SOME CONSEQUENCES OF THE E-PRINT/WWW REVOLUTION ON DAILY OPERATIONS OF THE SLAC LIBRARY


<table>
<thead>
<tr>
<th>Mo/Yr</th>
<th>Preprints Circulated</th>
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<tbody>
<tr>
<td>March 1991</td>
<td>783</td>
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<tr>
<td>March 1992</td>
<td>438</td>
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<tr>
<td>March 1993</td>
<td>356</td>
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<tr>
<td>March 1994</td>
<td>190</td>
</tr>
<tr>
<td>March 1995</td>
<td>73</td>
</tr>
</tbody>
</table>

This results in redirection of some staff effort and less pressure on shelf space. An old measure of library effectiveness bits the dust!

2. New higher volume postscript printer had to be purchased. Most physicists still want it on paper if they're seriously interested in a preprint.

3. More public X-terminals were and are needed. Not everyone has a high quality X-terminal on his/her desk for viewing compressed postscript.

4. It is now 'impossible' to lose an e-print. Users have immediate access to the papers they need (no recalls necessary) and the library conducts fewer raids on known packrats.

5. More staff time is spent checking quality of the posted papers and troubleshooting TeX, bad figures, etc. and corresponding with authors.

6. Input to the HEP database is somewhat eased by the automated extraction of citation lists from the TeX originals (or at least the citations are more accurately input). Still is not practical to extract bibliographic information from the e-prints due to lack of standards.

7. The Library dropped paper publication of its 25 year old preprint list (PPF) and started distributing it via listserv and WWW. When you don't put out paper lists, you have to work harder to ensure that everyone knows how to get your information and has access.

8. Preprint acquisition by mail is no longer a major effort. Instead, there is considerable effort expended in cruising various laboratory postscript servers to obtain newly posted papers, enter them in the HEP database with their correct URL's. Not all papers are posted to the e-print archives and a growing trend seems to be for organizations to control their own postscript.

9. The library staff works in an environment which is changing even more rapidly than usual. Much retraining has to take place, mostly informally. Fortunately, they're flexible, smart and learning more about chaos theory every day.

Addis-4/95
SPIRES-HEP
World-Wide-Web Information Sheet

April 1995

1. For more information about the WWW software, including a complete list of
browsers and how to obtain them, telnet to:

   \texttt{telnet.w3.org} (no password).
   You don't need anything more than a dumb terminal for this.

2. To link to the SLAC SPIRES home page from your WWW browser, open
URL:

   \url{http://www.slac.stanford.edu/FIND/spires.html}

3. For more information about the WWW SPIRES connection, e-mail to H. Galic
(\texttt{hep@slac.stanford.edu}).

4. To link to the general SLAC home page, open:

   \url{http://www.slac.stanford.edu/FIND/slac.html}

5. To be completely successful, you'll need a browser which can cope with
compressed postscript (ps.Z). The most popular such browser is NCSA's Mosaic
for X. It can be obtained by anonymous FTP from:

   \texttt{ftp.ncsa.uiuc.edu} in directory \texttt{/Mosaic}.

6. Or you might want to try the new version of MidasWWW (version 2.1), the
browser pictured in these pages, available via FTP from:

   \texttt{freehep.scri.fsu.edu}
in directory \texttt{/freehep/networking_email_news/midaswww}
(includes source code as well as executables for aix, sun4, hpx, osf, sgi
and VMS.)

MidasWWW is especially well suited for database index searching since the
entire search statement is easily visible and the search area is always present and
active at the bottom of the page no matter where the scroll bar has been pulled.

Addis, SLAC
SEARCH EXAMPLES

The following search examples illustrate a few of the features and power of the WWW/SPIRES-HEP combination.

Full-text, including figures and equations, is viewable for over 17000 preprints which have appeared on physics e-print archives or which are stored on postscript servers at various laboratories. The full text files (ps.Z) are linked to the SPIRES HEP database so that users may search by author, title, etc. and then view or print the entire preprint.

A warning: the 'look' of our WWW interface changes frequently as we try to improve the usability so examples may not always exactly match what you see on the screen.

**Example 1** - Search by author, leads to viewing a paper with color postscript figures

**Example 2** - A search by title and date finds the two papers announcing the discovery of the 'top quark.' We explore those papers and follow a reference to an article in Nuclear Physics on-line.

**Example 3** - Citation search

---

EXAMPLE 1

Using WWW and SPIRES to view the full text of a scientific paper by authors Hata and Langacker in the SPIRES-HEP database.

The paper could be found in various ways such as:

```
FIND AUTHOR HATA and LANGACKER
FIND BULL hepph 9308252
FIND a hata, n and title updated msw
```

The document address is calculated from information stored in a SPIRES database called ABSTRACTS which is used for tracking e-print archive papers thru the TeXing and postscript creation process in the SLAC Library.

A SPIRES 'format' dynamically creates the HTML for WWW. An example is shown here.

This example uses the MidasWWW browser running under X-windows and views a postscript version of the paper with color postscript figures.
Stanford Public Information Retrieval System

SLAC Last update: 21 Mar 1995

Welcome to SLAC-SPIRES Information Retrieval System

A variety of SLAC's databases of interest to high-energy physics community is now made available via WWW. This project is still in the experimental phase and we do appreciate your feedback. If a caretaker of a particular database is not listed, please address your comments to: library@slac.stanford.edu

The following SLAC's information sources are currently accessible to WWW users:

Books:
- SLAC Library book catalog

Preprints:
- HEP preprint database. Contains bibliographic summaries of more than 300,000 particle physics papers. Included are preprints, journal articles, technical reports, thesis, etc. Searchable by author, title, report number, institution, collaboration, and more. Find citations of your favorite author or article. View postscript versions of selected preprints, read abstracts of e-print archive papers. Need more help? Try also the latest version of our (still) highly experimental forms search in the HEP database. Send comments/suggestions related to the forms to: tony_johnson@slac.stanford.edu

Recent e-Prints:
- Useful in searching for recent high-energy physics e-prints ("bulletin-board" papers) not yet covered by the HEP database. Find abstracts and viewable postscript (made at SLAC) of articles posted today, yesterday, in the last seven days, week before that, or anytime. Preferred access to older e-prints is through the HEP preprint database (above).

Heppnames:
- World-wide e-mail directory of people related to particle physics. Includes SLAC physicists, personnel.
The HEP Preprint database

The HEP preprint database contains bibliographic summaries of more than 280,000 particle physics papers. Included are preprints, journal articles, technical reports, theses, etc.

Need help? Choose 1 below for help on any field.

Search Parameters

- Author: [ ]
- Title: [ ]
- Affiliation: [ ]
- Collaboration: [SLD, Delphi, Opal, L3, Aleph, Other]
- Date: [Since [ ] , Until [ ] , 1990 ?]

Result format

- Show only number of matches
- Show all matches using Default format ?

Perform Search Clear Form

8) SOLAR MODEL UNCERTAINTIES, MSW ANALYSIS, AND FUTURE SOLAR NEUTRINO EXPERIMENTS.
e-Print Archive: hep-ph/9311214

References
Keywords
Bibliographic
Abstract and Paper from SLAC postscript depository
Link to Los Alamos server

9) THE UPDATED MSW ANALYSIS AND THE STANDARD SOLAR MODEL UNCERTAINTIES.
e-Print Archive: hep-ph/9306252

References
Keywords
Abstract and Paper from SLAC postscript depository
Link to Los Alamos server
Conference Info

10) 'THEORY OF THEORIES' APPROACH TO STRING THEORY.
e-Print Archive: hep-th/9308001

References
Keywords
Citation Search
HTML from DATABASE

to produce previous web page!
The Updated MSW Analysis and the Standard Solar Model Uncertainties

Nacys Hats and Paul Langacher

Department of Physics, University of Pennsylvania, Philadelphia, PA 19104

(August 8, 1993, UPR-6881T)

Abstract

We update the analysis of the MSW and general astrophysical solutions to the combined solar neutrino observations by including the GALLEX II result. We also show that our parametrized flux uncertainties are equivalent to the Monte-Carlo results of Babbal and Ulrich.

Including Earth Effect

(w/o Day-Night Data)

Combined 90% C.L.
SAGE & GALLEX
Kamiokande
Homestake
EXAMPLE 2:

We look for the title words 'TOP QUARK OBSERVATION' and find the two March 1995 papers from Fermilab announcing the important discovery of the 'top quark.'

We examine the reference list for one of these papers and follow a reference to a paper published in Nuclear Physics which is available from the Elsevier WWW server to Nuclear Physics subscribers.
Observation of the Top Quark

FIG. 3. DØ measured t̄t̄ production cross section (solid line with one standard deviation error band) as a function of assumed top quark mass. Also shown is the theoretical cross section curve (dashed line) [6].
Some of the references, mostly to bulletin boards and published journal articles, from the paper: Observation of the top quark (Only the first author is displayed, where known)

- Phys. Rev. Lett. 72, 2128 (Abachi: Search For The Top Quark In P Anti-P Collis...)
- Phys. Rev. D49, 2985 (Abc: Evidence For Top Quark Production In Anti-P P...)
- Phys. Rev. Lett. 73, 223 (Abc: Evidence For Top Quark Production In Anti-P P...)
- Phys. Lett. B321, 284 (Lenen: Top Quark Production Cross-Sectio...)
- Nucl. Instrum. Meth. A394, 185 (Abachi: The D0 Detector...)
- Nucl. Phys. B403, 633 (Giele: Higher Order Corrections To Jet Cross-Section...)

Click here to expand these references

---

Database: HEP (SPIRES-SLAC)
Search Command: FIND SPICITE NUPHA,B403,633
Result: 1 document found:

HIGHER ORDER CORRECTIONS TO JET CROSS-SECTIONS IN HADRON COLLIDERS.
e-Print Archive: hep-ph/9302225

References
Keyword
Citation_Search
Abstract_and_Tex_Source
Link to LosAlamos server
Postscript_Version from CERN
Source from Nucl. Phys. server (Access may be restricted)

Link to the main HEP SPIRES-SLAC page

Click here to get paper from Nucl. Phys. server if your institution subscribes
Observation of Top Quark Production in $p\bar{p}$ Collisions with the CDF Detector at Fermilab

Abstract

We establish the existence of the top quark using a 67 pb$^{-1}$ data sample of $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV collected with the Collider Detector at Fermilab (CDF). Employing techniques similar to those we previously published, we observe a signal consistent with $t\bar{t}$ decay to $WWb\bar{b}$, but inconsistent with the background prediction by 6.8$\sigma$. Additional evidence for the top quark is provided by a peak in the reconstructed mass distribution. We measure the top quark mass to be $170 \pm 8$ (stat.) $\pm 18$ (sys.) GeV/c$^2$, and the $t\bar{t}$ production cross section to be $6.5^{+2.4}_{-2.0}$ pb.

Figure 2: Reconstructed mass distribution for the $W + \geq 4$-jet sample prior to $b$-tagging (solid). Also shown is the background distribution (shaded), with the normalization constrained to the calculated value.
EXAMPLE 3:

We look for author Paul Ginsparg and use the special format to do citation searching on his publications.
Warning: The citation search should be used and interpreted with great care.
At present, the source for the citation list in the HEP database is only the preprints received by the SLAC Library, and not the (unpreprinted) journal articles. Citations of a paper during the months it was circulated as a preprint may also be lost, because only references to journal articles and e-print papers are indexed. Still, the citation index in HEP (SPIRES-SLAC) is formed from an impressive number of sources. For example, in 1994, the citation lists were collected from 10,000 preprints.

Database: HEP (SPIRES-SLAC)
Search Command: FIND G HEP-TTH 9304011
Results: HEP-TTH 9304011 was cited by the following 21 documents in HEP:

1) ALGEBRAIC-GEOMETRICAL FORMULATION OF TWO-DIMENSIONAL QUANTUM GRAVITY.
By G. Boecci, P.A. Marchetti, M. Matone (INFN, Padua & Padua U.).
DPPI-96-TH-06, Feb 1996. 5pp. e-Print Archive: hep-th/9603069
References:
Abstract and Paper from SLAC postscript repository
Link to Los Alamos server

2) DYNAMICAL TRIANGULATION WITH FLUCTUATING TOPOLOGY.
e-Print Archive: hep-lat/9411032
References:
Abstract and Paper from SLAC postscript repository
Link to Los Alamos server
Conference Info

3) TOPOLOGICAL STRINGS WITH SCALING VIOLATION AND TODA LATTICE HIERARCHY.

