). In addition, most cited references in a PubMed Central article are linked to a corresponding PubMed abstract through which access is provided to full-text publications, in select cases; to value-added content (e.g. genomic data, protein sequences, chemical structures, etc.); and to their related "articles" ("Entrez PubMed", n.d.). Such integrated access no doubt may serve as a model for the next-generation electronic journal.

While there are several innovative features, functionalities, and content within the PubMed/PubMed Central system, full-text content in PubMed Central is substantially inadequate and not as seamless as many would desire. In addition, non-journal and gray life

science literature is limited and conceptual linkages between and among publications are restricted to bibliographic citations, abstracts, and associated subject descriptors in a highly structured bibliographic database. Recently, a pilot project was established to investigate and explore the potential benefit of enhanced and alternative navigation and use of open access electronic publications within a more dynamic and integrated digital framework.

Perspectives in Electronic Publishing

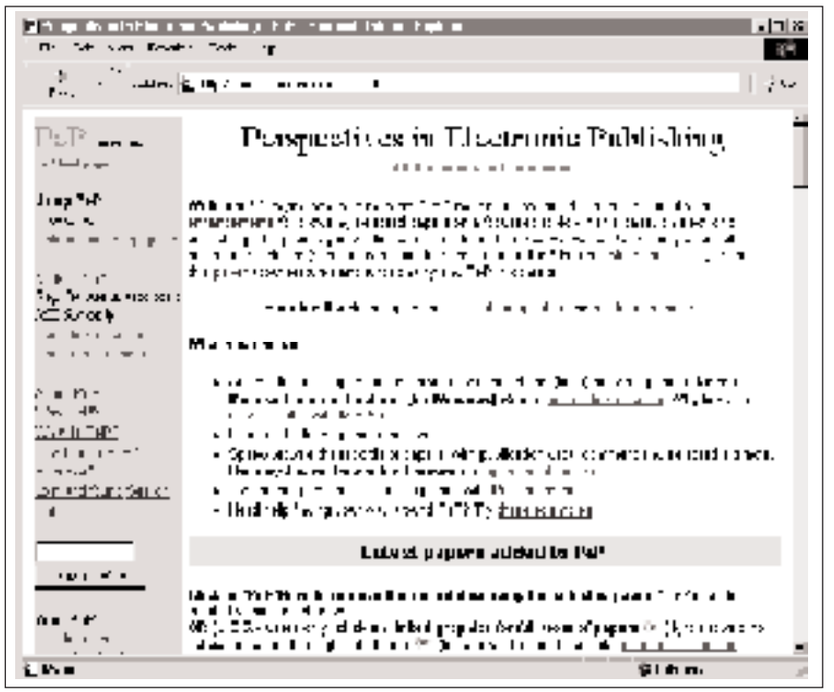
Perspectives in Electronic Publishing (http://aims.ecs.soton.ac.uk/ pep.nsf/) is a "new model e-journal" that covers a broad range of topics relating to electronic networked publishing, with an emphasis on academic publishing and journals (see Figure 1). As characterized by its editor, Stephen M. Hitchcock, *Perspectives in Electronic Publishing* (*PeP*), is a "distributed linkbase journal" and an "evaluated journal with full-text papers distributed on the Web." *PeP* may also be considered a review journal in that it provides critical assessments of selected publications or an "extract" journal in that it provides selected extracts from source publication. In that it provides summaries and indexing of its primary and secondary content, it may also be considered an abstracting and indexing service. Alternatively, *PeP* may be viewed as a "vertically integrated portal", a resource discovery tool, or a subject-based information gateway ("What is *PeP*?", n.d.). In that its core content – open access full-text publications – is not original to the journal but incorporated within it, *PeP* may also be viewed as a "virtual e-journal" (McKiernan, in press).

Coverage

In general, *PeP* covers the publishing process, publishers, and intermediary services. Its specific coverage includes major aspects and components (see Table I).

In addition, *PeP* includes publications that discuss a wide range of scientific, technological and humanistic disciplines in the context of electronic publishing ("*PeP* categories", n.d.).

