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INTRODUCTION OF NEW EDITORS OF *LIBRARY HI-TECH NEWS*

Philip Calvert

It's a great pleasure to introduce myself to readers of *Library Hi-Tech News*. This is an unusual journal in the Library Science discipline and one that is much needed by the profession. Julia Gelfand, Colby Riggs and myself hope to bring you a lively and informative combination of news, reviews, conference reports, diary dates, research in progress and much else besides.

Currently I am a member of the School of Communication and Information Management of Victoria University of Wellington in New Zealand. My main teaching areas are management and bibliographic organization in the Master of Library and Information Studies programme. You may not be too surprised to hear that I intend to start teaching a new course on Electronic Publishing later this year. My research interests range over such issues as service quality, performance measurement, the funding of public libraries, the impact of misinformation, and much else besides.

Editing is a great challenge, so I am glad to have plenty of experience at it already. For five years I was the Editor of *New Zealand Libraries*, our national LIS journal of record. I was Associate Editor of *Asian Libraries* for two years, and I have also been part of the editorial team on several other journals. *Library Hi Tech News* will be a particular challenge, however.

One reason I was invited to join the editorial team of this journal was to give it a wider international perceptiveness. I sometimes say that if you become a librarian you can see the world, so after working in my native England for a few years I then worked in Fiji, Papua New Guinea, Singapore, and currently

New Zealand. It has given me a feeling for the richness and diversity of the library and information management profession around the world and the many fine people who are part of it. I am sure this will be a rewarding experience for me, and I hope we can produce a journal that excites you.

Julia Gelfand

Not exactly new to MCB readers, I was the founding editor of the *International Journal on Grey Literature* (IJGL), the journal ceased after one volume year and I wanted to continue my learning curve as an editor. The opportunity to work with other editors and contributors and retain my interest in journal editing was a real perk when there became turnover in the established publishing program of *LHTN*. For my real job, I am the Applied Sciences and Engineering Librarian at the University of California, Irvine where I have been a member of staff since 1981 and centrally involved in collection development and reference liaison activities supporting many subject areas. Active professionally in many societies and associations, ranging from the American Library Association (ALA), Society of Scholarly Publishing, map and GIS groups, the American Association for the Advancement of Science and others, I find great rewards from my affiliations and networking opportunities these memberships offer. Although US based, I have always had a wide international focus in my work having served as the US/UK Fulbright Librarian in 1992-1993 based at Imperial College, London. Half-way through my first four-year term as ALA's Science and Technology Representative to IFLA's Science &

E-PROFILE

REPEC: AN OPEN LIBRARY FOR ECONOMICS

Gerry McKiernan

What I would suggest is this: a distributed system with any number of sites, each mirroring each other. It would have extensive bibliographic functions (cross-referencing, etc.) ... For archives outside it, papers could be listed but no cross-referencing. But, such archives could "join" the system ... Then you'd have the best of both worlds: distributed, anybody could join, extensive cross-referencing, the whole works. Such a system could grow with the profession's use of the net. Such a system would GREATLY benefit the [economics] profession. (Goffe, 1995).

RePEc

As cited by Krichel, this posting to the now-defunct *NetEc-admin* electronic discussion list was the inspiration for the development of the *Guildford Protocol* (Krichel, undated b). The Guildford Protocol is the protocol used as the framework for the creation of *RePEc* <<http://www.repec.org/>>, a decentralized Internet-based service in the field of economics. From Krichel's perspective,

The way to achieve this "global and local" archive is through a comprehensive distribution process that is based on a set of archives. An archive is a machine that makes data available. It is a place where original data enters the system. The data are then distributed to any number of sites. A site is a collection of archives on the same computer system. It usually consists of a local archive augmented by frequently updated copies of remote archives maintained on other computers.

All archives hold papers and metadata about papers, as well as software that is useful to maintain archives. Everything contained in an archive may be mirrored. ... The Guildford protocol aims to find a set of minimal restrictions on archives such that a global and local system will work ... [and] provide[s] a

set of rules such that if they are followed locally, require almost no central effort (Krichel, undated b).

Utilizing the Guildford Protocol, *RePEc* provides access to bibliographic data for "working papers", journal articles, and software components for a variety of disciplines in economics, as well as directory information for selected authors and economics research organizations. As of February 2001, *RePEc* provided access to more than 80,000 "working papers", 34,000 journal articles, and 650 software components. In addition, its directory databases provide contact information for more than 1,100 registered individuals and 5,600 economics research organizations. In total, *RePEc* provided access to more than 120,000 items of potential interest <<http://www.repec.org/>> to economists.

The *RePEc* Economics Library provides access to one of the largest sources of freely-downloadable scientific "preprints" in the world (Krichel, 2000; Cruz and Krichel, 2000), second only to the Los Alamos National Laboratory e-print server, *arXiv.org*. As defined by the Office of Scientific and Technical Information (OSTI), US Department of Energy (DOE), preprints are:

Manuscripts that have not yet been published, but may have been reviewed and accepted; submitted for publication; or intended for publication and being circulated for comment" (US DOE, Office of Scientific and Technical Information, undated).

Kramer has defined a preprint as "a record of research distributed among ... [researchers] prior to formal publication" (Kramer, 1985, p. 4). Such a description can also be used to characterize the "working paper" in the Economics discipline. As of February

2001, *RePEc* provides access to the full-text of more than 36,000 publications on a broad range of economic topics, many of them working papers (Zimmermann, 2000).

ReDIF

Unlike the centralized model exemplified by *arXiv.org* (McKiernan, 2000), *RePEc* has been developed within the framework of the Open Library, a collaborative framework for the supply of metadata about documents (Krichel, 2000). "Metadata" is often defined as "data about data" but is perhaps more concisely defined as "structured data about a resource" (Day and Powell, 2000). A fuller definition defines metadata as "definitional data that provides information about or documentation of other data managed within an application or environment ...". "[Metadata] may include descriptive information about the context, quality and condition, or characteristics of the data...." "[Metadata could] document data about data elements or attributes, (name, size, data type, etc.) and data about records or data structures (length, fields, columns, etc.) and data about data (where it is located, how it is associated, ownership, etc.)" (Howe, 2000). To represent its collections, *RePEc* makes use of a customized metadata framework named the Research Documents Information Format (ReDIF) (Krichel, undated c).

From the *RePEc* perspective, a discipline can be viewed a set of four basic elements that are related to each other: *paper*, *collection*, *person*, and *institution*. Using a distinct *ReDIF* template for each of these elements, *RePEc* offers a centralized *catalog of records* for working papers, journal articles, and software components (*paper*); journals and working paper series (*collection*); authors of papers or editors of collections (*person*); and the names of

organizations that conduct economics research (*institution*) (Krichel, undated a) For examples of two completed ReDIF templates, see Figure 1 and Figure 2.