Cited 4 times in the HEP (SPIRES-SLAC) database.
5) P. Ginsparg, J. Zinn-Justin, LARGE ORDER BEHAVIOR OF NONPERTURBATIVE GRAVITY.

Cited 20 times in the HEP (SPIRES-SLAC) database.
6) P. Ginsparg, J. Zinn-Justin, ACTION PRINCIPLE AND LARGE ORDER BEHAVIOR OF NONPERTURBATIVE GRAVITY.

N/A: citation search is available only for journal papers or e-prints


N/A: citation search is available only for journal papers or e-prints

8) P. Ginsparg, M. Gouliem, M.B. Plasser, J. Zinn-Justin, (P, Q) STRING ACTIONS.

Cited 38 times in the HEP (SPIRES-SLAC) database.
9) P. Ginsparg, J. Zinn-Justin, 2-D GRAVITY + 1-D MATTER.

Cited 172 times in the HEP (SPIRES-SLAC) database.

This output was created by SPIFORM
HOPES FOR THE FUTURE

* LINKS TO JOURNAL ARTICLES VIEWABLE BY SUBSCRIBERS

* FULL-TEXT STANDARDS (FIGURES)

* AUTHORS SUPPLY VIEWABLE PAPERS
BRIEF AND BIASED HISTORY OF PREPRINT AND DATABASE ACTIVITIES AT THE SLAC LIBRARY
1962-1994

1962 - SLAC Library begins with the charge from Director W.K.H. Panofsky to actively and promptly acquire preprints in high energy physics, catalog preprints fully (and promptly), and include every author no matter how many there are. Library starts with several boxes of CERN reports donated by kindly physicists.

1969-70 - Computers become more powerful and development begins at Stanford University of what eventually becomes the SPIRES DBMS with the SLAC Library as a primary test site.

1969 - The APS Division of Particles and Fields and the AEC sponsor community-wide distribution of SLAC's weekly list of new preprints, Preprints in Particles and Fields. (PPF) Hundreds of physicists pay an annual subscription fee to get PPF weekly by airmail. Those in faraway places often complain that they can't actually get copies of the preprints on the list or that they come very late (PPF continues hardcopy publication until Fall 1993.)

Dubious and hostile journal editors are mollified by a PPF section called Anti-preprints, which lists journal references for recently published preprints.

SLAC Library systematically looks for publication information for preprints, discards published preprints, annotates its card catalog with journal references.

1970's - We are told that full-text databases are just around the corner and that soon we will not need books.

1974 - The SPIRES-HEP (High-Energy-Physics) database begins. Best estimates predict a steady state not larger than 5000 bibliographic records.

SLAC now annotates the bibliographic records in the HEP database with publication information (as well as its card catalog) and continues to trash dead preprints.

The SLAC and DESY Libraries team up to jointly create the HEP database (a collaboration which continues to this day). DESY contributes physicist-assigned TOPIC indexing and bibliographic records for articles which were never preprinted

1975 - An average of 70 preprints/week arrive in the SLAC Library.

1979 - Donald Knuth at Stanford publishes a description of his new text formatting system called TeX. It provides a way to get high quality mathematical text using simple ASCII characters as input.

Early 80's - More and more physicists ask to continue their computer accounts when they leave SLAC so that they can consult SPIRES from their new home institutions.

1980 - An average of 97 preprints/week arrive in the SLAC Library

1982 - SLAC Library becomes first library at Stanford to throw out its card catalog.
mid 80's - SLAC computing moves to an IBM VM/CMS system which is hospitable to creation of 'servers.' George Crane of SLAC's Computing Group develops 'Remote SPIRES,' and the QSPIRES server starts up on Bitnet.

Now it is possible to query the SPIRES-HEP database without actually having an account on the SLAC computer, by sending messages or e-mail to the QSPIRES server. At its peak, QSPIRES is responding to inquiries from 662 nodes in 44 countries and has almost 5000 registered non-SLAC users.'

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A total of 11,757 records are added to SPIRES-HEP (includes preprints, reports, unpreprinted journal articles, theses, etc.)

1980's- Everyone is talking about the 'paperless' office as they acquire new higher speed printers.

Most particle physics graduate students write their theses using TeX and though everyone complains about having to learn the notation, TeX is widely used in the particle physics community.

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Aug 1991 - The revolution begins - Part 1:
Paul Ginsparg, a theoretical physicist, starts the first e-print archive at hep-th@xxx.lanl.gov and invites fellow string theorists to deposit the TeX source for their new preprints by e-mail. New preprints are announced and distributed by listserv. Hep-th is successful beyond the wildest of dreams owing in large measure to the talents of Ginsparg who combines his many good ideas with actual computer smarts. It is now possible for any physicist on the Internet to keep up with the preprint literature.

An excellent article about the e-print archive development and futures is:,
First Steps Towards Electronic Research Communication by P. Ginsparg,
Computers in Physics: 3, 390 (Jul/Aug 1994)

Aug 1991 - SLAC Library hastens to add a field for 'bulletin board' number to the SPIRES-HEP database (for a long time the e-print archives are called 'bulletin boards'). The first number is HEP-TH 9108001 based on the year and month and unique series number. A TeX expert is hired parttime to obtain papers from bulletin boards, TeX them and pass the hard copy along to the library catalogers for entry in SPIRES-HEP.

Late 1991 - The revolution continues, Part 2.
Paul Kunz, a SLAC physicist, brings word of the World-Wide-Web development by Tim Berners-Lee and a group at CERN, our sister laboratory in Geneva, Switzerland. Kunz immediately sees its potential as a way to streamline access to the SPIRES-HEP database.

Jan 1992 - (approx.) - The first (we believe) U.S. WWW server is established at SLAC to provide access the SPIRES HEP database. G.Crane provides an interface between the Web server and SPIRES.
As we learn how to use the features of WWW, we start linking bulletin board preprints to their TeX source on the servers at Los Alamos. This isn't really full-text but it's a lot better than nothing. SPIRES creates the html dynamically and presents it to the W3 server.


QSPIRES users are encouraged to change to WWW and some do.

Tony Johnson, a physicist with the SLAC-SLD experiment, releases the MidasWWW browser for X. It allows viewing of postscript files on the Web and even handles compressed postscript.

The SLAC Library acquires a NeXT and a 1.3 gigabyte disk and starts to take the 'next' step by converting the TeX DVI files to postscript using the DVIPS program on Unix. The files are then compressed and stored on a WWW server disk. Figures are requested by e-mail from authors, faxed to our NextFAX, converted to EPS format and posted with the basic text on the SLAC postscript server (preprint.slac.stanford.edu).

SPIRES-HEP can now be searched using the MidasWWW browser on an X-terminal and the genuine full-text complete with equations and often figures can be displayed or printed.

The full text service is made public.

A new X browser called Mosaic is released by NCSA. It has many of the features of MidasWWW and the full support of a large organization. With the availability of Mosaic, Web use starts to gain momentum.

SPIRES-HEP now receives about 38,000 queries/month. Of these, 15,000 are thru WWW.

SPIRES-HEP averages 178 new preprints each week and more than 20,000 new records are added in 1993 (remember that HEP isn't just preprints!).

Paul Mende of Brown University gives us a present of his automatic texing program and installs it for us on our own system. With some tuning and additional scripts, the whole process of ftping tex source from various e-print archives and trying to tex them and update the tracking and abstracts database is automated. Eventually it handles about 55% of all the e-print papers completely. We still, however, must carefully check each one for viewability and printability and manually deal with the remaining 45%.

DESY and CERN give us a hand with TeX to postscript, but with the advent of automatic processing distributed texing becomes less effective.

Additional features are added to the SPIRES-HEP service thru WWW. It is now possible to see who has cited any of an author's papers and go directly to the full-text if the citing paper appeared on a bulletin board (now called the politically correct 'e-print archives').
1994 - Ginsparg at LANL starts to link to the SLAC postscript server in order to supply .ps.Z files as well as the TeX source. Others start setting up shadow servers to have the postscript versions closer at hand. (Networks are the limiting factor. Not everyone has fast enough connections yet to make postscript viewing feasible).

1994- Use of WWW explodes to the world beyond physics.

Apr 1994 - An e-print archive for experimental particle physics (hep-ex) is started.

Sep 1994 - SPIRES-HEP averages 187 new preprints/week, more than 65% as e-prints. The total size of the database now reaches 292,000 records.

Sep. 1994 - SPIRES-HEP is now getting 83,000 queries/month, 65,000 of them thru WWW.

Sep 1994 - Hrvoje Galic of the SLAC Library adds 3000+ links to non-eprint papers stored on servers at the various labs. He also starts adding links to the *Nuclear Physics* journal server provided by Elsevier and accessible only to organizations whose libraries are subscribers. We hope fervently for more such journal links in the future as other publishers join in. We also hope for something better than TeX source from publishers in the future.

early 1995 The total size of the database passes 300,000 records! Bob Gex has probably proofed almost every one of those records during his years as cataloger extraordinaire.

Queries to HEP pass the 100,000/month mark, mostly thru WWW these days. We're processing more than 600 TeX e-prints/month and hoping that this too shall pass. Maybe authors will magically start producing viewable, printable postscript or even PDF.
Brief and Biased History of Preprint and Database Activities at the SLAC Library, 1962-1994

1962

SLAC Library begins with the charge from SLAC's first Director, W.K.H. Panofsky, to actively and promptly acquire preprints in high energy physics, catalog preprints fully (and promptly), and include every author no matter how many there are. Library starts with several boxes of CERN reports donated by kindly physicists. (Actually SLAC was then only known as Project 'M', 'monster?')

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1983

Louise Addis of the SLAC Library and Prof. Edwin Parker of Stanford University share the Division Award of the Physics-Astronomy-Mathematics Div. of Special Libraries Association for development of the SPIRES-HEP database. This is the first time that an online database has been chosen as the basis for this award rather than a printed book.

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Paul Kunz, a SLAC physicist, brings word of the World-Wide-Web development by Tim Berners-Lee and a group at CERN, our sister laboratory in Geneva, Switzerland. Kunz immediately sees its potential as a way to streamline access to the SPIRES-HEP database and outlines his ideas to Librarian, Louise Addis. With her enthusiastic support, Kunz and an associate, T. Hung, start work on bringing up a WWW server at SLAC.

Dec 12, 1991

The first U.S. WWW server is established at SLAC to provide access the the SPIRES HEP database. G.Crane provides the interface between the Web server and SPIRES. Addis makes SPIRES write HTML 'on the fly'.

Feb 1992

An Ad Hoc web support group, the WWW Wizards is convened by L. Addis. The 'volunteers' are Louise Addis, Mark Barnett, George Crane, Tony Johnson, Joan Winters, and Bebo White. The group is advised by Paul Kunz and starts work immediately to enhance WWW at SLAC.
Summer 1992

As we learn how to use the features of WWW, we start linking bulletin board preprints to their TeX source on the servers at Los Alamos. This isn't really full-text but it's a lot better than nothing. SPIRES creates the html dynamically and presents it to the W3 server.


QSPIRES users are encouraged to FTP the free browser from CERN and change to WWW and some do.

Fall 1992

WWW Wizard, Tony Johnson, a physicist with the SLAC-SLD experiment, releases the MidasWWW browser. Based on Motif/X, MidasWWW allows viewing of postscript files on the Web from Unix and VMS, and even handles compressed postscript.

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SPIRES-HEP averages 178 new preprints each week and more than 20,000 new records are added in 1993 (remember that HEP isn't just preprints!).

January 1994
Paul Mende of Brown University gives us a present of his automatic texing program and installs it for us on our own system. With some tuning and additional scripts, the whole process of flipping tex source from various e-print archives and trying to tex them and update the tracking and abstracts database is automated. Eventually it handles about 55% of all the e-print papers completely. We still, however, must carefully check each one for viewability and printability and manually deal with the remaining 45%..."