Figure 1.
Home page of Perspectives in Electronic Publishing (PeP)



Selection

At the core of *PeP* are full-text electronic publications. These may be accessible from an author's Web site, an institutional server, or a subject-based e-print archive. In addition, open access electronic journals and proceedings are included. Source publications may or may not be peer reviewed. To be considered for incorporation within *PeP*, publications must be freely-accessible on the Web and relevant to its scope. To qualify for inclusion, a candidate publication must meet one broad criterion: noteworthiness. As succinctly described by Hitchcock, a noteworthy candidate is simply a "[publication] that has something interesting to say." Typical reasons for exclusion are poor presentation, poor readability, incoherence, dullness, and repetition ("About *PeP*", n.d.).

***PeP* Record**

For each incorporated and original contribution within *PeP*, the following data and information are provided:

- author(s);
- affiliation(s);
- e-mail address(es);
- Web page(s);
- source;
- format;
- type of paper (type of publication);
- references (cited publications);
- other versions, if available.

In addition, the *PeP* record includes the assigned broad and specific categories for a publication, the date on which the publication was added to *PeP*, and a modification date, if applicable. The core of the record includes an author-based abstract, editor comments, and extracts – editorially selected highlights from the publication (see Figures 2 and 3). A *PeP* record also includes links to forms that allow readers to comment on the publication under review and for authors to report updates to their publications or to request changes to *PeP* records. To assist readers in navigating the *PeP* collection, the bottom of each *PeP* record includes a categorized, hyperlinked directory of all *PeP* categories (see Figure 4).

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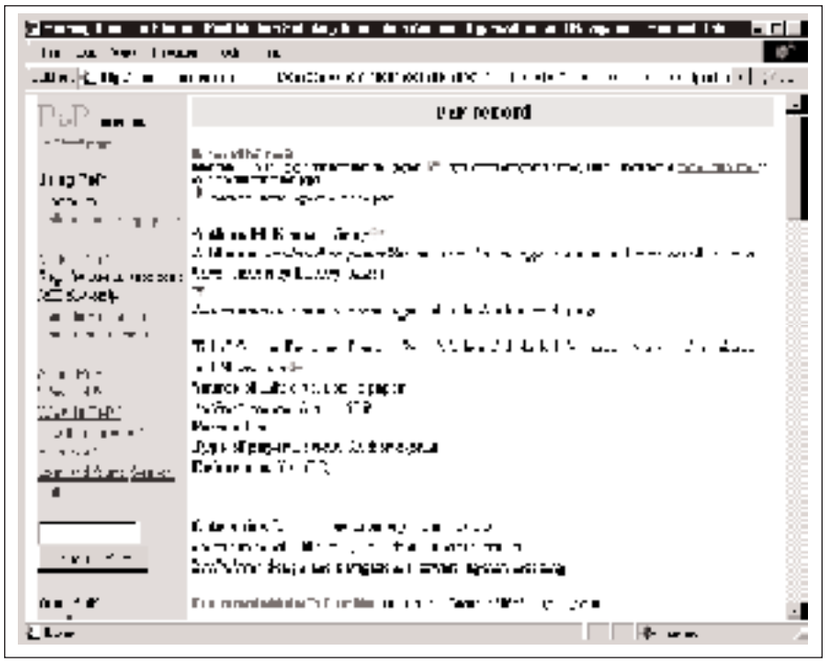
Table I.
Selected PeP *coverage*

Publishing	Electronic publishing	Future developments	Publishing models
Journals	E-journals	Economics	Ownership
Libraries	Archiving	Cataloging and metadata	Licensing
Services	Abstracting and indexing	Journal aggregators	Subscriptions
Technical	Linking	Metadata development	Multimedia
Academic	Citation impact	Electronic preprints	Peer review
Research	Information research	New media	User studies
Legal	Copyright	Hyperlinking	Intellectual property

Figure 2.
Top section of sample PeP *record*



PeP Originals

In addition to external, freely-accessible Web publications, *PeP* contains original work ("About *PeP*", n.d.). These include:

- *PeP* Reviews;
- *PeP* Commentary;
- *PeP* Topics.