In the *RePEc* catalog, appropriate data elements between different *ReDIF* record types are linked in a relational database structure (Karlsson and Krichel, 1999, p. 208). Such linking between template types inherently facilitates record updates, notably when an author changes his or her e-mail or affiliation. By having names and contact information linked between bibliographic records and contact directories, a change can be made simultaneously in all records where an individual is the author or co-author of a publication or software component.

Collections, Databases, and Services *IDEAS*

RePEc is composed of several collections, databases, and services. Of these, the Internet Documents in Economics Access Service (*IDEAS*) is the most comprehensive, providing access to all *RePEc* components (see Figure 3).

Figure 3.
IDEAS Web Page

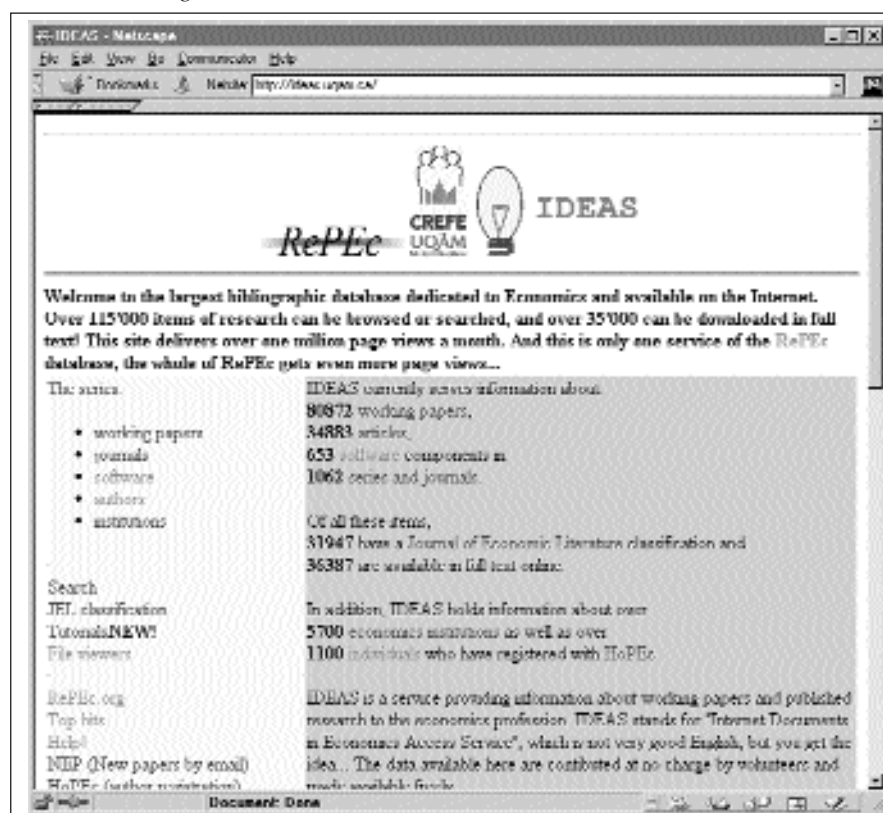


Figure 1.
Sample Record Using "Person" Template

```

Template-Type: ReDIF-Person 1.0
Name: Thomas Krichel
Email: T.Krichel@surrey.ac.uk
Author-Paper: RePEc:sur:surrec:9404
Author-Paper: RePEc:sur:surrec:9601
Homepage: http://gretel.econ.surrey.ac.uk
Handle: RePEc:per:1965-06-05:thomas_krichel

```

Figure 2.
Sample Record Using "Paper" Template

```

Template-Type: ReDIF-Paper 1.0
Title: Dynamic Aspect of Growth and Fiscal Policy
Author-Name: Thomas Krichel
Author-Email: T.Krichel@surrey.ac.uk
Author-Name: Paul Levine
Author-Email: P.Levine@surrey.ac.uk
Author-Workplace-Name: University of Surrey
Classification-JEL: O61, E21, E23, E62, O41
File-URL: ftp://www.econ.surrey.ac.uk/pub/RePEc/sur/surrec/Surrec9601.pdf
File-Format: application/pdf
Creation-Date: 199603
Revision-Date: 199711
Handle: RePEc:sur:surrec:9601

```

IDEAS uses complete bibliographic data from the central *RePEc* database for working papers and articles, and includes contributions from over 150 economic archives. Among these are those maintained by Center for Economic and Policy Research (CEPR) (USA), the International Monetary Fund (IMF), National Bureau of Economic Research Inc. (NBER) (USA), US Federal Reserve Bank, and Washington University, St Louis, Missouri (USA) and the central banks of the USA, UK, Australia, Canada and other countries.

The working papers and other publications from the economics departments of dozens of universities are also made available in *IDEAS*, notably those of such major colleges and universities as:

- Boston College;
- Brown University;
- California Institute of Technology (Caltech);
- London School of Economics

- Massachusetts Institute of Technology (MIT);
- Seoul National University UCLA;
- Universität Bonn, Universität Pompeu Fabra;
- Université de Montréal;
- University of California-Berkeley;
- University of Maryland;
- University of Rochester;
- University of Tokyo;
- University of Toronto.

From within *IDEAS*, access is provided to *WoPEc* <<http://netec.mcc.ac.uk/WoPEc.html>>, a bibliographic database and collection of *downloadable* versions of working papers and articles (see below). *IDEAS* also provides access to a database of bibliographic information for print publications named *BibEc* <<http://netec.mcc.ac.uk/BibEc/>>. In *IDEAS*, bibliographic data and abstracts are provided for journal articles published in more than 100 economics and finance journals, notably the *Canadian Journal of Economics*, *Econometrica*, *Economic Theory*, *Federal Reserve Bulletin*, and the *Journal of Applied Econometrics*. Both *WoPEc* and *BibEc* can be searched separately or collectively within *NetEc* <<http://netec.mcc.ac.uk/>> “an international academic effort to improve the communication of Economics via electronic media” founded in 1993. *NetEc*, also provides access to *WebEc*, a selected and categorized collection of free Internet resources in economics <<http://netec.mcc.ac.uk/WebEc.html>>, among other resources.

From within *IDEAS*, users can browse <<http://ideas.uqam.ca/ideas/data/JEL/index.html>> through nearly 32,000 documents that have been assigned one or more *Journal of Economic Literature* (JEL) classification codes <<http://www.aeaweb.org/journal/elclasjn.html>>. JEL is the standard classification maintained by the American Economics Association <<http://www.aeaweb.org/>> and used to

categorize the literature of economics. While significant, the number of JEL classified documents is a fraction of the more than 80,000 working papers and nearly 34,000 journal articles accessible through *IDEAS* and *RePEc*.