DESY and CERN give us a hand with TeX to postscript, but with the advent of automatic processing distributed texing becomes less effective.

1994

Additional features are added to the SPIRES-HEP service thru WWW. It is now possible to see who has cited any of an author's papers and go directly to the full-text if the citing paper appeared on a bulletin board (now called the politically correct 'e-print archives').

1994

Ginsparg at LANL starts to link to the SLAC postscript server in order to supply .ps.Z files as well as the TeX source. Others start setting up shadow servers to have the postscript versions closer at hand. (Networks are the limiting factor. Not everyone has fast enough connections yet to make postscript viewing feasible).

1994

Use of WWW explodes to the world beyond physics.

April 1994

An e-print archive for experimental particle physics (hep-ex) is started.

September 1994

SPIRES-HEP averages 187 new preprints/week, more than 65% as e-prints.

The total size of the database now reaches 292,000 records. (Remember that HEP isn't just preprints.)

September 1994

SPIRES-HEP is now getting 83,000 queries/month, 65,000 of them thru WWW.

September 1994

Hrvoje Galic of the SLAC Library adds 3000+ links to non-eprint papers stored on servers at the various labs. He also starts adding links to the Nuclear Physics (journal) server provided by Elsevier and accessible only to organizations whose libraries are subscribers. We hope fervently for more such journal links in the future as other publishers join in. We also hope for something better than TeX source from publishers in the future.
Early 1995

The total size of the database passes 300,000 records! Bob Gex has probably proofed almost every one of those records during his years as cataloger extraordinaire.

March 1995

SPIRES-HEP is now getting more than 100,000 queries/month, mostly thru WWW. SLAC and DESY libraries together are processing between 600 and 700 TeX e-prints/month.

Ginsparg and his group start work on a more comprehensive auto-TeXing program and establishing better submission standards for authors.

1996

At SLAC, Harv Galic establishes links with Phys.Rev.D and starts receiving all Phys.Rev.D papers before publication so that they will be 100% represented in SPIRES-HEP.

December 1996

Total size of SPIRES-HEP database exceeds 338,000 records. Of the almost 20,000 records added in 1996, 10,880 are available on the internet as full text documents via WWW.

All TeX processing is now done at the e-print archive machine. E-prints are now available in both postscript and PDF formats.

SPIRES-HEP now gets more than 200,000 queries/month via WWW.

June 1999

Total size of SPIRES-HEP database is now almost 400,000 records, of which over 150,000 are available on the internet as full text documents thru the LANL eprint server, various journal servers, and institutional preprint servers, etc.

SPIRES-HEP now gets between 300,000 and 400,000 queries/month via WWW.

Apr 2000

SPIRES-HEP passed into the new century without incident. The database is now 423,000 records with almost 500,000 queries/month via WWW.

A new and popular feature, a citation summary report, is now available. Not only can users find out who has cited their papers (as well as other conventional uses for citation indexing), but now they can run a summary of all their eprints and published papers showing total citations, with a breakdown by 'famous papers' (over 500 citations) on down thru several categories.

Preprint History at SLAC
Last modified: 12 Apr 2000
addis@slac.stanford.edu
Hi Joan, Thanks for the mail about SPIRES and UNIX. We are currently looking at ways to interface our several SPIRES databases to Unix...probably via Xwindows. The SSCL has been funding an Xwindows prototype which provides search access to HEP. I'm also working with Paul Kunz on some other approaches to the problem.

At present there are over 4000 registered QSPIRES users in 30 countries who indirectly access our databases, primarily HEP, CONF, HEPNAMES, and INSTITUTIONS. Many of those folks are on Unix workstations and we'd like to provide a better interface for them as well as for our own Unix community here at SLAC.

Cheers, Louise

==:B:=}
Let's get on with the WWW project on SLACVM...this is a working meeting.
Paul will explain how his stuff works and we'll figure out what further needs doing, how, and who.

Cheers, -L

---B---
---T--- 12/12/91 10:21 pfkeb @KAON.SLAC WWW

VMid 'SPICELL' is running the WWW daemon. The PROFILE EXEC on
SPICELL 191 has been setup correctly, I think. All the source for
WWW is on SPICELL 192. I have not put the INSTALL EXEC on its 192
disk.

So I think you can put SPICELL in the autolog list of service VMs
and we should be in business, at least for Tim Berners-Lee demos in
San Antonio.

Louise, its up to you now to find someone to work on it for
further enhancements, etc. I'll get back to my normal work.

---R--- Reply from ADDIS

---T--- Fri, 13 Dec 1991 01:26 -0800 (PST) <ADDIS@SLACVM>
From: "Louise Addis"
To: pfkeb@KAON.SLAC.Stanford.EDU
Subject: Re: WWW

In-Reply-To: pfkeb@KAON.SLAC.Stanford.EDU -- 12/12/91 18:21

Hi Paul, Thats great, I'll start trying to get George interested. lxa

---B---
---T--- 12/11/91 15:09 pfkeb @KAON.SLAC Re: [alt.wais] WAIS and library access (L
Date: Wed, 11 Dec 91 15:04:35 PST
From: pfkeb@KAON.SLAC.Stanford.EDU (Paul Kunz)
Subject: Re: [alt.wais] WAIS and library access (LIBTEL)
To: addis@SLACVM.SLAC.STANFORD.EDU
Message-id: <9112112304.AA02869@kaon.SLAC.Stanford.EDU>
X-Envelope-to: addis@SLACVM.SLAC.STANFORD.EDU

Here's yet another database access system floating around...

In comp.archives article <kkb70u1NN2hc@agate.berkeley.edu> you wrote:
> Archive-name: auto/alt.wais/WAIS-and-library-access-LIBTEL
>
> LIBTEL is a UNIX shell script that provides menu-ed access to over
> 200 libraries
> and public access databases around the world. The basic script is
> available
> via anonymous ftp from ftp.oit.unc.edu in pub/docs as libtel.unix.
A vms sister
> that does much the same thing is available from the same address
as lib.com
> (thanks to Mark Resmer of Sonoma State for that one).
>
> We're looking at redoing LIBTEL and placing it in a client-server
> environment. As it stands now, we've taken the basic script and
enhanced it
> quite a bit. We've also added a scripted version of telnet that
will do a
> good part (if not all) of the complex connections for you. (This
version is
> available for testing on bbs.oit.unc.edu--just login as bbs and
create your own
> id).
>
> We're now pretty close to being able to distribute the scripted
version,

> though there is a lot of work that must be done to keep it up to
date.
> What this means is that LIBTEL will nearly always be lagging (just
as its vms
> sister will be). Further, the organization of the information is at
present
> geographical except in a few cases where databases are lumped into the
> meaningless MISC category.

>
> As more and more libraries with special collections and specialized
databases
> come on the net, how do folks find which library has, say, a
Southern Historical
> Collection or a Dante project? Just as LIBTEL and network
connectivity changed
> our way of accessing on-line catalogs, we need to change again to
provide more
> flexible access to more varied information.
>
> What we really need is to have the library descriptions on WAIS (as
seen at
> think.com). Then you could search for the state, country, special
> collections,
> or institution in a much more sane manner. That's a good first
> step, but you
> still have to connect (do the libtel job). We could do as hytelnet
> has done and
> simply place the connection info in the WAIS ed database as part of
> the first
> step, but the real way to handle things is to: 1) create the WAIS ed
> database
> including connection information in a form usable by scripted
> telnet; then 2)
> create WAIS clients that let you query the database, read the
> library
> descriptions, AND connect (via button or command) using the
> downloaded script
> and a local version of telnet that can read such a script. This
> means that
>
> > updates to the database will be instantly available to everyone
> running clients
> > anywhere on the net, thus eliminating the lag and the pain of
> having to keep up
> > with new versions.
> >
> > We will be doing a UNIX version of such a client and setting up an
> experimental
> version of the database soon, but we will need folks who will build
> or modify
> existing WAIS clients to make this work. If you are interested in
> working on
> this project, please contact me at the address below (or on the
> From: line). If
> you or your library organization are interested in helping fund or
> eventually
> run the project please contact me as well. (Discussion of X.500
> alternatives is
> also welcome).
> -------
> Paul Jones
> <pjones@samba.oit.unc.edu>
> Office FOR Information Technology
> University of North Carolina - Chapel Hill
> 310 Wilson Library
> Chapel Hill, NC 27599-3460
> (919) 962-9107
>
> --
> Paul F. Kunz (NeXT mail ok)
> Stanford Linear Accelerator Center, Stanford University
> Voice: (415) 926-2884 (NeXT) Fax: (415) 926-3587
> ==:B:==
> ==:T:== 12/11/91 09:45 pfkeb @KAON.SL WWW & Spires
> -----------------------------------------------------------------
> Received: from SC.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08
> R208004) with BSMTP id 9303; Wed, 11 Dec 91 09:45:12 PST
> Received: from KAO.N.SLAC.Stanford.EDU by SC.SLAC.STANFORD.EDU with PMDF#10283;
> Wed, 11 Dec 1991 08:58 PST
> Received: by kaon.SLAC.Stanford.EDU (NeXT-1.0 (From Sendmail 5.52)/NeXT-2.0)
> id Aa0243L; Wed, 11 Dec 91 08:54:03 PST
> Received: by NeXT Mailer (1.63.RR)
> Date: Wed, 11 Dec 91 08:54:03 PST
From: pfkeb@KAON.SLAC.Stanford.EDU (Paul Kunz)
Subject: WWW & SPIRES
To: addis@SLACVM.SLAC.STANFORD.EDU
Message-id: <9112111654.AA02431@ kaon.SLAC.Stanford.EDU >
X-Envelope-to: addis@SLACVM.SLAC.STANFORD.EDU

I gave the authors of WWW an update on our SPIRES interface and they are quite excited about it. They are going to a HyperText conference next week in San Antonio and they want to use the SPIRES interface in their demos!!

I wrote back saying they are living dangerously. However, we might try to accommodate. Where is our special account for the disconnected VM that will run the Daemon? Can we get SCS to rush that thru the system? If we add an automatic OUTPUT (STACK to the REXX exec, then we will avoid the problem when OUTPUT is given as a separate command.

If we don't feel secure about it before the weekend, then tough for the CERN guys, but we might try to be ready. After all, they are demoing their own product at their own risk.

==R== Reply from ADDIS
====================================================================
Date: Thu, 12 Dec 1991 00:42 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: pfkeb@KAON.SLAC.Stanford.EDU
Subject: Re: WWW & SPIRES
In-Reply-To: pfkeb@KAON.SLAC.Stanford.EDU -- 12/11/91 09:45

If you're game, I'm game! Let's try. The account is SPICELL (it's an old one that I got for Bill Weeks to use in developing a 'padded cell' environment for outside SPIRES users...it seems appropriate to use it for this instead). I'll get Ted or someone to make it an authorized server first thing tomorrow.

George has a strategy for tracking the IP numbers via QSPIRES so we may have a way to do iterative searching...but perhaps not in time for the demo.

Cheers, -L

==:F== Forward from ADDIS
====================================================================
Date: Thu, 12 Dec 1991 00:48 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: CAROLFY@SLACVM, LIRYG@SLACVM
Subject: WWW & SPIRES
Forwarded-from: ADDIS

fyi

==:B:==
==:T== 02/06/92 17:40:29 >LISTSERV
====================================================================
Date: Thu, 06 Feb 1992 17:40 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: listserv@info.cern.ch

ADD www-interest

==:B:==
==:T== 02/06/92 19:18:58 >ADDIS Minutes, WWW Working Wizards, 2/5/92
====================================================================
Date: Thu, 06 Feb 1992 17:40 -0800 (PST)
Paul Kunz has imported the WWW (WorldWideWeb) software to SLAC from CERN. WWW provides seamless access to a variety of textual and database material on several platforms. For example, access to SLAC SPIRES - HEP database is now available at CERNVM through a quick and dirty gateway which Paul installed on SLACVM for demonstration purposes.

Anyone who wishes can explore WWW at CERN by telnetting to INFO.CERN.CH (no password is required).