PeP Reviews are 1,000-2,000-word contributions "chosen to generate links to as many works as possible." Currently, there is one *PeP* Review, a concise synopsis of the views of Stevan Harnad, "one of the most prolific, passionate and, perhaps, misunderstood writers on scholarly electronic publishing . . ." (Hitchcock, 2001a). *PeP* Commentary is "personal viewpoints on subjects covered by *PeP*." This content is intended to be primarily invited contributions, but reader submissions will be considered. There is currently one *PeP* Commentary, a brief observation on the implications of Napster for journal publishers (Hitchcock, 2001b). *PeP* Topics is a planned feature that will include "items of substance selected from user correspondence with *PeP*" and intended to be less formal than a *PeP* Commentary but more formal than an electronic discussion list. Users may submit comments or initiate a new *PeP* topic using specialized forms.

Link Session

Among the unique features of *PeP* are the dynamic links created within and between publications in the journal. Linkages are made when a reader opens a "link session". Opening a link session involves downloading a "link database" in a small applet. This applet interacts with a link session browser window and recognizes text of requested original publication pages and displays associated icons for the added links in their appropriate positions within document text. In August 2001, there were nearly 1,660 links in the *PeP* linkbase. These links are not embedded in the original publication text but overlaid on it ("*PeP* help pages. Link sessions", n.d.).

To open a link session and download a link database, the reader is required to use the Microsoft Internet Explorer (IE) browser (v. 5.0 or above). IE 5.x is required, as it has an Application Programming Interface (API) that enables the applet to interact with the Web text. Recent versions of Netscape do not currently have this feature ("Open *PeP* link session", n.d.) ("*PeP* help pages. Link sessions", n.d.). Direct access to incorporated full-text publications is only available using IE 5.x with an active link session ("*PeP* help pages. Links", n.d.). In addition, *PeP* is currently only operational in the Microsoft Windows operating environment on a PC platform.

Remote Index

Using an appropriate version of Microsoft Internet Explorer (MIE 5.x), *PeP* readers can access its core and auxiliary publications using a variety of browsable indexes, the majority of which are only available through a Remote Index. Unlike most electronic

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Figure 3.
Middle section of sample PeP *record*