In addition to bibliographic information about print or electronic publications, *IDEAS* provides access to more than 650 software components (code and programs) from six providers; an alphabetical listing of authors who have registered with *HoPEc* <<http://netec.mcc.ac.uk/HoPEc/>>, the *RePEc* author registration service (see below); and *EDIRC* <<http://ideas.uqam.ca/EDIRC/>>, a directory of Economics departments, institutes, and research (see below).

Browse and Search. Within *IDEAS*, a variety of browsing and search options are available for each of its component collections, databases, and services. Users may browse the listings of entries by “Series” (e.g. “working papers”, “journals”, “software component series”) <<http://ideas.uqam.ca/ideas/series.html>>, working papers by “provider” <<http://ideas.uqam.ca/ideas/data/PaperSeries.html>>, or journal articles by journal title <<http://ideas.uqam.ca/ideas/data/ArticleSeries.html>>. Selected working papers that have been categorized using the JEL classification system are browsable at various broad or hierarchies levels <<http://ideas.uqam.ca/ideas/data/JEL/index.html>>.

In addition to various browsing options, individual or select *IDEAS* databases can be searched from a dedicated search page <<http://ideas.uqam.ca/ideas/search.html>>. Excite(sm) is the search engine used in this database search and provides a listing of matching records based on relevancy. A search of the working papers collection will retrieve a brief record that includes the title, author(s), and abstract, if available, for each paper. A brief record title is linked to a full record that includes the title of the work (e.g. “Bayesian Leading Indicators: Measuring and Predicting Economic Conditions in Iowa”), its author(s) (e.g. “Otrok, C. and Whiteman, C.H.”), his or her affiliation (e.g. “University of Iowa”), and abstract, if available. In addition, assigned keywords, publication length (number of pages), assigned

JEL classification codes (e.g. E17, C10, C15), creation date, and the work’s specific “handle” (e.g. “RePEc:uia:iowaec:96-14”) are provided. A “handle” is a unique identifier assigned to each individual, institution, publication, and software component within the *RePEc* service. The full record also provides a note on the source of the data (e.g. “Paper provided by University of Iowa – Department of Economics in its series Working Papers”).

In searching the journal article or software component databases, the results are displayed in a similar manner, with the linked full records containing analogous bibliographic information for the article or software component as provided for working papers.

From *IDEAS*, a user may also search by an institution’s handle <<http://ideas.uqam.ca/EDIRC/handle.html>> or search the entire directory of economics research institutions (*EDIRC*) using a single keyword or a Boolean statement <<http://ideas.uqam.ca/EDIRC/search.html>>.

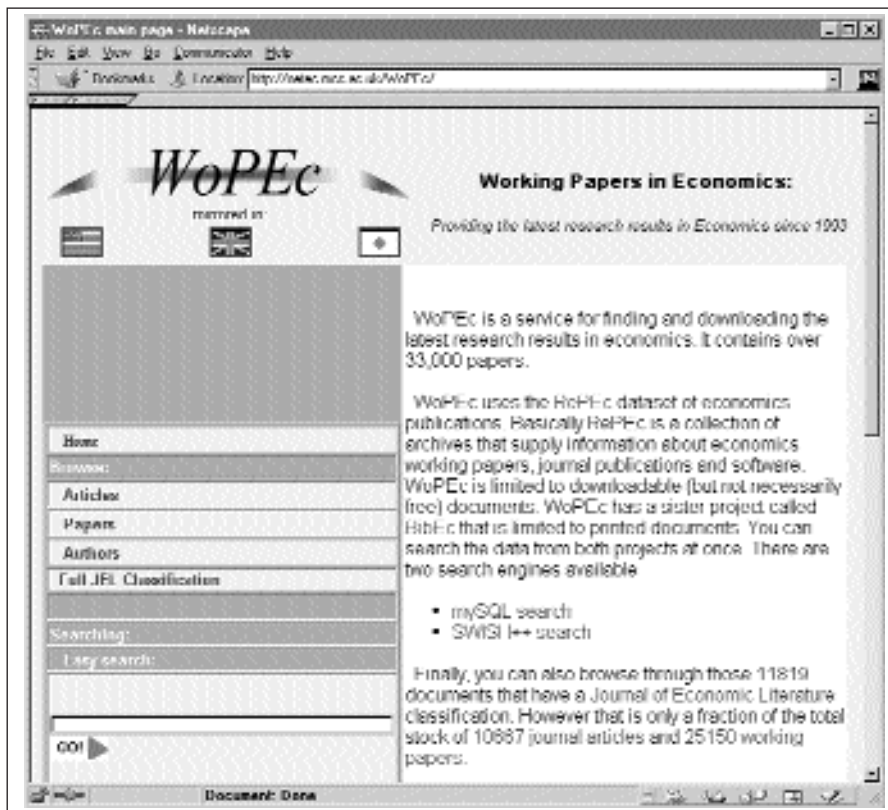
A Russian language version of *IDEAS* named *RuPEc* <<http://rvles.ieie.nsc.ru:8101/RuPEc/>> provides access to all the databases and resources available in the English language version of *IDEAS* and to a Russian working paper electronic discussion list <<http://rvles.ieie.nsc.ru:8101/HyperNews/get/forums/archive.html>>.

WoPEc: Working Papers in Economics

The first electronic preprint in economics appeared in April 1993 and formed the basis of *WoPEc*, the *Working Papers in Economics* project <<http://netec.mcc.ac.uk/WoPEc/>> (Krichel, 1997). By March 1999, *WoPEc* contained a collection of more than 13,000 downloadable papers (Karlsson and Krichel, 1999, p. 204). In February 2001 it contained more than 33,000 entries, of which nearly 12,000 can be browsed by one or more JEL codes.

Search. WoPEc. (see Figure 4) may be searched using a MySQL-based search interface <<http://netec.mcc.ac.uk/papersearch.html>> or a SWISH++-based search interface <<http://netec.mcc.ac.uk/local/search.html>>. The

Figure 4.
WoPEc Web Page



mysql search is not limited to a search of the *WoPEc* database but also incorporates a concurrent search of *BibEc*, the *RePEc* companion database of “printed papers in Economics” <http://netec.mimas.ac.uk/BibEc/> (see below). In searching these combined databases, the user may specify a concurrent search in the title, abstract, and keywords fields; a keyword only search; a title only search; or an author search. Users may restrict a search to online (downloadable) resources; specify the number of search results to be displayed per page; and indicate whether they wish to display portions of an associated abstract for a record, if available, and/or its assigned keywords. Search results are displayed in reverse chronological order and include the title of the paper, its author(s), assigned keywords (if selected), the handle for the document, its creation date, and an indication of online access and available formats (e.g. “Download: PDF TEXT-HTML POSTSCRIPT-GNUZIPPED”). As with the Excite(sm) results in the *IDEAS* service, a search

result entry is linked to its full record from the title field.