At SLAC, Paul installed the WWW client software on the Unixhub cluster and on Grp B's NeXT cluster. Bebo then installed it on SLACVM, and TonyJ installed it on SLACVX.

Paul, having demonstrated the potential of WWW at SLAC as a very quick way to access information across platforms and systems, wishes to transfer the maintenance and polishing to other hands.

He provided a listing of the files (C programs, SGML, and REXX execs) involved in the WWW interface to SLACVM. It has 7 parts:

1. Server machine startup (as a PROFILE EXEC on account SPICELL 191)
2. Root hypertext file: /usr/local/lib.shared/WWW/default.html (on unixhub)
3. Customizable exit to server code: findgate c on spicell 191
4. File fetching: fget exec on spicell 192
5. File returned from root file: spires hmtl on spicell 192
6. File returned that starts search: spires index on spicell 192
7. Process a search: fsearch exec on spicell 192

Paul led a guided tour thru the interface code (C, Rexx, and SGML), the largest hunk of which is no. 3 (above).

WWW itself is written in C and uses TCP/IP for networking.

Tasks:

1. Clean up the simple interface to QSPIRES to allow all the arguments from a QSPIRES command to pass thru. (At present, anything following a left paren is stripped off.) (This is a C problem)

2. Provide informational menus for users. (REXX & HYPERTEXT)

3. Maintain WWW on SLAC platforms and install upgrades.

4. Enhance the interface to databases which are of general interest to the physics community, i.e. HEP, BOOKS, CONF, INSTITUTIONS, MEYENAMES, BIBLIST, RFP (Review of Particle Properties), etc. to provide a 'guided' version for the occasional user.
5. Develop WWW interfaces to other documentation and databases at SLAC, CERNVM, etc.

6. Look at ways we can identify individual users (rather than just their IP addresses) for iterative searching in SPIRES, and for possible recording of user statistics.

Joan Winters and Mark Barnett have also been approached re WWW matters (via Tony) and should be included in future.

It's not clear how much help can be expected from SCS folk because of press of other tasks. They'll try to get that clarified.

In meantime, Bebo and Crane will take a look at the code and try to make a couple of very quick fixes to make the full QSPIRES commands work, i.e. the switches from one database to another and choice of output formats.

We'll reconvene same time next week for another working meeting. (Wednesday, 12 Feb 1992, 1:15). Place will be given in reminder e-mail. I'm looking for a room with at least a terminal...better yet a Unix station. Help!

lxa

---------------------------------------------------------------------

EXCERPT from WWW explanatory material at INFO.CERN.CH
(The bracketed numbers indicate that further information is available. In line-mode, one types that number to go deeper.)

---------------------------------------------------------------------

WORLD WIDE WEB

The WorldWideWeb (W3) is a wide-area hypermedia[1] information retrieval initiative aiming to give universal access to a large universe of documents.

General Project Information


People[10] A list of people involved in the project.


Technical details

How to provide data[12] How can I make my own data available on the web?


Design Issues[16] A list of decisions to be made when designing or selecting a hypertext/IR system. See also related products[17].

Design notes[18] Notes of meetings, etc, mostly historical.

WHAT IS HYPERTEXT

Hypertext is text which is not constrained to be linear.

Hypertext is text which contains links[1] to other texts. The term was coined by Ted Nelson[2] around 1965 (see History[3]).

HyperMedia is a term used for hypertext which is not constrained to be text: it can include graphics, video and sound[4], for example. Apparently Ted Nelson was the first to use this term too.

Hypertext and HyperMedia are concepts, not products.

WORLDWIDEBWEB - SUMMARY

The WWW[1] project merges the techniques of information retrieval and hypertext to make an easy but powerful global information system.

The project is based on the philosophy that much academic information should be freely available to anyone. It aims to allow information sharing within internationally dispersed teams, and the dissemination of information by support groups. Originally aimed at the High Energy Physics community, it has spread to other areas and attracted much interest in user support, resource discovery and collaborative work areas.

READER VIEW

The WWW world consists of documents, and links. Indexes are special documents which, rather than being read, may be searched. The result of such a search is another ("virtual") document containing links to the documents found. A simple protocol (" HTTP[2] ") is used to allow a browser program to request a keyword search by a remote information server.

The web contains documents in many formats. Those documents which are hypertext, (real or virtual) contain links to other documents, or places within documents. All documents, whether real, virtual or indexes, look similar to the reader and are contained within the same addressing scheme.

To follow a link, a reader clicks with a mouse (or types in a number if he or she has no mouse). To search and index, a reader gives keywords (or other search criteria). These are the only operations necessary to access the entire world of data.

INFORMATION PROVIDER VIEW

The WWW browsers can access many existing data systems via existing protocols (FTP, NNTP) or via HTTP and a gateway. In this way, the critical mass of data is quickly exceeded, and the increasing use of the system by readers and information suppliers encourage each other.

Making a web is as simple as writing a few SGML[3] files which point to your existing data. Making it public involves running the FTP or HTTP daemon[4], and making at least one link into your web from another. In fact, any file available by anonymous FTP can be immediately linked into a web. The very small start-up effort is designed to allow small contributions. At the other end of the scale, large information providers
may provide an HTTP server with full text or keyword indexing. This may allow access to a large existing database without changing the way that database is managed. Such gateways have already been made into Digital's VMS/Help, Technical University of Graz's "Hyper-G", and Thinking Machine's "W.A.I.S." systems.

The WWW model gets over the frustrating incompatibilities of data format between suppliers and reader by allowing negotiation of format between a smart browser and a smart server. This should provide a basis for extension into multimedia, and allow those who share application standards to make full use of them across the web.

This summary does not describe the many exciting possibilities opened up by the WWW project, such as efficient document caching, the reduction of redundant out-of-date copies, and the use of knowledge daemons. There is more information in the online project documentation, including some background on hypertext and many technical notes.

TRY IT

You can try the simple line mode browser[5] by telnetting to info.cern.ch 1-

==:F== Forward from ADDIS

From: "Louise Addis" <ADDIS@SLACVM>
To: WBJ@SLACVM
Subject: Minutes, WWW Working Wizards, 2/5/92

Forwarded-from: ADDIS

fyi

==:B==

==:T== 02/11/92 14:31:20 WWW Reminder - WWW Wizards meeting, 2/12/92- NEW TIM

Date: Tue, 11 Feb 1992 14:15 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: ADDIS@SLACVM, BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM,
WINTERS@SLACVM, MEB@SLACVM
Subject: Reminder - WWW Wizards meeting, 2/12/92- NEW TIME: 2:00 pm

Mtq : WWW Wizards Working Mtg
Date: 2/12/92 (Wednesday)
Time: 2:00 - 3:00 pm
Pl : Beehive

Agenda: Progress reports - Bebo & Crane, etc.

Please let me know pronto if you can't attend.

==:B==

==:T== 02/11/92 18:06 pfkeb @KAON.SL www

Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08 R2080004) with BSMTP id 3775; Tue, 11 Feb 92 18:06:30 PST
Received: from KAON.SLAC.Stanford.EDU by SCS.SLAC.STANFORD.EDU with PMDF#10283;
Tue, 11 Feb 1992 18:06 PST
Received: by kaon.SLAC.Stanford.EDU (NeXT-1.0 (From Sendmail 5.52)/NeXT-2.0) id AA15083; Tue, 11 Feb 92 18:03:26 PST
Received: by NeXT Mailer (1.63.RR)
Date: Tue, 11 Feb 92 18:03:26 PST
From: pfkeb@KAON.SLAC.Stanford.EDU (Paul Kunz)
Subject: www
To: jhh@SLACVM.SLAC.STANFORD.EDU
Cc: addis@SLACVM.SLAC.STANFORD.EDU
Message-id: <9202120203.AA150830@kaon.SLAC.Stanford.EDU>
X-Envelope-to: addis@SLACVM.SLAC.STANFORD.EDU, jhh@SLACVM.SLAC.STANFORD.EDU

The WWW server is still not running. I get the following error message when I try to start it...

rundaemo
Daemon: Parsed address as port 2784, inet 0.0.0.0
IP: Opened socket number 3
TCP: Error 48 in "errno" after call to bind() failed.
    (Error number not translated)
Daemon: Bad setup: Can't bind and listen on port.
    (Possibly server already running, for example).
Ready: ?=0.00/0.12 18:03:58

I have no clue on what to do about it.

---B:---
==:=T:== 02/11/92 14:22  ADDIS  Reminder - WWW Wizards meeting, 2/12/92- NEW TIME
============================================================================
Received: by SLACVM (Mailer R2.08 R208004) id 0171;
    Tue, 11 Feb 92 14:22:54 PST
Date: Tue, 11 Feb 1992 14:15 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: ADDIS@SLACVM, BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM,
    WINTERS@SLACVM, MEB@SLACVM
Subject: Reminder - WWW Wizards meeting, 2/12/92- NEW TIME: 2:00 pm

Mtg : WWW Wizards Working Mtg
Date: 2/12/92 (Wednesday)
Time: 2:00 - 3:00 pm
Pl : Beehive

Agenda: Progress reports - Bebo & Crane, etc.

Please let me know pronto if you can't attend.

---B:---
==:=T:== 02/16/92 12:16  TONYJ  SCS.SLA FWD: Spires/WWW bugs
============================================================================
Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08
    R208004) with BSMTP id 6043; Sun, 16 Feb 92 12:16:45 PST
Date: Sun, 16 Feb 1992 12:16 PST
From: "Tony Johnson (415) 926 2278" <TONYJ@SCS.SLAC.STANFORD.EDU>
Subject: FWD: Spires/WWW bugs
To: ADDIS@SLACVM.SLAC.STANFORD.EDU, BEBO@SLACVM.SLAC.STANFORD.EDU,
    PFKEB@SLACVM.SLAC.STANFORD.EDU, CRANE@SLACVM.SLAC.STANFORD.EDU,
    WINTERS@SLACVM.SLAC.STANFORD.EDU, MEB@SLACVM.SLAC.STANFORD.EDU
Message-id: <E20608aa0c00b180@SCS.SLAC.STANFORD.EDU>
X-Envelope-to: ADDIS@SLACVM.SLAC.STANFORD.EDU, BEBO@SLACVM.SLAC.STANFORD.EDU,
    CRANE@SLACVM.SLAC.STANFORD.EDU, MEB@SLACVM.SLAC.STANFORD.EDU,
    PFKEB@SLACVM.SLAC.STANFORD.EDU, WINTERS@SLACVM.SLAC.STANFORD.EDU
X-VMS-To: @DISKLESS_USR0:[TONYJ.HEPLIB]WWW.DIS/1
X-VMS-Cc: TONYJ

I just remembered that when I first contacted Tim Berners-Lee about using WWW he
sent me a list of "bugs" concerning the SPIRES/WWW interface. Looking at this li

t again I noticed in particular point 3...which looks as if it may explain the fac
that the SPIRES interface was not working correctly from CERN.

Tony
1. It was a good idea to start with a page of hypertext: it's more flexible than having it written into the code. I'd suggest putting in it a paragraph describing the data in SPIRES, roughly as you sent to me, that is, describing the bounds of the index: what material will be in it, what won't. If its everything in HEP, say so, if it isn't, say so. (I am not one to talk: We haven't done that with the XFIND index but we certainly ought to.)

2. The help doesn't work. Following the link from the page you gave me as a root (http://slacvm.slac.stanford.edu./FIND/spires.html) to the help (http://slacvm.slac.stanford.edu./FIND/spihelp) gives the message:

   Sorry, the FIND server could not execute 'EXEC FGET 128.141.201.74 spihelp'
   I guess SPIHELP HTML doesn't exist -- maybe you could put something there for now.

2. You could probably merge the initial page into the query page, to avoid one jump by people (the majority) who want to do a search. This would also allow the one-line command

   alias spires www http://slacvm.slac.stanford.edu./FIND/spires

   which would be neat.

   There's nothing wrong with having a page have hypertext links AND and an index.
   You could just, instead of outputting the message from the C program, output "<ISTINDEX>" then treat it as though spires.html had been asked for.