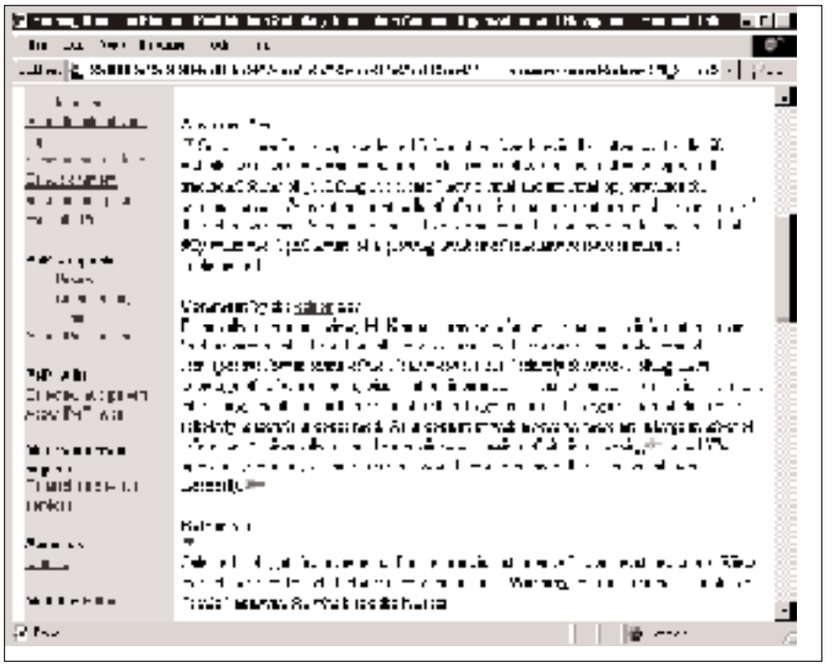
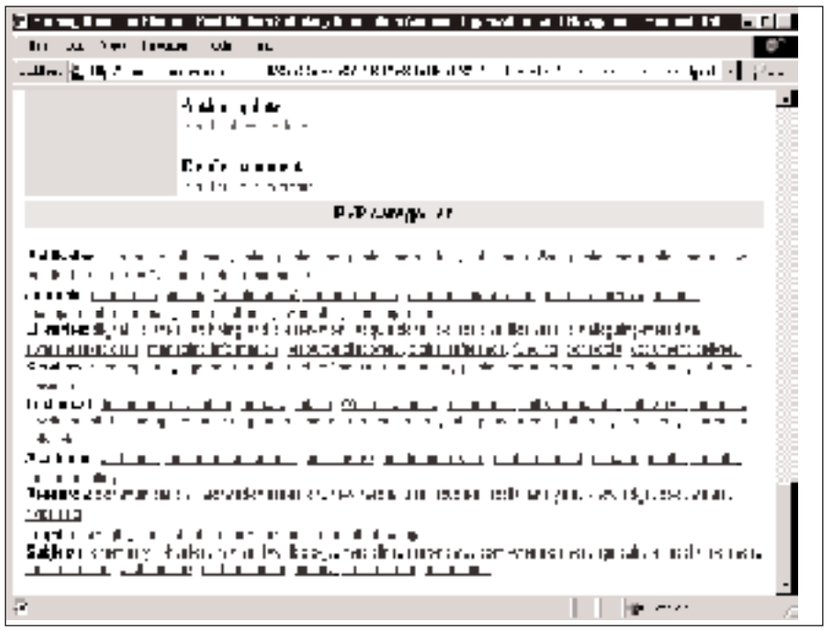
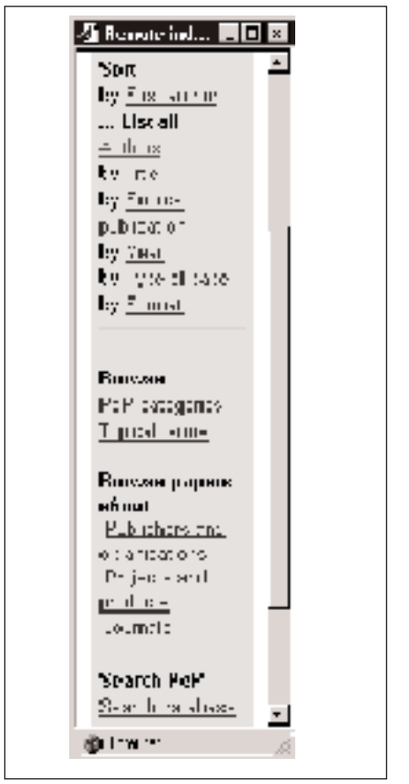


Figure 4.
Bottom section of sample PeP *record*



journals, *PeP* make its indexes available as a separate browser window; hence the characterization of the parent index as "remote" (see Figure 5). This configuration option allows accessed publications to be fully displayed in their "native form" in the main browser. To launch properly the Remote Index, Javascript must be enabled in the MIE 5.x browser. Users of non-MIE 5.x Javascript-enabled browsers can navigate the Remote Index, but can only access secondary data about *PeP* publications ("*Pep* help pages. Remote Index", n.d.).

Figure 5.
Remote Index



The Remote Index contains a variety of conventional and unconventional "views" or indexes. These indexes are sorted views of data maintained within the *PeP* database, a database developed within the Lotus Notes framework (Lotus Notes, n.d.) ("*PeP* help pages. Indexes (views)", n.d.).

The primary *PeP* indexes are:

- first author;
- all authors;
- title;
- source publication;
- year;
- type of paper;
- format.