The full record consists of labeled fields that include the title, author(s), creation date, and abstract for an item, if available. The source of the item is noted below the record block. The Web address for the full text of paper, (e.g. “<http://www.jcpr.org/wp/wpdownload.cfm?pdfink=wpfiles/Fletcher.PDF>”), if available, and the file format (e.g. “application/pdf”) are noted near the bottom of the screen display. A button beneath these entries (“Download Paper”) allows the user to easily retrieve the full text of the paper.

Selecting the SWISH++ search option places the user in the search interface for *NetEc* <http://netec.mcc.ac.uk/local/search.html>, the collection of *RePEc* databases and Internet resources in Economics. From this page the user may choose to search the default database (i.e. “Electronic Working Papers (WoPEc)”), or one or more resource collections, namely the “Printed Working Papers (BibEc)” database, two major Economic Internet

resource collections, or a directory of Economics departments, institutes and research centers (*EDIRC*) (see below) (see Figure 5).

The user may perform a keyword search or, in the *BibEc* or *WoPEc* databases, specify a search in the author, title, and/or abstract field(s). Results from the search are ranked by relevancy. The handle, title, author(s), and notation on full-text access, if available, are provided in a brief record format. Brief records are linked to an associated full record from the handle. Publications with full-text availability are linked to their respective full record in *WoPEc* (see above); items without full-text are linked to an associated full record in *BibEc*.

Papers with full-text may also be searched from within the *DECOMATE II* project site <http://cwis.kub.nl/~dbi/demomate/demomate.htm> <http://www.kub.nl/~dbi/demomate/repref.htm>. *DECOMATE II* <http://www.bib.uab.es/decomate2/> is an effort to “develop an end-user service which provides access to heterogeneous information resources distributed over different libraries in Europe using a uniform interface, leading to a working demonstrator of the European Digital Library for Economics.” *RePEc* full-text working papers and articles may also be searched using the *Inomics*, “the Internet Site for Economists” <http://www.inomics.com/>.

BibEc: Printed Papers in Economics

BibEc <http://netec.mcc.ac.uk/BibEc/> is the companion database to *WoPEc* and provides bibliographic information for working papers and journal articles available in *RePEc* (see Figure 6).

From the *BibEc* page, users may browse through more than 18,000 records that have been assigned one or more JEL classification codes <http://netec.mcc.ac.uk/BibEc/data/JEL/index.html> or browse the entire database of nearly 56,000 working papers <http://netec.mcc.ac.uk/BibEc/data/PaperSeries.html> (see Figure 7) and more than 22,400 journal articles <http://netec.mcc.ac.uk/BibEc/data/ArticleSeries.html> (see Figure 8). Working papers series are organized by the name of the associated corporate

Figure 5.
NetEc Search Page

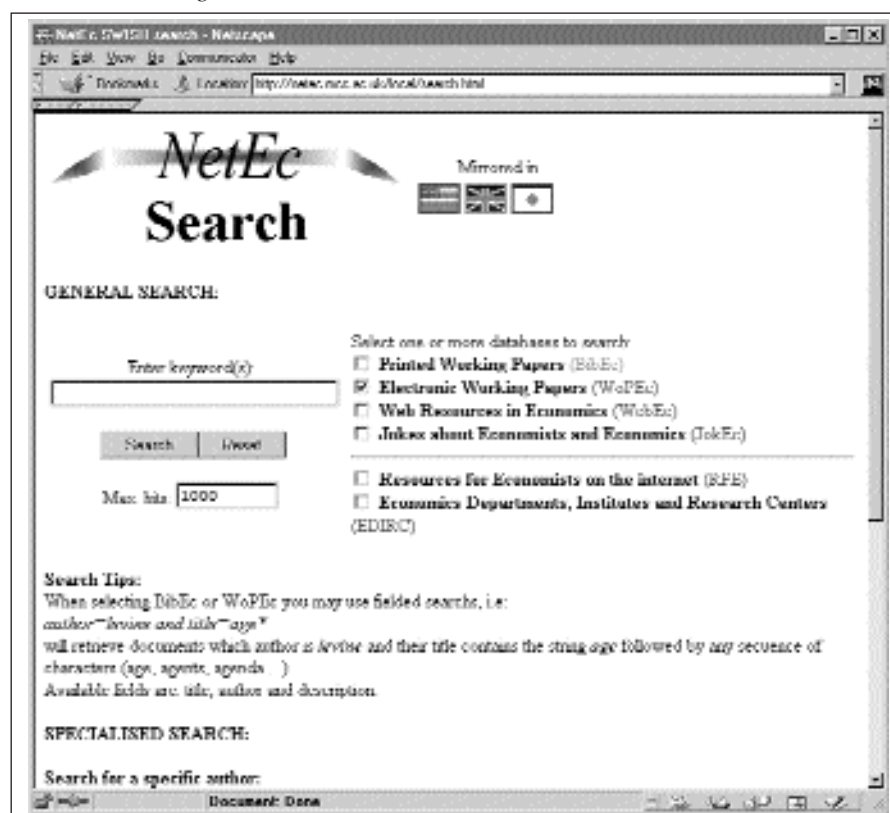
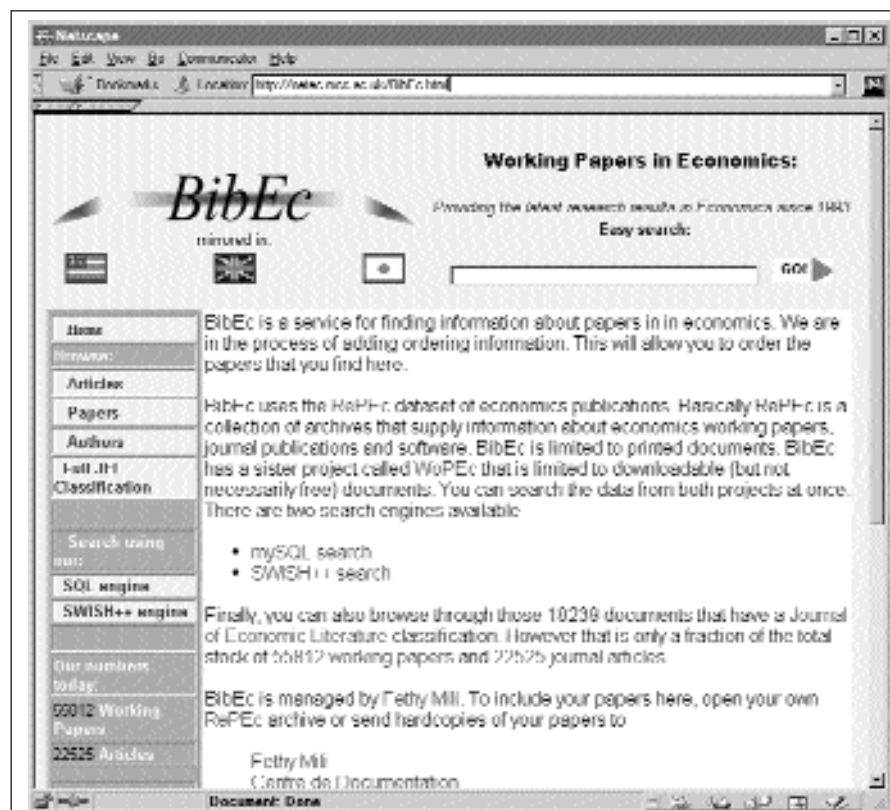