3. The line mode browser has a "keyword" or (in the new version 1.0, currently under test) an equivalent "find" command. This means that to use spires one would have to type

   find find title tau and date 1980

   which is not intuitive! If he types "FIND author kunz" he gets "unrecognized command: AUTHOR". Two possibilities suggest themselves: One is to just prepend "FIND" to every query in FSEARCH EXEC.

   If you want to leave open other commands, you could give them different addresses like

   http://slacvm.slac.stanford.edu./SPIRES/FIND/spires.html
   http://slacvm.slac.stanford.edu./SPIRES/OTHERCOMMAND/spires.html

   and your root page could have pointers to them.

   In this way you could make sure that the OUTPUT of the find was only picked up for the FIND command. At the moment, if I say "FIND HELP" you get "HELP" and I get back the output of the last person's FIND command (and no help output).

4. You may find that the new generation of physicists find SPIRES through WWW when they didn't know it before, so references to QSPIRES may not be understood.
The reference is useful for those who have a history in bitnet, but it is a good idea to also have the help available in full for newcomers.

5. I notice that all the lines output are 80 characters long. This is a pity, as it means that every line wraps round, as we format the text for 79 characters wide. (We do that because terminal behaviour when you type in column 80 is not well defined. The result is double spacing on the line mode browser (version 1.0 anyway). Stripping trailing spaces from all lines (use PIPE?) would save this and shorten transmission time too. It could be done in the exec, or perhaps most easily in the C code which copies the file line by line. Or maybe its an option on the execio or something.

==:B==
==:T== 02/19/92 08:55  SPI 1:15, today, Wed. Feb 19, WWW Wizard Mtg., My (ADD
==================================================================================================
Received: by SLACVM (Mailer R2.08 R208004) id 3253;
   Wed, 19 Feb 92 08:55:45 PST
Date: Wed, 19 Feb 1992 08:51 -0800 (PST)
From: SPI@SLACVM
To: BEBO@SLACVM, CRANE@SLACVM, TONYJ@SLACVM, WINTERS@SLACVM, PFKEB@SLACVM,
   MEB@SLACVM, ADDIS@SLACVM
Subject: 1:15, today, Wed. Feb 19, WWW Wizard Mtg., My (ADDIS) office

WWW Wizards will meet briefly today for progress reports, at 1:15 in my office (Note TIME CHANGE...to avoid conflict with Unix Journal Club this afternoon).

You'll recall that last week:

1. Bebo reported that SCS says 'yes' to time commitments for WWW (per Cottrell & Johnson).

2. Bebo & TonyJ agreed to look at the interface C code to a) understand it and b) possibly recode it in REXX for flexibility and maintainability.

3. Crane agreed to coordinate with the C-->Rexx coders and look at, fix, and enhance the search/server interface to SPIRES. (First priority is to fix apparent inconsistency between search works (or doesn't) from CERNVM and from Unixhub at SLAC.)

4. MEB agreed to consider maintaining WWW on various platforms at SLAC (i.e., VMS, UNIX, VM, etc.). He'll look at the requirements and estimate the extra workload.

5. Winters will explore CERNVM WWW menus with eye to possible SLAC menus when and if WWW is announced here.

6. List of priorities as described in last minutes was accepted... with addition of high priority recoding effort in 2 above.

1xa (ADDIS@SLACVM)
==:B==
==:T== 02/16/92 12:16  TONYJ @SCS.SLA F/M: Spires/WWW bugs
==================================================================================================
Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08
I just remebered that when I first contacted Tim Berners-Lee about using WWW he sent me a list of "bugs" concerning the SPIRES/WWW interface. Looking at this list again I noticed in particular point 3... which looks as if it may explain the fact that the SPIRES interface was not working correctly from CERN.

Tony

1. It was a good idea to start with a page of hypertext: it's more flexible than having it written into the code. I'd suggest putting in it a paragraph describing the data in SPIRES, roughly as you sent to me, that is, describing the bounds of the index: what material will be in it, what won't. If its everything in HEP, say so, if it isn't, say so. (I am not one to talk: We haven't done that with the XFIND index but we certainly ought to.)

2. The help doesn't work. Following the link from the page you gave me as a root (http://slacvm.slac.stanford.edu./FIND/spires.html) to the help (http://slacvm.slac.stanford.edu./FIND/spihelp) gives the message:

   Sorry, the FIND server could not execute 'EXEC FGET 128.141.201.74 spihelp'

I guess SPIHELP HTML doesn't exist -- maybe you could put something there for now.

2. You could probably merge the initial page into the query page, to avoid one jump by people (the majority) who want to do a search. This would also allow the one-line command

   alias spires www http://slacvm.slac.stanford.edu./FIND/spires

which would be neat.

There's nothing wrong with having a page have hypertext links AND and be an index.

You could just, instead of outcutting the message from the C program, output "<ISINDEX>" then treat it as though spires.html had been asked for.

3. The line mode browser has a "keyword" or (in the new version 1.0, currently under test) an equivalent "find" command. This means that to use spires one would have to type
find find title tau and date 1980

which is not intuitive! If he types "FIND author kunz" he gets "unrecognized
command: AUTHOR". Two possibilities suggest themselves: One is to just preprend
"FIND" to every query in FSEARCH EXEC.

If you want to leave open other commands, you could give them different addresse
like
http://slacvm.slac.stanford.edu/~SPIRES/FIND/spires.html
http://slacvm.slac.stanford.edu/~SPIRES/OTHERCOMMAND/spires.html
and your root page could have pointers to them.

In this way you could make sure that the OUTPUT of the find was only picked up f
or the FIND command. At the moment, if I say "FIND HELP" you get "HELP" and I get b
ack the output of the last person's FIND command (and no help output).

4. You may find that the new generation of physicists find SPIRES through WWW
when they didn't know it before, so references to QSPIRES may not be understood.
The reference is useful for those who have a history in bitnet, but it is a good
idea to also have the help available in full for newcomers.

5. I notice that all the lines output are 80 characters long. This is a pity, a
it means that every line wraps round, as we format the text for 79 characters wi
de.
(We do that because terminal behaviour when you type in column 80 is not well
defined). The result is double spacing on the line mode browser (version 1.0
anyway). Stripping trailing spaces from all lines (use PIPE?) would save this an
d shorten transmission time too. It could be done in the exec, or perhaps most eas
ily in the C code which copies the file line by line. Or maybe its an option on the
execio or something.

==:B:=
==:T:= 02/26/92 13:50:35 >WWW subscribing to WWW listserv  lists
=============================================================================
Date: Wed, 26 Feb 1992 13:48 -0800 (PST)
From: "Louise Addis"
<ADDIS@SLACVM>
To: ADDIS@SLACVM, BEBO@SLACVM, FFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM,
WINTERS@SLACVM, MEB@SLACVM
Subject: subscribing to WWW listserv  lists

The general list is www-interest (announces upgrades, etc.)
the technical chat list for gurus is www-talk
Send e-mail to listserv@info.cern.ch

in body of message (no subject line)
add www-talk
or

add www-interest

(You'll need to do two messages to subscribe to both lists)

to add.

cheers,  lxa

add www-talk

or

add www-interest

(You'll need to do two messages to subscribe to both lists)

to add.

cheers,  lxa

In hepnet.hepix article <9202261335.AA12737@nikhef.nikhef.nl> you wrote:

> During the first HEPLIB and HEPIX meetings I learned about
> WWW (the World Wide Web). In November 1991 I installed a
> WWW browser at NIKHEF. My main objective was to have access
> to the documentation of the CERN library in the XFIND data-
> base on CERNVM. The enthusiasm about WWW at NIKHEF grew
This month I installed a WWW server at NIKHEF on a SUN. The information about NIKHEF which is provided by this server is still very preliminary, but more important is the observation that it is EXTREMELY simple to install a server and to make information accessible to WWW on a UNIX system. I therefore humbly suggest HEPIX to consider the use of WWW as a communication channel to find out Who is working Where on What.

Best regards, Wwillem van Leeuwen
February 26, 1992

--
Paul F. Kunz  (NeXT mail ok)
Stanford Linear Accelerator Center, Stanford University
Voice: (415) 926-2884  (NeXT) Fax: (415) 926-3587
==:B:==
==:T:== 02/25/92 09:37 pfkeb @KAON.SL Browser append to file, and SPIRES server
=================================================================
Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08
R208004) with BSMTP id 0813; Tue, 25 Feb 92 09:37:32 PST
Received: from KAON.SLAC.Stanford.EDU by SCS.SLAC.STANFORD.EDU with PMDF#10283;
Tue, 25 Feb 1992 09:37 PST
Received: by kaon.SLAC.Stanford.EDU (NeXT-1.0 (From Sendmail 5.52)/NeXT-2.0)
id AA08353; Tue, 25 Feb 92 09:33:50 PST
Received: by NeXT Mailer (1.63.RR)
Date: Tue, 25 Feb 92 09:33:50 PST
From: pfkeb@KAON.SLAC.Stanford.EDU (Paul Kunz)
Subject: Browser append to file, and SPIRES server
To: addis@SLACVM.SLAC.STANFORD.EDU, crane@SLACVM.SLAC.STANFORD.EDU
Message-id: <9202251733.AA08353@kaon.SLAC.Stanford.EDU>
X-Envelope-To: addis@SLACVM.SLAC.STANFORD.EDU, crane@SLACVM.SLAC.STANFORD.EDU

FYI

Begin forwarded message:

Date: 25 Feb 1992  07:01 PST
From: timbl@nxoc01.cern.ch
Subject: Browser append to file, and SPIRES server
To: PFKEB@kaon.SLAC.Stanford.EDU
X-Envelope-To: PFKEB@KAON.SLAC.Stanford.EDU

Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU
(Mailer R2.08
R208004) with BSMTP id 8047; Tue, 25 Feb 92 06:39:38 PST
Received: from dxmint.cern.ch by SCS.SLAC.STANFORD.EDU with
PMDF#10283; Tue, 25
Feb 1992 06:39 PST
Received: by dxmint.cern.ch (cernvax) (5.57/3.14) id AA15746; Tue, 25
Feb 92
15:39:56 +0100
Received: by nxoc01.cern.ch (NeXT-1.0 (From Sendmail 5.52)/NeXT-2.0) id AA04800; Tue, 25 Feb 92 15:44:49 GMT+0100
Received: by NeXT Mailer (1.62)
Date: Tue, 25 Feb 92 15:44:49 GMT+0100
From: timbl@nxoc01.CERN.CH (Tim Berners-Lee)
Subject: Browser append to file, and SPIRES server
To: W.vanLeeuwen@nikhef.nl (Willelm van Leeuwen)
Cc: www-talk@nxoc01.CERN.CH, pfkeb@SLACVM.SLAC.STANFORD.EDU
Message-id: <9202251444.AA04800@nxoc01.cern.ch>
X-Envelope-to: pfkeb@SLACVM.SLAC.STANFORD.EDU

> Date: Tue, 25 Feb 92 13:40:05 +0100
> From: W.vanLeeuwen@nikhef.nl (Willelm van Leeuwen)
> Some remarks about the new browser:

> The use of >> to add text of a document to an existing file
> should be documented in the help:
> > file
> > >>file
>
> Good point -- In fact I hadn't noticed that it works by virtue of the same code which makes ">>" work!
> It's in the help for the next version.

> When browsing the SPIRES database one has to type find twice:
> the first is interpreted by the browser, the second by SPIRES.
> (The old browser used K, which could be omitted).
> Yes - This should be fixed at the server end.
> SPIRES does not give always the promised number of references.
> Try find author holthuizen, there should be 111 references, only 104 are shown.
> This too. The last one's a bit odd, as the limit seems to vary. Perhaps its in lines. Another thing is taht the lines
> trainling spaces to 80 characters which makes them wrap around a 79-character terminal. They could be stripped in the server
> EXEC too.

>Willem
> -Tim

==:B:==
==:T:== 02/25/92 09:37 pfkeb @KAON.SL spires - confuses most people.