PeP Indexes

First Author

The "First Author" option provides an A-Z index by the surname of the first author of incorporated and original publications; papers by anonymous authors are also listed. Each index entry

includes a link to an associated *PeP* record; the surname and first name (or initial) of the primary author; the full publication title; and year of publication. Other *PeP* works by an individual have separate entries. During an active link session ("Open *PeP* link session", n.d.), a left-arrow link icon ( ) is displayed to the right of an author's first name (or first (or middle) initial). In this context, the icon links to a "Related Links" list of *PeP* publications in which the named individual is a primary author or a co-author. This secondary listing provides identical categories of information, as found in the original A-Z index (i.e. *PeP* record link, author(s), publication title, source, and year). Author entries in this listing also have associated left-arrow link icons, which in turn provides access to the "Related Links" for these individuals.

Within the "First Author" index, the original A-Z listing also includes a right-arrow link icon ( ) adjacent to the title of an individual work. This icon links directly to the full text of the publication. Titles in the "Related Links" group also have the right-arrow icon and likewise link to their respective full text.

All Authors

The Remote Index also provides access to a comprehensive A-Z index to *PeP* publications by all named primary or secondary authors, as well as anonymous authors. For each index entry, the number of publications for an individual is noted. This number is located at the far left of the entry, before a blue right wedge icon ("▶"), the author name (in inverted order), and a left-arrow link icon (" ") (e.g. "6 ▶ Arms, William Y "). Upon clicking the blue wedge, an expanded listing of the authored (or co-authored) works by the selected individual is displayed within the same page in the context of non-selected author names. For each entry, a *PeP* record link, full publication title, source, and publication year are listed beneath the author name. The names of co-authors, if any, are not listed in the expanded display but are accessible from within the associated *PeP* record for each work or by clicking the left-arrow link icon adjacent to an author name in the alphabetical author grouping. The right arrow link icon (" ") adjacent to the publication title provides access to its full text. A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with the index entry.

Title

Within the Remote Index, the "Title" index is an A-Z index to incorporated and original *PeP* publications by title, with entries arranged primarily in alphabetical order. Notable exceptions are groupings that do not disregard initial articles (i.e. "a", "an", and "the") in the alphabetization. Each alphabetical group includes entries that provide the full title of the publication, author(s), the source, publication year, and a link to an associated *PeP* record. A right-arrow link icon (" ") located to the right of the publication title provides access to the full text of a publication from its original source. The left-arrow link icon (" ") adjacent to each author name provides access to a "Related Links" grouping, which in, this context, are all *PeP* publications by an individual either as a primary or as a secondary author.

Source

The "Source" index within the Remote Index provides access to an alphabetized list of *PeP* sources, notably journals, magazines and newsletters; e-print services; and author servers. The number of available *PeP* publications from the source is noted at the far left of each entry, before a blue right wedge icon ("▶") and the source name or type (e.g. "16 ▶ *Ariadne*"). In most cases, a right-arrow link icon (" ") is located to the right of the source name or title. In this context, however, the right-arrow link is to source homepage and not to an individual publication.

Upon clicking the blue wedge, an expanded listing of individual publications from a select *PeP* source is displayed within the same page in the context of non-selected source entries. Within this expanded list, a *PeP* record link, the author (and co-authors), full title, and publication year, are provided for each publication from the selected source. As in other *PeP* indexes, a right-arrow icon (" ") is located to the right of each publication title and provides a link to its full text. A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with the source entry.

Year

The "Year" index is an index to the year of publication for incorporated or original *PeP* publications, with years listed in reverse chronological order. The number of *PeP* publications published in a particular year is noted at the far left of each year, before a blue right wedge icon ("▶") and the publication year (e.g. "64 ▶ 2001"). A significant portion of *PeP* publications date from the mid-1990s.

Upon clicking the blue wedge, an expanded listing of individual publications for a selected year is displayed in alphabetical order by the surname of the first author. Within the expanded list, a *PeP* record link, the author (and co-author(s)), full title, and source, are provided for each publication title. Adjacent to each author name is a left-arrow link icon (" ") that provides access to "Related Links" associated with this author, namely all papers that the individual has authored or co-authored. A right-arrow icon (" ") is located to the right of each publication title and provides a link to its full text and the expanded list is displayed within the original page(s). A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with the category entry.