Figure 6.
BibEc Web Page



body (“Department”) (e.g. “Bank of England”). The series title (“Series”) issued by the body (e.g. “*Bank of England Working Papers*”) is located in the center of the screen listing to the right of the corporate name. To the right of the series title is the number of papers (“Nr. Papers”) available in *BibEc* for the particular series. A similar organizational method is used for journal articles, except that journal titles are listed in place of working paper series titles.

In selecting a working papers series title (e.g. “*Bank of England Working Papers*”), a listing of publications in the series is displayed in reverse order by handle designation (see Figure 8). Above the publication listing is the name of the corporate organization (e.g. “Bank of England”) the title of the series (e.g. “*Bank of England Working Papers*”), and contact information for the corporate body associated with the series (“provider”). As in other display results, each entry is linked to a full record from the publication’s handle designation. From this listing the user may display the full record for an individual entry or mark one or more individual entries and simultaneously display the full record for all these marked items by selecting the display button (“Display Full Record”).

The full record for a working paper provides its title, author, and abstract, as well as its handle. The source of the item is noted below the record block (e.g. “Paper provided by Bank of England in its series *Bank of England Working Papers*”). From a left-hand side table, the user may choose to browse journal articles, the entire working papers listing, a listing of authors registered with the *HoPEc* service (see below), browse publications that have been assigned a JEL classification code, or search the database using either a MySQL-based or SWISH++ search engine, among other options (see Figure 9).

The full record for an article in the journal article series provides appropriate information for this publication type, notably its title, author name(s), pagination, volume, issue, and publication month and year. As in the screen for the working paper publication, the source of the item is noted below the record block (e.g. “Article published by

Figure 7.
BibEc Working Papers Series Listing

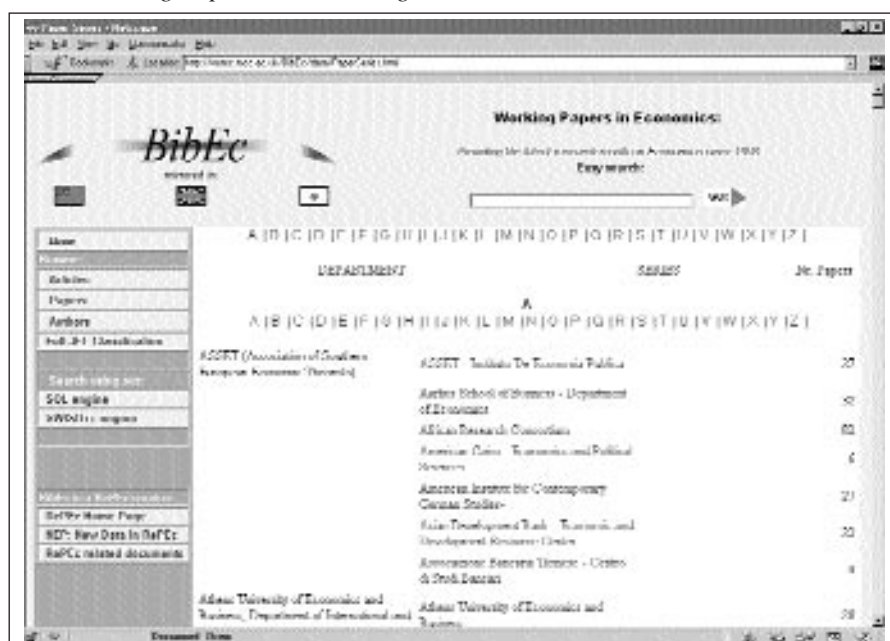
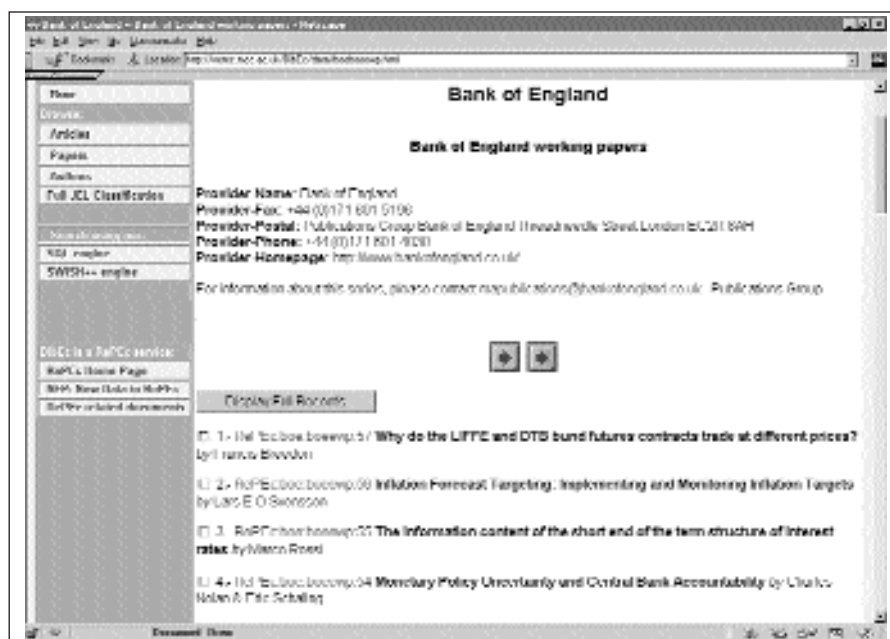


Figure 8.
Sample BibEc Working Paper Series Entry



Econometric Society in its journal *Econometrica*”).

NEP: New Economics Papers

Users interested in receiving notification of new working papers within *RePEc* may subscribe to one or more e-mail announcement services though

New Economics Papers (NEP) (<http://netec.wustl.edu/NEP/>), an adjunct *RePEc* service.

