Desktop Access to HEP Preprints

Using WWW and SPIRES

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Situation in 1990

- SPIRES HEP database at SLAC contains 200,000 entries corresponding to HEP publications (preprints)
  - Access by either logging in to SLACVM (need an account and a way to log in)
  - Network access provided by QSPIRES over BITNET

1992 -- Revolution

- Physics papers (especially theory papers) begin being submitted via Bulletin Boards set up at Los Alamos by Paul Ginsparg
- Development of the WorldWide Web, providing an easy method of accessing the SPIRES database for users world-wide.

Current Situation

April 1994

- Each night papers submitted to the physics bulletin boards (hep-ph, hep-th, hep-lat, gr-qc, nucl-th, astro-ph) are downloaded at SLAC and automatically TeXed* to produce postscript output.
- Papers that fail the automatic TeX process are manually TeXed the next day. (in collaboration with DESY and CERN).
- Authors are contacted by the SLAC library staff and asked to provide figures (either as Postscript or by fax). Faxed figures are converted to postscript at SLAC.
- Postscript documents are stored at SLAC and made available through FTP and HTTP (WWW).
- Postscript documents are linked with SLAC HEP database.

Result - Using SPIRES database, accessed through WWW, physicists can now not only look up papers, but also read and/or print the papers from their desktops.

* The automatic Tex-ing system was developed by Paul Mendes at Brown

Other Spires Databases

- In addition to the HEP preprint database, several other SPIRES databases are accessible from WWW, including
  - > Experiments in HEP (source for the PDG LBL-91 report)
  - > HEPnames - worldwide e-mail directory of people related to particle physics
  - > FreeHEP - software packages of interest to HEP
  - > Conferences - Past and Future particle physics conferences
  - > Institutions - Addresses, phone and fax numbers of HEP institutions
  - > Particles - Data from the Review of Particle Properties. Courtesy of LBL Particle Data Group

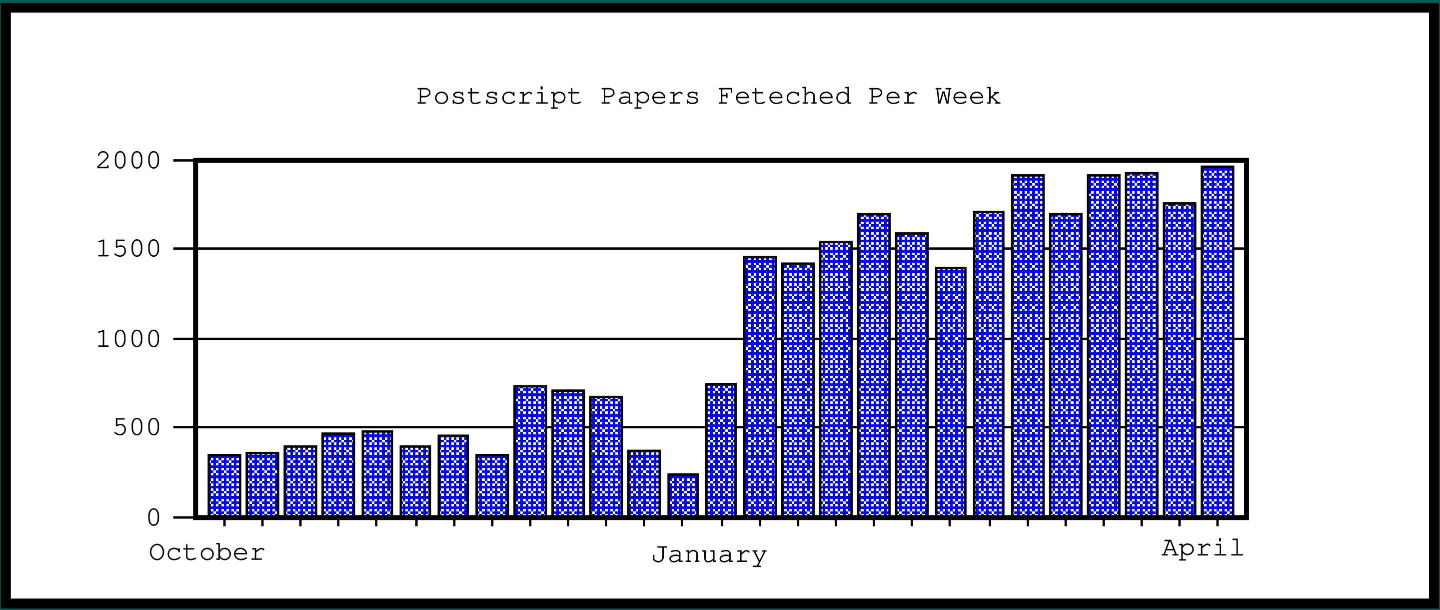
Statistics

SPIRES

- 280,000 publications listed in SPIRES HEP database
- 6000 papers with full postscript available
- 50% of all preprints received at SLAC library are available on bulletin boards

WWW access to SPIRES

- 6000 database queries per day, vast majority from HEP sites other than SLAC.
- 2000 postscript documents fetched /week



Future Plans

- Provide More Forms based interfaces to remove need for casual users to know anything about SPIRES database commands.
- Add experimental papers in addition to theoretical papers.
- Change references of published papers to point to URL's of papers at journal's own WWW server?
- Mirror sites for postscript papers at other sites (already working with National Hepnet Management to set up a mirror site at Fermilab)

URL's to take home

- SLAC SPIRES Home Page:
  - > http://www-spires.slac.stanford.edu/FIND/spires.html
    - > In full production, we encourage you and your colleagues to try it.
    - > Includes full-postscript interface
- **Experimental** forms based interface to SPIRES-HEP
    - > http://www-spires.slac.stanford.edu:5080/FIND/hep_form.html
    - > Suggestions, comments etc welcome

MidasWWW Browser

- Provides seamless access to postscript viewing under Unix and VMS
- Fully functional WWW browser including forms, navigation aids.
- Available by anonymous FTP from:
  - > freehep.scri.fsu.edu in directory
  - > /freehep/networking_email_news/midaswww
    - > Includes source code as well as executables for aix, sun4, hpux, osf, sgi and VMS.