Type of Paper

The "Type of Paper" index provides access to the types of publications incorporated within *PeP*. These publication types range from book chapters, conference papers, journal articles, magazine features, and technical reports. E-prints, electronic discussion list posting and correspondence, and transcripts are among the more unusual publication types. This category also includes entries that characterize the nature of a publication (e.g. "commentary", "editorial", "review", etc). The number of *PeP* publications of a particular type is noted at the far left of each type name, before a blue right wedge

icon ("▶") and the type of publication (e.g. "225 ▶ Journal paper").

Upon clicking the blue wedge, an expanded listing of individual publications of the type is displayed in broad chronological order. Within the expanded list, a *PeP* record link, the author (and co-authors), full title, and source, are provided for each listed publication. Adjacent to each author name is a left-arrow link icon ("") that provides access to 'Related Links' associated with this author in *PeP*, namely all papers that the individual has authored or co-authored. As in other *PeP* indexes, a right-arrow icon ("") is located to the right of each publication title and provides a link to its full text, and the expanded list is displayed within the original page(s). A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with category entry.

Format

The "Format" index provides access to *PeP* publications by format type (e.g. ASCII, HTML, PDF, etc.), an overwhelming number of which are HTML documents (454/534). The number of *PeP* publications of a particular format is noted at the far left, before a blue right wedge icon ("▶") and the format type (e.g. "454 ▶ html").

Upon clicking the blue wedge, an expanded listing of individual publications in a particular format is displayed in broad chronological order. Within the expanded list, a *PeP* record link, the author (and co-authors), full title, and source, are provided for each listed publication. Within the expanded list, a *PeP* record link, the author (and co-authors), full title, source, and year are provided for each listed publication, and the expanded list is displayed within the original page(s) in the context of non-selected formats. A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with category entry.

In addition to its variety of indexes, *PeP* also provides two additional options for browsing its collection: "*PeP* categories" and "Topical Terms".

PeP Categories

"*PeP* Categories" provide access to a categorized grouping of the subject categories and subcategories used to index the broad and specific content of *PeP* content (see Figure 4). The broad categories are appropriate to the varied aspects of *PeP* (e.g. "Journals", "Technical", "Academic", etc.) and subcategories appropriate for the various issues relevant to electronic publishing (e.g. Journals: "serials crisis", "e-journals, "ownership", etc.; Technical: "formats", "linking", "metadata developments"; Academic: "peer review", "citation impact", "e-prints", etc.).

All subcategories are hotlinked to a listing of associated indexed *PeP* publications. A *PeP* record link, the author (and co-authors), full title, and source, and publication year are provided for each publication in a *PeP* category. Records within each category may be accessed by primary author surname, in ascending or descending alphabetical order, using black upward and downward arrows ("") located to the left of the "Authors" heading. Adjacent to each author name is a left-arrow link icon ("") that provides access to "Related Links" associated with this author name in *PeP*, namely all papers that the individual has authored or co-authored. A right-arrow icon ("") is located to the right of each publication title and links to its full text.

Topical Terms

To facilitate access to specific aspects and issues relating to electronic publishing (e.g. "CrossRef", "DOI" [Digital Object Identifier], "XML" [eXtensible Markup Language], etc.), a Topical Term index is provided in *PeP*. In this index, the number of *PeP* publications that discuss a particular topic is noted at the far left of each topical term, before a blue right wedge icon ("▶") and specific topic term or phrase (e.g. "6 ▶ CrossRef"). As of August 2001, only a fraction of *PeP* publications was indexed by topical term(s).

Upon clicking the blue wedge, an expanded listing of individual publications of indexes by a particular topical term or phrase is displayed in broad chronological order. Within the expanded list, a *PeP* record link, the author (and co-author(s)), full title, source, and publication year are provided for each listed publication title. Adjacent to each author name is a left-arrow link icon ("") that provides access to "Related Links" associated with this author in *PeP*, namely all papers that the individual has authored or co-authored. A right-arrow icon ("") is located to the right of each publication title and provides a link to its full text, and the expanded list is displayed within the original page(s) in the context of non-selected topics. A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with category entry.