------------------------------------------------------------------------
Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08 R208004) with BSMTP id 0783; Tue, 25 Feb 92 09:37:06 PST
Received: from KAO1.SLAC.Stanford.EDU by SCS.SLAC.STANFORD.EDU with PMDF#10283;
   Tue, 25 Feb 1992 09:37 PST
Received: by kaon.SLAC.Stanford.EDU (NeXT-1.0 (From Sendmail 5.52)/NeXT-2.0) id AA08348; Tue, 25 Feb 92 09:33:21 PST
Received: by NeXT Mailer (1.63.RR)
Date: Tue, 25 Feb 92 09:33:21 PST
From: pfkeb@KAON.SLAC.Stanford.EDU (Paul Kunz)
Subject: spires - confuses most people.
To: addis@SLACVM.SLAC.STANFORD.EDU, crane@SLACVM.SLAC.STANFORD.EDU
Message-id: <9202251733.AA08348@kaon.SLAC.Stanford.EDU>
X-Envelope-to: addis@SLACVM.SLAC.STANFORD.EDU, crane@SLACVM.SLAC.STANFORD.EDU

This explains why the SPIRES server doesn't work from CERNVM anymore. But I think you have already figured it out.
Begin forwarded message:

Date: 25 Feb 1992 07:01 PST
From: timbl@nxoc01.cern.ch
Subject: spires - confuses most people.
To: PFKEB@kaon.SLAC.Stanford.EDU
X-Envelope-To: PFKEB@RAON.SLAC.Stanford.EDU

Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU
(Mailer R2.08) with BSMTP id 7989; Tue, 25 Feb 92 06:29:03 PST
Received: from dxmlnt.cern.ch by SCS.SLAC.STANFORD.EDU with
FMDF#10283; Tue, 25
Feb 1992 06:28 PST
Received: by dxmlnt.cern.ch (cernvax) (5.57/3.14) id AA14576; Tue, 25
Feb 92
15:29:08 +0100
Received: by nxoc01.cern.ch (NeXT-1.0 (From Sendmail
5.52)/NeXT-2.0) id
AA04776; Tue, 25 Feb 92 15:34:28 GMT+0100
Received: by NeXT Mailer (1.62)
Date: Tue, 25 Feb 92 15:34:28 GMT+0100
From: timbl@nxoc01.CERN.CH (Tim Berners-Lee)
Subject: spires - confuses most people.
To: W.vanLeeuwen@nikhef.nl (Willem van Leeuwen)
Cc: pfkeb@SLACVM.SLAC.STANFORD.EDU, terryh@UNIXHUB.SLAC.STANFORD.EDU,
www@dxmlnt.CERN.CH
Message-id: <9202251434.AA04776@nxoc01.cern.ch>
X-Envelope-to: pfkeb@SLACVM.SLAC.STANFORD.EDU

Willem,

You are not the first to notice this problem with the SPIRES
server. The problem is that the guys who originally got it going in
a short space of time are not responsible for maintaining it or
making little fixes like this.

Paul: Could we have a contact name for the SPIRES server, please?
In this case all that needs doing is a REXX line inserting which
will add the word "FIND" to the front of the query if it isn't
already there.

The word "FIND" (abbreviatable to F) is now a synonym for the
word
"KEYWORD" (abbreviatable to K). "FIND" was added to be compatible
with most other search commands. If you are reading an index and you
give a completely unrecognised word then a search will be assumed
anyway. Therefore, before FIND was allowed, if you asked for FIND
AUTHOR KUNZ your first word was recognised as a keyword, and all
three words were sent. Nowadays, "FIND" is taken as a command and
only the last two are sent. This is how it should work, and the SLAC
server should regenerate the FIND command. At the moment you can say
"FIND HELP" and other commands which produce rather strange results.

Tim

Begin forwarded message:

Date: Tue, 25 Feb 92 14:57:51 +0100
From: W.vanLeeuwen@nikhef.nl (Willem van Leeuwen)
Organisation: Nikhef-H (National Institute for Nuclear and
High-Energy Physics)
Address: Kruislaan 409, P.O. Box 41882, 1009 DB Amsterdam, the
Netherlands
Phone: +31 20 5920411, +31 2995 2499 (home)
Telex: 10262 hef nl
Telefax: +31 20 5925155
To: timbl@nxoc01.cern.ch
Subject: spires
Cc: a03@nikhef.nl
Sorry, I was too hasty about find in SPIRES, but if you miss SLAC SPIRES[17] The High Energy Physics preprint index at Stanford
Linear Accelerator, California. (This is the same information available via the QSPIRES facility on BITNET. Include the word "FIND" as the first keyword, eg: FIND FIND AUTHOR FRED.),
then the following message is misleading:
SLAC SPIRES HEP Preprint database search
Use standard SPIRES search terms such as...
find author Peri, M find title tau and date 1980
Is it always possible to type keywords without find?
The K of the old browser was needed in the case that the keyword started with K.
This is not the case for F.
Willem

---B:---
==:T:== 02/27/92 12:13:05 >CRANE spicell
===============================================
Date: Thu, 27 Feb 1992 12:10 -0800 (PST) From: "Louise Addis" <ADDIS@SLACVM>
To: CRANE@SLACVM Subject: spicell
try for www or 4www or fourwww (it's one of those for sure)
I tried WWW from CERNVM and it only half works, one must still type FIND FIND AUTHOR blah
Otherwise you get someone else's search and an error message.
I think it is very important to get that working minimally before all else. It is a big deal at CERN and we're probably beginning to look pretty flaky.

1xa
---B:---
==:T:== 02/27/92 08:50 MEB In case you haven't, GIME BOEHEIM 192 then GOPHER
===============================================
Received: by SLACVM (Mailer R2.08 R208004) id 8487; Thu, 27 Feb 92 08:50:57 PST
Date: Thu, 27 Feb 1992 08:50 -0800 (PST)
From: "Mark Barnett (meb@slacvm.slac.stanford.edu)" <MEB@SLACVM>
To: ADDIS@SLACVM
Subject: In case you haven't, GIME BOEHEIM 192 then GOPHER

---B:---
==:T:== 02/21/92 11:24 pfkeb @EBNEXTN Setting up servers: HTTP gateway; Port nu
===============================================
Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08 R208004) with BSMTP id 6999; Fri, 21 Feb 92 11:24:52 PST
Received: from EBNEXTN.SLAC.Stanford.EDU by SCS.SLAC.STANFORD.EDU with PMDF#10283; Fri, 21 Feb 1992 11:24 PST
Received: by ebnextn.SLAC.Stanford.EDU (NeXT-1.0 (From Sendmail 5.52)/NeXT-2.0) id AA00208; Fri, 21 Feb 92 11:24:11 PST
Received: by NeXT Mailer (1.63.RR) Date: Fri, 21 Feb 92 11:24:11 PST
From: pfkeb@EBNEXTN.SLAC.Stanford.EDU (Paul Kunz)
Subject: Setting up servers: HTTP gateway; Port number 80
To: addis@SLACVM.SLAC.STANFORD.EDU
Message-id: <9202211924.AA00208@ebnnextn.SLAC.Stanford.EDU>
Has your crew signed up on the www mailing list? If not, they should. Here is the latest posting...

Begin forwarded message:

Date: Fri, 21 Feb 92 11:34:42 GMT+0100
From: timbl@nxoc01.cern.ch (Tim Berners-Lee)
Subject: Setting up servers: HTTP gateway; Port number 80
To: www-interest@dmint.cern.ch
X-Envelope-To: pfkeb@RAON.SLAC.Stanford.EDU

Two points for those who run or are thinking of running servers:

Official Intnet Port Number

W3 has been allocated by Jon Postel of ISI an official IP port number for the HTTP protocol. This is 80. In due course (not for a few weeks) this will become the default port for HTTP access in new client code. In the mean time, I suggest that servers on port 80 should set up in parallel with any servers on the old port 2784 to prepare for a changeover period. (This just means duplicating the entries in /etc/services and /etc/inetd.conf or whatever holds this information on your server system.) If you do this, mail me and any links I have to your "root" node can be switched to explicitly mention port 80 for all those who are using old browser software. The server on //info.cern.ch/ runs in parallel on both ports now.

Making an HTTP gateway

This illustrates how simple a W3 server can be. If you have an organisational restriction that external internet access is only permitted from one machine, you can run an HTTP gateway to allow internal machines to read the web.

The server file invokes the www client program to send the source back. This is the server:

#! /bin/sh
read get docid
/usr/local/bin/www -source -n -na -p "$docid"

(See http://info.cern.ch/hypertext/WWW/Daemon/User/Installation.html for more details on installing a daemon under inetd, and the inetd man pages.) This simple gateway only gateways things whose source is in hypertext - it won’t work for news for example. An option to return the html for anything (news, etc) is on the agenda.

Obviously making a W3 server for other data you can extract with a shell script is easy...

Tim

Tim Berners-Lee
World Wide Web initiative
CERN
1211 Geneva 23, Switzerland

timbl@info.cern.ch
(NetXTMail is ok)
Tel: +41(22) 767 3755
Fax: +41(22) 767 7155
==:F:== Forward from ADDIS
Date: Thu, 27 Feb 1992 18:37 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: ADDIS@SLACVM, BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM,
WINTERS@SLACVM, MEB@SLACVM
Subject: Setting up servers: HTTP gateway; Port number 80

Forwarded-from: ADDIS

==:B:==
==:T:== 02/27/92 13:40 CRANE wwwtest
Date: Thu, 27 Feb 1992 13:40:22 PST
From: CRANE@SLACVM
To: ADDIS@SLACVM
Subject: wwwtest

I've been playing around with wwwtest and have it working pretty well for both binlist and hep. The big difference between wwwtest and spicell is that wwwtest is reading directly from spires rather than via gspires.

To use it, GIME CRANE and WTEST

George

==:B:==
==:T:== 03/03/92 22:42:43 >ADDIS No WWW Wizards meeting this week
Date: Tue, 03 Mar 1992 22:27 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: ADDIS@SLACVM, BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM,
WINTERS@SLACVM, MEB@SLACVM
Subject: No WWW Wizards meeting this week

Due to scheduling conflicts, there'll be no WWW Wizards meeting this week. We'll resume next week, 3/11/92, same time, same place.

lxa

==:B:==
==:T:== 03/10/92 14:15:33 >WWW Reminder, WWW Wizards Mtg., Wed, 3/11, 1:15, LXA
Date: Tue, 10 Mar 1992 13:09 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: ADDIS@SLACVM, BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM,
WINTERS@SLACVM, MEB@SLACVM
Subject: Reminder, WWW Wizards Mtg., Wed, 3/11, 1:15, LXA Office

This week for sure, WWW Mtg:

Date: Wed, 3/11/92
Time: 1:15 pm
Place: LXA's office
Agenda: Updates from all
Summary of previous meeting

Meeting: 26 Feb 92
Attendance: All Wizards
Wizard words:

1. Mark is still 'considering' maintenance issues. Since
WWW has already been installed on Unixhub, SLACVX and SLACVM,
future maintenance might simply consist of making sure that
WWW has a known and active guru on each platform and verifying
that new versions are installed timely. The jury (Mark) is still
out on this one.

2. Bebo has created a WWW SLAC menu which comes up on VM
if you issue the WWW command (after GIME BEBO). It includes
BINLIST and doesn't yet work....but will.

3. New accounts WWW and WWWTTEST are now available and
George reported on the TEST version of WWW which is
now running. A peculiar problem turned up...i.e. when
SPICELL or WWWTTEST is autologged (vs. manual disconnection) WWW
doesn't work (this wasn't noticed in past because SPICELL
was always manually logged on and disconnected).

The rest of the meeting was spent working on this problem. It
was ultimately revealed as a quirk of the C program that behaves
differently when SPICELL/WWWTTEST are autologged. The fix
was to supply a filedef for sysin in the profile exec instead
of allowing a default. The following line is now present in
profile execs for both SPICELL & WWWTTEST:

'FILEDEF SYSIN TERM (LOWCASE CHANGE PERM RECFM U LRECL 120'

Bebo will try to understand what's behind the quirk.

George will refine the test version and make sure the production
version (used by CERN, etc.) is robust within its current
limitations.

-F:== Forward from ADDIS
=================================================================================================================================================================
Date: Wed, 11 Mar 1992 11:23 -0800 (PST) From: "Louise Addis" <ADDIS@SLACVM>
To: WBJ@SLACVM
Subject: Reminder, WWW Wizards Mtg., Wed, 3/11, 1:15, LXA Office

Forwarded-from: ADDIS

Bill, A little background. I will send previous minutes also...which
are very informal due to the press of other duties.