These reports are prepared by subject-specific editors and made available through more than 40 general or subject-specific *JISCMail* lists. *JISCMail* (<http://www.jiscmail.ac.uk/>) is a centralized electronic list service (e-lists)

for the higher education community based in the UK. Among the e-lists made available in *NEP* are:

- nep-all (all new papers);
- nep-agr (agricultural economics);
- nep-cba (central banking);
- nep-cfn (corporate finance);
- nep-dev (development);
- nep-ecm (econometrics);
- nep-eff (efficiency and productivity);
- nep-env (environmental economics);
- nep-fin (finance);
- nep-gth (game theory);
- nep-his (economic history);
- nep-ifn (international finance);
- nep-lab (labor economics);
- nep-mic (microeconomics);
- nep-pke (post-Keynesian economics);
- nep-pub (public finance);
- nep-reg (regulation).

From the *NEP* site, users may browse or search all announcements sent to a *NEP* e-list by clicking on the *NEP* code for the e-list (e.g. “nep-agr”). The coverage of the reports in the *NEP* e-lists is not necessarily mutually exclusive or exhaustive; in some cases there may be significant overlap in the papers included in the reports for different e-lists. Instructions for subscribing to one or more of the *NEP* e-lists, a list of subject editors and their associated affiliation, and procedures for contributing to *NEP*, are provided in the second half of the *NEP* site.

Software components

In addition to providing bibliographic information and access to full-

Figure 9.
Sample BibEc Working Paper Record



text publications, *RePEc* offers access to more than 650 software programs and code from six providers in more than a dozen series <<http://ideas.uqam.ca/ideas/data/SoftwareSeries.html>>. These include statistical software components, and C/C++, DOS and Microsoft Windows, Fortran, Mathematica, and MathLab programs and computer code. Selection of a series (e.g. “Statistical Software Components”) from within the software series site will display the name of the provider and relevant contact information. A listing of available items in the selected series with their respective handles, titles, authors and a notation of online availability (“Downloadable”) is found beneath the directory data. The full record is linked from an item’s handle and provides an abstract about the software component; the creation and revision dates of the record, if any; assigned keywords and notes; associated software requirements; the item’s handle, the provider’s name, and the assigned institutional identifier for the component. The second half of the full record is a list of files associated with the downloadable component. Each of these has an associated Internet address (e.g. “<http://fmwww.bc.edu/repec/bocode/a/archdesc.ado>”), file format (e.g. “text/plain”), file function (e.g. “pro-

gram code”), and size (e.g. “104 lines”). At the bottom of the record is a button that activates the download process (“Click here to download the selected file”). Only one file may be downloaded at a time.

EDIRC: Economics Departments, Institutions, and Research Centers

Augmenting the various bibliographic databases and resources in *RePEc* is *EDIRC* <<http://ideas.uqam.ca/EDIRC/>>, a worldwide directory of economics departments, institutes, and research centers. It also includes entries for finance ministries, statistical offices, central banks, think tanks, and other non-profit institutions where economists are employed. *EDIRC* currently has more than 5,600 entries. Directory entries are organized in one of several ways: alphabetically by country; alphabetically by continent, then by country; alphabetically by ISO 3166 country codes (domains); and clustered by specialization and type.

Entries within a country listing are arranged alphabetically by the name of the main corporate body, with relevant organizational units listed beneath, where applicable. Preceding the main listing is a list of “Economics Associations and Societies” located within the country. In selecting either

organizational entity, the user is provided with a directory profile that includes the geographic location of the body; and if available, its Web address; its e-mail address; its phone number, fax number, and postal address; its handle; and areas of specialization or focus (see Figure 10).

EDIRC also includes a combined directory of all “Economics Associations and Societies”, and a separate link to economics organizations and institutions located in the USA organized by state. In addition to the various organized listings, the entire *EDIRC* directory may be searched by single keyword or in Boolean keyword combination <<http://ideas.uqam.ca/EDIRC/search.html>>.

HoPEc: Author Registration and Directory Services

Complementing the *EDIRC* directory is *HoPEc* <<http://netec.mcc.ac.uk/HoPEc/>>, a registration directory, and search service for authors (Cruz *et al.*, 2000). Through a formal registration process <<http://netec.mcc.ac.uk/adnetec-cgi-bin/register.cgi>>, authors who contribute to *RePEc*, and others, may register with the *HoPEc* service. The registration process provides each author or editor with an individual handle, thereby allowing each to be uniquely identified. Such identification permits an unambiguous and comprehensive database search of author contributions in *RePEc*. In registering, authors are requested to provide their name; personal e-mail address; Web page address; institutional handle, name, and postal address; workplace e-mail, workplace phone and fax numbers, institutional Web page address, and additional contact addresses or numbers. Currently, more than 1,100 individuals have registered with *HoPEc*; of these more than 540 indicate authorship of a *RePEc* contribution.

The *HoPEc* directory may be searched by author name, browsed from an A-Z listing <<http://netec.mcc.ac.uk/adnetec-cgi-bin/gemini.cgi>>, or browsed from a combined alphabetical list <<http://ideas.uqam.ca/ideas/data/PersonInfo.html>> (see Figure 11). Information presented by the *HoPEc* service has been provided to improve

Figure 10.
Sample EDIRC Record

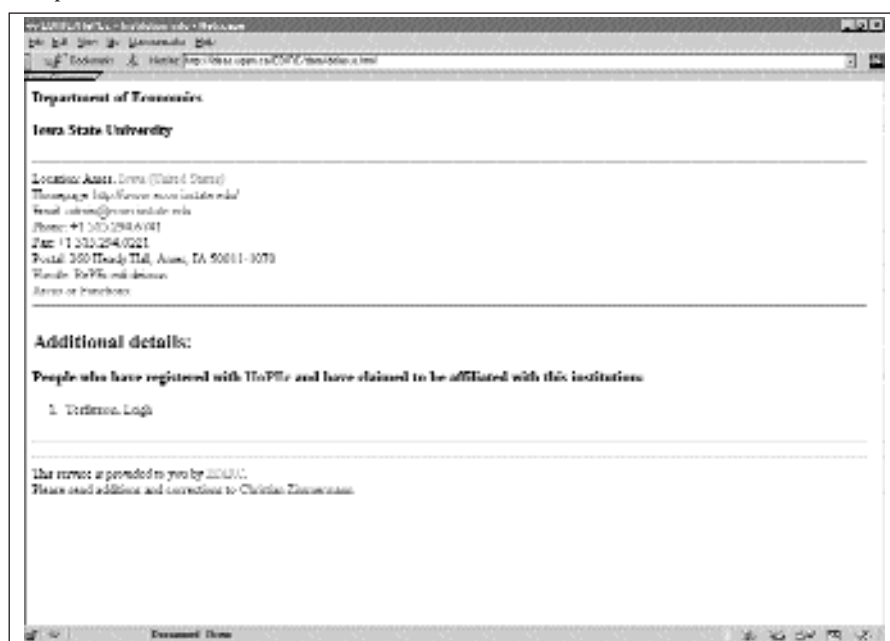
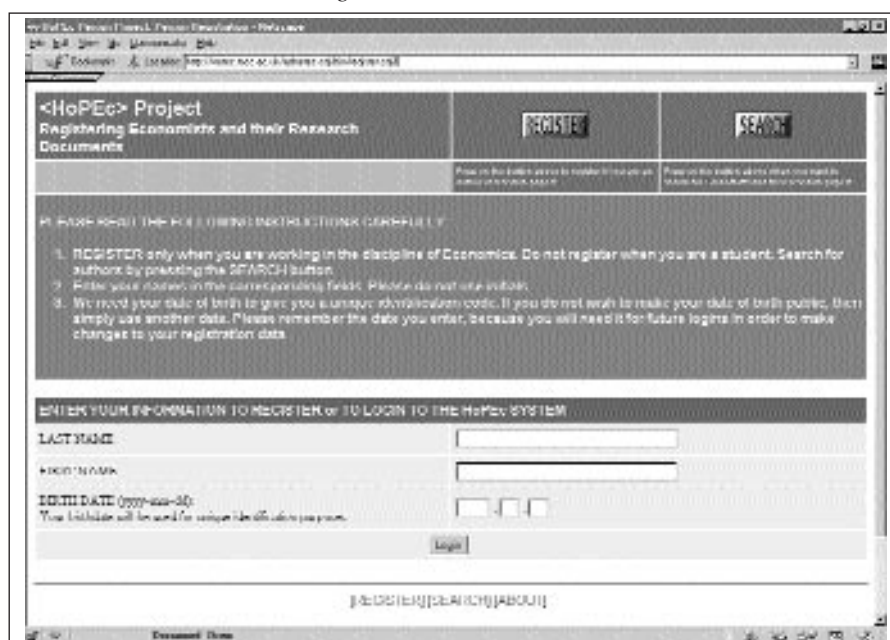