Publishers and Organizations

To facilitate access to *PeP* publications that discuss the commercial and non-commercial activities of publishers and organizations directly or indirectly involved in electronic publishing, *PeP* provides a separate alphabetical index ("Publishers and organisations"). A corporate name may appear both as an acronym (e.g. "ISI") and as a formal name (e.g. "Institute for Scientific Information"). In this index, the number of *PeP* publications that discuss a particular publisher or organization is noted at the far left of each publisher or organization, before a blue right wedge icon ("▶") and specific publisher or organization (e.g. "4 ▶ Association for Computing Machinery"). As of August 2001, only a fraction of *PeP* publications was indexed by this component.

Upon clicking the blue wedge, an expanded listing of publications that discuss a particular publisher or organizations is displayed. Within the expanded list, a *PeP* record link, the author (and co-authors), full title, source, and publication year are provided for each publication. Adjacent to each author name is a left-arrow link icon ("") that provides access to "Related Links" associated with this author in *PeP*, namely all papers that the individual has authored or co-authored. A right-arrow icon ("") is located to the right of each publication title and provides a link to its full text and the expanded list is displayed within the original page in the context of

non-selected publishers or organizations. A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with category entry.

Projects and Products

PeP also provides a specialized index to *PeP* publications that discuss the variety of current and former projects and products relating to electronic publishing. As with its publishers and organizations index, entries in this *PeP* index may appear both as an acronym (e.g. "jake") and as a formal name (e.g. "Jointly Administered Knowledge Environment"). In this index, the number of *PeP* publications that discuss a particular project or product is noted at the far left of each project or product, before a blue right wedge icon ("▶") and specific project or product (e.g. " 3 ▶ CiteSeer"). As of August 2001, only a fraction of *PeP* publications was indexed by these aspects.

Upon clicking the blue wedge, an expanded listing of publications that discuss a particular project or product is displayed. Within the expanded list, a *PeP* record link, the author (and co-authors), full title, source, and publication year are provided for each publication. Adjacent to each author name is a left-arrow link icon ("") that provides access to "Related Links" associated with this author in *PeP*, namely all papers that the individual has authored or co-authored. A right-arrow icon ("") is located to the right of each publication title and provides a link to its full text, and the expanded list is displayed within the original page(s) in the context of non-selected projects and products. A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with category entry.

Journals

An alphabetical index ("Journals") is available to facilitate access to *PeP* publications that discuss specific electronic journals. As with other indexes, entries may appear both as an acronym (e.g. "JAI") and as a formal name (e.g. "Journal of Artificial Intelligence"). In this index, the number of *PeP* publications that discuss a particular journal is noted at the far left of each topic, before a blue right wedge icon ("▶") and specific journal title (e.g. "2 ▶ Psycoloquy"). As of August 2001, only a fraction of *PeP* publications was indexed by this component.

Upon clicking the blue wedge, an expanded listing of publications that discuss a particular journal is displayed. Within the expanded list, a *PeP* record link, the author (and co-authors), full title, source, and publication year are provided for each publication. Adjacent to each author name is a left-arrow link icon ("") that provides access to "Related Links" associated with this author in *PeP*, namely all papers that the individual has authored or co-authored. A right-arrow icon ("") is located to the right of each publication title and provides a link to its full text, and the expanded list is displayed within the original page in the context of non-selected projects and products. A listing may be collapsed by clicking on the blue down wedge arrow icon ("▼") associated with category entry.

Search

Although *PeP* is designed primarily for browsing with dynamic links that facilitate navigation, it does offer a search option as well. As *PeP* was built using Lotus Notes (Lotus Notes, n.d.), its search feature uses the Lotus Notes search functionality. In a *PeP* search, the *PeP* record (and fields not displayed to the user) are searched, not the full text of the linked publications.

Although *PeP* accommodates basic Boolean searching and phrase searching, readers are advised to begin a search with a single word and to use specific appropriate term(s) (Search hints for *PeP* users. Selected search tips from the Notes documentation, n.d). For a search, users can specify that word variants be considered (e.g. pair: paired, pairs, pairing, etc.) and/or that a fuzzy search be executed (e.g. "ray" to find "gray", "stray", or "bray"). In addition, the maximum number of results to be displayed (i.e. 10, 50, 100, 250, All) can also be selected from a drop-down menu. By default, search results are displayed in relevancy order, with the most relevant publications ranked higher than those of less relevance. Alternatively, readers may specify that results be listed in order by modification date(s).