These minutes refer to the situation as of two weeks ago. Much progress
has been made in meantime and I believe the group will probably opt to meet
only once a monthto report on enhancements. Have you tried TELNET
to INFO.CERN.CH to see how CERN is using this (access to CERNLIB documentation,
access to SLACVM HEP, etc.)?

We'll eventually make a memo to you and Les with some information and
recommendations...but I'll try to keep you in the loop in the meantime.

Cheers, lx

---P:---
==T:== 03/12/92 13:01:09 >WINTERS various
=================================================================================================================================================================
Date: Thu, 12 Mar 1992 12:10 -0800 (PST)
From: "Louise Addis"
To: WINTERS@SLACVM
Subject: various

Thanks for your research into the PORT assignment question...it is important for folks to understand this and get it right from the beginning. Thanks for keeping us out of this pitfall.

Re meeting, I'm afraid that I have too little time to really do any of this more than hastily. I'm sorry I couldn't stay afterward to talk...but my deadlines are real and almost undoable at the moment.

Most of the people in the research division are in the same state. I spent last evening with Marty B. trying to get straight just who is unofficially working with the SLD group (at the 'author' level) so that some statistics can be correctly compiled for Leith. It is ridiculous that he and I would have to spend our time this way...but that's the way it is.

If you can come up with a WWW menu design that doesn't confuse the heck out of a sane person and gives an impatient physicist instant access to a function he/she already understands I'll be delighted.

It's my opinion (as of now) that people should be able

BINLIST WINTERS and get the answer they're used to
BINLIST WINTERS (BRIEF) should get just the basics.

The novice (and this will always be a minority) should be able to guess from the examples what to do. The rare person who actually 'reads the manual first', should also be considered...but the facilities for this person shouldn't get in the way of the more impatient.

Anything we come up with will have to be passed by several representative physicists.

Anyway, it's probably not wise to spend too much time on planning menus until George finds out a little more about the new version. But some thought would be great.

Cheers, lxa

P.S. George has a wonderful analogy for this kind of activity...'sometimes you just have to row and build the boat as you go'. Hope you can put up with it for a while since we obviously need your input.

==:B:==
==:T:== 03/11/92 11:08 MEB My role in WWW implementation/maintenance/development
==============================================
Received: by SLACVM (Mailer R2.08 R208004) id 4105; Wed, 11 Mar 92 11:08:32 PST
Date: Wed, 11 Mar 1992 07:48 -0800 (PST)
From: "Mark Barnett <meb@slacvm.slac.stanford.edu>" <MEB@SLACVM>
To: ADDIS@SLACVM
cc: BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM, WINTERS@SLACVM, WBJ
Subject: My role in WWW implementation/maintenance/development/etc.

It doesn't make sense for me to commit to continuing responsibilities in the project, since I am having trouble meeting prior commitments. I am willing to attend meetings and serve in a consulting capacity if you think that useful.

My "take" on the WWW project so far:

- It is capable of providing a useful service with a limited local effort;
- It appears to be an infinite sink;
- The level of effort required is (obviously) a function of the project's goals, where some important variables are:
  - Number of platforms supporting clients;
  - Degree of consistency across platforms;
  - Level of client support, optional (e.g., adding servers to client menus) and required (e.g., avoiding breakage and/or installing enhancements with new versions from CERN);
  - Level of server support (adding new servers).

If WWW is going to receive continued local support, I think the WWW group needs a set of limited (i.e., minimal) goals, including local support levels, and a coordinator (not me) with the time and interest to make it work.

P.S. I started this note at the time shown above. It is now 11:07. I appreciate the "coordinator" offer, but it's not a good idea.

---

Louise - Realized driving in this morning that I didn't respond visibly to your mail yesterday. I appreciated the information and the support. I will try to help build the www boat as we row. Though my own experience is that such boats usually leak. Still, sometimes it's necessary.

Guess we live in interesting times.

Joan

---

I found the following in the Internet RFC 1060 John pointed me at on "Assigned Numbers" for Internet protocols:

If you are developing a protocol or application that will require the use of a link, socket,
port, protocol, etc., please contact the IANA to receive a number assignment. (IANA is the Internet Assigned Numbers Authority.)

Joyce K. Reynolds
Internet Assigned Numbers Authority
USC - Information Sciences Institute
4676 Admiralty Way
Marina del Rey, California 90292-6695

Phone: (213) 822-1511

Electronic mail: JKREY@ISI.EDU

Perhaps Joyce could tell us about testing and other number assignment conventions. Shall I call her?

In the RFC I also found a list of UNIX ports used for standard services, which I've included after John's note. Note FINGER and WHOIS are both included.

++ ++ ++ ++ ++ ++ ++ ++ ++ ++ Forwarded Text 1 ++ ++ ++ ++ ++ ++ ++ ++

Received: by SLACVM (Mailer R2.08 R208004) id 8063;
Wed, 11 Mar 92 15:02:33 PST
Date: Wed, 11 Mar 1992 14:59 -0800 (PST)
From: "John Halperin" <JXH@SLACVM>
To: WINTERS@SLACVM
Subject: Internet sockets

Cf RFC 1060 (on NETNOTES disk).

I'm not aware of any conventions or standards for choosing port numbers for non-official (eg, test) applications. CXG once mentioned that the HEPNET people at FNAL were talking about taking on a registrar function for HEP-related IP applications, but I don't know if anything ever came of it.

++ ++ ++ ++ ++ ++ ++ ++ ++ ++ Forwarded Text 2 ++ ++ ++ ++ ++ ++ ++ ++

Extract from Internet RFC 1060 (March, 1990):

UNIX PORTS

By convention, ports in the range 256 to 1024 are used for "Unix Standard" services. Listed here are some of the normal uses of these port numbers.

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Port/Protocol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>echo</td>
<td>7/tcp</td>
<td>sink null</td>
</tr>
<tr>
<td>discard</td>
<td>9/tcp</td>
<td>users</td>
</tr>
<tr>
<td>systat</td>
<td>11/tcp</td>
<td></td>
</tr>
<tr>
<td>daytime</td>
<td>13/tcp</td>
<td></td>
</tr>
<tr>
<td>netstat</td>
<td>15/tcp</td>
<td></td>
</tr>
<tr>
<td>qotd</td>
<td>17/tcp</td>
<td></td>
</tr>
<tr>
<td>chargen</td>
<td>19/tcp</td>
<td></td>
</tr>
<tr>
<td>ftp-data</td>
<td>20/tcp</td>
<td></td>
</tr>
<tr>
<td>ftp</td>
<td>21/tcp</td>
<td></td>
</tr>
<tr>
<td>telnet</td>
<td>23/tcp</td>
<td></td>
</tr>
<tr>
<td>smtp</td>
<td>25/tcp</td>
<td>mail</td>
</tr>
<tr>
<td>time</td>
<td>37/tcp</td>
<td>timserver</td>
</tr>
<tr>
<td>name</td>
<td>42/tcp</td>
<td>nameserver</td>
</tr>
<tr>
<td>whois</td>
<td>43/tcp</td>
<td>nickname</td>
</tr>
<tr>
<td>nameserver</td>
<td>53/tcp</td>
<td>domain</td>
</tr>
<tr>
<td>Service</td>
<td>Port</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>apts</td>
<td>57/tcp</td>
<td>any private terminal service</td>
</tr>
<tr>
<td>apfs</td>
<td>59/tcp</td>
<td>any private file service</td>
</tr>
<tr>
<td>rje</td>
<td>77/tcp</td>
<td>netrjs</td>
</tr>
<tr>
<td>finger</td>
<td>79/tcp</td>
<td>ttylink</td>
</tr>
<tr>
<td>link</td>
<td>87/tcp</td>
<td></td>
</tr>
<tr>
<td>supdup</td>
<td>95/tcp</td>
<td></td>
</tr>
<tr>
<td>newacct</td>
<td>100/tcp</td>
<td>[unauthorized use]</td>
</tr>
<tr>
<td>hostnames</td>
<td>101/tcp</td>
<td>hostname</td>
</tr>
<tr>
<td>iso-tsap</td>
<td>102/tcp</td>
<td>tsap</td>
</tr>
<tr>
<td>x400</td>
<td>103/tcp</td>
<td></td>
</tr>
<tr>
<td>x400-snd</td>
<td>104/tcp</td>
<td></td>
</tr>
<tr>
<td>csn-net-ns</td>
<td>105/tcp</td>
<td>CSNET Name Service</td>
</tr>
<tr>
<td>pop-2</td>
<td>109/tcp</td>
<td>pop postoffice</td>
</tr>
<tr>
<td>sunrpc</td>
<td>111/tcp</td>
<td></td>
</tr>
<tr>
<td>auth</td>
<td>113/tcp</td>
<td>authentication</td>
</tr>
<tr>
<td>sftp</td>
<td>115/tcp</td>
<td></td>
</tr>
<tr>
<td>uucp-path</td>
<td>117/tcp</td>
<td></td>
</tr>
<tr>
<td>nntp</td>
<td>119/tcp</td>
<td>usenet readnews untp</td>
</tr>
<tr>
<td>ntp</td>
<td>123/tcp</td>
<td>network time protocol</td>
</tr>
<tr>
<td>statsrv</td>
<td>133/tcp</td>
<td></td>
</tr>
<tr>
<td>profile</td>
<td>136/tcp</td>
<td>news</td>
</tr>
<tr>
<td>NeWS</td>
<td>144/tcp</td>
<td></td>
</tr>
<tr>
<td>print-srv</td>
<td>170/tcp</td>
<td></td>
</tr>
<tr>
<td>exec</td>
<td>512/tcp</td>
<td>remote process execution;</td>
</tr>
</tbody>
</table>

authentication performed using
passwords and UNIX logpgin names
remote login a la telnet;
avtomatic authentication performed
based on priviledged port numbers
and distributed data bases which
identify "authentication domains"
like exec, but automatic
authentication is performed as for
login server
spooller
extended file name server
newdate
rpc
chat
readnews
uucpd
krcmd
rfs server
chkmd
demon
Sun IPC server
nqs
<table>
<thead>
<tr>
<th>Service</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>webster</td>
<td>765/tcp</td>
</tr>
<tr>
<td>phonebook</td>
<td>767/tcp</td>
</tr>
<tr>
<td>vid</td>
<td>769/tcp</td>
</tr>
<tr>
<td>rtip</td>
<td>771/tcp</td>
</tr>
<tr>
<td>cycleserv2</td>
<td>772/tcp</td>
</tr>
<tr>
<td>submit</td>
<td>773/tcp</td>
</tr>
<tr>
<td>rpasswd</td>
<td>774/tcp</td>
</tr>
<tr>
<td>entomb</td>
<td>775/tcp</td>
</tr>
<tr>
<td>wpages</td>
<td>776/tcp</td>
</tr>
<tr>
<td>wpgs</td>
<td>780/tcp</td>
</tr>
</tbody>
</table>