Figure 11.
HoPEc Search and Browse Page



communication among researchers in economics; commercial use of its data is prohibited.

Statistics

IDEAS offers a variety of statistical data regarding access to its various resources. Among these is a monthly

activity report that presents data on contributing archives (e.g. *BibEc*, *Fed in Print*, NBER), ranked in order by the number of accesses to the specific archive in that period <<http://www.repec.org/docs/ideas.ranks.html>>. There is also a monthly statistical tabulation retrospective to April 1998 for all contributing archives <[\[uqam.ca/ideas/statistics.html\]\(http://ideas.uqam.ca/ideas/statistics.html\)>. Statistical data for access to various *RePEc* components is also available, notably the “Top 25 Working Papers”, “Top 20 Articles”, “Top 10 Software Components”, “Top 25 Working Papers Series”, “Top 10 Journals” and “Top 5 Software Series” for a given month, year, or period <<http://ideas.uqam.ca/ideas/top/>>. In addition, item statistics are provided on the page views and downloads for individual working papers and working paper series \(see, for example, <<http://ideas.uqam.ca/ideas/data/Papers/sursurrec9403.html>> “How popular is this item?”\).](http://ideas.</p>
</div>
<div data-bbox=)

Submission

RePEc provides a variety of opportunities for individuals to contribute to the various databases and resources. In addition to its institutional (*EDIRC*) and author (*HoPEc*) directories, *RePEc* provides explicit instructions for submitting contributions in hardcopy or electronic form <<http://ideas.uqam.ca/ideas/participate.html>>. It also provides detailed instructions and tips for individuals interested in creating their own personal archives for integration within the *RePEc* network scheme <<http://ideas.uqam.ca/ideas/stepbystep.html>> using the *ReDIF* format (see above). Templates for creating *ReDIF* files for working papers, articles, software components, as well as books, are available <<http://ideas.uqam.ca/ideas/templates.html>>.

Assistance

User assistance is offered at various levels within *RePEc*. *IDEAS*, the comprehensive *RePEc* gateway, offers an excellent FAQ <<http://ideas.uqam.ca/ideas/faq.html>> that provides concise information about *RePEc*, its various collections, databases, and directories, and the relationships between them (e.g. “What is the difference between *IDEAS* and *RePEc*?”, “What is the difference between *IDEAS* and *BibEc*?”, “What is this ‘handle’ each paper has?”). In addition, each database and directory has specific features that assist users with basic or advanced searching. Some are general and applicable to using significant features of the *RePEc* service (e.g. “Help! I Do Not Know What to Do! (*IDEAS*)

<<http://ideas.uqam.ca/ideas/help.html>> and “Help on Viewers for Electronic Papers” (IDEAS) <<http://ideas.uqam.ca/ideas/viewers.html>>.

Recent Developments

RePEc is one of several major electronic archives that were incorporated with the Universal Preprint Service (*UPS*) <<http://ups.cs.ou.edu/>>, a proof-of-concept prototype developed to demonstrate end-user, cross-archive searching of major e-Print and reports services (Van de Sompel *et al.*, 2000) (see Figure 12). In addition to the *RePEc* service, *UPS* included *arXiv.org*, the Los Alamos National Laboratory e-Print server; *CogPrints*, the Cognitive Sciences e-Print Archive; *NACA*, the Digital Library for the National Advisory Committee for Aeronautics; *NCSTRL*, the Networked Computer Science Technical Reference Library; and *NDLTD*, the Networked Digital Library of Theses and Dissertations. The *UPS* prototype is a component of a much larger effort known as the Open Archives Initiative (OAI) <<http://www.openarchives.org/>>, a forum established to “discuss

and solve matters of interoperability between author self-archiving solutions [e.g. e-Print services]” (Van de Sompel and Lagoze, 2000).

In October 2000, *ARC* <<http://arc.cs.ou.edu/>>, the first new set of Open Archives services established under the Santa Fe Convention (Van de Sompel and Lagoze, 2000), was registered. With the creation of the *ARC* service, five major electronic archives are now available for cross-searching, providing concurrent access to electronic archival collections that cover physics, mathematics and computer science, and the cognitive sciences (Open Archives: Information about ARC, 2000). With appropriate technical implementations, it is expected that *RePEc* will become incorporated within *ARC* in 2001[1].

Conclusion

The widespread adoption of the Internet for scholarly communication offers an unprecedented opportunity for individuals and organizations to broaden access to their personal and institutional resources and publications. Within the Open Library collabo-

rative framework, *RePEc* provides economists and other economics scholars and researchers an unparalleled opportunity to access and contribute to the development of a unique collection of databases, directories, and services that provides local as well as global benefits to a worldwide community.