New and Modified Records

To facilitate access to the latest records added to *PeP*, as well as those that have been modified, users are offered two specialized indices: "Latest records" and "Modified records". For each index, entries are displayed in reverse chronological order by entry date or modification date, respectively. As in other *PeP* indexes, entries include a *PeP* record link, author(s), source, and publication date. The respective entry and modification dates are noted in a column to the left of the *PeP* record link for each entry. Access to the most recently added *PeP* records is also provided from the *PeP* homepage.

***PeP* Hubs**

To facilitate access to the most important publications relating to electronic publishing, *PeP* offers a select collection of publications called "*PeP* Hubs" ("About *PeP* hubs", n.d.). Publications are considered "hubs" based on the high frequency of keywords relating to electronic publishing that they contain relative to other *PeP* publications. Hubs are typically general or review publications; *PeP* reviews are intended to be hub papers. Presently there are fewer than a dozen *PeP* hub publications ("*PeP* Archive. *PeP* Hub papers", n.d.). Entries for hub publications include a link to a *PeP* record, author, full title, source, and year of publication. Currently, only HTML *PeP* publications are hub candidates, as *PeP* links are not applied to documents in other formats.

Participation

Using Web-based forms, authors and readers are invited to participate in the development of *PeP* by nominating publications for consideration or commenting on a *PeP* publication (Send comment on *PeP*, paper or topic, n.d.). Comments are appended to the *PeP* record for the publication and may be edited. Access to *PeP* publications with reader comment is provided from the

comment submission page and from the *PeP* homepage (see Figure 1). Readers can also use the Web form to comment about a *PeP* Topic or about *PeP* in general. Individuals interested in participating in a formal evaluation of *PeP* can link to a specialized form from within this same form ("Evaluating *PeP* – how you can help", n.d.).

Using another specialized Web form ("Send author update for *PeP* record", n.d.), authors of *PeP*-incorporated publications can provide additional data for their *PeP* record (e.g. e-mail address); notify the editor of changes or corrections (e.g. change in an Internet address); respond to editor commentary or extract selection, or reader comments; or request that new information be added to the record (e.g. new papers that extend the original *PeP* record). Access to all updated *PeP* publications is offered from within this page.

Dynamically-Linked E-Publications

While an increasing number of "eclectic" journals provide a variety of innovative features, functionalities, and content (McKiernan, 2001), few offer the range found within *PeP*. While noteworthy, however, such an array is not as significant as the dynamic linking provided between and among *PeP* source publications in the *PeP* environment. Through superimposed links readers can navigate not only explicit relationships within and among documents but, perhaps more importantly, implicit relationships as well ("*PeP* help pages. Links", n.d.). A left-arrow icon ("") overlaid on a *PeP* full-text document provides direct access to a listing of related publications within the *PeP* collection, while a right-arrow icon ("") adjacent to a publication title in this listing links directly to the full text of the related publication. In interacting with superimposed links, readers can dynamically explore the semantic relationships of *PeP* publications within a full-text environment and readily gain access to publications that share a range of conceptual relationships.

PeP: A Model for the Future e-Journal

In utilizing and applying a variety of digital Web-based technologies, *PeP* not only offers value-added features and content that transcend the "limitations of paper", but also surpasses the functionalities of most current Web-based electronic journals. Within its framework, *PeP* offers researchers organized access to an integrated collection of heretofore "fragmented and chaotic" literature (Hitchcock and Hall, 2001). Through dynamic linking, it allows readers to discover relationships not evident through conventional hyperlinks, fostering opportunities to gain new insight to a literature and new perspectives for future scholarly pursuit. While the current focus of *PeP* is electronic publishing, the publication model exemplified by *PeP* need not be limited to one subject or research area. The innovative features, functionalities, and content of the *PeP* model could equally enhance access and use of other literatures and benefit other research communities.

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