Reynolds & Postel

<table>
<thead>
<tr>
<th>Service</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>mdbcs_daemon</td>
<td>800/tcp</td>
</tr>
<tr>
<td>device</td>
<td>801/tcp</td>
</tr>
<tr>
<td>mailtrd</td>
<td>997/tcp</td>
</tr>
<tr>
<td>busboy</td>
<td>998/tcp</td>
</tr>
<tr>
<td>garcon</td>
<td>999/tcp</td>
</tr>
<tr>
<td>blackjack</td>
<td>1025/tcp</td>
</tr>
<tr>
<td>bbn-mm1s</td>
<td>1347/tcp</td>
</tr>
<tr>
<td>bbn-mm1xs</td>
<td>1348/tcp</td>
</tr>
<tr>
<td>orasrv</td>
<td>1525/tcp</td>
</tr>
<tr>
<td>ingreslock</td>
<td>1524/tcp</td>
</tr>
<tr>
<td>issd</td>
<td>1600/tcp</td>
</tr>
<tr>
<td>nkld</td>
<td>1650/tcp</td>
</tr>
<tr>
<td>dc</td>
<td>2001/tcp</td>
</tr>
<tr>
<td>mailbox</td>
<td>2004/tcp</td>
</tr>
<tr>
<td>berknet</td>
<td>2005/tcp</td>
</tr>
<tr>
<td>invokator</td>
<td>2006/tcp</td>
</tr>
<tr>
<td>dectalk</td>
<td>2007/tcp</td>
</tr>
<tr>
<td>conf</td>
<td>2008/tcp</td>
</tr>
<tr>
<td>news</td>
<td>2009/tcp</td>
</tr>
<tr>
<td>search</td>
<td>2010/tcp</td>
</tr>
<tr>
<td>raid-cc</td>
<td>2011/tcp</td>
</tr>
<tr>
<td>ttyinfo</td>
<td>2012/tcp</td>
</tr>
<tr>
<td>raid-am</td>
<td>2013/tcp</td>
</tr>
<tr>
<td>troff</td>
<td>2014/tcp</td>
</tr>
<tr>
<td>cypress</td>
<td>2015/tcp</td>
</tr>
<tr>
<td>cypress-stat</td>
<td>2017/tcp</td>
</tr>
<tr>
<td>terminaldb</td>
<td>2018/tcp</td>
</tr>
<tr>
<td>whosockami</td>
<td>2019/tcp</td>
</tr>
<tr>
<td>serverexec</td>
<td>2021/tcp</td>
</tr>
<tr>
<td>down</td>
<td>2022/tcp</td>
</tr>
<tr>
<td>ellpack</td>
<td>2025/tcp</td>
</tr>
<tr>
<td>shadowserver</td>
<td>2027/tcp</td>
</tr>
<tr>
<td>submitserver</td>
<td>2028/tcp</td>
</tr>
<tr>
<td>device2</td>
<td>2030/tcp</td>
</tr>
<tr>
<td>blackboard</td>
<td>2032/tcp</td>
</tr>
<tr>
<td>zlogin</td>
<td>2033/tcp</td>
</tr>
<tr>
<td>scoremgr</td>
<td>2034/tcp</td>
</tr>
<tr>
<td>imslased</td>
<td>2035/tcp</td>
</tr>
<tr>
<td>objectmanager</td>
<td>2038/tcp</td>
</tr>
<tr>
<td>lam</td>
<td>2040/tcp</td>
</tr>
<tr>
<td>interbase</td>
<td>2041/tcp</td>
</tr>
<tr>
<td>isis</td>
<td>2042/tcp</td>
</tr>
<tr>
<td>rims1</td>
<td>2044/tcp</td>
</tr>
<tr>
<td>dls</td>
<td>2047/tcp</td>
</tr>
<tr>
<td>dls-monitor</td>
<td>2048/tcp</td>
</tr>
<tr>
<td>shilp</td>
<td>2049/tcp</td>
</tr>
<tr>
<td>NSWS</td>
<td>3049/tcp</td>
</tr>
<tr>
<td>rfa</td>
<td>4672/tcp</td>
</tr>
</tbody>
</table>

Reynolds & Postel

<table>
<thead>
<tr>
<th>Service</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>commplex-main</td>
<td>5000/tcp</td>
</tr>
<tr>
<td>Service</td>
<td>Port Type</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>commplex-link</td>
<td>5001/tcp</td>
</tr>
<tr>
<td>padl2sim</td>
<td>5236/tcp</td>
</tr>
<tr>
<td>man</td>
<td>9535/tcp</td>
</tr>
<tr>
<td>echo</td>
<td>7/udp</td>
</tr>
<tr>
<td>discard</td>
<td>9/udp</td>
</tr>
<tr>
<td>systat</td>
<td>11/udp</td>
</tr>
<tr>
<td>daytime</td>
<td>13/udp</td>
</tr>
<tr>
<td>netstat</td>
<td>15/udp</td>
</tr>
<tr>
<td>qotd</td>
<td>17/udp</td>
</tr>
<tr>
<td>chargen</td>
<td>19/udp</td>
</tr>
<tr>
<td>time</td>
<td>37/udp</td>
</tr>
<tr>
<td>rlp</td>
<td>39/udp</td>
</tr>
<tr>
<td>name</td>
<td>42/udp</td>
</tr>
<tr>
<td>whois</td>
<td>43/udp</td>
</tr>
<tr>
<td>nameserver</td>
<td>53/udp</td>
</tr>
<tr>
<td>bootps</td>
<td>67/udp</td>
</tr>
<tr>
<td>bootpc</td>
<td>68/udp</td>
</tr>
<tr>
<td>tftp</td>
<td>69/udp</td>
</tr>
<tr>
<td>sunrpc</td>
<td>111/udp</td>
</tr>
<tr>
<td>erpc</td>
<td>121/udp</td>
</tr>
<tr>
<td>ntp</td>
<td>123/udp</td>
</tr>
<tr>
<td>statsrv</td>
<td>133/udp</td>
</tr>
<tr>
<td>profile</td>
<td>136/udp</td>
</tr>
<tr>
<td>snmp</td>
<td>161/udp</td>
</tr>
<tr>
<td>snmp-trap</td>
<td>162/udp</td>
</tr>
<tr>
<td>at-rtmp</td>
<td>201/udp</td>
</tr>
<tr>
<td>at-nbp</td>
<td>202/udp</td>
</tr>
<tr>
<td>at-3</td>
<td>203/udp</td>
</tr>
<tr>
<td>at-echo</td>
<td>204/udp</td>
</tr>
<tr>
<td>at-5</td>
<td>205/udp</td>
</tr>
<tr>
<td>at-zis</td>
<td>206/udp</td>
</tr>
<tr>
<td>at-7</td>
<td>207/udp</td>
</tr>
<tr>
<td>at-8</td>
<td>208/udp</td>
</tr>
<tr>
<td>biff</td>
<td>512/udp</td>
</tr>
<tr>
<td>who</td>
<td>513/udp</td>
</tr>
<tr>
<td>syslog</td>
<td>514/udp</td>
</tr>
<tr>
<td>talk</td>
<td>517/udp</td>
</tr>
<tr>
<td>ntalk</td>
<td>518/udp</td>
</tr>
<tr>
<td>utime</td>
<td>519/udp</td>
</tr>
<tr>
<td>router</td>
<td>520/udp</td>
</tr>
<tr>
<td>timed</td>
<td>525/udp</td>
</tr>
<tr>
<td>netwall</td>
<td>533/udp</td>
</tr>
<tr>
<td>new-rwwho</td>
<td>550/udp</td>
</tr>
<tr>
<td>rmonitor</td>
<td>560/udp</td>
</tr>
<tr>
<td>monitor</td>
<td>561/udp</td>
</tr>
<tr>
<td>meter</td>
<td>571/udp</td>
</tr>
<tr>
<td>e1srd</td>
<td>704/udp</td>
</tr>
<tr>
<td>loadav</td>
<td>750/udp</td>
</tr>
<tr>
<td>vid</td>
<td>769/udp</td>
</tr>
</tbody>
</table>

Reynolds & Postel

TCP connection is established. Used by mail system to notify users of new mail received; currently receives messages only from processes on the same machine. Maintains data bases showing who's logged in to machines on a local net and the load average of the machine.

Like tenex link, but across machine - unfortunately, doesn't use link protocol (this is actually just a rendezvous port from which a

unixtime

Local routing process (on site); uses variant of Xerox NS routing information protocol

timeserver

For emergency broadcasts

new-who

rmonitor

udemon

errlog copy/serve daemon
cadlock 770/udp
notify 773/udp
acmaint_dbd 774/udp
acmaint_transd 775/udp
wpages 776/udp
puparp 998/udp
applix 999/udp
puprouter 999/udp
cadlock 1000/udp
hermes 1248/udp
wizard 2001/udp
globe 2002/udp
emce 2004/udp
oracle 2005/udp
raid-cc 2006/udp
raid-am 2007/udp
terminald 2008/udp
whosockami 2009/udp
pipe_server 2010/udp
servserv 2011/udp
raid-ac 2012/udp
raid-cd 2013/udp
raid-sf 2014/udp
raid-cs 2015/udp
bootserver 2016/udp
bootclient 2017/udp
repack 2018/udp
about 2019/udp
xinupageserver 2020/udp
xinuexpansion1 2021/udp
xinuexpansion2 2022/udp
xinuexpansion3 2023/udp
xinuexpansion4 2024/udp

[Page 18]

==:B:=
==:T:= 03/09/92 11:52 CRANE Spicell and WWW
=================================================================
Received: by SLACVM (Mailer R2.08 R208004) id 4759;
 Mon, 09 Mar 92 11:52:26 PST
Date: Mon, 09 Mar 1992 11:49 -0800 (PST)
From: CRANE@SLACVM
To: ADDIS@SLACVM, BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, WINTERS@SLACVM, MEB@SLACVM
Subject: Spicell and WWW

In-Reply-To: ADDIS@SLACVM -- 03/03/92 22:42

I have made a few changes to the production www html's and execs running
in SPICELL. Basically I cleaned things up a bit, added help files (which
probably need review) and added access to the SLAC stores catalog for
all SLAC nodes.

George
==:B:==
==:T:== 03/17/92 15:24:52 >WWW More databases for WWW
=========================================================================
Date: Tue, 17 Mar 1992 15:21 -0800 (PST)
From: "Louise Addis" <ADDIS@SLACVM>
To: ADDIS@SLACVM, BEBO@SLACVM, PFKEB@SLACVM, TONYJ@SLACVM, CRANE@SLACVM,
WINTERS@SLACVM, MEBB@SLACVM
cc: COTTRELL@SLACVM, WBJ@SLACVM
Subject: More databases for WWW

Les Cottrell asked me recently whether it would be possible to
add some other (ORACLE) databases to the SLAC WWW menu. George, I
referred him to you.

lx
==:B:==
==:T:== 03/18/92 15:42 CRANE binlist via www (or qspires)
=========================================================================
Received: by SLACVM (Mailer R2.08 R208004) id 7515;
Wed, 18 Mar 92 15:42:13 PST
Date: Wed, 18 Mar 1992 15:40 -0800 (PST)
From: CRANE@SLACVM
To: ADDIS@SLACVM
Subject: binlist via www (or qspires)

It seems to me that we have an awful lot of search terms available
in BINLIST via qspires and www to the public. Should we trim that
list down a bit?? Try qspires show ind (in binlist

George
==:B:==
==:T:== 03/25/92 07:53 timbl @nxoc01. New server release
=========================================================================
Received: from SCS.SLAC.STANFORD.EDU by SLACVM.SLAC.STANFORD.EDU (Mailer R2.08
R208004) with BSMTP id 7225; Wed, 25 Mar 92 07:53:33 PST
Received: from dxmintaucern.ch by SCS.SLAC.STANFORD.EDU with PMDF#10283; Wed, 25
Mar 1992 07:53 PST
Received: by dxmintaucern.ch (cernvax) (5.57/3.14) id AA18178; Wed, 25 Mar 92
16:50:18 +0100
Received: by nxoc01.cern.ch (NeXT-1.0 (From Sendmail 5.52)/NeXT-2.0) id
AA21619; Wed, 25 Mar 92 16:50:01 GMT+0100
Received: by NeXT Mailer (1.62)
Date: Wed, 25 Mar 92 16:50:01 GMT+0100
From: timbl@nxoc01.CERN.CH (Tim Berners-Lee)
Subject: New server release
To: www-interest@nxoc01.CERN.CH
Message-id: <92032501550.AA21619@nxoc01.cern.ch >
X-Envelope-to: addis@SLACVM.SLAC.STANFORD.EDU

A new minor release of the W3 server code is now available by
anonymous FTP from info.cern.ch in /pub/www/src/WWWDaemon_0.4.tar.Z

Changes are:

- The code will now compile under non-ANSI C compilers as
  well as under ANSI C. (Tested on decstation and NeXT).

- The WAIS gateway code is now included. It will now allow
  hypertext HTML files to be extracted from WAIS servers
  and returned as hypertext.
The WAIS gateway returns pointers to anonymous FTP files (instead of to documents which just contain the filename) for database names containing the word "archie".

Tim BL
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