NOTE

1. E-mail correspondence with Thomas Krichel, October 12, 2000.

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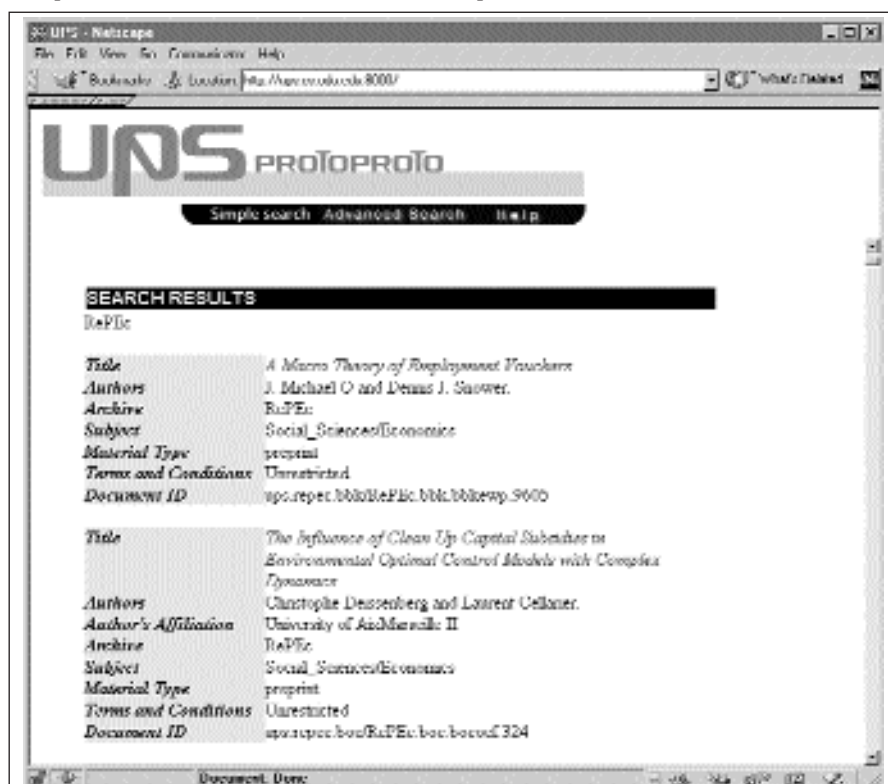
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Figure 12.

Sample Search Results in the Universal Preprint Service (*UPS*)



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Availability

The following RePEc services are currently available < <http://ideas.uqam.ca/ideas/services.html> >:

BibEc

Hitotsubashi University (Japan)

<<http://netec.ier.hit-u.ac.jp/BibEc.html>>

University of Manchester (UK)

<<http://netec.mcc.ac.uk/BibEc.html>>

Washington University (St Louis, USA)

<<http://netec.wustl.edu/BibEc.html>>

HoPEc

University of Manchester,
Manchester Computing (UK)

<<http://netec.mcc.ac.uk/HoPEc/>>

IDEAS

Université du Québec à Montréal
(Canada)

<<http://ideas.uqam.ca/>>

NEP

University of Manchester,
Manchester Computing

<<http://netec.mcc.ac.uk/NEP/>>

RuPEc

Siberian Branch of the Russian
Academy of Sciences, Novosibirsk
(Russia)

<<http://rvles.ieie.nsc.ru:8101/RuPEc/>>

WoPEc

Hitotsubashi University (Japan)

<<http://netec.ier.hit-u.ac.jp/WoPEc.html>>

University of Manchester (UK)

<<http://netec.mcc.ac.uk/WoPEc.html>>

Washington University (St Louis,
USA)

<<http://netec.wustl.edu/WoPEc.html>>

Major Contributors

RePEc is collaborative effort of over 100 volunteers in about 25 countries. Major contributions for its individual services are:

- *BibEc* is managed by Fethy Mili (Centre de Documentation, Département des Sciences Economiques, Université de Montréal, Canada) and Thomas Krichel (University of Surrey, Department of Economics, UK).
- *HoPEc* is managed by Markus J.R. Klink.
- *IDEAS* is maintained by Christian Zimmermann (Center for Research on Economic Fluctuations and Employment (CREFE), University of Quebec at Montreal, Canada).

- *NEP* was founded in 1998 by Thomas Krichel. It is currently maintained by John S. Irons (Amherst College, Department of Economics, USA) and Bernardo Batiz-Lazo (The Open University Business School).

- *RuPEc* is maintained by Sergei I. Parinov (Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia).

- *WoPEc* is managed by Thomas Krichel (University of Surrey, Department of Economics, UK) and José Manuel Barrueco Cruz (Universitat of València, Biblioteca de Ciencias Sociales, Spain).

- RePEc was founded and is coordinated by Thomas Krichel (University of Surrey, Department of Economics, UK). The main *RePEc* Web page <<http://www.repec.org>> is maintained by Christopher Baum (Boston College, Department of Economics, USA) and Christian Zimmermann (Center for Research on Economic Fluctuations and Employment (CREFE), University of Quebec at Montreal, Canada).

Major Participants

Among the many participating institutions providing over 1000 *RePEc* series, the 30 largest contributing *RePEc* archives are:

- WOPEBI (Canada).
- Federal Reserve System (*Fed in Print* (USA)).
- National Bureau of Economic Research (USA).
- *WoPEc* (non-UK).
- *EDIRC* (Canada).
- International Monetary Fund (IMF).
- *Econometrica*.
- Centre for Economic Policy Research (UK).
- DEGREE (The Netherlands).

- *Journal of Money, Credit and Banking*.
- RAND Journal/Bell Journal of Economics.
- Cowles Foundation, Yale University (USA).
- *EconWPA* (USA).
- *WoPEc* (UK).
- California Institute of Technology (USA).
- *Journal of Business and Economic Statistics*.
- University of Bonn Department of Economic Policy (Germany).
- Boston College Economics (USA).
- MIT Economics (USA).
- *S-WoPEc* (Sweden).
- *HoPEc* Person Archive.
- University of California – Berkeley Economics (USA).
- CEPREMAP (France).
- *Journal of Applied Econometrics*.
- Society for Computational Economics.
- Financial Markets Group, London School of Economics (UK).
- Centre for Economic Performance, London School of Economics (UK).
- Universitat Pompeu Fabra Economics and Business (Spain).
- University of California – Los Angeles (USA).
- University of Rochester, Center for Economic Research (USA).

A complete listing of all institutional contributors to *RePEc* is available <<http://ideas.uqam.ca/ideas/services.html>> as is a listing of all institutions hosting *RePEc* archives <<http://ideas.uqam.ca/ideas/archives.html>>.

Support and Disclaimer

RePEc emerged from the *NetEc* group, which received support for its *WoPEc* project between 1996 and 1999 by the Joint Information Systems Committee (JISC) of the UK Higher Education Funding Councils, as part of its Electronic Libraries Programme (eLib).

Gerry McKiernan is a Science and Technology Librarian and Bibliographer at Iowa State University, Ames. He is also Curator of CyberStacks(sm), a virtual science and technology reference collection, and contributing editor for the “News from the Field” column for the *Journal of Internet Cataloging*.